

**E-COMMERCE ADOPTION AND PERFORMANCE OF IMPORT ORIENTED  
SMALL AND MEDIUM ENTERPRISES IN NAIROBI CITY COUNTY**

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## DECLARATION

This research project is my original work and has not been submitted for examination in any other university.

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## **DEDICATION**

I dedicate this project to my parents, Alexander Muthee and Rahab Njeri for their financial support and constant encouragement throughout my education. May God bless you abundantly.

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### **ABBREVIATIONS AND ACRONYMS**

<b>ANOVA</b>	:	Analysis of Variances
<b>B2B</b>	:	Business-to-business
<b>C2B</b>	:	Customers to customers
<b>CRM</b>	:	Customer relationship Management
<b>E-</b>	:	Electronic
<b>ICT</b>	:	Information Communication Technology
<b>Ksh</b>	:	Kenyan Shillings
<b>POS</b>	:	Point of sale systems
<b>SMEs</b>	:	Small and Medium Enterprises
<b>SPSS</b>	:	Statistical Package for Social Scientists
<b>TAM</b>	:	Technology Acceptance Model
<b>UTAUT</b>	:	Unified theory of acceptance and use of technology

## ABSTRACT

This study examined the relationship between e-commerce adoption and performance of import oriented small and medium enterprises in Nairobi City County. The study was based on unified theory of acceptance and use of technology (UTAUT) model and transactions cost theory. This research employed descriptive cross-sectional research design. The kinds of businesses meeting the definition of import oriented SMEs were 408. The research employed stratified random sampling in which any import oriented business had equal chance of being selected in the sample. The sample size selected was 122 import oriented SMEs. The research collected relevant data based on structured questionnaires. The questionnaires were self-administered and collected back immediately after being filled. For SMEs operators that were absent on the day of the study, the researcher dropped the questionnaires in respondent's offices and made follow-up by e-mail and telephone. Data analysis, involved both descriptive and inferential analysis. The descriptive analysis included mean, standard deviation and percentages. The inferential analysis involved Pearson correlation and multivariate regression. The study established a positive and statistically significant influence on performance of import oriented SMEs. The study established that e-marketing has a significant positive influence on performance of import oriented SMEs in Nairobi City County. The study also established that the influence of e-payment on performance of import oriented SMEs is positive but not statistically significant. The research also revealed that e-bookkeeping had a positive and statistically significant effect on performance. Finally, the study revealed that e-customer relationship management had a significant effect on performance of import oriented SMEs. The study recommends that ownership and management of import oriented SMEs should continue adopting and using e-ordering and custom clearance of products. They also suggested to management of import oriented SMEs to enhance their presence online through e-marketing. The research also recommends that the firms should continue adopting latest e-payment modes besides their manual payment methods. The study further suggests to management of import oriented SMEs to adopt e-book keeping fully. Finally, research recommends that management of import oriented SMEs to adopt e-CRM rigorously.

# CHAPTER ONE: INTRODUCTION

## 1.1 Background of the Study

Businesses globally have been actively adopting electronic commerce (e-commerce) especially with the improvement in information technology (Alzahrani, 2018). Theoretical literature has tended to establish a strong relationship between e-commerce adoption and performance of businesses. The improved adoption of e-commerce has been associated with enhancing performance of businesses through market expansion. E-commerce enables a business to buy and sell its products beyond the geographical boundaries hence expansion of market for products and performance (Riany, Were & Kihara, 2019; Mire, 2019). The adoption of e-commerce also leads to improved firm performance via improved efficiency of business. The adoption of e-commerce e-technologies have helped ease the process of trade and reduce operational costs through automation hence improved firm performance (Achiando, 2018).

The study was based on unified theory of acceptance and use of technology (UTAUT) model and transactions cost theory. UTAUT postulated by Venkatesh, et al. (2003) explains user intentions to use e-commerce and subsequent usage behavior as moderated by user demographic factors. Transactions cost theory traces its roots to Coase (1937). The theory states that there exists transaction costs in using the market when obtaining goods or services. The theory further holds that organizations are always exploring the options of reducing and avoiding transactions costs. With the ever-increasing transaction

cost, import oriented SMEs are adopting e-commerce to reduce and eliminate some transaction costs associated with ordering products, custom clearance of product and payment for products. The theory implies that performance of import oriented SMEs could be enhanced through adoption of e-commerce that reduces and eliminates transaction costs.

The importation business is financial resource intensive and has always thrived on economies of scale. The high resource requirement has been a barrier to entry into import business by small and medium enterprises (SMEs); however, in the advent of e-commerce technology, SMEs globally and Nairobi Kenya in particular are slowly getting involved in import business (Odeo, 2016). SMEs in Nairobi Kenya can now place orders for products on giant global online markets hence eliminating the need for having to travel to the countries of goods origin. Additionally, the goods can be electronically cleared at the Kenyan ports without the need for physical presence of the entrepreneur through electronic custom clearance (Riany, Were & Kihara, 2019). SMEs are also marketing goods electronically through e-marketing (Muhami, 2019). SMEs in Kenya have also actively adopted electronic book keeping options like point of sale systems (POS) that enable faster record keeping. Finally, SMEs are using electronic customer relationship management (e-CRM) to build brand loyalty with minimal physical interaction with customers (Achiando, 2019).

### **1.1.1 Electronic Commerce**

Manideep and Reddy (2019) defined e-commerce as the process of buying and selling (exchanging) goods, services over computer networks. Fatima (2017) defined e-commerce as economic activity that adopts information communication technology applications to aid in the buying and selling of products and services. Tuffour, Akuffo, Kofi, Frimpong and Sasu (2018) described e-commerce as any business or economic activity that makes use of ICT-based applications to facilitate the transaction among businesses, business-to-business (B2B), individuals, customers to customers (C2C), or business to customers (B2C). Billal, Shin and Sim (2019) on the other defined e-commerce as business transactions between a firm and other firms or between a firm and individuals that is mediated electronically in matters concerning exchange of goods and services.

According to Yang, Humphreys, McIvor, and Cadden (2017), e-commerce has two main roles. First, e-commerce involves the utilization of ICTs resources to enhance a firm's internal operations including human resource, communication, logistics, contract management, procurement and data management functions. Second, e-commerce aids in enhancing the movement of goods and services from the producer or service provider to the final consumer (for instance ordering, payment, marketing, delivery among others). Besides, Mahliza (2019) noted that e-commerce is useful in enhancing efficiency and customer service. However, Gregory, Ngo and Karavdic (2019) added that it is critical for firms including import oriented SMEs to modify their business strategies to enhance their

compatibility with the e-commerce environment so as to benefit from the capabilities of e-commerce.

There are a number of e-commerce aspects including e-marketing, e-ordering, e-payment, e-CRM and e-custom clearance. Electronic ordering is an aspect of commerce that involves the purchasing organization placing orders for replenishment of stock of goods and services online and electronically (Shaytura et al. 2017). E-payment is an aspect of electronic commerce where the purchasing organization makes payment for goods and services supplied to them using electronic means of payment that does not involve hard currency (Hua et al. 2019). E-customer relationship management (e-CRM) is an e-commerce process for identifying, acquiring, maintaining and cultivating gainful clientele (Arduyan & Sugiyarti, 2018). E-marketing involves promoting products and services over the internet and digital networks (Charoensukmongkol, & Sasatanun, 2017). E-custom clearance is an electronic system that captures customs details, computes import duty and other taxes, and validates the entry; lodge the entry electronically; receive lodgment confirmation or lodgment rejection and print the required related forms and reports (Jia, 2019).

### **1.1.2 Firm Performance**

Firm performance refers to significant business outcomes or results measured alongside its intended outputs. Firm performance measures the efficiency and effectiveness in the use of firm assets to generate revenues (Charoensukmongkol & Sasatanun, 2017). Firm performance is the product of the association among firm's resources, strengths,

weaknesses, actions and the environment. Performance means gaining unprecedented improvement from technological development in business trade (Hua et al., 2019). Firm Performance is actually measured achieved targets against standards such as quality, costs, efficiency, revenues, growth that are set in the plan. Performance focuses on three areas of a firm's outcomes: product market performance, customer satisfaction and product service quality (Manideep & Reddy, 2019).

Performance measurement generates beneficial data for use by management in their daily decision-making. The data and information generated from performance measurement has to be relevant, precise, complete, easily accessible and timely (Mahliza, 2019). Besides, performance measurement indicators have to reflect critical factors that explain the productivity of various business processes. Firm performance has become an important component of business policy. Policy makers and researchers frequently take the performance of organization's into account when investigating any organizational structure, strategy and planning. Firms utilize performance measures information for control purposes of firm processes (Mustapha & Sorooshian, 2019).

