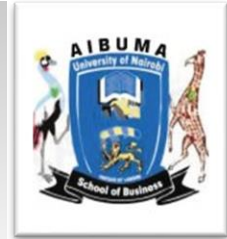




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## E-LOGISTICS PRACTICES AND SUPPLY CHAIN PERFORMANCE OF FAST-FOOD OUTLETS IN NAIROBI CITY COUNTY, KENYA

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### Abstract

*This study investigated the influence of e-logistics practices on Supply Chain Performance (SCP) of fast-food outlets in Nairobi City County, Kenya. The study examined the utilization and effect of key components: e-warehousing, e-inventory management, e-transportation, and e-information management, that streamline operations, reduce costs, and improve service quality. In Kenya's fast-food sector, where timely deliveries and real-time decision-making are crucial, adopting these digital solutions can optimize resource utilization, enhance responsiveness, and strengthen competitive advantage. This study focused on the influence of e-logistics practices on supply chain performance. Two objectives guided the study: to find out the extent of e-logistics utilization and to establish the influence of e-logistics practices on supply chain performance of fast-food outlets in Nairobi City County, Kenya. The resource based view and the diffusion of innovation theory were the anchoring theories. Descriptive research design was adopted and primary data collected from all the 46 fast food outlets, with a 76% response rate. Data was analyzed using descriptive statistics and regression analysis. The study found that the firms have adopted e-logistics practices from moderate to a large extent. Further, the study found that e-logistics practices had a strong positive influence on supply chain performance of the fast-food outlets. All the e-logistics practices considered were significant predictors of supply chain performance. An R-Square value of 0.874 indicates that 87.4% of the variance in supply chain performance is explained by the e-logistics variables in the model, demonstrating a strong explanatory power. The study concluded that e-logistics practices have led to improved supply chain performance. In line with the RBV, e-logistics practices presents an opportunity for investing resources to build business capabilities that can give the firm competitive advantages like efficiency and environmental excellence. E-logistics provides real-time tracking of shipments, inventory, and overall supply chain processes. By optimizing routes, reducing delays, and minimizing inventory holding costs through better forecasting, e-logistics significantly improve supply chain performance. The study recommends the intensification of e-logistics practices among fast food outlets. The study suggests future researchers should consider broadening the scope to other sectors, counties and countries for a compressive view of the influence of e-logistics practices on supply chain performance.*

**Key words:** E-Logistics Practices, Supply Chain Performance, Fast-Food Outlets, Nairobi City County, Kenya

## Introduction

Digital technologies are reshaping the landscape of logistics by enabling real-time tracking, automated processes, and enhanced data accuracy across supply chains. The adoption of e-logistics practices has proven instrumental in boosting supply chain performance through improved operational efficiency and customer responsiveness (Duhan, 2023). As a result of globalization, the business environment has become increasingly competitive, necessitating the adoption of efficient, technology-driven systems to optimize operations. E-logistics, through its core components such as e-warehousing, e-inventory management, e-transportation, and e-information management, has emerged as a transformative solution capable of reducing transaction and operational costs while fostering business excellence (Sarkis, Meade & Talluri, 2004; Gunasekaran, Ngai, & Cheng, 2007). E-warehousing leverages automation and data analytics to enhance storage efficiency and order fulfillment; while e-inventory management improves inventory visibility, accuracy, and replenishment through real-time data systems. Similarly, e-transportation utilizes transport management systems (TMS) to streamline delivery routes, reduce lead times, and optimize fleet operations; and e-information management integrates data flows across the supply chain for improved coordination and decision-making (Arzu & Erman, 2010). Firms that implement these e-logistics dimensions have consistently reported enhanced supply chain performance outcomes, including greater responsiveness, reliability, and cost efficiency. Supply chains play a pivotal role in determining firm performance, with their effectiveness being influenced by multiple factors such as digital technology, infrastructure, workforce capability, and strategic alignment (Kamble

& Gunasekaran, 2020). Ultimately, the quality of supply chain performance is reflected in increased visibility, improved environmental sustainability, responsiveness to market dynamics, and overall operational resilience.

