

**ELECTRONIC CUSTOMER RELATIONSHIP MANAGEMENT
STRATEGIES, RELATIONSHIP QUALITY, STRATEGIC
AGILITY AND PERFORMANCE OF SMALL AND
MEDIUM ENTERPRISES IN NAIROBI COUNTY,
KENYA**

**BY
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BUSINESS MANAGEMENT**

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DECLARATION

Declaration by the Candidate

This research thesis is my original work and has not been presented for a degree in any other institution. No part of this research should be reproduced without prior permission from the author and/or the institution.

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DEDICATION

I wish to dedicate this work to my dear Wife Eunice Jeptanui, Children Kigen Kipkorir and Kalya Kipchirchir, my Parents David Kiplagat Rotich and my mother Veronica Rotich for their encouragement during my academic journey this far having been a student since Diploma to Doctorate level. my brothers Gilbert Lagat and Joshua Too and my sisters Edna Korir, Naomi Melly and Ruth Rutto for their Moral, social and financial support.

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ABSTRACT

In Kenya, SMEs play a crucial role in the counties, yet they encounter numerous challenges, resulting in over 90% of them failing by their third year and only a small number of SMEs in Kenya have expanded into large formal organizations, a negative trend commonly observed among SMEs. Recently, scholars have debated on the issue of e-CRM in developed and developing countries, few have focused on the effect of e-CRM components coupled with other factors on SME performance. As a result, there is a gap in how e-CRM influences SME performance. The purpose of the study was to determine the effect of electronic customer relationship management strategies, strategic agility and relationship quality on performance of small and medium enterprises in Nairobi County. The study's specific objectives was to determine the effect of electronic customer relationship management strategies, relationship quality on SME performance, effect of electronic customer relationship management strategies on relationship quality, determine mediating effect of relationship quality, moderating effect of strategic agility and the moderating effect of strategic agility on the relationship between electronic customer relationship management strategies on SME performance via relationship quality. The study was anchored on Resource Based View theory, Relationship Marketing theory and Diffusion of innovations theory. The study was anchored on positivist paradigm and employed explanatory research design. The target population of this study comprised of 2,821 small firms operating within Nairobi central business district. A sample of 416 small firms was selected using normal approximation to the hyper-geometric distribution formulae. Senior managers were the respondents. The study used primary data collected from the respondents' using questionnaires. Quantitative method of analysis was adopted. Cronbach alpha was used to measures the reliability of the questionnaire values above 0.7 were accepted. From the direct effects, electronic customer management strategies ($\beta=0.533$, $p<0.05$), relationship quality ($\beta=0.333$, $p<0.05$) and Strategic agility ($\beta=0.138$, $p<0.05$) all have a significant effect of SME performance. Strategic agility moderated the relationship between electronic customer management strategies and relationship quality ($\beta=0.179$, $p<0.05$, ΔR -square of 1.17%) but not on electronic customer management strategies and SME performance ($\beta=-0.019$, $p>0.05$, ΔR -square of 0.01%). There was a positive significant partial mediation of relationship quality ($\beta=0.182$, bootstraps lower limit =0.117, bootstrap upper limit = 0.257). Furthermore, the moderated mediation was positive and significant ($\beta=0.046$, bootstraps lower limit =0.015, bootstrap upper limit = 0.089). In conclusion, electronic customer management strategies, relationship quality and strategic agility play a crucial role in enhancing SME performance by fostering customer loyalty, positive word-of-mouth and customer advocacy. SMEs can achieve sustainable growth, increased sales, and overall business success. The study recommends that firms need to allocate funds for research and development grants specifically focused on enhancing eCRM technologies and strategies. SMEs may emphasize the importance of customer relationship quality. Train employees in customer service and communication skills. Encourage personalized interactions, active listening, and prompt problem resolution to build strong, long-lasting customer relationships.

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OPERATIONAL DEFINITION OF TERMS

Customer Relationship Management: refers to managerially relevant application of relationship marketing across an organization focused on customers, which leverages information technology to achieve the objectives firm performance (Palmatier, 2008)

Electronic customer relationship management (E-CRM): it is a combination of hardware, software, process, applications and management commitment to improve customer service, retain customer, and provide analytical capabilities for the firm (Al-Qirim, 2007).