Different tools can measure organization performance; these include financial performance, market performance, social responsibility and employee satisfaction. However, financial and market performance ordinarily received more attention by researchers and managers due to their significance to organizational success and survival (Rehman & Anwar, 2019). For this study, the researcher adopted a balanced scorecard model for measuring performance of SMEs. Balance scorecard has key components

including Customer Perspective, Internal Perspective, Innovation and learning perspective and Financial Perspective.

### **1.1.3 Import Oriented Small and Medium Enterprises in Nairobi**

Small and Mediums enterprises (SMEs) are defined based on number of employees, turnover and assets (Alzahrani, 2018). In Kenya, a small business is one that has more than nine (9) employees but less than 50 employees or revenue less than Ksh. 50 million. Medium size firms are those having more than 50 employees but less than 500 employees (Achiando, 2018). SMEs in Kenya in general and Nairobi in particular have now embraced import trade despite the stiff competition from established large firms (Odeo, 2016). Import oriented SMEs are a category of SMEs that directly source finished goods or raw materials from outside the country for resale or production respectively. The distinguishing factor between import oriented SMEs and other SMEs is whether they directly source raw materials or finished goods from outside the country or locally.

Most of the Import oriented SMEs in Kenya are based in Nairobi with products imported including automobiles, mobile phones and accessories, clothesline and wares, electronics, hard wares, machineries, furniture, steel makers, foodstuff, drugs and medicines among others (Muhami, 2019). There are about 1,569 SMEs in Nairobi of which import oriented are about 26% translating to 408 firms (Kagwaini, 2018). The study targets the import oriented SMEs given their aggressive adoption of e-commerce to compete favorably with large-scale import firms by leveraging on the capabilities of e-commerce technologies. The import oriented SMEs are further categorized into resale or manufacturing; resale



businesses buy finished goods for further sale in Kenya while manufacturing based buys raw materials or work in progress for production of finished goods to be sold locally (Muhami, 2019).

## **1.2 Research Problem**

Literature has established that e-commerce offers significant opportunities for cost reduction, demand improvement and revenue maximization for businesses (Mahliza, 2019). E-commerce adoption has enhanced influence on processes and management. The use of ecommerce can also improve marketing ability (Billal, Shin, & Sim, 2019). The practice of businesses generally and import oriented SMEs in particular is rapidly shifting to e-commerce with various capabilities of e-commerce proving worthwhile for import oriented businesses (Alzahrani, 2018). Firms in the SMEs category are fast adopting E-commerce capabilities like e-ordering, e-custom clearance, e-CRM, e-marketing and e-book keeping to enhance their performance across magnitudes like profitability, sales growth and customer satisfaction (Fatima, 2017).

Kenyan businesses are fast embracing e-commerce in ensuring that their activities and transactions are delivered on time, made faster, convenient, reliable and there is a smooth operation across businesses (Nakhumwa, 2013). According to the Communications Authority of Kenya (2020), the electronic commerce market in Kenya was estimated at around Ksh.4.3 billion in 2018. The internet penetration of about 35.5 million internet users has made Kenya to be one of the strategic African countries for digital commerce explosion. Companies are now adopting the ecommerce by creating internet based

platforms to sell products and services, for instance Safaricom Limited adopted the Amazon model by introducing an e-commerce platform targeting the formal retail as well as the informal trading in East Africa's biggest economy, the platform offers products ranging from electronics to beverages, cosmetics and clothing (Riany, Were & Kihara, 2019).

Globally, in a study in Saudi Arabia, Alzahrani (2018) examined the causal effect link between business strategy of SMEs and e-commerce adoption. The study revealed that the adoption of e-commerce has a major impact on business strategy. Additionally, study revealed that most SMEs are ready to change their business strategies to fit into the e-commerce era. Farida, Naryoso and Yuniawan (2017) analyzed the association persisting between e-commerce and marketing performance among SMEs in Semarang City in Indonesia. The study revealed the effect of e-commerce on marketing performance was direct. Kusuma and Marhaeni (2019) sought to evaluate the influence of E-commerce and other factors on the performance of SMEs. The research revealed that firms that have adopted e-commerce demanded more products compared to those who have not yet adopted e-commerce. The study also noted that firms that have adopted e-commerce performed better than those that have not yet adopted e-commerce.

Locally, Achiando (2019) examined the causal effect relationship between E-commerce and performance of Micro and Small Enterprises (MSEs). The study found that E-commerce websites had significant improvement in profitability. However, the effect of internet marketing and e-CRM on firm performance was not significant. Mire (2019)

examined the causation link between performances of agricultural based firms and e-commerce adoption. The findings established that e-commerce mode of payment; internet availability and e-commerce security factors had a statistically significant relationship with performance. Nyagwencha (2018) examined the influence that e-commerce has on the performance of automotive firms in Nairobi. The research revealed that e-book keeping, e-ordering and e-CRM directly influenced performance; however, the influence of e-payment was not significant.

Even with studies already carried out, a number of knowledge gaps still exist. First, empirical literature reveals mixed findings regarding the effect of different aspects of e-commerce on firm performance. Some aspects of e-commerce had a significant effect on firm performance while other aspects of e-commerce did not significantly affect firm performance (Nyagwencha, 2018; Achiando, 2019). Secondly, in the conceptualization of e-commerce, most studies have tended to ignore some components of e-commerce especially e-CRM and e-custom clearance. The study sought to bridge the gap by examining the research question; what is the influence of e-commerce adoption on performance of import oriented SMEs in Nairobi city county, Kenya?

### **1.3 Research Objective**

The general objective of the study was to examine the influence of e-commerce adoption on performance of import oriented small and medium enterprises in Nairobi City County.

Specifically:

1. Establish the influence of e-commerce adoption on firm performance
2. Determine the perceived benefits of e-commerce adoption
3. Establish the relationship between e-commerce and firm performance of import oriented businesses in Nairobi City County.

#### **1.4 Value of the Study**

The study report generates information critical for theory, practice and policy in Kenya.

Regarding theory, the study examined the application of UTAUT and Transactions cost theories in explaining the association between e-commerce adoption and performance of import oriented medium size enterprises. The study explored the application of Unified theory of acceptance and use of technology (UTAUT) in the examination of adoption of e-commerce among import oriented SMEs. The study also expounds on how transaction cost theory informs the decision by import oriented SMEs in adopting e-commerce to reduce and eliminate some transaction costs associated with ordering products, custom clearance of product and payment for products.

The study is useful for the purpose of practice. The study report is insightful for owners and managers of Small and Medium enterprises. The study is insightful to proprietors of import oriented SMEs in appreciating the value of e-commerce adoption to their businesses. The study identifies areas of e-commerce that can be adopted by the SMEs in an effort to enhance their performance and compete effectively with large-scale import oriented firms in Kenya. The managers and owners of SMEs will be in a position to

identify the areas of e-commerce they should adopt and the possible benefits they can accrue to their business establishments when they adopt e-commerce. Finally, the study is critical for policy makers. The findings of this are insightful to policy makers especially in the ministries of information and communication technology and Trade. The research provides insight to officials in the ministry on ICT to come up with policy documents to encourage the adoption of e-commerce by supporting service providers.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

The chapter presents the theoretical and empirical literature regarding the association between e-commerce and firm performance. The chapter specifically elaborates on empirical foundations, determinants of firm performance, relationship between e-commerce and firm performance and the empirical literature.

### **2.2 Theoretical Foundations**

The study on the relationship between e-commerce adoption and firm performance was anchored on Unified Theory of Acceptance and Use of Technology and Transactions Cost Theory.

#### **2.2.1 Unified Theory of Acceptance and Use of Technology**

Emanating from the inadequacies of Technology Acceptance Model (TAM), Venkatesh, et al. (2003) and Wu and Wang (2005) proposed the UTAUT model by integrating past studies on TAM. The UTAUT sought to expound on the intentions to use information systems (IS) by the user and actual usage behaviour. The theory posits that user intention to use IS is a function of expected performance, expected efforts needed, facilitating conditions and social influence. Additionally, the actual behaviour of adoption of technology and applications is modelled by age, gender, experience, and voluntariness of the user (Venkatesh et. al., 2003; Laukkanen & Pasanen, 2008).

The UTAUT informs the independent variable; e-commerce adoption. The theory explains user intentions to use e-commerce and subsequent usage behaviour as moderated by user demographic factors. The theory implies that the intention to adopt e-commerce by import oriented SMEs depends on the expected performance expectancy, effort expectancy, social influence and facilitating conditions. Further, actual adoption of e-commerce among import oriented SMEs is dependent on demographic variables of business owners.