An increasing number of fast-food outlets are adopting e-logistics practices to resolve logistics challenges related to transportation, inventory control, order fulfilment, and information flow (Erceg & Damoska-Sekulowska, 2019). Given their heavy reliance on take-away and home delivery models, these businesses are turning to digital platforms to streamline operations and meet evolving customer expectations. By integrating online ordering systems, real-time tracking technologies, and digital inventory solutions, fast-food chains are enhancing supply chain responsiveness and visibility. The use of web-based applications for order placement and coordination of transportation has redefined how fast-food outlets deliver value to customers. Moreover, e-logistics enables implementation of Just-in-Time (JIT) inventory systems, which minimize holding costs and improve service reliability (Kanagavalli & Azeez, 2019). Through the digitization of logistics processes including e-transportation, e-inventory management, and e-information management, fast-food outlets have achieved notable improvements in supply chain performance, reflected in faster delivery times, improved customer satisfaction, and operational cost savings (Duhan, 2023).

Most major fast-food outlets in Kenya are concentrated in Nairobi City County, where rapid technological advancements and robust infrastructure development have facilitated the widespread digitization of e-logistics practices (Murugi, 2022). These outlets typically experience high inventory turnover rates and operate under volatile demand conditions, necessitating agile and efficient

logistics systems. To meet customer expectations and manage delivery logistics effectively, many have partnered with third-party logistics (3PL) providers to offer fast and reliable transportation services while integrating digital platforms for real-time order processing and information sharing (Owino, Misuko, & Wadawi, 2017). Additionally, the adoption of e-logistics components such as e-transportation, e-inventory management, and e-information systems has enhanced visibility and coordination across the supply chain (Mutinda & Rotich, 2023). This transformation aligns with the global trend toward digitally enabled logistics operations, which have been shown to improve service reliability and customer satisfaction (Ahi & Searcy, 2013).

Fast food outlets are foodstuff retailing institutions featuring very limited menu, pre-cooked or quickly prepared foods, and take-out operations. The emergence of the fast-food industry in Nairobi City County continues to expand due to growing middle class and the developing tourism industry (Owino, et al, 2017). According to a forecast by the National Restaurant Association of Kenya (NRAK), the fast food chain segment is expanding rapidly within the broader restaurants and service industry, driven by a growing preference for eating out among Kenyan families and urban workers in Nairobi City County (Gansler, Lucyshyn & Ross, 2003). Significant investments amounting to millions of dollars by both global and local chains such as KFC, Java House, Subway, Teriyaki, Coldstone Creamery, Domino's Pizza, Steers, and Café Deli, have facilitated their expansion across Nairobi (Statista, 2024). This study sought to examine how the deployment of digital technologies in managing logistics processes influence supply chain performance among

fast-food outlets operating within Nairobi City County, Kenya.

### **Literature Review**

The Resource Based View (RBV) and the Diffusion of Innovation Theory were the anchoring theories of the study. The RBV, which was proposed by Penrose (1954) and supported by others such as Wernerfelt (1984) and Barney (1991), suggests that a firm can achieve a competitive advantage by appropriately utilizing its resources (Barney, 1991; Wernerfelt, 1984). This theory was used to show how technology as a resource is employed by fast food outlets to achieve a competitive edge in the market. The RBV explains how internal resources like e-logistics systems such as e-warehousing, e-transportation, and e-information management can offer fast-food outlets a competitive advantage. From the RBV, the e-logistics practices are strategic organizational capabilities that enhance supply chain performance by meeting the VRIN criteria, i.e. valuable, rare, inimitable, and non-substitutable. E-warehousing improves inventory visibility and cost efficiency; e-transportation enhances delivery reliability through digital tracking and routing; and e-information management strengthens coordination via real-time data sharing. Together, these technology-driven capabilities create unique operational advantages that are difficult for competitors to replicate, thereby sustaining superior supply chain efficiency, agility, and responsiveness (Kamboj, Goyal, & Rahman, 2019; Mikalef, Krogstie, Pappas, & Giannakos, 2018). When these digital tools are effectively utilized, they enhance supply chain performance by improving efficiency, responsiveness, and customer service. Thus, RBV supports the idea that unique technological capabilities are key to superior performance in the fast-food sector. Rogers' (1962) Diffusion of Innovation Theory

