Int Journal of Social Sciences Management and Entrepreneurship 9(1): 1040-1058 2025

ISSN 2411-7323

www.sagepublishers.com

ELECTRONIC ORDERING AND SUPPLY CHAIN PERFORMANCE OF LARGE RETAIL CHAINS IN KENYA

[1] Mauki Reuben Mwenda, [2] Dr. Odari Sammy, [3] Dr. Ndeto Charles

[1]PhD Student, Jomo Kenyatta University of Agriculture and Technology
[2]Lecturer, Jomo Kenyatta University of Agriculture and Technology
[3]Lecturer, Jomo Kenyatta University of Agriculture and Technology

ABSTRACT

Despite high business turbulence recently witnessed, Retail Chains are one of the crucial retail sectors that contribute in achieving the Vision 2030. At a minimum, the industry is projected to contribute to the achievement of Vision 2030 by 10 % of GDP and 10% of total formal employment. However, based on the trend of performance, there has been a steady decrease in Retail Chains contribution to GDP from 8.0% in 2014 to 4.5% in 2018. In recent past, E-procurement has emerged as a new strategy to improve performance. However, there is no empirical evidence to support its use as a market strategy that can turn the large Chains industry's income in Kenya around with higher results. Hence this study sought to establish the relationship between electronic ordering and supply chain performance in Large Retail Chains in Kenya. The study also sought to establish the moderating effect of top management support on the relationship between electronic ordering and supply chain performance of Large Retail Chains in Kenya. The study was guided by The Dynamic Capability Theory and Power Theory. The study adopted descriptive research design and positivist research paradigm. The study targeted 12 Large Retail Chains in Kenya; they formed the unit of analysis while the unit of observation was heads of procurement department, logistics department, finance department and ICT department. Therefore, the target population for this study was 240 respondents. Census method was used in this study. A total of 24 respondents from Medium size Retail Chains in Kenya participated in the pilot test which represents 10% of target population. The study used research questionnaires to collect primary data. The Statistical Package for Social Sciences (SPSS) version 25 software was used to analyze the data. Qualitative data was analysed using content analysis and presented in prose form. Qualitative data was analysed using descriptive and inferential analysis. Descriptive statistics such as frequency, percentages, and means were used. Pearson correlation coefficient was used for testing strength and direction between the independent and the dependent variables. A multiple regression model was used to test the significance of the relationship between the independent variables and the dependent variable. The findings were presented in Tables and figures. The study concludes that electronic ordering has a positive and significant effect on supply chain performance of Large Retail Chains in Kenya. The study also concluded that top management support has a significant moderating effect on the relationship between electronic ordering and supply chain performance of Large Retail Chains in Kenya. Based on the findings, this study recommends that the management of large retail chains in Kenya should give priority to electronic ordering and top management support.

Key Words: Electronic Ordering, Supply Chain Performance, Top Management Support

Background of the Study

In the world of challenging and competitive business ecosystem, the use of technological tools and services to drive innovation is no longer a minor matter; Rather, a key and necessary for public and private organisations adoption. It is relevant in today's world for businesses to provide clients with a cost-effective overall solution and good clients satisfaction using innovation and new technology. The advent of Information and Communication Technology (ICT), industries were compelled in switching business operations from the old-style to the philosophy of electronic business, electronic procurement and electronic supply chain to ensure sustainability. The private and public sectors have used Information Technology (IT) over the past decade to enhance and improve purchasing and some business processes (Koorn & Mueller, 2019).

In automating the process of supply chain, electronic procurement offers diverse advantages that almost all competitive company have to consider to ensure efficiency. In the 2000s, the Internet has substantially made feasible and supported a key resource for the automation of the purchase process, with the added benefit of improving the processing capabilities of audiovisual aids. Supply chain (SC) practices by themselves will not deliver efficiency; efficiency can only be obtained by combining various supply chain practices. To imply, Dawe (2018) stated that in order to improve the supply chain's performance, extensive efforts should be made to improve all supply chain functions in an organisation, and by focusing on supply chain practices, moving away from a functional and independent system and toward a more enhanced and integrative system that is passed over to system. The result is that the effectiveness of every supply chain practice should be evaluated in terms of how the process impacts the efficient integration of the whole supply chain. Supply chain integration success may be accomplished by combining various supply chain methods and centralized organisational structures in a well-defined manner.

Electronic procurement is an important way of doing business to lower purchase prices and increase process efficiency. Collection management, e-tendering, e-auction, e-information, supplier management, order integration, catalog management, order status, dispatch notification, electronic bill, electronic payment of goods and management of contract constitute e-procurement value chain. Efficient performance of the supply chain is vital to companies to stay in business. This efficiency maybe achieved through ensuring that all actions along the supply chain system, from one end customer to supplier, are properly synchronized and coordinated. When functions like procurement are lagged behind, an important determinant of the company's relationship with suppliers becomes very important. Global purchasing has shifted its focus away from day-to-day sourcing and toward long-term, value-added purchasing and supply chain initiatives. The COVID-19 pandemic crisis is the biggest threat to the global economy since the economic crisis in 2019, electronic procurement has obtained much attention especially with the emergence of new technology. Simultaneously, it is responding to the problems and opportunities of electronic procurement by using the Internet to trade for products and services.

Many improvements have been made on the electronic information side: collecting and distributing purchasing information via internet technology from and to internal and external parties, and using internet powered devices to purchase products and services from a variety of known and unknown vendors has improved sales processes. E-Market-Sites: Creates value chains by extending web-based ERP. According to Jessop, (2006) buying communities may link to suppliers' supply chains and buyers' financial systems to acquire commodities and services from preferred vendors, add shopping carts, make enquiries and receive permissions, accept orders, and process electronic invoicing. E-procurement solutions have arisen during the previous two decades. Despite the technology industry's exponential expansion, we estimate that organisations will only employ around 25% of their solution capacity, partially

owing to a lack of technical expertise or financial resources, but also because solutions are likely misaligned with expanding purchasing demands. Regardless of the listed limitations, electronic procurement has apparent prospective benefits that may be used to make a business case for financial support, increasing usage, or new alternatives investment

The government of Kenya, through the Vision 2030 medium term plan 2013 - 2017, considered retail sector among the six priority sectors projected to make up the largest part of the country's Gross Domestic Product (GDP) and to create approximately fifty (50) per cent of total formal employment. Indeed, the vision 2030 singled out retail sector as one of the economic pillars with potential to improve the prosperity of all Kenyans by achieving a 10 per cent GDP growth rate by the end of 2030. Further, the government expects the retail sector to be a key gateway to the market for goods from the manufacturing sector which is expected to contribute 15 percent of GDP by 2022 from 8.4 percent in 2017 (KAM, 2019). However, a closer look at the recent trends characterizing Kenya's retail sector reveals that the growth rate has been on the decline trajectory as a result of systematic failures of supply chain management (World Economic Situation Prospects [WESP], 2020). For example, the growth rate declined from 8.4 percent in the year 2017 to 3.6 percent in 2016 and by 2019, the growth rate stood at 3.9 percent signifying the inability of the sector to meet the Vision 2030. The decline in growth further led to the closure of a number of giant Retail Chains outlets (e.g Nakumatt, Ukwala, Uchumi, Tuskies) which has affected both the shareholders and the employees, who lose jobs adding to an already growing pool of unemployed in the country (WESP, 2020).