### **2.2.2 Transactions Cost Theory**

This theory traces its roots to Coase (1937) through his work “The Nature of the Firm”. The theory states that there exists transaction costs in using the market when obtaining goods or services. These costs include sourcing and information costs, negotiation/bargaining costs, confidentiality costs, transportation costs, taxation costs, policing and enforcement costs and dispute resolution costs. All these costs increase the costs of procuring from the market. The theory further holds that organizations are always exploring the options of reducing and avoiding transaction costs. Transaction costs deal with consideration of all costs incurred during sourcing of product (Papulova & Papulova, 2016).

Every activity involving purchase or supply from the market has a cost implication attached to it. It is the responsibility of the organizational management to compare the cost of transactions and identify strategies and ways of reducing or even eliminating transaction costs (Mwanthi, 2018). The importation business is a highly competitive

industry. With the ever-increasing transaction cost, import oriented SMEs are adopting e-commerce to reduce and eliminate some transaction costs associated with ordering products, custom clearance of product and payment for products. The theory implies that performance of import oriented SMEs can be enhanced through adoption of e-commerce that reduces and eliminates transaction costs.

### **2.3 Electronic Commerce Adoption and Firm Performance**

Empirical literature has examined the association between adoption of e-commerce and performance of organizations. Ardyan and Sugiyarti (2018) points out that E-commerce has the possibility to offer benefits to a business compared to traditional business operating environments. Gregory, Ngo and Karavdic (2019) noted that E-commerce has a direct influence on business operations and those businesses left behind in the E-commerce adoption cannot favourably compete in the global marketplace. Firms that have implemented E-commerce have seen performance improvements, including better operational effectiveness and efficiency, market expansion, better customer service, and reduction in operating costs. E-commerce can enhance the competitive positioning of SMEs in the global business landscape while fending off stiff competition from large-scale business organizations that have advantages of economies of scale (Tuffour, Akuffo, Kofi, Frimpong & Sasu, 2018).

The adoption of e-ordering enhances the sales of a business as customers who are not in the same geographic boundary can place their orders online and the goods and services



are delivered to them with the payment being made before delivery or after delivery (Billal, Shin, & Sim, 2019). Interest in e-lodgement allows agents to establish the result of selection made earlier than in the manual system of lodgement enabling the agent to take timely action to ensure cargo are released on time with minor hindrances (Sakhasia, 2017). Besides, the ability to view the results of lodgement immediately reduces transaction costs. Therefore, e-custom clearance is of benefit to importers including import oriented SMES by lowering operational costs per unit and overall total cost hence making SMEs to have cost advantage when compared to large scale businesses that do manual custom clearance (Mwajita,2016).

Businesses with substantial online presence through their websites, social media interactions, email marketing channels are better placed to access the market and grow their sales compared to those sticking to the traditional marketing methods (Gregory, Ngo & Karavdic, 2019). Businesses can use social media marketing methods like pay per click and impressions on Facebook, Snapchat, Pinterest, Twitter, and Instagram among others. Social media marketing is cost effective and easy to use in targeting the market, communicating product, and services (Ibrahim & Jebur, 2019). Email marketing has the potential to strengthen the relationship with clients hence a small business can afford to reach vast numbers of clients (Tuffour et al., 2018).

Electronic payment systems enable the exchange of goods and services at comparatively low unit costs. E-payment is classified into two broad categories: Retail payment and high value payment systems (Ozturk, 2016). The retail payments system entails

transactions made by many individual clients. The payment includes individual to business, person-to-person, business-to-business and business to individual. The retail payments instruments include: point-of-sale payment, automated clearinghouses, mobile money electronic funds transfer among others (Malenya, 2017). New payment technologies that take the form of electronic methods have not only reduced the settlement time but also the financial costs of processing client payments.

E- CRM as a business strategy aims at creating value for the enterprise and customers by initiating and maintaining healthy customer relationships. E-CRM is a core strategy that uses a marketing information system and the organization's IT infrastructure (Zeng, Jia & Wan, 2017). Additionally, e-CRM can be used in a limited perspective at the business level as a database or for electronic marketing, and at the strategic level to create value for both the clients and the stockholders. Knowledge collected by e-CRM systems includes the buying history, customer connections, expectations, needs, and purchasing activities. For the firm to retain its competitive advantage and enhance performance customer satisfaction, it should have a customer-related knowledge and an acceptable level of customer service (Manideep & Reddy, 2019).

## **2.4 Empirical Studies and Knowledge Gaps**

Empirical studies e-commerce adoption and its benefits is extensive globally, regionally and locally in Kenya. In a study in Saudi Arabia, Alzahrani (2018) examined the causal effect link between business strategy of SMEs and e-commerce adoption. The study revealed that the adoption of e-commerce has a major impact on business strategy.

Additionally, study revealed that most SMEs are ready to change their business strategies to fit into the e-commerce era. Farida, Naryoso and Yuniawan (2017) analyzed the association persisting between e-commerce and marketing performance among SMEs in Semarang City in Indonesia. The study revealed the effect of e-commerce on marketing performance was direct.

Achiando (2019) examined causation between E-commerce and performance of MSEs. The study found that E-commerce websites had significant improvement in profitability. However, the effect of internet marketing and e-CRM on firm performance was not significant. Mire (2019) examined the association between performance of agricultural firms and e-commerce adoption in Kenya. The findings revealed that e-commerce mode of payment; internet availability and e-commerce security factors had a statistically significant relationship with performance. Muhami (2019) sought to establish the causal effect link between business growth and E-commerce among automotive firms in Kenya. The correlational analysis showed that there exists a statistically major link between e-commerce enabling environments, e-commerce barriers on the growth of the auto industry.

Nyagwencha (2018) examined the effect of causal link obtaining between e-commerce and performance of automotive firms in Nairobi. The study revealed that e-book keeping, e-ordering and e-CRM majorly affected performance; however, the effect of e-payment on performance was minor. Ardyan and Sugiyarti (2018) points out that E-commerce has the possibility to offer benefits to a business compared to traditional business operating

environments. Gregory, Ngo and Karavdic (2019) noted that E-commerce has a direct causal effect relationship with business operations and that firms that have not adopted E-commerce cannot favourably compete in the global marketplace. Firms that have implemented E-commerce have seen performance improvements, including better operational effectiveness and efficiency, market expansion, better customer service, and reduction in operating costs.

Kusuma and Marhaeni (2019) sought to evaluate the influence of E-commerce and other factors on the performance of SMEs. The research revealed that firms that have adopted e-commerce demanded more products compared to those who have not yet adopted e-commerce. The study also noted that firms that have adopted e-commerce performed better than those that have not yet adopted e-commerce. In a study in Jakarta Region, Mahliza (2019) evaluated the causal link between social media marketing and business performance. The study established that social media marketing had a direct causal effect link with performance of micro enterprises.

Ibrahim and Jebur (2019) evaluated how ICT technologies adoption influenced business firms. The critical review study revealed that e-commerce enables firms to acquire raw material easily. In Indonesia, Ardiansah, Chariri, Rahardja and Udin (2020) evaluated the impact of e-payment security on the perception of consumers of ecommerce. The research revealed that perceived e-payment security influences purchase decisions using e-payment platforms. The study also revealed that e-payment security had a mediating

effect on the association between perceived ease of use purchase decisions on e-commerce platforms.

A study on State Corporations in Kenya by Chepkwony (2017) evaluated the causal effect relationship between adoption of e-informing and E-ordering and supply chain performance. The results of the study revealed that e-informing and e-ordering had a direct and major effect on supply chain performance. Sakwa and Ngeno (2018) evaluated the relationship between supply chain performance and electronic procurement among sugar processing firms in Kenya. The research showed a major causal effect link between electronic ordering and performance of the supply chain.

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

The chapter explores the methods and techniques adopted to collect and analyse data on the association between e-commerce adoption and firm performance. The chapter specifically elaborates on research design, population, sampling size, data collection instruments and procedures and data analysis.

### **3.2 Research Design**

This research employed descriptive cross-sectional research survey design to establish the influence of e-commerce adoption on performance of import oriented SMEs in Nairobi City County. Descriptive research design is concerned with establishing the post effect relationship between variables in a study in their natural setting. Descriptive research design does not control the environment where the variables interact rather measures the outcome variable after it has been impacted by a set of explanatory variables (Mugenda & Mugenda, 2009). Besides, descriptive research is concerned with collecting facts about variables to establish the causal effect relationship between them.