explains how innovations such as e-logistics practices are adopted progressively within organizations (Wani & Ali, 2015). The theory's stages of adoption help understand how fast-food outlets decide to implement digital tools like e-warehousing, e-transportation, and e-information management (Rogers, 2003). Adoption varies based on factors such as perceived benefits, organizational readiness, and social influence, which in turn affect supply chain performance outcomes (Miller, 2015; Tornatzky & Klein, 1982). By framing e-logistics as an innovation, the theory highlights the process and challenges of technology uptake that influence operational efficiency and customer service (Rogers, Singhal & Quinlan, 2014; Davis, 1989).

According to Kanagavalli and Azeez (2019) e-logistics is used interchangeably with internet enabled logistics or e-business where it supports the ordering and delivery of goods and services through utilization of Information Communication Technology (ICT) as part of the business activities and in execution of various logistics activities. E-logistics practices rely on e-logistics technology and include e-transportation, e-warehousing, e-inventory management, and e-information sharing. This includes software applications, information systems and technology infrastructure to improve efficiency, visibility and control in the supply chain and distribution of goods and services (Wang & Pettit, 2016; Hamza, Hua, & Peng, 2007; Sarkis et al., 2004). The indicators of e-logistics are linked to specific logistics processes where technology is employed to enhance efficiency. For e-transportation, transport management systems are used to optimize routes, schedule delivery times and expedite transportation (Lotfi, Mukhtar, Sahran, & Zadeh, 2013; Stockdale & Standing, 2004). Trackers and GPS are also used to trace the movement of inventories

and goods. For inventory management, the use of Radio Frequency Identification (RFID) and Barcodes allows the monitoring of expiration dates and tracking of inventory movements, increasing accountability (Kanagavalli & Azeez, 2019). E-logistics is also measured by considering how logistics information flow is managed online through platforms that allow real-time communication with vendors and customers thus increasing visibility and transparency in logistics processes (Erceg, & Damoska-Sekulowska, 2019; Sukati, Hamid, Baharun, & Yusoff, 2012).

Supply chain performance (SCP) refers to a total system's capability to meet end to end customer requirements through availability of product and observance of cost, quality and timeliness in delivery (Agami, Saleh, & Rasmy, 2012; Kurien, & Qureshi, (2011). The SCP measurement is also defined as the overall set of measures used to estimate both the competence and capability of the supply chain, across several tiers of suppliers and customers and the range of relationships and interactions (Kamble & Gunasekaran, 2020; Keebler & Plank, 2009). Contemporary studies assert that cost efficiency, delivery timeliness, and quality are foundational metrics for assessing supply chain performance (Baraka, Mahuwi & Mwenda, 2023; Kamble & Gunasekaran, 2020). Quality is concerned with achievement of customer demand, fulfillment on-time, complete, without damage (Arvis et al., 2018; Ganji, Shaharoun, & Norehan, 2015). Time entails the duration it takes to react to and fulfill customer demand, lead times and cycle time and the ability of supply chain to increase or decrease demand within a given planned period (Huan, Sheoran & Wang, 2004). Cost is objective assessment of all components of supply chain expense and entails inventory costs, logistics cost,

transaction costs and warehousing costs (Gebisa, 2019; Ganki et al., 2015).