Relationship quality - refers to the strength, trust, and effectiveness of interactions between business entities, such as between companies and their clients, customers, suppliers, partners, or within internal teams. It reflects the degree to which these relationships are mutually beneficial, stable, and conducive to achieving shared goals (Palmatier, Scheer, Evans, & Arnold, 2008).

Small and medium sized enterprises: Small enterprises are those that have an annual turnover of Ksh 500,000-5,000,000, with the number of employees ranging from 10-50 people (Laws of Kenya, 2012).

According to Kenya's Micro and Small Enterprises Act 2012, micro enterprises are defined as a firm, trade, service, industry or a business activity whose annual turnover does

not exceed Kshs 500,000 and whose total employees are less than 10 people.

SME performance- It is defined by using the value added (VA) by SMEs, as a percent of the total VA by enterprises. The ability of a SMEs to implement optimal organization with the aim of offering a product or service that meets the expectations of its consumers. (Corò, & Volpe, (2020)

Strategic agility it refers to ability to come up with strategies that proactively respond to unforeseen or foreseen sudden and unexpected changes on SMEs (Nkuda, 2017).

LIST OF ABBREVIATION AND ACRONYMS

CRM	Customer Relationship Management
CVI	Content Validity Index
DOI	Diffusion of Innovation Theory
e-CRM	Electronic customer relationship management
ICT	Information and Communication Technologies
IT	Information Technology
NACOSTI	National Council for Science Technology and Innovation
PPMC	Pearson Product Moment Correlation
RBV	Resource Based View
RM	Relationship Marketing
RQ	Relationship Quality
SA	Strategic Agility
SMEs	Small and Medium Enterprises
VIF	Variance Inflation Matrix

CHAPTER ONE

INTRODUCTION

This chapter presents the background of the study, statement of the problem, objectives of the study, research hypotheses, significance of the study, and the scope of the study.

1.1 Background of the Study

The modern business environment has become highly dynamic. Thus, small and medium enterprises (SME) must develop strategies to keep up with the rate of change in technology, customer demands, and global competition in order to enhance performance. Studying SME performance is important because it has major impact both on gross domestic product (GDP) and unemployment (Cicea, Popa, Marinescu and Ștefan, 2019). SMEs play a vital role in enhancing promotion of technical progress in society and innovation in economic activity (AlQershi, Abas, Mokhtar, 2018). Therefore, it is necessary to investigate the drivers for SME performance especially in emerging Economies where SMEs are less performing than developed nations.

Innovation strategies in customer relations management are main drivers for SME performance which forge long-term relationships with customers hence optimizing their competitive power (Nagwan, Sany and Zakaria, 2020). Electronic customer relationship management (eCRM) is one of the primary strategic innovative initiatives in industry today that firms use in identifying and drawing potential customers for increasing profit (Nam, Lee and Lee, 2019). Electronic customer relationship management increases benefits of quality customer relationship such as customer satisfaction and loyalty through value customer relationship (Safari, Safari, Olesen, &

Shahmehar, 2016). A successful electronic customer relationship management strategy attracts and retain economically valuable customers (Herman, Sulhaini & Naili, 2021). SMEs in Indonesia have employed Electronic customer relationship management to create connections with customers, understand the types and effective strategies that are key in assisting the companies to increase their profitability. This becomes a company's power in analyzing the customers 'preference (Herman, Sulhaini & Farida, 2021). Electronic customer relationship management is more than an information tool and plays a critical role in SMEs in Yemen.

SMEs which had successfully implemented of Electronic customer relationship management had increased customer satisfaction, retention, also increased employee satisfaction and subsequently improved company performance (AlQershi *et al.*, 2020). In Poland, e-CRM helps businesses use technology and human resources to gain insight into the behavior of customers and value of those customers. With an effective electronic customer relationship management strategy, a business can increase revenues (Anaam et al., 2021). According to Hanif et al., (2020) electronic customer relationship management has led to SMEs competitive edge and success through understanding the customers and the conditions that effect customer loyalty and retention rate of customers by maintaining long lasting relationships with customers

Scholars have indicated that implementing electronic customer relationship management strategy through e-business strengthens traditional customer relationship (Sistar & Sadeghi, 2016;Safari & Safahani, 2015). To enhance customer retention, customer satisfaction and loyalty which leads to SME performance requires 360 degrees' view of the customer. In order to imply 360' customer view concept, there is need to implement electronic customer relationship management that is integrating

internet- based business customer communication, customer key dimensions and technology through technology-integration, business-wide customer driven and cross-functional organization. However, each dimension has its unique challenges but integrating all three together define customer relationship management system (Rigo, Pedron, Caldeira, & Araújo, 2016; Safari *et al.*, 2016).