### 3.3 Population of the Study

The study targeted those SMEs that are duly registered under relevant law (i.e. Business name act, partnership act and Companies act), licensed by the Nairobi city county and registered for import duty and Income tax. The target population was therefore businesses that were legally registered under relevant law, licensed by Nairobi City County, registered by KRA for import duty tax, having employees between 10 to 250. The kinds of businesses meeting the definition were 408 (Registrar of Companies, 2020). The SMEs targeted were in sectors including automobiles, mobile phones and accessories, clothesline and wares, electronics, hard wares, machineries, furniture, steel makers, foodstuff, drugs and medicines among others. The import oriented SMEs were grouped under Trade, manufacturing and construction as shown in Table 3.1

**Table 3. 1: Target Population Distribution**

<b>SMEs</b>	<b>Population Distribution</b>	<b>Percentage (%)</b>
Trade sector	313	76.71
Manufacturing	77	18.87
Construction	18	4.41
<b>Total</b>	<b>408</b>	<b>100.00</b>

**Source: Registrar of Companies (2020)**

### 3.4 Sample Size

In order to select the SMEs to be part of the study, the research employed stratified random sampling in which any import oriented business had equal chance of being selected in the sample. The population was segregated into three strata including trade,

manufacturing and construction. In selecting respondents to the study, the study adopted purposive sampling in which only one operator of the business was selected. The operator of the business can be the owner, the manager or any other senior employees who understands the association between e-commerce and performance. The sample size was determined based on Mugenda and Mugenda (2009) arguments that hold that a sample size of between 10% and 30% is a good representative of the target population. Therefore, the researcher selected a sample size of 122 import oriented SMEs. The number 122 is 30% of the target population of 408 (Registrar of companies, 2020) import oriented SMEs operating within Nairobi city county as presented in Table 3.2

**Table 3. 2: Sample Distribution**

<b>SMEs</b>	<b>Population Distribution</b>	<b>Percentage (%)</b>	<b>Sample Distribution</b>
Trade sector	313	76.71	94
Manufacturing	77	18.87	23
Construction	18	4.41	5
<b>Total</b>	<b>408</b>	<b>100.00</b>	<b>122</b>

**Source: Data Analysis**

### **3.5 Data Collection**

The research collected relevant data based on structured questionnaires. Questionnaires are preferred over other methods of data collection when the sample size is large and there are inadequate resources (Mugenda & Mugenda, 2009). The questionnaire had closed-ended questions to collect quantitative data. The questionnaires were self-administered and collected back immediately after being filled. For SMEs operators



that were absent on the day of the study, the researcher dropped the questionnaires in respondent's offices and made follow-up by e-mail and telephone.

### 3.6 Data Analysis

Data analysis, aided by Statistical Package for Social scientists (SPSS), involved both descriptive and inferential analysis. The descriptive analysis included mean, standard deviation and percentages. The inferential analysis involved Pearson correlation and multivariate regression. Multivariate regression analysis was employed to identify the causal effect link between e-commerce adoption and performance of import oriented SMEs in Nairobi City County. The regression output included the Model summary, ANOVA and regression coefficients. The study adopted the regression equation (1) in estimating the intercept term and coefficients of the explanatory variables.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon \dots\dots\dots (1)$$

Where Y= Firm Performance

X<sub>1</sub> = E-ordering and Custom Clearance

X<sub>2</sub> = E-marketing

X<sub>3</sub> = E-payment and Billing

X<sub>4</sub> = E-book Keeping

X<sub>5</sub> = E-customer Relationship Management

$\beta_0$  = Constant,  $\beta_1$ ,  $\beta_2$ ,  $\beta_3$ ,  $\beta_4$  and  $\beta_5$  are coefficients of independent variables respectively and  $\varepsilon$  = Error term.

## **CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSIONS**

### **4.1 Introduction**

The chapter presents the results and discussion based on the examination of the influence of e-commerce adoption on performance of import oriented small and medium enterprises in Nairobi City County. The analysis was performed based on descriptive and inferential statistics. The descriptive statistics included the mean and standard deviation while the inferential statistics included the correlation and multivariate regression.

### **4.2 Response Rate**

The study sought to establish the response rate on the questionnaires. The response rate was established based on frequency and percentages as presented in Table 4.1.

**Table 4. 1: Response Rate**

<b>Questionnaires</b>	<b>Frequency</b>	<b>Percentage</b>
Adequately filled	99	81.14
Unreturned	16	13.11
Rejected	7	5.73
Total	122	100

**Source: Data Analysis**

From Table 4.1, the study issued 122 questionnaires of which 99 were adequately filled making 81.14% response rate. The response rate was adequate for further analysis as supported by Mugenda and Mugenda (2004) that held that the response rate of 70% is adequate for survey studies.

**4.3 Demographic Characteristics**

The study also sought to examine the distribution of respondents in terms of whether they were owners or managers, or senior employees. The findings are presented in Table 4.2.

**Table 4. 2: Designation**

<b>Designation</b>	<b>Frequency</b>	<b>Percentage</b>
Owners	55	55.55
Managers	33	33.33
Senior employees	11	11.11
Total	99	100

**Source: Data Analysis**

The study revealed in Table 4. 2 that the majority of respondents who participated in the study were owners at 55(55.55%), followed by managers at 33(33.33%) and other senior employees at 11 (11.11%). SMEs have strict control hence most of the questionnaires were responded to by the owners and managers with a few questionnaires answered by other senior managers.

#### 4.4 Descriptive Analysis of Study Variables

The study sought to examine the distribution study variables based on descriptive statistics. The variables included; E-ordering and custom clearance, E- Marketing, E-payment and Billing, E- bookkeeping, E- Customer relationship management and Firm Performance. The study used a 5-point Likert scale to measure responses concerning adoption of e-commerce.

##### 4.4.1 E-Ordering and Custom Clearance

The research sought to establish the distribution and adoption of e-ordering and custom clearance in import oriented SMEs in Nairobi City County. The analysis was based on mean and standard deviation as presented in Table 4.3.

**Table 4. 3: E-ordering and Custom Clearance**

<b>Statements on e-Ordering and Custom Clearance</b>	<b>N</b>	<b>Mean</b>	<b>Std. Dev</b>
You frequently make orders for goods on e bay and Alibaba	99	4.55	.60
Goods you order are delivered via international freight agents	99	4.46	.65
You receives Quotation for supply from e bay and Alibaba	99	4.38	.73
You frequently clear your imported goods on KRA e-portal	99	4.26	.59
Your business sends inquiries on e bay and Alibaba	99	4.21	.50
You have signed up on the KRA e-portal for payment of import duty tax	99	4.20	.68
You have an active account in Alibaba	99	3.93	.39
<b>Overall Mean Score</b>		<b>4.28</b>	<b>0.59</b>

**Source: Data Analysis**

The analysis presented in Table 4.3 was based on mean and standard deviation where the mean responses were ordered from the most supported to the least supported. The

most supported statement regarding adoption of e-ordering and custom clearance was that firms frequently make orders for goods on ebay, Alibaba and other global online markets. This is depicted by mean response (M= 4.53) tending to strong agreement with a standard deviation of .61 around the mean. The response implies that most of the SMEs studied are purchasing products on global online markets including ebay and Alibaba.

The least supported statement was that the SMEs have an active account in Alibaba, ebay and other global online markets. This is depicted by mean and standard deviation (M= 3.93 and SD= .39) tending towards agreement implying that import oriented SMEs do not always have active accounts in all the global market platforms. Some import oriented SMEs import from china hence they have active accounts on Alibaba while those that import mostly from the United States are on eBay. The overall mean score was 4.28 which tended to agree hence implying that the SMEs had actively adopted e-ordering and custom clearance as part of e-commerce adoption.

#### **4.4.2 E-marketing**

The study examined the responses about the adoption of e-marketing as part of the overall e-commerce. The analysis examined the ranking of various statements regarding adoption of e-marketing. The analysis was based on mean and standard deviation as presented in Table 4.4.