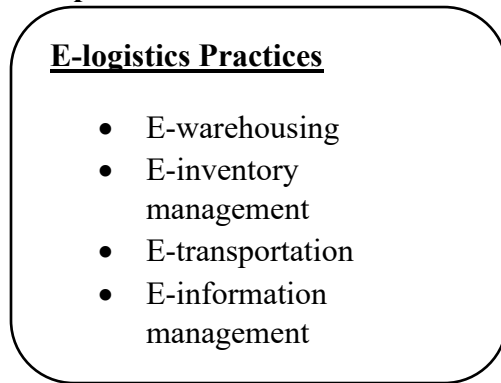
While there are studies that attempted to link logistics management practices with various organizational outcomes, literature has limited studies that directly link e-logistics to supply chain performance. Sarkis et al. (2004) studied the influence of e-logistics on environmental performance of logistics firms in India. The study considered firms that have implemented e-logistics throughout their supply chain. The results indicated that common e-logistics practices include e-procurement, e-reverse logistics, e-inventory management and e-warehousing. It was also revealed that e-logistics has significant environmental benefits. Ullah et al. (2021) studied e-logistics and firm performance in the context of supply chain among Pakistanian firms. The survey was conducted in big manufacturing firms and random sampling was used to select respondents. The study identified a positive relationship between e-logistics and supply chain performance of a firm. Buyko (2022) studied the implications of e-logistics on business performance in supply chain management which aimed at establishing the relationship between the e-logistics and supply chain performance of big corporations in Taiwan. The study revealed a strong positive relationship between e-logistics and business performance in the context of supply chain performance. The empirical literature therefore triggered the need for this study where the main objective was to establish the influence of e-logistics practices on supply chain performance of fast food outlets in Nairobi City County, Kenya.

From the literature reviewed, it is noteworthy that while prior studies have examined the relationship between e-logistics and supply chain performance in manufacturing and logistics sectors (Gunasekaran et al., 2017; Nguyen & Hens, 2020), limited attention has been paid to fast-food outlets, which operate under unique conditions such as high product turnover, volatile consumer demand, and the need for speed and consistency in service delivery (Zhong et al., 2020). Existing evidence shows that food service supply chains face greater risks of disruption and quality lapses compared to traditional manufacturing (Akkucuk, 2019). These contextual differences suggest that findings from other sectors may not fully capture the dynamics of fast-food supply chains. By focusing on fast-food outlets in Nairobi City County, this study fills this gap by examining how e-logistics practices influence supply chain performance in a sector where efficiency, responsiveness, and reliability are particularly critical.

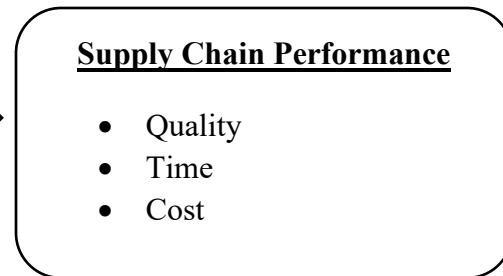
### **The Conceptual Model**

Based on the main objective, the study focused on e-logistics practices as the Independent Variable (IV) and supply chain performance as the Dependent Variable (DV). The indicators of e-logistics practices were e-warehousing, e-inventory management, e-transportation, e-information sharing while the indicators of supply chain performance were quality, time and cost. A conceptual model on the relationship between the IV and DV was drawn as follows:

### Independent Variable



### Dependent Variable



**Figure 1: Conceptual model**

Source: Authors own

### The Study Hypothesis

From the conceptual model and the general study objective, the following hypothesis was drawn:

H<sub>0</sub>: E-logistics practices have no significant effect on supply chain performance

### Methodology

The study adopted a descriptive research design, which is well-suited for investigations that seek to determine and describe the characteristics, patterns, or relationships within a phenomenon without manipulating the study environment. Descriptive design enables researchers to explore the “what” of a situation, providing a clear depiction of variables as they exist in their natural context (Creswell & Creswell, 2018). Moreover, this design facilitates the application of structured data collection methods, such as questionnaires and surveys, which support quantitative analysis and allow for generalization of findings across a broader population (Saunders, Lewis, & Thornhill, 2019). A census approach was employed, targeting all 46 fast-food outlets in the study population, at Nairobi City County, Kenya. Primary data was collected by use of semi-structured questionnaires, which were

administered to the logistics and supply chain managers or the equivalent in each of the firms. The choice of respondents was based on the study variables, namely e-logistics practices and supply chain performance. The questionnaire had two main sections, where the independent and dependent variables were operationalized guided by the sub-constructs outlined on the conceptual framework. A five-point Likert scale, ranging from ‘strongly disagree’ (1) to ‘strongly agree’ (5), was used to measure respondents’ perceptions on e-logistics practices and supply chain performance. The data collected was first checked for completeness and consistency before being coded for further analysis. Data analysis was done by use of Statistical Package for Social Sciences (SPSS) V.25. Descriptive statistics was used for the first objective to identify the level of e-logistics utilization using means and standard deviation. For the second objective, a regression analysis was carried out to establish correlation between e-logistics practices and supply chain performance.