Electronic customer relationship management strategy integrates ICT in the management of customer relationships which enables effective collection and processing of customer data from a wide geographic reach and efficient customer interaction with the organization (Herman, et al., 2021). Integration of electronic customer relationship management through ICT and internet-based technologies create two capabilities in the firm. The firm's capability is managing customer information through storing and processing of customer data while the second is communicating with customers (Bashir and Idris, 2015). Electronic customer relationship management use technology to capture and integrate customer data (Al-Dmour, Algharabat, Khawaja, & Al-Dmour, 2019). However, despite the benefits of electronic customer relationship management the effect of electronic customer relationship management on performance of SMEs has been given little attention.

In addition, despite electronic customer relationship management being beneficial to SMEs performance, there are several factors such as strategic agility which have shown to influence effectiveness of electronic customer relationship management toward improving SME performance. The concept of strategic agility is important in an organization by defining performance as function of alignment between electronic customer relationship management and organization structure, and its adoption capabilities (Peng-Cui *et al.*, 2014). Strategic agility points out how organization

adapts and reconfigure to changes such as electronic customer relationship management to obtain state of fit (Al-Dmour *et al.*, 2016). This therefore suggest that SMEs should implement strategies that lead in the achievement of alignment with technological changes especially in terms of adapting structures, policies, resources, and activities to environmental conditions. Thus, the study will moderate the relationship between electronic customer relationship management and SME performance with strategic agility.

However, despite electronic customer relationship management being beneficial to SMEs performance, there are several factors such as relationship quality and strategic agility which have shown to influence the effectiveness of electronic customer relationship management (Lecerf, & Omrani, (2020).). Accordingly, strong ties with competent intermediaries built over time can provide the SME with enduring competitive advantages. For resource-constrained SMEs, relationship quality may be particularly important to the extent it allows the SMEs to enter new markets, overcome the complexities inherent in exporting, and successfully manage operations in those markets. From an importing SME's perspective, relationship quality was analyzed by Skarmas & Robson, 2008, who considered the influence of asset specificity, role performance, and cultural sensitivity on the quality of relationship between a customers and firm. Relationship quality was recognized as a higher-order concept resulting in greater trust, commitment, and satisfaction, while lowering conflict.

Strategic agility is more about the ability to think and act differently to bring about new business model innovations (Doz and Kosonen, 2017). In its most general sense, strategic agility can be defined as competitive capabilities that enable organizations to

cope with changing environments by constantly perceiving, detecting and capturing with strategic moves and changing organizational configuration (Nejatian *et al.*, 2019). Strategic agility requires inventing new business models and new categories rather than rearranging old products and categories. In the context of the concept of strategic agility, researchers have stated that factors such as developing strategies to cope with discontinuities and disruptions, finding new ways to manage business transformations and renewals, developing dynamic capabilities, creating imitation skills, providing a high level of organizational flexibility and convenience as well as developments in learning are important (Yildiz, & Aykanat, 2021).

Relationship quality has been proposed as a mechanism for distinguishing buyer–supplier relationships along a continuum (low to high relationship quality) to evaluate various aspects of the relationships, including the level of trust Xuan, *et al.*, (2020). Relationship quality is a measure not only of the quality of collaboration relationships, but also can be used to evaluate the value of arm’s length relationships (Lo *et al.*, 2018). Relationship quality represents the overall relationship in an abstract manner rather than as specific dimensions of the relationship.