**Table 4. 4: E-marketing**

<b>Statements on E-marketing</b>	<b>N</b>	<b>Mean</b>	<b>Std. Dev.</b>
You frequently market your products via sending emails	99	4.53	.61
You frequently post your products on social media platforms like Facebook, WhatsApp and Instagram	99	4.52	.57
Your business has an active e-commerce website	99	4.41	.62

Your website displays all business Product on sale	99	4.41	.60
You frequently involves online sales influencers to boost sales	99	4.34	.68
You frequently use sms messaging to inform customers about products you are selling	99	4.28	.53
You frequently do online research on competitors	99	4.22	.59
You frequently do online Research on consumers preferences	99	3.91	.42
<b>Overall mean score</b>		<b>4.39</b>	<b>0.60</b>

**Source: Data Analysis**

Table 4.4 depicts the responses on the statements regarding the variable e-marketing and how it was adopted by the export oriented firms. The responses were ordered from the most supported to the least supported based on mean score. The most supported statement was that import oriented SMEs market their products via sending emails as shown by mean score (M= 4.53) tending to strong agreement and a narrow standard deviation (SD= .61) around the mean. The response implies that import oriented SMEs are relying on e marketing through cold pitching where they get access to prospective customer's emails and then send emails hoping to convert such emails into customers. The least supported statement was that SMEs frequently do online Research on consumers preferences as shown by mean response (M= 3.91) of agreement and standard deviation of .42 around the mean. The response implies that the SMEs are not doing adequate online research on consumers' preferences. The overall mean score was 4.39 that is tending to agreement implying that on average, most SMEs had adopted the e-marketing component of e-commerce.

### 4.4.3 E-Payments and Billing

The study examined the responses about the adoption of E-Payments. The analysis was based on mean and standard deviation as presented in Table 4.5.

**Table 4. 5: E-payments**

<b>Statement on e-payments and billing</b>	<b>N</b>	<b>Mean</b>	<b>Std. Dev.</b>
You make payments to suppliers using PayPal/ pesapal	99	4.34	.64
You make payment for utility bills using Pay bill Number	99	4.26	.75
You frequently receive e-bills from utility service providers	99	4.26	.70
You receive mobile money payment by your customers	99	4.25	.69
Your business has active buy goods till number	99	4.25	.65
You get customers paying through Debit and credit Cards	99	4.14	.58
You get paid by customers through Electronic Fund Transfer	99	3.89	.56
<b>Overall Mean score</b>		<b>4.20</b>	<b>0.65</b>

**Source: Data Analysis**

Table 4.5 presents the responses on the statements regarding the variable e-payment and billing. The responses were ordered from the most supported to the least supported based on mean score. The most supported statement was that SMEs make payments to suppliers using PayPal/ pesapal/ western Union as shown by mean score (M= 4.34) tending to agreement and a narrow standard deviation (SD= .64). The response means that the import oriented SMEs have actively adopted online payment avenues for goods imported including PayPal/ pesapal/ western Union.

The least supported statement was that import oriented SMEs frequently get paid by customers through Electronic Fund Transfer as shown by mean response score and standard deviation just tending to agreement (M= 3.89 and SD= .56). The response implies that electronic fund transfer was not a popular method for receiving payment for

goods sold with payment methods such as MPESA being more popular in Kenya. The overall mean score was 4.20 that was in agreement with statements on e-payment adoption. The response implies that the import oriented SMEs have actively adopted various online payment modes to carry out their business activities.

#### 4.4.4 E-book keeping

The research also examined the responses about the adoption of E-book keeping as part of the overall e-commerce. The analysis was based on mean and standard deviation as presented in Table 4.6.

**Table 4. 6: E-book keeping**

<b>Statements on E-book keeping</b>	<b>N</b>	<b>Mean</b>	<b>Std. Dev</b>
You frequently receive e-receipts for utility bills payments made	99	4.38	.69
You exclusively use accounting software like quick books and Pastel for bookkeeping purposes	99	4.25	.59
You frequently send e-receipts to customers	99	4.22	.78
You exclusively use a point of sale (POS) system when making sales	99	4.06	.60
<b>Overall Mean Score</b>		<b>4.22</b>	<b>0.67</b>

**Source: Data Analysis**

Table 4.6 presents the responses on the statements regarding the variable E-book keeping.

The responses were ordered from the most supported to the least supported based on mean score. The most supported statement was that SMEs frequently receive e-receipts for utility bills payments made as shown by mean response (M= 4.38) of agreement and standard deviation of .69 around the mean. The finding implies that import oriented SMEs receive e-receipts for utility for payment made by the firm for products purchased



and bills payment. The least supported statement was that import oriented SMEs exclusively use a point of sale (POS) system when making sales as supported mean response (M= 4.06) tending to agreement and narrow standard deviation (SD= .60) around the mean. The response implies that import oriented SMEs are not exclusively using point of sale (POS) systems with some sales being made manually at the stores. The overall mean score was 4.22 that was general agreement with statements hence majority of import oriented SMEs had adopted e-book keeping.

#### 4.4.5 E- Customer Relationship Management

The research also examined the responses about the adoption of E- Customer relationship Management as part of the overall e-commerce. The analysis was based on mean and standard deviation as presented in Table 4.7.

**Table 4. 7: E-customer Relationship Management**

<b>Statements E- Customer relationship Management</b>	<b>N</b>	<b>Mean</b>	<b>Std. Dev</b>
You frequently receive and respond to customer complaints and inquiries online	99	4.38	.52
You frequently send periodic notifications to customers on various issues like availability of new stock	99	4.37	.67
You safely keep customer data in your possession	99	4.31	.58
You frequently wish customers well on special occasions like birthdays,	99	4.26	.69
You frequently track customers who visit your website	99	3.97	.42
<b>Overall Mean Score</b>		<b>4.26</b>	<b>.58</b>

**Source: Data Analysis**

Table 4.7 presents the analysis of responses on the statements regarding the variable E- Customer relationship Management. The responses were ordered from the most supported to the least supported based on mean score. The most supported statement was

that import oriented SMEs frequently receive and respond to customer complaints and inquiries online as shown by mean response (M= 4.38) tending to agreement and a standard deviation of 0.52 around the mean. The response means that SMEs tend to handle customer complaints and inquiries online as part of e-CRM.

The least supported statement was that import oriented SMEs frequently track customers who visit your website as shown by mean response score (M= 3.97) tending to agreement and a standard deviation of .42. The response implies that in general, the import oriented SMEs had adopted E- Customer relationship Management as part of the e-commerce adoption. Additionally, the overall mean score of 4.26 tended to agree, showing that on average, most import oriented SMEs in Nairobi city county had adopted e-CRM to improve their operations.

#### 4.4.6 Firm Performance

The research also evaluated the responses regarding performance of import oriented SMEs. The analysis was based on mean and standard deviation as presented in Table 4.8.

**Table 4. 8: Firm Performance**

<b>Statements on Firm Performance</b>	<b>N</b>	<b>Mean</b>	<b>Std. Dev</b>
You deliver goods ordered by customers on time	99	4.45	.55
You make faster decisions based on available information	99	4.44	.64
Your sales volume have been growing	99	4.44	.57
Your processes have become efficient	99	4.43	.59
Your operational costs have been falling	99	4.39	.56
You easily run the business remotely	99	4.37	.54
You can closely monitor changing customer needs	99	4.36	.63
You have introduce new products	99	4.23	.66

Employees are able acquire new skills via online information	99	4.23	.71
Your business sell high quality products	99	4.23	.58
You offer better prices to customers compared to competitors	99	4.11	.55
Your profitability has been growing consistently	99	3.87	.79
<b>Overall Mean Score</b>		<b>4.29</b>	<b>.61</b>

**Source: Data Analysis**

The Table 4.8 presents the responses on the statements regarding the variable performance of import oriented SMEs in Nairobi City County. The responses were ordered from the most supported to the least supported based on mean score. The most supported statement was that import oriented SMEs do deliver goods ordered by customers on time as depicted by mean response (M= 4.45) tending to strong agreement and standard deviation of .55 around the mean. The response implies that adoption of e-commerce may have contributed to faster customer service through timely delivery of products. The least supported statement was that import oriented SMEs have experienced consistent profitability growth (M= 3.87 and SD = .79). The response implies that profitability has not always been growing with some import oriented SMEs experiencing falling profitability. The overall mean score was 4.299 implying that import oriented SMEs were generally experiencing improved performance that may be due to adoption of various e-commerce tools such as E-ordering and custom clearance, E- Marketing, E-payment and Billing E- bookkeeping and E- Customer relationship management.

#### **4.5 Correlation Analysis**

The research also sought to examine the correlation among study variables based on Pearson correlation coefficient. The study adopted bivariate correlation between dependent variable firm performance and independent variable adoption of e-commerce (e-ordering and custom clearance, E-marketing, e-payment and billing e-bookkeeping and e-customer relationship management). The findings are presented in Table 4.9.