Procurement covers every stage of purchasing, from the initial identification of a requirement, through the tendering process, to the payment and potentially the contract management (Porter & Millar, 2017). According to Croom and Brandon (2018), adoption of e-procurement technology in an organization enables a firm to organize its interactions with its most crucial suppliers, a set of built in monitoring tools to help control costs, assure maximum supplier performance and keeping an open line of communication with potential suppliers during a business process all of which contribute to the attainment and sustenance of competitive advantage. Bryan (2018) argues that there is a direct relationship between performance contracting and corporate performance. This study therefore advances e-procurement practices as a possible solution to supply chain performance gap with ICT infrastructure as a moderating factor in the retail sector in order to align the sector's contributions to the vision 2030.

According to the Kenya Retail Sector Report (2020) themed "E-commerce Shaping the Retail Sector" the Kenyan retail sector's performance dropped slightly with average rental yields declining by 0.3% points to 6.7% in 2020, from 7.0% in 2019, while the occupancy rates declined by 0.7% points to 76.6% in 2020, from 77.3% in 2019. In 2019, the retail sector performance in the Nairobi Metropolitan Area declined by 5.4% and 4.7%, respectively to record rental yields of 8.0% and occupancy rates of 75.1%, respectively (Kenya Retail Sector Report, 2019). In 2020, the retail sector performance recorded a decline of 0.3% and 0.7% points in average rental yields and occupancy rates, respectively, coming in at 6.7% and 76.6%, respectively (Kenya Retail Sector Report, 2020).

Retail Chains contribute immensely to the socio economic wellbeing of a country. Research shows that the potential economic impact of a new Retail is vast (Wisner et al., 2019). The most important is the new Retail Chains' ability to create jobs and income. National data shows that a new Retail Chains can have an employment multiplier effect on the economy. Furthermore, between 50 and 75 percent of directly created jobs are filled locally, helping to pump income into the local community (McConnell, 2019). Thirdly, opening a new Retail Chains has an immediate and significant effect on commercial and residential real estate. Data from the Pennsylvania Fresh Food Financing Initiative indicates that opening a new Retail Chains instantly boosts home values by between four and seven percent. The new Retail Chains

acts as an anchor retailer, attracting smaller Retail Chains and spur economic development (Wisner *et al*., 2019).

Statement of the Problem

In the dynamic and competitive landscape of the retail industry in Kenya, Large Retail Chains face the imperative of optimizing their supply chain performance to meet customer demands efficiently (Bryan, 2018). Research has shown that the supply chain performance of the Kenya retail industry has been on the decline. Juma, (2020) indicates that the Retail Chains industry's dominance structure has shifted dramatically, with the lesser companies of the past being leading players and the biggest actors of yesteryear either extinguished or struggling to stay afloat. For instance, Uchumi has become a shell of its past, shutting down Nakumatt, Ukwala, and Jack and Jill's shops. Several existing dominants have trouble staying afloat, primarily because of overheads (Kitheka and Ondiek, 2020). This has seen a steady decrease in Retail contribution to GDP from 8.0% in 2014 to 4.5% in 2017 (Mburu, & Njeru, 2019). Despite high business turbulence recently witnessed, Retail Chains are one of the crucial retail sector that contributes in achieving the Vision 2030 and the government's Bottom-up Economic Transformation Agenda for socio-economic development. At a minimum, the industry is projected to contribute to the achievement of Vision 2030 and the Government's Big 4 agenda by 10 % of GDP and 10% of total formal employment (GoK, 2020).

According to Croom and Brandon (2018), e-procurement in an organization enables a firm to organize its interactions with its most crucial suppliers, a set of built in monitoring tools to help control costs, assure maximum supplier performance and keeping an open line of communication with potential suppliers during a business process all of which contribute to the attainment and sustenance of competitive advantage. Bryan (2018) argues that there is a direct relationship between e-procurement and organization performance. It is therefore essential to establish the relationship between of e-procurement and supply chain performance of Large Retail Chains in Kenya. Top management supportis essential for the successful implementation of electronic procurement systems. Supportive leadership ensures that the necessary resources, both in terms of finances and human capital, are allocated to facilitate the smooth adoption of electronic procurement practices (Mwiriki, 2017). The retail industry, like many others, often faces resistance to change when implementing new technologies. Top management support can mitigate this resistance by fostering a positive organizational culture that embraces innovation. A supportive management team can communicate the benefits of electronic procurement to employees and address concerns, facilitating a more seamless transition (Wisner *et al*., 2019).

Various studies have been conducted on electronic ordering and organization performance. For instance: Kheng and AlHawandeh (2018) investigated the adoption of electronic ordering in Singapore and presented stumbling blocks to this initiative from the point of view of Singaporean firms; Metoh (2019) did a study on the factors affecting implementation of electronic ordering system in the public sector: a case of National Aids Control Council; Muturi (2020) studies automation of inventory operations on performance of retail firms. Also, E-inventory management systems have been hypothesized to have significant effect on performance of retail firms (Mburu, 2019; Dedeke & Watson, 2018) through reduction of operation costs, effective control of inventories, untying working capital and improvement of customer services (Harshitha, 2018). Nevertheless, none of these studies established the relationship between electronic ordering and supply chain Large Retail Chains in Kenya. To fill the highlighted gaps, the current study sought to the relationship between electronic ordering and supply chain performance of Large Retail Chains in Kenya

Specific Objectives

i. To determine the relationship between electronic ordering and supply chain performance of Large Retail Chains in Kenya.
ii. To assess the moderating effect of top management support on the relationship between electronic ordering and supply chain performance of Large Retail Chains in Kenya.

Theoretical Review

The Dynamic Capability Theory

This theory was developed by Gary Pisano and Amy Shuen, in their 1997 paper "Dynamic Capabilities and Electronic Supply Chain Management". Dynamic capability theory elaborates the organizations ability to deliberately optimize its resources. The ability of a firm to integrate, develop and leverage on the environmental competitive advantage to adapt to its dynamism according to Bagozzi and Lee (2019).

Dynamic capability is a theory of competitive advantage in rapidly changing environments (Boer & Heijboer, 2018). It examines the scope conditions of dynamic capability; that is, when the theory has more and less explanatory power. It finds that dynamic capability has greatest explanatory power when a partially foreseeable technological change is on the verge of transforming market competition such as online vendor evaluation; and less explanatory power when dynamic capabilities are not undervalued and in markets that reward short bursts of performance over long-term persistence, such as electronic catalogues (Hawking & Foster, 2018).

The attractiveness of the dynamic capability concept stems from its' potential to connect the resource-based view of the firm with the emerging knowledge economy aspects such as electronic sourcing, discourse prevalent in contemporary debate. It appears to offer a means of realizing Mahoney's (2005) belief that "economics based research (the management of resources) and research on organizational learning (the resources of management) need to be joined in the next generation of resource-based research." Therefore electronic sourcing is one of the angles that both approaches have a mutual focal point hence its relevance in this study (Wang, Chang & Heng, 2018).

The dynamic capability theory is appropriate for this study because it articulates issues propagating the use of electronic ordering. The theory will therefore be used in examining the influence of electronic ordering supply chain performance of Retail Chains.

Power Theory

The power theory was developed by Dahl (1957). The theory states that, strategic change and strategy-making provides insights into how power is exercised by managers to carry out strategic actions (Hardy, 2016). Jarzabkowski and Balogun (2019) argue that, according to power theory, managers focus on creating strategies by using their power influence and control managers at the middle level to ensure alignment during strategic plan execution. Therefore, the top management at execution level must deal with major aspects, that is, to provide resources and give leadership in the entire process (Burney, 1991). The effective implementation of strategy is triggered by management monitoring of the implementation process and offering a clear direction of the project. The management of the firm should be willing to change and accept the fact that the exercise involves learning at all levels including the upper level management (Okioga, 2012).