RBV theory which shoots from the principle of the source of firms’ competitive advantage (enhanced performance), is positioned on a firms’ internal resources as opposed to the external environment. That is, competitive advantage of a firm depends on the unique resources and capabilities it poses rather than merely evaluating environmental opportunities and threats in conducting business. The RBV of the firm predicts that certain resources possessed and organized by the firm have the potential to create a competitive advantage and eventually superior firm performance (Ainuddin *et al.*, 2007). Resources that are valuable, rare, inimitable and non-substitutable allow the firm to do a better job of taking planned actions. If the

actions undertaken capitalize resources, it creates a competitive advantage, which in turn enhances performance (Ketchen Jr. *et al.*, 2007).

In recent years, changes in the market and business environment have become more important than ever. The internal changes in the organizational environment such as the increasing domination of the Internet in the business world, the Internet of things, fast emerging events such as Industry, rapid technological developments, changes in the tastes of customers, the speed of information transfer and complex employee management force businesses to transform (AlTaweel *et al.*, 2021). It has caused unprecedented pressure on businesses to quickly adapt and respond to changes in their work environments (Nejatian *et al.*, 2019). There is a consensus on the importance of strategic agility in the light of complex management challenges such as globalization, dynamic environment, speed of innovation, mergers and acquisitions. The struggle to cope with increased environmental uncertainties including various practices and techniques commonly used in different sectors, has consequently, required a revision of both strategic decision-making processes and their nature (Vecchiato, 2015).

1.1.1 SMEs in Kenya

MSMEs play a pivotal role in Kenya's economy. They contribute to over 90 per cent of total labour force and play a key role in poverty reduction and economic development. They are also a source of innovation, competitiveness, goods and services, and entrepreneurial skills. There are over 7.4 million MSMEs employing approximately 14.9 million Kenyans in various sectors of the economy. In addition, the MSMEs cover a wide range of establishments in almost all sectors of the economy. It is also worth noting that most MSMEs operate informally (Kaberia, *et al.*, 2021). Moreover, the important role of MSMEs in promoting GDP growth and

employment is underlined in Kenya's Vision 2030, the country's long-term development blueprint and the "Big Four" agenda under the manufacturing agenda. Despite this, SMEs continue to face substantial challenges, key among them is limited access to finance that impedes their growth. The time is ripe to create a conducive space for SMEs to be productive and profitable at local and regional levels. SMEs create 80 percent of employment, has establish a new middle class and stimulates the demand for new goods and services.

According to the Kenya Micro and Small enterprises ACT, 2012. micro and small enterprises are defined as enterprises in both formal and informal sector, classified in farm and non- farm categories, employing not more than fifty employees and have a turnover not more than four million shillings. Small and medium enterprises in Kenya contribute between 18-25% to the country's GDP and employ over about 17% of the total labor force in Kenya, (CBS, ACEG and KREP Holdings, 1999). Most small business enterprises are self-financed or financed by loans from family or other informal sources.

Most SMEs fall under the informal sector. The informal sector is estimated to constitute 98 percent of business in Kenya, contributing 30 percent of jobs and 25 percent of Kenya's GDP. There has been inadequate research on utilization of technology for business advantage by SMEs in Kenya; various managers expressed concerns of underutilized technology a major drawback to the electronic customer relationship management strategies adoption and where it can be applied (Kiiru, 1991).

The proprietors of various SMEs in Kenya have adequate awareness of the benefits of technology in their organizations. However, only a few know the benefits of

electronic customer relationship management strategies beyond the basic description. Many have adopted a wait and see attitude as far as use of electronic customer relationship management strategies are concerned. According to (Ellison, Lampe, & Steinfield, 2010), the concept of electronic customer relationship management has aroused interest in the enterprise but it is also clear that businesses are testing their options to decide whether they will adopt.

SMEs markets are ever changing all the time depending on the type of the product and what the business produces, however SMEs needs to react to this or they end up losing customers (Schepers, *et al* 2021). SMEs often attempt to benchmark competitors or related service industries to improve key business processes. Competition is escalating, both from traditional players and from new entrants, owing to deregulation. Changing consumer behavior and needs, globalization, disintermediation are all the dynamics being faced SMEs. Information technology is also having positive and negative impact on SMEs performance M. M, & Ahmed, E. R. (2022).

Research on large firms suggests that dedicated customer relationship management (CRM) software applications play a critical role in creating and sustaining customer relationships. CRM is also of strategic importance to small and medium-sized enterprises (SMEs), but most of them do not employ dedicated e-CRM strategies to seek attract and meet the needs of their customers. Instead they use non Internet-based systems to manage customer relationships. There has been little research on the mediating effect of relationship quality between electronic customer relationship management strategies and SME performance.