**Table 4. 9: Bivariate Pearson Correlation**

		e- ordering and custom clearance	e-marketin g	e-payment	e-bookkeepin g	e-CRM	Firm Performanc e
e-ordering and custom clearance	Pearson Correlation	1	.710**	.703**	.749**	.627**	.781**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
e-marketing	Pearson Correlation	.710**	1	.581**	.626**	.600**	.782**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
e-payment	Pearson Correlation	.703**	.581**	1	.808**	.616**	.672**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
e-bookkeeping	Pearson Correlation	.749**	.626**	.808**	1	.695**	.839**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
e-CRM	Pearson Correlation	.627**	.600**	.616**	.695**	1	.733**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
Firm Performance	Pearson Correlation	.781**	.782**	.672**	.839**	.733**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
<b>**.</b> Correlation is significant at the 0.01 level (2-tailed).							

**Source: Data Analysis.**

The Table 4.9 presents the bivariate Pearson correlation between firm performance and adoption of e-commerce (-ordering and custom clearance, E- marketing, e-payment and billing, e- bookkeeping and e- customer relationship management). The correlation between e- ordering & custom clearance and performance import oriented SMEs was strong and positive ( $r = .781$ ,  $p = .000 < .05$ ). There was a strong and positive correlation between e-marketing and performance of import oriented SMEs ( $r = .782$ ,  $p = .000 < .05$ ). The correlation between e-payment and performance of import oriented SMEs was moderate and positive ( $r = .672$ ,  $p = .000 < .05$ ). The study also revealed that the correlation between e bookkeeping and performance of import oriented SMEs was strong and positive ( $r = .839$ ,  $p = .000 < .05$ ). Finally, the correlation between e-customer relationship management and performance of import oriented SMEs was strong and positive ( $r = .733$ ,  $p = .000 < .05$ ).

#### **4.7 Regression Analysis**

The study further examined the influence of e-commerce adoption on performance of import oriented small and medium enterprises in Nairobi City County. The research adopted multivariate regression analysis with adoption of e-commerce as the independent variable and performance of import oriented SMEs as the dependent variable. The study findings are presented in Tables 4.10, 4.11 and 4.12.

**Table 4. 10: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.892 <sup>a</sup>	.795	.787	.14467

a. Predictors: (Constant), e-ordering and custom clearance, e-marketing, e-payment , e-bookkeeping and e-CRM

**Source: Data Analysis**

The Table 4.10 presents the model summary where the value (R= .892) is the overall correlation between firm performance and adoption of e-commerce (e-ordering and custom clearance, E- marketing, e-payment and billing e- bookkeeping and e- customer relationship management). The coefficient of determination ( $R^2 = .795$ ) shows that e-commerce adoption explains 79.5% of the variation in performance of import oriented SMEs in Nairobi city county. The remaining variation of 20.5% in performance of import oriented SMEs in Nairobi City County is explained by other unobserved variables that were not part of the current study.

**Table 4. 11: Analysis of Variances**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.438	5	1.888	72.337	.000 <sup>b</sup>
	Residual	2.428	93	.026		
	Total	11.866	98			

a. Dependent Variable: Firm Performance

b. Predictors: (Constant), e-ordering and custom clearance, e-marketing, e-payment , e-bookkeeping and e-CRM

**Source: Data Analysis**

Table 4.11 presents the Analysis of Variances (ANOVA). The Table shows that adoption of e-commerce tools including e-ordering and custom clearance, e-marketing, e-payment, e-bookkeeping and e-CRM have a significant influence on performance of import oriented SMEs in Nairobi city county (  $F = 72.337$  and  $P\text{-Value} = .000 < .05$ ).

**Table 4. 12: Regression Coefficients**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.943	.208		4.535	.000
e-ordering	.201	.076	.199	2.642	.009
e-Marketing	.141	.057	.201	2.488	.014
e-Payment	.046	.060	.049	.764	.446
e-bookkeeping	.187	.052	.310	3.603	.000
e-CRM	.208	.049	.255	4.291	.000

**a. Dependent Variable: Firm Performance**

**Source: Data Analysis.**

The Table 4.12 presents the regression coefficients for the causal effect relationship between adoption of e-commerce and performance of import oriented SMEs in Nairobi City County. The influence of e-ordering and custom clearance on performance of import oriented SMEs in Nairobi City county was positive and statistically significant ( $\beta_1 = .201$ ,  $t = 2.642$  and  $p = .009 < \alpha = .05$ ). The influence of e-marketing on performance of import oriented SMEs in Nairobi City county was positive and statistically significant ( $\beta_2 = .141$ ,  $t = 2.488$  and  $p = .014 < \alpha = .05$ ). The influence of e-payment on performance of import oriented SMEs in Nairobi City county was positive and but not statistically significant ( $\beta_3 = .046$ ,  $t = .764$  and  $p = .446 > \alpha = .05$ ). The influence of book keeping on performance of import oriented SMEs in Nairobi City



county was positive and statistically significant ( $\beta_4 = .187$ ,  $t = 3.603$  and  $p = .000 < \alpha = .05$ ). Finally, the influence of e-CRM on performance of import oriented SMEs in Nairobi City county was positive and statistically significant ( $\beta_5 = .208$ ,  $t = 4.291$  and  $p = .000 < \alpha = .05$ ). The model was estimated as shown in equation (1).

$$Y = .943 + .201X_1 + .141X_2 + .046X_3 + .187X_4 + .208X_5 + \epsilon \dots \dots \dots (1)$$

#### 4.6 Discussion of Findings

The study sought to examine the influence of adoption of e-commerce on performance of import oriented SMEs in Nairobi County. The relationship between e-ordering & custom clearance and performance of import oriented SMEs was strong and positive ( $r = .781$ ,  $p = .000 < .05$ ). Additionally, regression revealed that the influence of e-ordering and custom clearance on performance of import oriented SMEs in Nairobi City county was positive and statistically significant ( $\beta_1 = .201$ ,  $t = 2.488$  and  $p = .009 < \alpha = .05$ ). The positive causal effect relationship between e-ordering & custom clearance and performance of import oriented SMEs implies that improved adoption of e-ordering and custom clearance for the imported products was associated with enhanced firm performance in terms of reduced ordering cost, shorter lead times. Additionally, improved adoption of e-ordering and custom clearance by one unit, leads to improved performance by .201 units.

The finding is in agreement with Billal, Shin and Sim (2019) who established that adoption of e-ordering enhances the sales of a business as customers who are not in the

same geographic boundary can place their orders online and the goods and services are delivered to them with the payment being made before delivery or after delivery. Additionally, Sakhasia, (2017) revealed that e-lodgement allows agents to establish the result of selection made earlier than in the manual system of lodgement enabling the agent to take timely action to ensure cargo are released on time with minor hindrances. Therefore, e-custom clearance is of benefit to importers including import oriented SMES by lowering operational costs per unit and overall total cost hence making SMEs to have cost advantage when compared to large scale businesses that do manual custom clearance (Mwajita,2016).

The correlation analysis also showed that there is a strong and positive relationship between e-marketing and performance of import oriented SMEs ( $r = .782$ ,  $p = .000 < .05$ ). Moreover, the regression revealed that the influence of e-marketing on performance of import oriented SMEs in Nairobi City county was positive and statistically significant ( $\beta_2 = .141$ ,  $t = 2.642$  and  $p = .014 < \alpha = .05$ ). The positive influence of e-marketing on performance of import oriented SMEs implies that increased e-marketing via media such as Facebook, Instagram, websites were associated with enhanced firm performance in terms of improved online sales, more customer reach, reduced marketing budgets etc. Further, an improved adoption of e-marketing by one unit was associated with enhanced performance by .141 units.

The findings are in congruence with Gregory, Ngo and Karavdic (2019) that established that businesses with substantial online presence through their websites, social media interactions, email marketing channels are better placed to access the market and grow their sales compared to those sticking to the traditional marketing methods. Additionally, Ibrahim and Jebur (2019) noted that businesses could use social media marketing methods like pay per click and impressions on Facebook, Snapchat, Pinterest, Twitter, and Instagram among others. Tuffour et al. (2018) revealed that social media marketing is cost effective and easy to use in targeting the market and communicating products and services.

The association between e-payment and performance of import oriented SMEs was moderate and positive ( $r = .672$ ,  $p = .000 < .05$ ). Further, the influence of e-payment on performance of import oriented SMEs in Nairobi City county was positive and but not statistically significant ( $\beta_3 = .046$ ,  $t = .764$  and  $p = .446 > \alpha = .05$ ). The positive causal effect relationship means that improved adoption of e-payment leads to enhanced performance of import oriented SMEs in terms of indicators such as reduced transaction costs. The effect was however not significant implying e-payment did not contribute majorly to firm performance. The finding further showed that increased adoption of e-payment by one unit results in enhancing firm performance by .046 units.