Also, effective execution of the strategic plan requires creating some core competencies by using strategies for change management to promote infusion of the strategic plan in the work place; where the attitude of key users is changed through communication (Al-Mashari et al, 2003). The implementation process needs top management support throughout the

organisation, since their approval is important to align the plan with strategic business goals. Therefore, the top-level managers' role in tying management bonuses to the success of the projects is of great importance. This includes allocating necessary people for implementation and providing reasonable time in accomplishing the task (Al-Mashari, *et al,* 2016).

Moreover, managers can enhance commitment with involvement and integration of workers starting from a lower lever (Beer & Eisenstat, 2018). This creates a kind of ownership of the new strategy for which, in return, commitment is increased. That is why other scholars argue that firms need a contributing, capable, competent, effective and executive leader as far as strategy execution is concerned. This also is supported by Cater and Pucko (20170) who argue that, a well-crafted strategy with a strong and effective pool of skills delivered from human resources, positively impacts successful execution of strategies, while poor leadership is considered as one of the key obstacles for execution of strategies in an organisation. Further, poor communication in an organisation has negative effects on a firm's ability to execute and refine its strategy (Beer & Eisenstat, 2017). Therefore, this theory will be applicable in explaining the moderating effect of Top management support on the relationship between electronic procurement and supply chain performance of Large Retail Chains in Kenya.

Conceptual Framework

A conceptual framework is a set of broad ideas and principles taken from relevant fields of enquiry and used to structure a subsequent presentation (Neuman, 2013). Mugenda and Mugenda (2014) define a conceptual framework as hypothesized model identifying the model under study and the relationship between study variables variables. Figure 2.1 presents the hypothesized relationship between the independent variables, the moderating variable and the dependent variable for testing in this study:

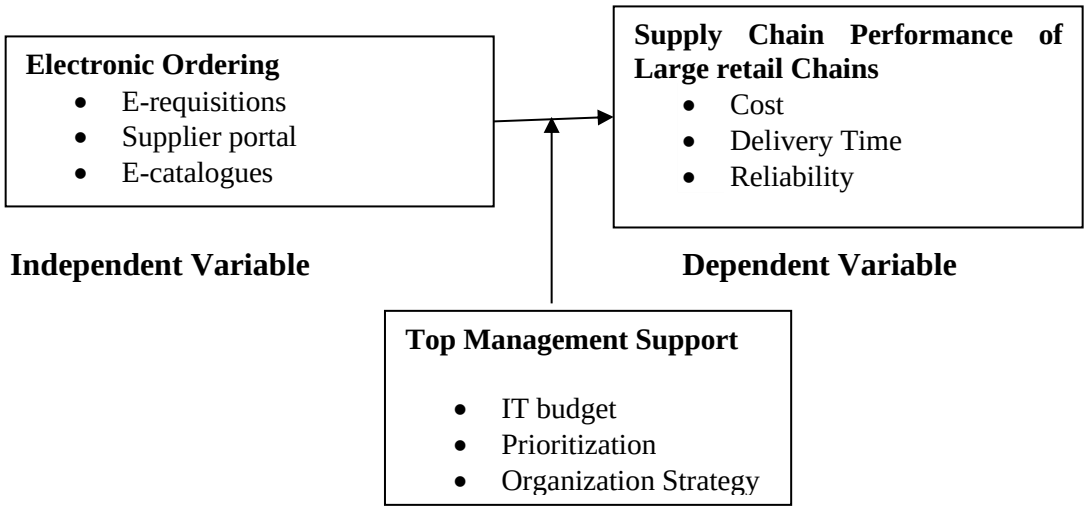

Figure 2.1: Conceptual Framework

Electronic Ordering

Electronic Ordering refers to the process of placing orders for goods or services via digital platforms, such as e-commerce websites, mobile apps, or specialized online systems. This method allows consumers or businesses to select products or services, specify quantities, and provide payment information without the need for physical interaction or paper-based processes (Flynn *et al,* 2019). E-requisitions refer to the digital process of requesting goods or services within an organization, typically using an online platform or software system. In traditional procurement, requisitions are paper-based forms or emails that employees submit to request materials or services (Croom *et al,* 2017). However, e-requisitions streamline this

process by allowing users to submit requests electronically, often through integrated procurement software. This process ensures that requests are captured in real-time, automatically routed to the appropriate approval authority, and tracked for compliance (Bottani *et al*, 2019).

A supplier portal is a secure online platform where businesses can interact with their suppliers to place orders, track shipments, manage payments, and collaborate on various aspects of the supply chain. These portals facilitate seamless communication between buyers and suppliers, making it easier to monitor orders, exchange important documents (such as invoices and contracts), and update procurement requirements in real time (Flynn *et al*, 2019). Supplier portals are often part of larger enterprise resource planning (ERP) or procurement systems, which integrate procurement functions with financial and inventory management. These portals allow suppliers to receive and acknowledge purchase orders, submit shipping updates, and access payment history, providing them with greater visibility into the buying organization's needs and timelines (Eadie*et al*, 2017). E-catalogues are digital versions of product or service catalogs that businesses or suppliers use to showcase their offerings in an electronic format. These catalogs can be hosted on websites or supplier portals, where buyers can browse and search for items they wish to purchase (Bottani *et al*, 2019). E-catalogues provide detailed product descriptions, pricing information, images, specifications, and availability, and are often integrated with procurement systems or e-commerce platforms to facilitate ordering. The key advantage of e-catalogues over traditional paper catalogs is their interactivity and real-time updates, which ensure that customers have access to the most current information regarding pricing and stock levels (Oteki, *et al*, 2018).

Top Management Support

Top Management Support refers to the active involvement, commitment, and endorsement of an organization's senior leaders in the implementation and success of strategic initiatives, projects, or organizational changes. This support is crucial for driving the direction and ensuring the alignment of resources, policies, and goals with the broader vision of the organization (Salum, 2017). It involves both tangible actions, such as providing the necessary financial and human resources, and intangible actions, such as fostering a culture that encourages innovation and change. An IT budget is a financial plan that outlines the expenses associated with an organization's information technology needs. It encompasses a wide range of costs, including hardware, software, infrastructure, cybersecurity, cloud services, personnel, and ongoing maintenance (Thompson, Strickland & Gamble, 2017).

Prioritization in the context of organizational strategy and resource allocation refers to the process of determining which projects, initiatives, or tasks should take precedence over others based on factors such as urgency, impact, cost, and alignment with strategic goals (Abok, 2018). Effective prioritization ensures that limited resources—such as time, money, and personnel—are directed toward the most critical objectives, thereby maximizing organizational efficiency and success. In the IT realm, prioritization is especially important given the rapid pace of technological advancements and the constant demand for updates and upgrades (Iqbal *et al*, 2015). For example, an organization might prioritize cybersecurity initiatives over the deployment of new software systems if security is deemed the most urgent concern. Prioritization is typically influenced by both internal factors, such as resource availability, and external factors, like market conditions or regulatory requirements. By clearly establishing priorities, organizations can reduce confusion, prevent wasted effort, and make more strategic, informed decisions (Salum, 2017).