1.2 Statement of the Problem

SMEs have been found to boost economic growth in developed and in developing economies, SMEs are faced with array of challenges, and still have the opportunities to grow in emerging economies (Manzoor, *et al.*, 2021). Some of the challenges include linkage with multinational companies, networks with other businesses, diversification of market and products, enabling environment, franchising opportunities (Rosado *et al.*, 2018). The issues and problems limiting SMEs acquisition of financial services include lack of tangible security coupled with inappropriate legal and regulatory framework that does not recognize innovative strategies for lending to SMEs (Omondi *et al.*, 2018). Such barriers, if addressed properly by micro and small businesses, have the potential to turn around their businesses in developing countries. (Bai, *et al.*, 2021).

In Kenya, despite the critical role played by the SME in the counties, most of the SMEs startups are faced with many challenges leading to over 90% of the businesses fail at their third year (Njoroge & Gathungu, 2013). Wambugu, (2005) stated that in Kenya, very few SMEs have grown into large formal organizations, an adverse scenario that is apparently common among SMEs by adopting the E-CRM strategies. The implementation of electronic customer relationship management strategies in developing nation like Kenya, have been found to have an impact on SME performance, this has raised SMEs competitiveness in developing countries. Recently, scholars have debated on the issue of e-CRM in developed and developing countries, few have focused on the effect of e-CRM components coupled with other factors on SME performance (Khanh *et al.*, (2022), As a result, there is a gap in how e-CRM influences SME performance. Therefore, this research established moderating

and mediating effect of the relationship quality and strategic agility between electronic customer relationship management strategies and SME performance.

1.3 General Objectives

The study general objective was to determine mediating and moderating effect of relationship quality and strategic agility on relationship between electronic customer relationship management strategies and performance of small and medium enterprises in Nairobi County.

1.3.1 Specific Objectives

1. To determine effect of e-CRM on performance of small and medium enterprises.
2. To determine effect of relationship quality on SME performance in Nairobi County, Kenya.
3. To determine the effects of strategic agility on SME performance in Nairobi County, Kenya.
4. To determine the effects of e-CRM on relationship quality in Nairobi County, Kenya.
5. To determine the moderating effect of strategic agility on the relationship between e-CRM and SME performance in Nairobi County, Kenya.
6. To determine the moderating effect of strategic agility on the relationship between e-CRM and relationship quality of SME in Nairobi County, Kenya.
7. To determine mediating effect of relationship quality on relationship between e-CRM on performance of small and medium enterprises in Nairobi County, Kenya.

8. To determine moderating effect of strategic agility on the relationship between e-CRM on performance of small and medium enterprises via relationship quality

1.4 Hypotheses Testing

- H₀₁:** There is no significant effect of e-CRM on performance of small and medium enterprises SME performance in Nairobi County, Kenya.
- H₀₂:** There is no significant effect of relationship quality on SMEs performance in Nairobi County, Kenya.
- H₀₃:** There is no significant effect of strategic agility on performance of small and medium enterprises.
- H₀₄:** There is no significant effect of e- CRM on relationship quality.
- H₀₅:** There is no significant moderating effect of strategic agility on relationship between e-CRM on performance of small and medium enterprises.
- H₀₆:** There is no significant moderating effect of strategic agility on the relationship between e-CRM on performance and relationship quality.
- H₀₇:** There is no mediating effect of relationship quality on the relationship between e-CRM and SMEs performance.
- H₀₈:** There is no significant moderating effect of strategic agility on the relationship between e-CRM on performance of small and medium enterprises via relationship quality.

1.5 Significance of the Study

This study contributes knowledge into existing e-CRM strategies, relationship Quality and strategic agility concept literature. The models, theories, research methods, approaches adopted and findings benefits scholars by contributing to body of

knowledge by understanding the determinants of e-CRM strategies and the relationship between the independent and dependent variables, and also researchers who would wish to investigate similar or related phenomenon in this research area.