The results agree with Ozturk (2016) who noted that electronic payment systems enable the exchange of goods and services at comparatively low unit costs. Moreover, Malenya

(2017) revealed that retail payments instruments including point-of-sale payment, automated clearinghouses, mobile money electronic funds transfer have not only reduced the settlement time but also the financial costs of processing client payments. Ibrahim and Jebur (2019) evaluated how ICT technologies adoption influenced business firms. Ardiansah, Chariri, Rahardja and Udin (2020) revealed that perceived e-payment security influences purchase decisions using e-payment platforms. E-payment security had a mediating effect on the association between perceived ease of use purchase decisions on e-commerce platforms.

The research, based on Pearson correlation, showed that the correlation between e bookkeeping and performance of import oriented SMEs was strong and positive ( $r = .839$ ,  $p = .000 < .05$ ). The regression analysis further revealed that the influence of book keeping on performance of import oriented SMEs in Nairobi City county was positive and statistically significant ( $\beta_4 = .187$ ,  $t = 3.603$  and  $p = .000 < \alpha = .05$ ). The positive influence of e-book keeping and performance of import oriented SMEs implies that adoption of electronic book keeping and accountancy software like POS, quick books and PASTEL was associated with improved financial performance. The study also showed that unitary improvement in the adoption of e-book keeping led to improved performance of import oriented SMEs by .187 units. The finding agrees with Nyagwencha (2018) that revealed that e-book keeping affected performance.

Finally, the correlation between e-customer relationship management and performance of import oriented SMEs was strong and positive ( $r = .733$ ,  $p = .000 < .05$ ). The influence of e-CRM on performance of import oriented SMEs in Nairobi City county was positive and statistically significant ( $\beta_5 = .208$ ,  $t = 4.291$  and  $p = .000 < \alpha = .05$ ). The positive causal effect relationship e-customer relationship management and performance of import oriented SMEs implies that increased adoption of e-CRM tools as a component of e-commerce leads to improving firm performance in terms of achieving customer loyalty, handling customer complaints and concerns and attracting new customers and responding effectively to changing customer needs.

The findings are in line with Zeng, Jia and Wan (2017) who noted that E-CRM as a business strategy aims at creating value for the enterprise and customers by initiating and maintaining healthy customer relationships. Further, Manideep and Reddy (2019) revealed that e-CRM could be used in a limited perspective at the business level as a database or for electronic marketing, and at the strategic level to create value for both the clients and the stockholders. For the firm to retain its competitive advantage and enhance performance customer satisfaction, it should have a customer-related knowledge and an acceptable level of customer service (Manideep & Reddy, 2019).

## **CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATION**

### **5.1 Introduction**

The chapter presents the summary of findings, conclusions, recommendations and areas for further studies. The study sought to establish the influence of adoption of e-commerce on performance of import oriented SMEs in Nairobi City County.

### **5.2 Summary of findings**

The study adopted descriptive and inferential statistics to analyze data. Regarding the variable e-ordering and custom clearance, the overall means score tended to agree hence implying that the SMEs had actively adopted e-ordering and custom clearance as part of e-commerce adoption. The relationship between e-ordering & custom clearance and performance of import oriented SMEs was strong and positive. Additionally, regression revealed that the influence of e-ordering and custom clearance on performance of import

oriented SMEs in Nairobi City County was positive and statistically significant. Additionally, improved adoption of e-ordering and custom clearance by one unit, leads to improved performance by .201 units.

Regarding e-marketing adoption, the overall mean score tended to agreement implying that on average, most SMEs had adopted the e-marketing component of e-commerce. The correlation analysis also showed that there is a strong and positive relationship between e-marketing and performance of import oriented SMEs. Moreover, the regression revealed that the influence of e-marketing on performance of import oriented SMEs in Nairobi City county was positive and statistically significant. Further, an improved adoption of e-marketing by one unit was associated with enhanced performance by .141 units.

The respondents also supported the statements regarding adoption of e-payment. This was depicted by overall mean score of agreement with statements on e-payment adoption. The response implies that the import oriented SMEs have actively adopted various online payment modes to carry out their business activities. The association between e-payment and performance of import oriented SMEs was moderate and positive. Further, the influence of e-payment on performance of import oriented SMEs in Nairobi City County was positive but not statistically significant. The finding further showed that increased adoption of e-payment by one unit results in enhanced firm performance by .046 units.

The respondents also reported that the majority of import oriented SMEs had adopted e-book keeping as shown by overall mean score of general agreement with statements. The correlation between e-book keeping and performance of import oriented SMEs was strong and positive. The regression analysis further revealed that the influence of book keeping on performance of import oriented SMEs in Nairobi City County was positive and statistically significant. The study also showed that unitary improvement in the adoption of e-book keeping led to improved performance of import oriented SMEs by .187 units.

Finally, most import oriented SMEs in Nairobi City County had adopted e-CRM as shown by overall mean score that tended to agreement. The correlation between e-customer relationship management and performance of import oriented SMEs was strong and positive. The influence of e-CRM on performance of import oriented SMEs in Nairobi City County was positive and statistically significant. The positive causal effect relationship e-customer relationship management and performance of import oriented SMEs implies that increased adoption of e-CRM tools as a component of e-commerce leads to improved firm performance in terms of achieving customer loyalty, handling customer complaints and concerns and attracting new customers and responding effectively to changing customer needs. The study also showed that unitary improvement in the adoption of e-CRM led to improved performance of import oriented SMEs by .208 units.



### **5.3 Conclusion**

Based on the findings, the study made a number of conclusions. Regarding the influence of e-ordering and custom clearance on performance of import oriented SMEs; the study established a positive and statistically significant influence. The study therefore concluded that improved adoption of e-ordering and custom clearance for the imported products was associated with enhanced firm performance in terms of reduced ordering cost, shorter lead times. The finding further implies that import oriented SMEs can improve their performance by adopting e-ordering and custom clearance for the imported products. Adoption of electronic ordering is associated with reduced ordering costs from the time an order is placed to the time goods are received by the import oriented SMEs.

Regarding the influence of e-marketing on performance of import oriented SMEs, the study established that e-marketing has a significant positive influence on performance of import oriented SMEs in Nairobi City County. The study therefore concluded that increased e-marketing via media such as Facebook, Instagram, websites and email marketing were associated with enhanced firm performance in terms of improved online sales, more customer reach, reduced marketing budgets etc. Further, an improved adoption of e-marketing among import oriented SMEs in Nairobi is beneficial to the concerned businesses given that the firms can reach more customers beyond the geographic boundaries. Customers can be reached online beyond the geographic boundaries of the country. This leads to improved reach and sales of the SMEs as well as reduced marketing budgets given the low cost per unit advertising costs.

The study also established that the influence of e-payment on performance of import oriented SMEs is positive but not statistically significant. The study therefore concluded that improved adoption of e-payment leads to enhanced performance of import oriented SMEs in terms of indicators such as reduced transaction costs. The effect was however not significant implying e-payment did not contribute majorly to firm performance. The influence of e-payment on firm performance nevertheless was positive and would enhance the performance of import oriented SMEs in Nairobi City County. The use of e-payment tools like mobile money, card payment, point of sale, and electronic funds transfers would enhance business performance through timely payment and low transactional costs.

The research also examined the influence of e-book keeping on performance of import oriented SMEs revealing that e-bookkeeping had a positive and statistically significant effect on performance. The research therefore concluded that the adoption of electronic bookkeeping and accountancy softwares like POS, quick books and PASTEL was associated with improved financial performance. Further, the adoption of e-book keeping is associated with clear records regarding operations of the business making the process of ascertaining the profits made by the business. Additionally, businesses that have adopted e-book keeping are in a position to avoid making unnecessary errors while performing business transactions.

Finally, the study revealed that e-customer relationship management had a significant impact on the performance of import oriented SMEs. The research thus concluded

increased adoption of e-CRM tool as a component of e-commerce leads to improving firm performance. The firm performance was enhanced in terms of achieving customer loyalty, handling customer complaints and concerns, attracting new customers, and responding effectively to changing customer needs. Additionally, e-CRM has the potential to follow up on customer interaction with products to identify their satisfaction level.

#### **5.4 Recommendations**

Given that the influence of e- ordering and custom clearance on performance of import oriented SMEs was positive, the study recommends that ownership and management of import oriented SMEs should continue adopting and using e-ordering and custom clearance of products. Improved adoption of e-ordering and custom clearance is associated with enhanced firm performance in terms of reduced ordering cost, shorter lead times. Adoption of electronic ordering is associated with reduced ordering costs from the time an order is placed to the time goods are received by the import oriented SMEs. Further, adoption of e-custom clearance is associated with reduced cost of clearance of goods at the port of arrival as well as reduced transaction cost and time wastage in manual clearance of products.