Supply Chain Performance

Supply Chain Performance refers to the ability of a supply chain to meet its objectives effectively and efficiently. It encompasses a range of metrics and indicators that assess how well a supply chain is functioning in terms of cost, speed, quality, flexibility, and customer

satisfaction (Gioconda, 2018). The performance of a supply chain is influenced by various factors, including supplier relationships, inventory management, logistics, demand forecasting, and the overall coordination among different entities within the chain—from raw material suppliers to end customers (Croom & Brandon-Jones, 2017). Cost is one of the most critical factors in evaluating the performance of a supply chain. It encompasses all expenses associated with the procurement, production, and delivery of goods and services, including raw materials, labor, transportation, warehousing, inventory holding, and overhead costs. Managing costs effectively is crucial for maintaining profitability, as supply chain expenses can significantly impact the bottom line (Dooley, 2018).

Delivery time refers to the period it takes for a product or service to be delivered to the customer, from the moment an order is placed to when the goods arrive at their destination. This metric is a key indicator of supply chain efficiency and customer satisfaction. Reducing delivery time can give companies a competitive edge by improving responsiveness to customer needs and enhancing overall service levels (Maina, 2017). Companies can shorten delivery times through better forecasting, improved inventory management, streamlined production processes, or faster logistics networks. However, faster delivery often involves higher transportation costs or the need for more advanced supply chain technology (Kamotho, 2018). The challenge is to balance the desire for speed with the associated costs, while maintaining the ability to meet customer expectations for on-time delivery. In industries such as e-commerce, where customers often expect next-day or even same-day delivery, optimizing delivery time is increasingly vital for retaining customer loyalty and competing in the market (Amayi, 2017). Reliability in the context of supply chain performance refers to the consistency and dependability of the entire supply chain in meeting expectations, particularly in terms of product quality, availability, and on-time delivery. A reliable supply chain minimizes disruptions and uncertainties, ensuring that products are delivered as promised without errors, defects, or delays (Gioconda, 2018). Reliability is often measured by the accuracy of order fulfillment, the consistency of product quality, and the ability to deliver on time. A supply chain that is reliable builds trust with customers, strengthens vendor relationships, and reduces the risks associated with stockouts or overstocking. It also fosters a strong reputation in the marketplace, which is essential for long-term business success (Croom & Brandon-Jones, 2017).

Empirical Review

Electronic Ordering and Supply Chain Performance

Flynn *et al.,* (2019) scrutinized the e-procurement adoption at the municipal level in Germany and adopted a descriptive research design. Findings revealed that perceptions of risks and benefits are the strongest determinants of e-procurement adoption. Further, the study found the following benefits as a result of e-procurement adoption leading to procurement performance: enhanced customer service level, procurement policy and procurement cycle-time and investment cost reduction. The study was done in Germany, thus presents a contextual gap.

Eadie*et al.,* (2017) explored the factors affecting the uptake of application of e-ordering within the UK publics sector and adopted a cross sectional research design. The findings revealed that in order to enhance procurement performance yielding efficiency in resource utilization, reduction in procurement lead-time, policy compliance and enhanced service delivery among public entities; there is need for thorough understanding agency's procurement landscape; the impact (both negative and positive) of public policy on adoption; the impact of enhanced organizational standing and the need for clear vision and leadership from senior stakeholders; and finally, the need for a comprehensive definition of e-procurement to ensure that organizations pursue a holistic approach to its adoption.

Croom *et al.,*(2017) investigated procurement processes and performance with the aims of identifying financial and non-financial measures that can contribute to improved performance

of the procurement function. The study employed a descriptive research design. The findings revealed that other than financial measures (which include: cost reduction and streamlined procurement processes leading to savings), non-financial measures (which include: reduced lead-time, enhanced procurement policy compliance and customer service level) also contribute significantly in enhancing procurement performance. However, the study did not focus on Retail Chains .

Bottani *et al.,* (2019) examined the effect of e-ordering on customer satisfaction and adopted a descriptive research design. It was revealed that whatever the effects of e-procurement on the procurement department will inevitably affect other departments because they rely on procurement to bring in materials at the right time, price, quality, quantity and from the right source which are used to produce goods for the end customer. Thus they opined that e-procurement contributes immensely to both internal and external customer satisfaction. However, the study did not focus on Retail Chains in Kenya.

Oteki, Namusonge, Sakwa, and Ngeno, (2018) studied the influence of electronic order processing on supply chain performance of sugar processing firms in Kenya. The study was guided by specific objective, to establish the influence of electronic order processing practice on supply chain performance. Mixed research design was applied and the target population comprised of 12 sugar processing firms in Kenya with a target population of 7,584. Stratified random sampling was applied to come up with a sample size of 367. Data was gathered by a self-administered drop and pick questionnaire, interviews and observation. The results reveal that there is significant relationship between electronic order processing practice and supply chain performance. The study concludes that electronic order processing practice enhances supply chain performance. The study recommends that Sugar firms in Kenya need to incorporate all the electronic order processing practices into the system to enable improve their supply chain performance.

Top management support and Supply Chain Performance

In Tanzania, Salum (2017) conducted a study on the influence of top management and organization resources on implementation of strategic plans in public sector. The study used simple random sampling to select five (5) agencies; and convenient sampling to obtain fifty (50) respondents. Primary data were collected using questionnaires; then were analysed using of SPSS and Excel spread sheet; while documentary review was used to collect secondary data. The study found that, top management influence implementation of strategic plans as average of 68% of respondents agreed on the supports received from top management during implementation process; and average of 67% of respondents agreed that, resources such as human and financial are very key in the implantation process of strategic plans in public sector. Therefore, top management and organisation resources positively influence implementation of strategic plans in the public sector with purpose improving quality service delivery

Thompson, Strickland & Gamble, (2017) points out that, an excellent strategy is the best test for managerial excellence and the most reliable recipe for organisation success. Awino (2017) studied the effect of selected variables on corporate performance using 49 large private insurance firms in Kenya. His findings revealed that, culture and management were very critical variables in firms' performance; and concluded that, among the selected variables, both financial and non-financial performance were affected to varying degree.

Abok, (2018) conducted a study on the factors affecting the implementation of strategic plans in Non-Governmental Organisations (NGOs). This study concluded that, organisations which provided a conductive environment were effective in incorporating culture that encouraged togetherness, team spirit, and willingness to share and execute goals of organisation. On the other hand, Mintzberg (2016) affirmed that, a successful execution of strategic plans is dependent on the learning and development environment for employees who are the true foot soldiers of implementations. This learning orientations requires emphasis on openness,

collaborations, trust, equity, risk taking and continuous improvement. Also, Guth and McMillan (2016) revealed that, middle level manager's participation enhances successful strategy execution, and hence, managerial involvement is essential for organisations to attain the execution of planned strategies.

Iqbal *et al* (2015) conducted a study on moderating effect of top Top management supporton relationship between transformational leadership and project Success. The study covers a total of 125 project managers selected through systematic sampling technique by using mail survey method. PLS-SEM has been utilized to analyze the study data. The study concludes that project success can be enhanced through unfolding the relationships between project managers' transformational leadership and top management support. The study is pioneer to discuss these relationships particularly in a developing country. However, the study findings only rely on the higher education sector of Pakistan.

RESEARCH METHODOLOGY

Research Design

For this study, descriptive research design was utilized to investigate and additionally clarify existing status of affairs pertaining the objectives of a research. The major purpose of descriptive research design is to describe the state of affairs as it is at the time, and as Cooper & Schindler (2018) observe, a descriptive research design is a process of collecting data in order to answer questions concerning the current status of the subjects in the study in their natural set up, as they occur.

This study adopted a positivist research paradigm. Cooper and Schindler (2017) asserts that positivist research paradigm takes the quantitative approach and is based on real facts, objectivity, neutrality, measurement and validity of results. The roots of positivism lie particularly with empiricism, that is, all factual knowledge is based on positive information gained from observable experiences, and only analytic statements are allowed to known as true through reason alone.