Secondly, this study informs the managers and proprietors of SMEs to understand effectiveness of Electronic customer relationship management strategies, strategic agility and relationship quality in attracting retaining customers and enhancing SMEs performance. The findings may also inform policy makers in the SME sector which the present Government has given priority by creating a stand-alone Ministry to deploy effective e-CRM strategies that will provide conducive technological environment and also enable SMEs to be innovative and competitive to attain operational effectiveness and efficiency in businesses hence increasing the competitiveness of their products in both local and International markets and guarantee performance of SMEs in Kenya.

Finally, the findings benefited SMEs to employ effective promotion strategies to ensure potential customers are attracted and a data base is created, quality relationship is built. Customer satisfaction and the customer loyalty is enhanced by attracting and retaining customers the SMEs are able to grow their performance and increase their customer based hence have a better performance.

1.6 Scope of the Study

The study concentrated on the effect of relationship quality on the relationship between electronic customer relationship management strategies, strategic agility and SMEs performance. Specifically, the study evaluated the key elements of ECRM strategies; the study used positivism as a research philosophy, and explanatory research design. The study was conducted on 416 selected SMEs from various

industries in Nairobi County owing to the diversity of business within the area. The study period was from January to October 2023.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter reviews literature related to the study variables with the focus being on the concept SME performance, concept of electronic consumer relationship management, concept of relationship quality, strategic agility, theoretical review, empirical literature review, summary of literature and gaps and conceptual framework.

2.1 Concept of Performance of Small and Medium Enterprises

SMEs' performance can be understood from a quantitative perspective: efficiency, financial results, level of production, number of customers (Anggadwita & Mustafid, 2014), market share, profitability, productivity, dynamics of revenues, costs and liquidity (Gupta & Batra, 2016; Zimon, 2018), etc. and also from a qualitative perspective: goals achievement, leadership style, employee behaviour (Anggadwita & Mustafid, 2014), customer satisfaction (Alpkan, Yilmaz, & Kaya, 2007), product and process innovation, organizational and marketing innovation (Sheehan, 2013), etc. Gopang, Nebhwani, Khatri, and Marri (2017), in their work, considered a series of 14 indicators to describe SMEs performance: reputation, productivity, employee satisfaction, profits, sales, prompt order delivery, sufficient working capital, effectiveness in operations of production, product quality, achievement of targets, number of clients, easiness in supervision, reduction in product cost and product diversification.

To survive and succeed in a potentially austere environment, firms must effectively deploy and combine their physical, human and organizational assets. Thus, they will

develop long-term competitive advantages and, in turn, achieve superior performance (Lonial & Carter, 2015). However, due to their limited resources, SMEs need to identify and exploit other means to be able to enhance their competitiveness and performance.

In general, various factors of the internal environment, which potentially influence the performance of SMEs, are mentioned in the literature. Of these, particular attention is paid to: firm age and size (Arend, 2014; Nicolini, 2001), human resources and human resource practices (Katou, 2012; Sheehan, 2013), entrepreneurial networks (Bratkovič Kregar & Antončič, 2016;) occupational health and safety measures (Gopang et al., 2017), product, process, organisational, marketing innovation (Altuntas, Cinar, & Kaynak, 2018; Wolff & Pett, 2006), sustainable leadership (Suriyankietkaew & Avery, 2016), planning and strategy (Aragón-Sánchez & Sánchez-Marín, 2005; Leitner & Guldenberg, 2010), organisational orientations (market, entrepreneurial, and learning orientations) (Lomberg, Urbig, Stöckmann, Marino, & Dickson, 2017), internationalisation (Chiao, Yang, & Yu, 2006; Majocchi & Zucchella, 2003), export (Altuntas et al., 2018), market orientation, planning flexibility (Alpkan et al., 2007), ownership and family involvement (Lien & Li, 2017), intellectual capital (Gomezelj Omerzel & Smolčić Jurdana, 2016), etc.

Although most of the published literature analyze different specific elements of the organization's internal and external environment as being critical to their performance, there are also a number of studies that also consider the macroeconomic factors. Performance differences in firms are often the subject of academic research and government analysis (Verreynne & Meyer, 2010). By considering businesses instead of the industry as the primary unit of analysis, researchers may gain a more in-

depth knowledge of the rivalry patterns between firms and drivers of performance (Houthoofd, 2006). Performance of SME comprises the actual output or results of an organization as measured against its intended outputs (or goals and objectives). According to (Richard, Devinney, & Yip) organizational performance encompasses three specific areas of firm outcomes: (a) financial performance (profits, return on assets, return on investment; (b) product market performance (sales, market share); and (c) shareholder return (total shareholder return, economic value added). Specialists in many fields are concerned with organizational performance including strategic planners, operations, finance, legal, and organizational development.