The regression model was in the form:  $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \epsilon$ .

Where:  $y$  = supply chain performance (a composite score was used for the DV, which was measured using 3 variables: quality, time and cost).

$x_1$  = e-warehousing;  $x_2$  = e-inventory management;  $x_3$  = e-transportation;  $x_4$  = e-information sharing.  $\beta_0$  = intercept;  $\beta$  = coefficient for  $x$ ;  $\epsilon$  = error term.

### Findings And Analysis

A 76% response rate was achieved from the data collected, as 35 out of 46 questionnaires dully filled were returned. Ericson, et al (2023) noted that response rates of 70% or

higher are needed if findings are to be considered generalizable, and making conclusions. To address the first objective on establishing the extent of e-logistics practices adoption among fast food outlets in Nairobi City County, the results on the four e-logistics practices namely e-warehousing, e-inventory management, e-transportation, and e-information sharing, were analyzed using descriptive statistics and the following table shows the summary of the results:

**Table 1**

### Summary and Overall Rank of E-logistics Practices Adoption

E-logistics Practice	Overall Mean	Rank
E-information sharing	4.55	1
E-transportation	3.96	2
E-inventory Management	3.43	3
E-warehousing	3.16	4

Source: Authors own from data

The results show that E-information sharing achieved the highest overall mean score of 4.55, indicating strong respondent agreement or influence. This was followed by mean scores of 3.96, 3.43, and 3.16, suggesting descending levels of perceived importance and effectiveness across the items, namely E-transportation, E-inventory Management and E-warehousing. These rankings reveal clear differences in how the variables were evaluated by participants, with the highest mean pointing to the most dominant or favorable factor in the analysis.

To address the second objective on assessing the influence of e-logistics practices on supply chain performance of fast food outlets in Nairobi City County in Kenya, a multiple regression analysis was conducted and the outcome are discussed below.

### The Regression Coefficients

The relationship between the dependent variable and the independent variables was ascertained using a multiple regression in the form:  $y = \beta_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \beta_4x_4 + \epsilon$ .

Where:

y= supply chain performance,

$x_1$  = e-warehousing,  $x_2$  = e-inventory management,  $x_3$  = e-transportation,  $x_4$ = e-information sharing,  $\epsilon$  = error term and  $\beta_i$  (i=0, 1, 2, 3, 4) = regression coefficients.

The results are shown in table 2.

**Table 2: Regression Coefficients**

Model		Unstandardized Coefficients		Standard Coefficients	t	Sig
		B	Std. Error	Beta		
1	(Constant)	1.234	0.658		1.875	0.070
	E-warehousing	0.345	0.103	0.425	3.348	0.002
	E-inventory Management	0.215	0.095	0.295	2.263	0.031
	E-transportation	0.456	0.098	0.567	4.664	0.000
	E-information Sharing	0.321	0.105	0.387	3.060	0.005

a. Dependent Variable: Supply chain performance

Source: Authors own from data

Using the coefficients of the multiple regression, the liner model was completed as follows:  $Y=1.234 + 0.345X_1 + 0.215X_2 + 0.456X_3 + 0.321X_4$ . According to the model, the value of supply chain performance is 1.234 when the value of e-logistics practices is zero (0). It also implies that all other factors held constant, a unit increase in e-warehousing, e-inventory management, e-transportation and e-information sharing, supply chain performance increases by 0.345, 0.215, 0.456, and 0.321 respectively. There is therefore a positive significant relationship between e-logistics practices and supply chain performance of fast food outlets in Nairobi City County, Kenya. All the e-logistics practices considered were significant predictors of supply chain performance as their t-values are greater than

critical value and p-values less than 0.05 ( $p<0.05$ ).

#### Model Summary

The influence of e-logistics practices and supply chain performance of fast-food outlets in Nairobi City County was determined using coefficient of determination ( $R^2$ ). According to the summarized regression model (Table 3), 87.4% of variation in the dependent variable is explained by variation in the independent variable as shown by R Square of 0.874. Thus, variation in e-logistics practices considered, explained 87.4% of change in supply chain performance of fast food outlets in Nairobi City County leaving 12.6% of the variance unexplained. This unexplained portion is possibly due to other variables not included in the model or random error.