Target Population of the Study

In this study, the target population was Large Retail Chains in Kenya. Large Retail chains typically refer to retail businesses that operate multiple stores across a region, country, or even internationally. Large Retail chains leverage economies of scale to negotiate better deals with suppliers, providing consumers with competitive prices. In Kenya, 12 Retail Chains qualify to be in the category of large Retails. These include; Chandarana Retails, Eastmatt Retails, Carrefour Retail, Khetias Retails, Magunas Retails, Shivling Retails, Cleanshelf Retail, Woolmatt Retails, Jumaa Retails, Maathai Retails, Quick Mart Limited and Naivas Limited (KAM,2023). The large Retail chains formed the unit of analysis while the unit of observation was senior employees working in 4 departments including procurement department, logistics department, finance department, and ICT department. These employees included; (the head of department, assistant head, secretary and 2 lower management employees). Therefore, the target population for this study was 240 respondents as shown in Table 3.1.

Table 3.1: Unit of Observation

Category	Total population
Procurement Department	60
Logistics Department	60
Finance Department	60
ICT Department	60
Total	**240**

The Census Method is commonly used in situations where the population size is relatively small or when resources allow for the collection of data from the entire population. This study used census method hence all the 240 respondents participated in the study.

Data Collection Instrument

Semi-structured questionnaires were structured into sections 1-5. Section one collected general information regarding the Retail Chains , while sections 2-4 collected information relevant to various study independent variables while section five targets information on Performance. The primary data was collected using a self-administered semi-structured questionnaire (Appendix II). The questionnaire contains both open and close ended questions based on the study objectives. According to Mugenda and Mugenda (2019), a questionnaire is appropriate for data collection from a large number of respondents as it helps to save on time spent in data collection. The researcher used semi-structured questionnaire as the primary data collection instrument for this study due to its practicability and applicability to the research problem and the size of the population. It is also cost effective (Denscombe, 2018).

Data Analysis and Presentation

The objectives of the study guided data analysis. SPSS was used to analyze the data collected from the field. To allow data to be entered into the software, the questionnaires were referenced, and the data coded. Both quantitative and qualitative data were collected. Quantitative data collected was analyzed using descriptive statistics techniques. Through descriptive analyses, correlational as well as experimental studies emerge; and they provide clues on the issues that require more attention which leads to further research (Mugenda & Mugenda, 2008). Qualitative data was analyzed using content analysis which was performed in SPSS. Before the data is analyzed, it was first coded, cleaned, and grouped as per their variables.

Pearson R correlation was used to measure strength and the direction of linear relationship between variables. The information was provide initial achievement of objectives 1, 2, 3 and 4 supply chain automation (electronic ordering) and influence on supply chain performance of Retail Chains. A large correlation implies a strong relation exists between the variables.

Regression models were fitted to the data to determine how the predictor/independent variables affect the response/dependent variable. Multiple regression analysis was used in this study because it uses the predictor variables in predicting the response variable. It is a statistical tool attempting to establish whether some variables can be used together in predicting a particular variable (Mugenda & Mugenda, 2018).

$$\mathbf{Y = \beta_0 + \beta_1 X_1 + \varepsilon}$$

This study used multiple regressions analysis (stepwise method) to establish the moderating effect of Top management support(Z) on the relationship between electronic ordering and supply chain performance of Large Retail Chains in Kenya. The regression model for the moderating effect was as follows;

$$\mathbf{Y = \beta_0 + \beta_1 X_1 + \beta izXiZ + \varepsilon, (i=1,)}$$

X_iZ_i is the interaction between the moderator with each of the independent variables (X_1).

BZi is the coefficient of X*Z the interaction term between the moderator and each of the independent variables for i = 1,;

β_0 is constant (Y- intercept) which represent the value of Y when X =0

PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

Descriptive Statistics Analysis

In this section, the study presents the finding on the specific objectives of the study. On the likert scale questions, the scale was 5 with 1 Strongly Disagree, 2 Disagree, 3 Moderate, 4

Agree and 5 Strongly agree. Means and standard deviations were used to interpret the results with a mean of 0-1.4 implied that the respondents strongly disagreed, a mean of 1.4-2.4 implied they disagreed, 2.5-3.4 suggest that they were neutral, a mean of 3.5-4.4 suggest they agreed, and a mean of 4.5-5 implies the respondents strongly agreed (Trochim, 2016).

Electronic Ordering and Supply Chain Performance

The first specific objective of the study was to determine the relationship between electronic ordering and supply chain performance of Large Retail Chains in Kenya. The respondents were requested to indicate their level of agreement on the statements relating to electronic ordering and supply chain performance of Large Retail Chains in Kenya. The results were as shown in Table 4.1

From the results, the respondents agreed that electronic requisitioning greatly reduces delivery time (M-3.902, SD= 0.897). In addition, the respondents agreed that supplier portals greatly reduces delivery time (M=3.884, SD= 0.731). Further, the respondents agreed that electronic catalogues reduces delivery time (M=3.843, SD= 0.763). The respondents also agreed that electronic requisitioning greatly influences customer satisfaction (M=3.816, SD=0.641). In addition, the respondents agreed that supplier portals greatly influence customer satisfaction (M=3.736, SD= 0.675). The respondents agreed that electronic catalogues greatly influences customer satisfaction (M=3.721, SD=0.866). The respondents also agreed that electronic requisitioning greatly reduces costs (M=3.688, SD=0.741). In addition, the respondents agreed that supplier portals greatly reduce costs (M=3.644, SD=0.888). Further, the respondents agreed that electronic catalogues greatly reduces costs (M=3.638, SD=0.576).

The standard deviations in these results indicate the degree of agreement and variability among respondents regarding the impact of electronic procurement tools on delivery time, customer satisfaction, and cost reduction. Lower standard deviations, such as for the influence of electronic requisitioning on customer satisfaction (SD=0.641) and the reduction in costs from electronic catalogues (SD=0.576), reflect a strong consensus, suggesting these benefits are consistently recognized across the organization. Moderate standard deviations, like those for the impact of supplier portals on customer satisfaction (SD=0.675) and electronic requisitioning on cost reduction (SD=0.741), indicate general agreement with some variability, implying that experiences and perceptions are mostly aligned but with slight differences. Higher standard deviations, such as for the impact of supplier portals on cost reduction (SD=0.888) and electronic catalogues on customer satisfaction (SD=0.866), reveal more diverse opinions, suggesting that the implementation or effectiveness of these tools might vary across different contexts within the organization.

Table 4. 1: Electronic Ordering and Supply Chain Performance

	Mean	**Std. Deviation**
Electronic requisitioning greatly reduces delivery time	3.902	0.897
Supplier portals greatly reduces delivery time	3.884	0.731
Electronic catalogues reduces delivery time	3.843	0.763
Electronic requisitioning greatly influences customer satisfaction	3.816	0.641
Supplier portals greatly influence customer satisfaction	3.736	0.675
Electronic catalogues greatly influences customer satisfaction	3.721	0.866
Electronic requisitioning greatly reduces costs	3.688	0.741
Supplier portals greatly reduce costs	3.644	0.888
Electronic catalogues greatly reduces costs	3.638	0.576
Aggregate	**3.764**	**0.753**

The respondents were further requested to indicate the challenges and possible solutions to Electronic Ordering and Supply Chain Performance. From the results, the respondents indicated that integrating various electronic ordering systems used across different departments and suppliers is a significant challenge. Different vendors and partners may use disparate systems that do not communicate seamlessly with each other. This can lead to data inconsistencies, delayed order processing, and increased manual intervention to ensure data integrity across systems. In addition, the respondents indicated that maintaining accurate and up-to-date data is critical for efficient electronic ordering. Inaccuracies in product codes, quantities, pricing, and inventory levels can lead to incorrect orders, stockouts, and overstock situations. This not only affects inventory management but also leads to customer dissatisfaction due to delays and errors in order fulfillment. Further, the respondents indicated that ensuring that all employees are proficient in using electronic ordering systems can be challenging. Resistance to change, varying levels of technological literacy, and inadequate training can hinder the effective use of these systems. This can result in errors during order placement, delays in processing, and overall inefficiencies in the supply chain.