During the last two decades, performance of small and micro-enterprises has been studied by a number of scholars. Most research focuses on the analysis of performance determinants, in which critical success-factors were identified by researching relationships between input-factors and performance. Performance of small and micro-enterprises, as organizational success or failure is seriously affected by the managerial competencies of owner-managers (Pansiri & Temtime, 2008).

Measuring performance of small and micro-enterprise is complex and challenging work (Sapienza & Grimm, 1997) The challenges are usually distinct from those of large organizations and, because most existing performance measurement systems were designed for the latter, few tools are available for small and micro-enterprises. The main challenges to measuring performance in small and micro-enterprises are as follows. First, collecting performance information from privately held small and micro-enterprises is often difficult due to a lack of historical information and accessibility. The information is often imperfect and the accuracy is

hard to be checked even if the information can be obtained. For example, traditional financial measures of performance are often unavailable (Wang & Ahmed, 2004).

Second, financial data is difficult to interpret (Barnes, *et al.*, 1998). This is because small and micro-enterprises usually have small starting base, enormous and erratic growth rate and uneven record-keeping (Sapienza & Grimm, 1997). Third, many measures, such as future profits and survival, require a longitudinal sample-design. It is inappropriate to use such measures on small and micro-enterprise, due to the group's typically short operation-history (Wang & Ahmed, 2004). Fourth, financial data is often influenced by industry-related factors (C. L. Wang & Ahmed, 2004). The performance measures for ICT SMEs present a different connotation from that for traditional industries. Fifth, there exists possible source bias, such as owner/founder might manipulate the related information in propaganda (Brush & Vanderwerf, 1992). Sixth, SMEs' future and potential performance is more important than lagged-performance. This requires that performance measurement systems not only measure lagged performance, but also capture future performance. Seventh, Most SMEs focuses on day-to-day operations. There may not be enough resources to execute comprehensive PM measurement (Stephens, 2000). Finally, the decision-making processes in SMEs are always not formalized and their strategies are often poorly planned, which influences the standard PM system employed in SMEs (Garengo, Biazzo, & Bititci, 2005).

The performance measures of small and micro-enterprises vary widely. Murphy, Trailer & Hill reviewed the performance dimensions and measures used in literature then examined the relationship between performance variables. In his research (Garengo *et al.*, 2005) Growth and profitability were found to be the two

performance dimensions most frequently used in the empirical research. The performance indicators that were used in recent research are: Growth indicators, such as sales growth, were adopted by two thirds of the research. Efficiency indicators, such as return on assets (ROA), were used frequently. The former, however, was used more frequently in recent studies, while return on investment (ROI) was more frequently used ten years ago and more and more intangible and subjective indicators for example; customer satisfaction and managerial satisfaction were used, as compared to ten years ago.

There are many arguments on whether some indicators suit small and medium companies. For example, many scholars use the indicators of ROA, ROI or ROE to measure micro and small companies' performance. But studies had shown that self-reported return measures are not entirely reliable, and it is suggested that these indicators were not appropriate for micro- and small firms (Chandler & Jansen, 1992; M. Welsh, Parke, Widaman, & O'Neil, 2001).

Profitability is a key component of financial performance. From the management's point of view, profitability reflects the effectiveness with which management has employed both the total assets and the net assets that are recorded on the balance sheet. Effectiveness is assessed by relating net profit to the assets utilized in the generation of the profit. From the owners' point of view the shareholders in the case of a company, profitability means the returns achieved, through the efforts of management, on the funds invested by the owners (Helfert, 2001).

Current SME performance models suffer from a number of disadvantages. They intensively use a business ratio approach, thus neglecting important non-financial parameters. They look at SMEs as a homogenous group, downplaying the variations

in size, age, location, and business sector. They consider firms to be closed systems, and undermine the significance of networking mechanisms in the promotion and enhancement of SME performance. They do not directly incorporate the impact of an enterprise's innovation activities. Finally, their complexity and reliance on sophisticated statistical refining methods make these models impractical for use by SME managers(Welsh *et al.*, 2001).