**Table 3: Regression Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.935	0.874	0.855	0.527

- a. Predictors: E-warehousing, E-inventory Management, E-transportation, E-information Sharing
- b. Dependent Variable: Supply Chain Performance

Source: Authors own from data

### Analysis of Variance (ANOVA)

An f-test was done to determine the significance of the model in predicting supply chain performance using e-logistics practices. The significance level of the model is  $p < 0.000$  which is less than f-significance of

$p < 0.05$  at 5% significance level. Therefore, the model explains a statistically significant portion of the variance in supply chain performance of fast food outlets in Nairobi City County, Kenya. The results are shown on table 4.

**Table 4: Analysis of Variance**

Model	Sum of Squares	df	Mean Square	F	Sig
1 Regression	72.483	4	18.121	51.79	0.000
Residual	10.460	30	0.349		
Total	82.943	34			

Source: Authors own from data

### Discussion Of Study Findings

The first objective of the study was to find out the extent of e-logistics practices utilization among fast food outlets in Nairobi City County. It was found that the firms have adopted e-logistics practices from a moderate to a large extent. The most widely adopted e-logistics practice is e-information sharing which was adopted to a large extent. It was followed by e-transportation, e-inventory management and e-warehousing, which were adopted to a moderate extent. Fast food outlets mostly operate under the 'take-away' basis and most customers order food at their homes using online platforms. This explains the wide adoption of e-information sharing as customers need to be informed of the food

products available and the status of their orders. Kankam et al., (2023) and Xiao and Zhang, (2024) noted that quality information and proactive information sharing significantly enhance supply chain performance by reducing uncertainty and improving coordination across supply chain partners. The ranking of the e-logistics practices can also be determined by the context or field of study as noted in the findings by Sarkis et al. (2004) where e-inventory management was the most widely adopted e-logistics practice by logistics firms that handle huge volumes of inventory which need to be managed using modern systems. Guided by the Innovation Diffusion Theory, the extent of e-logistics utilization among

fast-food outlets reflects how technological innovations are adopted within an industry. The moderate to high adoption levels indicate that most firms perceive e-logistics as offering significant operational advantages, aligning well with existing systems, and being relatively easy to implement. As outlets observe positive outcomes among peers, imitation and learning effects further drive diffusion, demonstrating that the perceived relative advantage, compatibility, and observability of e-logistics solutions strongly influence their uptake in the sector.

The second objective was to establish the influence of e-logistics practices on supply chain performance of fast food outlets in Nairobi City County, Kenya. The study found that e-logistics practices significantly and positively, strongly influenced supply chain performance of fast food outlets, where 87.4% (R Square = 0.874) of variation in supply chain performance was due to variation in e-logistics practices. All the e-logistics practices considered were significant predictors of supply chain performance as indicated by p-values less than 5% ( $p < 0.05$ ) and there was a significant and positive relationship between all e-logistics practices and supply chain performance. The findings corroborate with Ullah et al. (2021); Sarkis et al. (2004) and Buyko (2022) who found a strong positive relationship between e-logistics and supply chain performance. In line with the RBV, e-logistics practices presents an opportunity for investing resources to build business capabilities that can give the firm competitive advantages like efficiency and environmental excellence. Outlining e-logistics as an innovation, the Diffusion of Innovation Theory highlights the process of technology uptake that influence operational efficiency and customer service (Rogers, Singhal & Quinlan, 2014). E-logistics provides ‘real-time’ tracking of shipments, inventory, and

overall supply chain processes. This increased visibility allows businesses to monitor the status of goods, anticipate potential disruptions, and make more informed decisions (Buyko, 2022; Sukati, et al, 2012). By optimizing routes, reducing delays, and minimizing inventory holding costs through better forecasting, e-logistics significantly improve supply chain performance (Murugi, 2022).