In relation to possible solutions to electronic ordering challenges, the respondents indicated that to address system integration and compatibility issues, invest in integrated supply chain management software that allows seamless communication between different systems. Using standardized data formats and APIs can facilitate smoother data exchange. Regular system audits and updates can ensure ongoing compatibility and efficiency. Further, the respondents indicated that the firms should implement strict data validation and verification processes to maintain data accuracy. Automated data entry systems, such as barcode scanners and RFID technology, can reduce human errors. Regular employee training on the importance of accurate data entry and periodic data audits can further ensure reliability. The respondents also indicated that the retail firms should develop comprehensive training programs for all employees involved in the electronic ordering process. These programs should cover system usage, troubleshooting common issues, and best practices for data entry. Continuous training and support can improve user proficiency and confidence, leading to higher adoption rates and fewer errors.

Top Management Support and Supply Chain Performance

The second specific objective of the study was to assess the moderating effect of top management support on the relationship between e-communication, e-ordering, e-contracting, e-payment and supply chain performance of Large Retail Chains in Kenya. The respondents were requested to indicate their level of agreement on various statements relating to management support on the relationship between e-communication, e-ordering, e-contracting, e-payment and supply chain performance of Large Retail Chains in Kenya. The results were as presented in Table 4.2.

From the results, the respondents agreed that top management actively supports supply chain initiatives within their organization (M=3.885, SD= 0.887). In addition, the respondents agreed that there is a clear commitment from top management to invest in supply chain improvements (M=3.808, SD= 0.745). The respondents also agreed that top management regularly communicates the importance of supply chain performance to all employees (M=3.787, SD= 0.623). Further, the respondents agreed that adequate resources (financial, human, technological) are allocated by top management to enhance supply chain operations (M=3.720, SD= 0.768). The respondents agreed that top management encourages innovation and continuous improvement in supply chain processes (M=3.719, SD=0.756). The respondents also agreed that there is strong alignment between top management's strategic goals and supply chain objectives (M=3.704, SD=0.567). In addition, the respondents agreed that top management participates in setting and reviewing supply chain performance metrics (M=3.687, SD=0.897). Further, the respondents agreed that top management provides the necessary

training and development programs for supply chain staff (M=3.679, SD=0.664). The respondents agreed that decisions made by top management consider their impact on supply chain performance (M=3.664, SD=0.756).

The standard deviations in the responses reveal the level of consensus among respondents regarding top management's support for supply chain initiatives. Lower standard deviations, such as for the alignment between top management's strategic goals and supply chain objectives (SD=0.567) and the regular communication of supply chain performance importance (SD=0.623), indicate a strong consensus, suggesting that these aspects are consistently experienced and perceived across the organization. Moderate standard deviations, like for the allocation of adequate resources (SD=0.768) and encouragement of innovation (SD=0.756), point to a general agreement but with some variability, indicating that while many respondents recognize these supports, their experiences may vary slightly. Higher standard deviations, such as for top management's participation in setting and reviewing supply chain performance metrics (SD=0.897) and active support for supply chain initiatives (SD=0.887), suggest more diverse opinions, reflecting differences in individual perceptions or experiences, potentially due to varying levels of visibility or engagement with top management across different areas of the organization.

Table 4. 2: Management Support and Supply Chain Performance

Statement	Mean	Std. Dev.
Top management actively supports supply chain initiatives within our organization.	3.885	0.887
There is a clear commitment from top management to invest in supply chain improvements.	3.808	0.745
Top management regularly communicates the importance of supply chain performance to all employees.	3.787	0.623
Adequate resources (financial, human, technological) are allocated by top management to enhance supply chain operations.	3.720	0.768
Top management encourages innovation and continuous improvement in supply chain processes.	3.719	0.756
There is strong alignment between top management's strategic goals and supply chain objectives.	3.704	0.567
Top management participates in setting and reviewing supply chain performance metrics.	3.687	0.897
Top management provides the necessary training and development programs for supply chain staff.	3.679	0.664
Decisions made by top management consider their impact on supply chain performance.	3.664	0.756
Aggregate	**3.739**	**0.740**

Test for Hypothesis One

The first objective of the study was to determine the relationship between electronic ordering and supply chain performance of Large Retail Chains in Kenya. The corresponding hypothesis was:

Ho_1: Electronic ordering has no significant relationship with supply chain performance of Large Retail Chains in Kenya.

A univariate analysis was therefore conducted to test the null hypothesis. From the model summary findings in Table 4.3, the r-squared for the relationship between Electronic ordering and supply chain performance was 0.269; this is an indication that at 95% confidence interval, 26.9% variation in supply chain performance can be attributed to changes in Electronic

ordering. Therefore, Electronic ordering can be used to explain 26.9% change in supply chain performance. However, the remaining 73.1% variation in supply chain performance suggests that there are other factors other than Electronic ordering that explain supply chain performance of ministry of Large Retail Chains in Kenya.

Table 4.3: Model Summary for Electronic ordering

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.519[a]	.269	.267	.68365

a. Predictors: (Constant), Electronic ordering

The analysis of variance was used to determine whether the regression model is a good fit for the data. From the analysis of variance (ANOVA) findings in Table 4.4, the study found out that that Prob>$F_{1,218}$= 0.000 was less than the selected 0.05 level of significance. This suggests that the model as constituted was fit to predict supply chain performance. Further, the F-calculated, from the table (469.35) was greater than the F-critical, from f-distribution tables (3.884) supporting the findings that Electronic ordering can be used to predict supply chain performance of Large Retail Chains in Kenya.

Table 4.4: ANOVA for Electronic ordering

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	51.159	1	51.159	469.35	.000[b]
	Residual	23.817	218	0.109		
	Total	74.976	219			

a. Dependent Variable: supply chain performance

b. Predictors: (Constant), Electronic ordering

From the results in table 4.5, the following regression model was fitted.

$$Y = 1.792 + 0.497 X_2$$

(X_2 is Electronic ordering)

The coefficient results showed that the constant had a coefficient of 1.792 suggesting that if Electronic ordering was held constant at zero, supply chain performance would be at 1.792 units. In addition, results showed that Electronic ordering coefficient was 0.497 indicating that a unit increase in Electronic ordering would result in a 0.497 increase in supply chain performance. It was also noted that the P-value for Electronic ordering coefficient was 0.000 which is less than the set 0.05 significance level indicating that Electronic ordering was significant. Based on these results, the study rejected the null hypothesis and accepted the alternative that Electronic ordering has negative significant influence supply chain performance of Large Retail Chains in Kenya.