Regarding e-marketing, the study revealed that e-marketing has a major positive influence on performance of import oriented SMEs in Nairobi City County. The study therefore suggests management of import oriented SMEs to enhance their presence online through e-marketing. Increased e-marketing via media such as Facebook, Instagram,

websites and email marketing were associated with enhanced firm performance in terms of improved online sales, more customer reach, reduced marketing budgets etc. Further, an improved adoption of e-marketing among import oriented SMEs in Nairobi is beneficial to the concerned businesses given that the firms can reach more customers beyond the geographic boundaries. This leads to improved reach and sales of the SMEs as well as reduced marketing budgets given the low cost per unit advertising costs.

Given that the influence of e-payment on performance of import oriented SMEs is positive, the research recommends that the firms should continue adopting latest e-payment modes besides their manual payment methods. Improved adoption of e-payment leads to enhanced performance of import oriented SMEs in terms of reduced transaction costs. The use of e-payment tools like mobile money, card payment, point of sale, and electronic funds transfers would enhance business performance through timely payment and low transactional costs. The effect of e-payment was however not significant implying that the cost saving aspects of e-payment may have been eroded by vices such as cybercrime that has seen a number of businesses lose their money to cyber criminals.

Regarding e-book keeping, the research revealed a positive influence of e-book keeping on performance of import oriented SMEs. The study therefore suggests to management of import oriented SMEs to adopt e-book keeping fully. The adoption of electronic bookkeeping software like POS, quick books and PASTEL are associated with clear records regarding operations of the business making the process of ascertaining the

profits made by the business. Additionally, businesses that have adopted e-book keeping are in a position to avoid making unnecessary errors while performing business transactions.

Finally, given the positive influence of e-customer relationship management on performance of import oriented SMEs, the research recommends that management of import oriented SMEs adopt e-CRM rigorously. Adoption of e-CRM tools as a component of e-commerce leads to improving firm performance in terms of achieving customer loyalty, handling customer complaints and concerns, attracting new customers and responding effectively to changing customer needs. Additionally, e-CRM has the potential to follow up on customer interaction with products to identify their satisfaction level.

### **5.5 Limitations of the Study**

The current research was based on import oriented SMEs in Nairobi City County regarding their adoption of e-commerce and its contribution to firm performance. The report of the finding is thus limited in its usefulness and may not be wholly used for decision making in import oriented SMEs outside Nairobi. Additionally, the study may not be readily applicable to other Kinds of SMEs that do not fall under importation business or businesses that do not fall under the category of SMEs.

The study was also limited to use of structured questionnaires to collect data for the purpose of analysis. The usage of structured questionnaires may not collect qualitative

information about adoption of e-commerce that may require other tools like interview schedules. Moreover, the study was limited to owners, managers and other senior employees hence the opinion of other employees below that carder was not solicited regarding the usefulness of adoption of e-commerce to firm performance.

### **5.6 Suggestions of Further Studies**

The current research was based on import oriented SMEs in Nairobi City County regarding their adoption of e-commerce and its contribution to firm performance. The study suggests that future researchers should carry out the same study in import oriented SMEs outside Nairobi City County. The study also suggests that future researchers use other data collection tools like interview schedules and focused group discussion in addition to structured questionnaires. In addition, the studies should sample employees of all cadres to give their opinion on the usefulness of e-commerce to firm performance among import oriented SMEs.

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## APPENDICES

### Appendix I: Questionnaire for SMEs Operators

This questionnaire is designed to collect opinions from respondents on the influence of **electronic commerce adoption on performance of import oriented SMEs in Nairobi City county**. Respondents are expected to answer the questions diligently and honestly based on provided information. NOTE: Your response/opinion will only be used for academic purposes and therefore confidentiality of the respondents is our priority.

#### SECTION A: GENERAL INFORMATION

1. What is your Designation?

Owner

Manager

Other senior employee

**SECTION B: ELECTRONIC ORDERING AND CUSTOM CLEARANCE**

2. Rate the following statements regarding adoption of Electronic ordering and custom clearance (where strongly agree (SA) = 5, Agree (A) = 4, Neutral (N) = 3, Disagree (D) = 2 and Strongly disagree (SD) = 1).

No		SA	A	N	D	SD
1	You have an active account in Alibaba, e-bay and other global online markets					
2	Your business frequently sends inquiries on <i>e bay</i> , <i>Alibaba</i> and other global online markets					
3	You receives Quotation for supply from <i>e bay</i> , <i>Alibaba</i> and other global online markets					
4	You frequently make orders for goods on <i>e bay</i> , <i>Alibaba</i> and other global online markets.					
5	The goods you order from abroad online are delivered through international freight agents					
6	You have signed up on the KRA e-portal for payment of import duty tax					
7	You frequently clear your imported goods on KRA e-portal					

**SECTION C: ELECTRONIC MARKETING**

3. Rate the following statements regarding adoption of Electronic Marketing (where strongly agree (SA) = 5, Agree (A) = 4, Neutral (N) = 3, Disagree (D) = 2 and Strongly disagree (SD) = 1).

No		SA	A	N	D	SD
1	You frequently do online Research on consumers preferences					
2	You frequently do online research on competitors					
3	Your business has an active e-commerce website					
4	Your website displays all business Product on sale					
5	You frequently market your products via sending emails					
6	You frequently post your products on social media platforms like facebook, whatsapp and Instagram					
7	You frequently use sms messaging to inform customers about products you are selling					

<b>8</b>	You frequently involves online sales influencers to boost sales					
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**SECTION D: ELECTRONIC PAYMENT**

4. Rate the following statements regarding adoption of Electronic Payment (where strongly agree (SA) = 5, Agree (A) = 4, Neutral (N) = 3, Disagree (D) = 2 and Strongly disagree (SD) = 1).

<b>No</b>		<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
<b>1</b>	You frequently get paid by customers through Electronic Fund Transfer					
<b>2</b>	You frequently get customers paying through Debit and credit Cards					
<b>3</b>	You frequently receive mobile money payment by your customers i.e Mpesa, airtel money, equitel, vooma					
<b>4</b>	You make payments using to suppliers using PayPal/ pesapal/ western Union					
<b>5</b>	You frequently receive e-bills from utility service providers					
<b>6</b>	Your business has active buy goods till number					
<b>7</b>	You frequently make payment for utility bills using Pay bill Number provided by utility providers					

**SECTION E: ELECTRONIC BOOKKEEPING**

5. Rate the following statements regarding adoption of Electronic bookkeeping (where strongly agree (SA) = 5, Agree (A) = 4, Neutral (N) = 3, Disagree (D) = 2 and Strongly disagree (SD) = 1).

<b>No</b>		<b>S A</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
<b>1</b>	You exclusively use a point of sale (POS) system when making sales					
<b>2</b>	You exclusively use accounting software like quick books and Pastel for bookkeeping purposes					
<b>3</b>	You frequently send e-receipts to customers					
<b>4</b>	You frequently receive e-receipts for utility bills payments made					

**SECTION F: ELECTRONIC CUSTOMER RELATIONSHIP MANAGEMENT**

6. Rate the following statements regarding adoption of Electronic Customer Relationship Management (where strongly agree (SA) = 5, Agree (A) = 4, Neutral (N) = 3, Disagree (D) = 2 and Strongly disagree (SD) = 1).

No		S A	A	N	D	SD
1	You frequently track customers who visit your website					
2	You frequently receive and respond to customer complaints and inquiries online					
3	You safely keep customer data in your possession					
4	You frequently send periodic notifications to customers on various issues like availability of new stock					
5	You frequently wish customers well on special occasions like birthdays,					

**SECTION G. FIRM PERFORMANCE BASED ON BALANCED SCORECARD**

7. Rate the following statements regarding performance of your business (where strongly agree (SA) = 5, Agree (A) = 4, Neutral (N) = 3, Disagree (D) = 2 and Strongly disagree (SD) = 1).

S/No	Firm Performance	SA	A	N	D	SD
	<b>Customer Perspective</b>					
1.	You offer better prices to customers compared to competitors					
2.	Your business sell high quality products					
3.	You deliver goods ordered by customers on time					
	<b>Internal Perspective</b>					
1.	You make faster decisions based on available information					
2.	You easily run the business remotely					
3.	Your processes have become efficient					
	<b>Innovation and learning</b>					
1.	Employees are able acquire new skills based on online information					

2.	Online information has enabled you to introduce new products					
3.	You can closely monitor changing customer needs					
	<b>Financial Perspective</b>					
1.	Your profitability has been growing consistently					
2.	Your sales volume have been growing					
3.	Your operational costs have been falling					