### Conclusions

The study was guided by two objectives: to find out the extent of e-logistics utilization among fast food outlets in Nairobi City County and to establish the influence of e-logistics practices on supply chain performance of fast food outlets in Nairobi City County, Kenya. Two theories namely; the RBV and Diffusion of Innovations Theory anchored the study by providing the theoretical assertions for e-logistics adoption. For the first objective, the results revealed that the firms have adopted e-logistics practices from a moderate to a large extent and practices utilized included e-warehousing, e-inventory management, e-transportation and e-information sharing. The most adopted e-logistics practice is e-information sharing which was adopted to a large extent, followed by e-transportation, e-inventory management and e-warehousing, which were adopted to a moderate extent.

For the second objective, the study found that e-logistics practices had a strong positive influence on supply chain performance of fast food outlets, R-square = 0.874. All the e-logistics practices considered were significant predictors of supply chain performance as indicated by p-values less than 5% ( $p < 0.05$ ) and there was a positive relationship between all e-logistics practices and supply chain performance. The study hypothesis  $H_0$ , was that e-logistics practices have no significant influence on supply chain performance. The discussion on the findings

therefore bring to a conclusion that the rejects the null hypothesis and concludes that e-logistics practices have a significant positive influence on supply chain performance.

The regression model was statistically significant in determining the relationship between e-logistics practices and supply chain performance ( $p < 0.05$ ). The study therefore concludes that the e-logistics practices utilized by fast food outlets in Nairobi City County include e-warehousing, e-inventory management, e-transportation and e-information sharing and that they are adopted from moderate to a large extent. E-information sharing was the most widely adopted e-logistics practices and this could be explained by the fact that these food outlets operate on a take-away basis and customers order products online. As such, there is need for increased visibility through adoption of enabling technologies. Some of the e-logistics practices like e-inventory and e-warehousing practices were adopted to a moderate extent, revealing that there is still room for intensification of these practices among fast food outlets in Nairobi City County. Further, the study concluded that e-logistics practices positively influence supply chain performance of fast food outlets in Nairobi City County. As such an increase in e-logistics practices utilization leads to increased supply chain performance of the fast food outlets. E-warehousing, e-inventory management, e-transportation and e-information sharing practices were all significant in predicting supply chain performance of the fast food outlets in Nairobi City County. As such, increased adoption of e-logistics practices translates to improved supply chain performance of fast food outlets. This agrees with Buyko (2022) who contended that e-logistics practices positively impacted supply chain performance.

### **Recommendations**

The study recommends that management of fast food outlets should refocus investments in increasing level of e-logistics practices since majority adopted e-logistics to a moderate extent. Specifically, practices like e-inventory management and e-warehousing, which had least ranking, should be given greater attention. Therefore, these firms should intensify the utilization of moderately adopted e-logistics practices to fully benefit from the efficiency, effectiveness and quality inherent in e-logistics practices. Based on the finding that e-logistics practices positively influence supply chain performance of fast food outlets, it is recommended that the management of fast food outlets should integrate e-logistics in their corporate strategy as a means of building efficient, timely and responsive supply chains. E-logistics help firms realized agile and lean supply chain by optimizing routes, reducing delays, and minimizing inventory holding costs through better forecasting (Buyko, 2022). The government and policy makers also need to institute policies that favor the adoption of e-logistics practices such as zero-rating or subsidizing logistics technologies to encourage e-logistics adoption which will make the firms more profitable. This will ensure continued contribution of fast food outlets to the Kenyan GDP and creation of more employment opportunities.

### **Future Research**

Future research should focus on a wider region by conducting studies on all the fast food outlets in the entire Country and beyond in order to obtain greater generalizable results. Additionally, future research should focus on examining how sustainable supply chain management practices like e-logistics practices can contribute to improved supply chain performance in other industries or sectors. Further, a research can be conducted to investigate the barriers to adoption of

certain e-logistics practices, such as e-warehousing, which had the least ranking on the level of adoption. Finally, a study that can include a moderating and or mediating variable, would help broaden the body of knowledge in the fields of logistics and supply chain management.

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**Disclosure Statement:**

The authors report there are no competing interests to declare.

**Data Availability Statement:**

The authors confirm that the data supporting the findings of this study are available in the article.

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