Table 4.5: Beta Coefficients for Electronic ordering

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.792	.188		9.523	.000
	Electronic ordering	.479	.046	.519	10.462	.000

a. Dependent Variable: supply chain performance

Test for Hypothesis Two

The second objective of the study was to assess the moderating effect of top management support on the relationship between electronic ordering and supply chain performance of Large Retail Chains in Kenya. Moderation happens when the relationship between the dependent

variable and the independent variables is dependent on a third variable (moderating variable). The effect that this variable has is termed as interaction as it affects the direction or strength of the relationship between the dependent and independent variable. To achieve the fifth research objective, the study computed moderating effect regression analysis. This (moderating effect regression analysis) also guided the study in testing the fifth research hypothesis. Top management support (M) was introduced as the moderating variable.

Ho_2: Top management support has no moderating effect on the relationship between e-ordering and supply chain performance of Large Retail Chains in Kenya.

The model for the moderating effect was:

$Y=\beta 0+ \beta 1X1*Z+ + \varepsilon$

Where Z is the moderator (Top management support), X1 is the independent variable

From the model summary findings in Table 4.6, the first model for which is the regression between supply chain performance of Large Retail Chains in Kenya (X) without moderator, Top management support (M) and interaction, the value of R-squared was 0.336 which suggests that 33.6% change in supply chain performance of Large Retail Chains in Kenya can be explained by changes in electronic ordering. The p-value for the first model (0.000) was less than the selected level of significance (0.05) suggesting that the model was significant. The findings in the second model which constituted components of e-ordering, Top management support and supply chain performance of Large Retail Chains in Kenya (X*M) as predictors, the r-squared was 0.568. This implies that the introduction of Top management support in the second model led to a 0.232 increase in r-squared, showing that Top management support positively moderates supply chain performance of Large Retail Chains in Kenya.

Table 4.6: Model Summary for Moderation Effect

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.580[a]	.336	.334	.65170	.336	150.295	1	184	.000
2	.754[b]	.568	.564	.52727	.232	79.360	3	183	.000

a. Predictors: (Constant), supply chain security management

b. Predictors: (Constant), E-Ordering, top management support, Interaction (X*M)

From the model summary findings in Table 4.7, the F-calculated for the first model, was 644.77 and for the second model was 571.21 Since the F-calculated for the two models were more than the F-critical, 3.884 (first model) and 2.646 (second model), the two models were good fit for the data and hence they could be used in predicting the moderating effect of top management support on the supply chain performance of large retail chains in Kenya.

Table 4.7: ANOVA for Moderation Effect

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	63.832	1	63.832	644.77	.000[b]
	Residual	21.675	218	0.099		
	Total	85.507	219			
2	Regression	107.958	3	35.986	571.21	.000[c]
	Residual	13.622	216	0.063		
	Total	121.58	219			

a. Dependent Variable: supply chain performance

b. Predictors: (Constant), electronic ordering * Top management support,

Further, by substituting the beta values as well as the constant term from the coefficient's findings for the first step regression modelling, the following regression model will be fitted:

$Y = 1.387 + 0.608 X$

Where X is Electronic ordering

The findings show that when electronic ordering is held to a constant zero, supply chain performance of Large Retail Chains in Kenya will be at a constant value of 1.387. The findings also show that electronic ordering has a statistically significant effect on supply chain performance of Large Retail Chains in Kenya as shown by a regression coefficient of 0.608 (p-value= .000).

By substituting the beta values as well as the constant term from model 2 emanating from the second step in regression modeling the following regression model was fitted:

$Y= 3.876 + 0.220 X + 0.325 M + 0.283 X*M$

Where X is electronic ordering; M is top management support and X*M is the interaction term between electronic ordering and top management support.

The findings show that when electronic ordering, top management support, interaction (X*M) are held to a constant zero, supply chain performance of Large Retail Chains in Kenya will be at a constant value of 3.876. The model also indicated that electronic ordering had a positive and statistically significant effect on supply chain performance of Large Retail Chains in Kenya as shown by a regression coefficient of 0.220 (p-value= 0.002). It is also seen that top management support had a positive and significant effect on supply chain performance of Large Retail Chains in Kenya as shown by a regression coefficient 0.325. On the other hand, interaction of electronic ordering and top management support (X*M) also had a positive and significant effect on supply chain performance of Large Retail Chains in Kenya as shown by a regression coefficient of 0.283 (p-value= 0.000).

It is therefore seen that electronic ordering on its own has 22% effect on supply chain performance of Large Retail Chains in Kenya. However, when interacted with top management support, it has an effect of 28.3%. This is a clear indication that introduction of top management support as moderating variable has positive influence on supply chain performance of Large Retail Chains in Kenya. The study therefore rejects the null hypothesis and accepts the alternative that top management support has significant moderating effect on the relationship between electronic ordering and supply chain performance of Large Retail Chains in Kenya.

Table 4.8: Beta Coefficients for Moderation Effect

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.387	.194		7.163	.000
	electronic ordering	.608	.050	.580	12.260	.000
2	(Constant)	3.876	1.009		3.841	.000
	electronic ordering	.220	.067	.782	3.284	.002
	Top management support	.325	.048	.310	6.748	.000
	Interaction (X*M)	.283	.065	1.661	4.357	.000

a. Dependent Variable: supply chain performance

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Electronic Ordering

The first null hypothesis test was 'Electronic Ordering has no significant influence on supply chain performance of Large Retail Chains in Kenya. The study found that electronic Ordering is statistically significant in explaining supply chain performance of Large Retail Chains in Kenya. The influence was found to be positive. The study concludes that electronic ordering

has a positive and significant effect on supply chain performance of Large Retail Chains in Kenya. Findings revealed that e-requisitions, supplier portals and e-catalogues influences supply chain performance of Large Retail Chains in Kenya. This implies that a unit improvement in electronic ordering would lead to improvement in supply chain performance of Large Retail Chains in Kenya

Top Management Support

The second null hypothesis test was 'Top management support has no significant moderating effect on the relationship between electronic ordering and supply chain performance of Large Retail Chains in Kenya. The study found that Top management support has a significant moderating effect on the relationship between e-procurement and supply chain performance of Large Retail Chains in Kenya. The influence was found to be positive. The study concluded Top management support has a significant moderating effect on the relationship between electronic ordering and supply chain performance of Large Retail Chains in Kenya. Findings revealed that IT budget, prioritization and organization strategy influences supply chain performance of Large Retail Chains in Kenya. This implies that a unit improvement in top management support would lead to improvement in supply chain performance of Large Retail Chains in Kenya

Recommendations

The study found that electronic ordering has a positive and significant effect on supply chain performance of Large Retail Chains in Kenya. This study therefore recommends that large retail chains in Kenya should adopt advanced electronic ordering systems that incorporate real-time inventory management to optimize their supply chain performance

Further, the study found that top management support has a positive and significant effect on supply chain performance of Large Retail Chains in Kenya. This study therefore recommends that large retail chains in Kenya should actively foster strong top management support for their digital transformation initiatives

REFERENCES

Alhammadi, A.A.; Tariq, M.U. (2020). The Impact of Quality E-payment System on Customer Satisfaction. *J. Crit. Rev, 7* (2), 5438–5447

Boer, L., Harink, J. & Heijboer, G., (2017). A model for assessing the impact of electronic procurement forms. *European Journal of Purchasing & Supply Management, 8*(1), 8–11

Centobelli, P & Cerchione, R. (2018). E-procurement and E-supply Chain: Features and Development of E-collaboration. *International Conference on Future Software Engineering and Multimedia Engineering, 7*(7), 32-46

Chirchir, E. (2017). Relationship between E-procurement Adoption and Partnership Practice in Tea Firms, *The International Journal of Business and Management, 8* (2), 322-344.

Chopra, S, Meindl, P, & Kalra, D. (2019). *Supply chain management*. Noida: Pearson Education.

Croom, S. (2020). 'The Impact of Web-Based Procurement on the Management of Operating Resources Supply' *The Journal of Supply Chain Management*. Winter, 3(1), 4-13

Fernandes, T. & Vieira, V. (2017). 'Public e-procurement impacts in small- and medium-enterprises', *Int. J. Procurement Management, 8*(5), 587–607.

Hawking, P., Stein, A., Wyld, D. C., & Foster, S. (2004). E-procurement: is the ugly duckling actually a swan down under? *Asia Pacific Journal of Marketing and Logistics, 16(1), 3-26.*

Ho, A.T.K. (2018). Reinventing Local Governments and the e-Government Initiatives, *Public Administration Review, 6*(2), 424-433.

Kamel, S. (2018). ICT4D –Case of the information society in Africa. A proposed article was submitted for review for possible publication. Encyclopedia of Information science and Technology Kenya". *International Journal of Human Resource and Procurement,* 4(4), 13–25.

Kamel, S. (2018). *Sherif Kamel, ICT4D – Case of the Information Society in Africa. a proposed article submitted for review for possible publication*. Encyclopedia of Information Science and Technology

Kauffman, J., & Kriebel, A. (2018). "Where we're going, Electronic procurement, 12, 27-33.

Kemei, D., Oboko, R., & Kidombo, H. (2018). The influence of top management support on the relationship between project manager leadership competencies and ERP system project performance. *International Academic Journal of Innovation, Leadership and Entrepreneurship*, *2*(2), 195-210.

Kheng, C.B. & Al-Hawandeh, S. (2018), "The adoption of electronic procurement in Singapore*", Electronic Commerce Research*, 2(3), 61-73.

Kheng, C.B., Al-Hawamdeh, S. (2002). The Adoption of Electronic Procurement in Singapore. *Electronic Commerce Research* 2, 61–73 (2002). https://doi.org/10.1023/A:1013388018056

Kilay, A.L.; Simamora, B.H.; Putra, D.P. (2022). The Influence of E-Payment and E-Commerce Services on Supply Chain Performance: Implications of Open Innovation and Solutions for the Digitalization of Micro, Small, and Medium Enterprises (MSMEs) in Indonesia. *J. Open Innov. Technol. Mark. Complex.*, 8, 119. https://doi.org/ 10.3390/joitmc8030119

Kitheka S. S. & Ondiek G. O. (2017). "Inventory Management Automation and the Performance of Retail Chains in Western Kenya*", International Journal of Research in Management & Business Studies*, *1*(4), 9–18, 2017.

Lear-Olimpi, M., (1999). Get in step for the future. *Warehousing Management*, *6*, 15.

Lee, R., (2018). Towards open electronic contracting, *EM – Electronic Markets*. 8(3), 3-8.

Margaret Rouse. (2017). *Cloud computing*. Retrieved from http://searchcloudcomputing.techtarget.com/definition/cloud-computing:

Marinagi, Catherine & Trivellas, Panagiotis & Sakas, Damianos. (2018). The Impact of Information Technology on the Development of Supply Chain Competitive Advantage. *Procedia - Social and Behavioral Sciences.* 147. 10.1016/j.sbspro.2014.07.161.

Marjanovic, O. & Milosevic, Z., (2017). *Towards formal modeling of e-contracts.* Sydney: University of New South Wales.

Masihuddin, M.; Khan, B.U.I.; Mattoo, M.M.U.I.; Olanrewaju, R.F. (2017). A survey on e-payment systems: Elements, adoption, architecture, challenges and security concepts. *Indian J. Sci. Technol*., *10* (7), 1–19.

Metoh, I. K (2016). *Factors affecting implementation of electronic procurement system in the public sector:* a case of National Aids Control Council.

Migai, J. (2019). *Development Partners and Governing Non Governmental Organizations Procurement in Kenya*. Kenya: Macmillan Publishers.

Mutangili, S. K. (2018). An assessment of the adoption of e-procurement application systems on supply chain management environment in Kenya: A case of Zain Kenya Limited. *International Academic Journals*, *1*(1), 38-61.

Muturi , K. S. (2017). Impact of Inventory Management on Financial Performance-A Comparative Study. *Global Journal for Research Analysis*, *5*(11),34-56

Nyagah, K. & Patrick, M. (2017). Influence of e-procurement implementation on supply chain performance in dairy industry in Kenya: a case of new KCC limited. *International Journal of Innovative Social Sciences & Humanities Research, 3*(2), 31-4.

Oteki, Evans B.; Namusonge, G. S.; Sakwa, M. & Ngeno, J. (2018). Influence Of Electronic Order Processing On Supply Chain Performance Of Sugar Processing Firms In Kenya.

International Journal of Social Sciences and Information Technology, 4(1), 2622-2634

Ouko, P., Omar, S. & Simiyu T. (2019). Effort of government service delivery in Procurement contracts: A case of Uasin Gishu County Government: [Unpublished Thesis]: University of Nairobi.

Public Procurement Oversight Authority, (2018). Quarterly Bulletin. Issue No. 04, December 2018, Trends in Electronic Procurement in Kenya, Retrieved from: ppoa.go.ke.

Public Procurement Oversight Authority, (PPOA), 2017).*The long term policy framework for public procurement in Kenya, Draft zero.* Nairobi: PPOA.

PWC. (2016). So much in store. Prospects in the Retail and consumer goods sector in ten subSaharan countries (pp. 1–106). South Africa: PWC. Retrieved from http://www.pwc.co.za/en/press-room/Retail-in-africa.html

Quelch, J. & Klein, L. (2016). "The Internet and International Marketing." *Sloan Management Review, Spring, 8*(10), 9–13.

Rai, A., Im, G., & Hornyak, R. (2019). "How CIOs Can Align IT Capabilities For Supply Chain Relationships," MIS Quarterly Executive 8 (1), 9 – 18.

Roberts, T. S., & McInnerney, J. M. (2017). Seven problems of online group learning (and their solutions). *Educational Technology & Society, 10*(4), 257-268.

Roddick, J., (2016). *Advances in conceptual modeling-theory and practice*. New York: Springer.

Shardeo, V. (2017). "Impact of Inventory Management on the Financial Performance of the firm". *IOSR Journal of Business and Management (IOSR-JBM)*, 7(4), 1–12.

Sire, D. N., & Muturi, W (2017). Influence of Inventory Lead Time on The Performance Of Retail Outlets; A Survey Research On Retail Chains In Kisii Town, Kenya. *International Journal of Social Sciences and Information Technology 3*(1), 1512-1522

Trochim, W. M. K. (2016). "Descriptive statistics". Research Methods Knowledge Base. Retrieved 14 March 2011.

Vaidya, A. Sajeev, N & Callender, G (2006).Critical Factors that Influence E-Procurement Implementation Success in the Public Sector. *Journal of Public Procurement, 6* (3), 70-99.

World Economic Situation Prospects [WESP], (2020). *World Economic Situation and Prospects 2020.* https://www.un.org/development/desa/dpad/

Wu, F. (2007). "Antecedents and outcomes of e- procurement adoption: an integrative model", IEEE Transactions on Engineering Management, 54(3), 432- 576.

Xu, L. (2018). *Monitoring Multi-party Contracts for E-business*. Tilburg: University of Tilburg.

Yusof, N.M.; Hariri, M.S.C.M.; Taheer, A.S.M.; Omar, S.A.S. (2018). The Adoption of Electronic Payment System Among Small Medium Enterprises (SMEs) in Malaysia. J. *Int. Business, Econ. Entrep, 3* (1), 36-54.