Measuring performance of small firm is complex and challenging work (Sapienza & Grimm, 1997). The challenges are usually distinct from those of large organizations and, because most existing performance measurement systems were designed for the latter, few tools are available for small firms. The main challenges to measuring performance in small firms are as follows. First, collecting performance information from privately held small firms is often difficult due to a lack of historical information and accessibility. The information is often imperfect and the accuracy is hard to be checked even if the information can be obtained. For example, traditional financial measures of performance are often unavailable(Wang, Wang, & Yang, 2010). Second, financial data is difficult to interpret (Barnes, *et al.*, 1998). This is because small firms usually have small starting base, enormous and erratic growth rate and uneven Record-keeping (Sapienza & Grimm, 1997). Third, many measures, such as future profits and survival, require a longitudinal sample-design. It is inappropriate to use such measures on small firm, due to the group's typically short operation-history (Wang & Ahmed, 2004). Fourth, financial data is often influenced by industry-related factor (Wang *et al.*, 2010). The performance measures for small firms present a different connotation from that for traditional industries. Fifth, there exists possible source bias, such as owner/founder might manipulate the related information in

propaganda (Brush & Vanderwerf, 1992). Sixth, Small firms' future and potential performance are more important than lagged- performance.

This requires that performance measurement systems not only measure lagged performance, but also capture future performance (Kaplan and Norton 1992). Seventh, Most Small firms focus on day-to-day operations. There may not be enough resources to execute comprehensive Performance measurement (Stephens 2000). Finally, the decision-making processes in Small firms are always not formalized and their strategies are often poorly planned, which influences the standard Performance Measurement system employed in Small firms(Garengo *et al.*, 2005).

Many scholars (Garengo *et al.*, 2005) believe that there are three fundamental differences between small and large firms: environmental uncertainty, innovation in products and service, and sustained evolution. Hence, performance measurements is often used in small firms to manage uncertainty, to innovate products and services, improve their processes, and benchmark against competitors (Garengo *et al.*, 2005).The performance measures of small firms vary widely. Murphy, Trailer & Hill reviewed the performance dimensions and measures used in literature then examined the relationship between performance variables. In his research (Garengo *et al.*, 2005). Growth and profitability were found to be the two performance dimensions most frequently used in the empirical research. The performance indicators that were used in recent research are: Growth indicators, such as sales growth, were adopted by two thirds of the research. Efficiency indicators, such as return on assets (ROA), were used frequently. The former, however, was used more frequently in recent studies, while return on investment (ROI) was more frequently used ten years ago and more

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SMEs performance is a concept frequently used as a dependent variable in various fields (Richard et al.) While SMEs performance is relevant, problems based on researchers convenience and little attention of its dimensionality has led to lack of agreement and selection of indicators.(Combs, Russell Crook, & Shook, 2005; Crook, Ketchen Jr, Combs, & Todd, 2008; Richard et al.). Even though SMEs performance is multidimensional, a number of studies measure it using a single indicator and represent this concept as one-dimensional (Glick, Washburn, & Miller, 2005; Richard et al.) posits that if several dimensions exist, researchers should choose the dimensions most relevant to their research and judge the outcomes of their choice.

Consequently, this study chooses to measure SMEs performance using marketing indicators of customer satisfaction (Hong-kit Yim, Anderson, & Swaminathan, 2004; Jayachandran et al., 2005); customer retention or loyalty, and sales growth (Jayachandran et al., 2005); Yim *et al.*, 2004; (Day & Van den Bulte, 2002). Additionally, the measure of performance employed in this study is subjective in nature as opposed to objective. A "subjective" measure means that the SMEs

performance metric is anchored on a scale such as “much worse” to “much better”, “very poor” to “very good,” or “much lower” to “much higher” compared to competitors over time. These can be (Jaworski & Kohli, 1996) contrasted with an “objective” measure that would be a definite percentage figure for sales growth or profitability. It is important to note, dependence on subjective measures is a limitation of the research to date (Jaworski & Kohli, 1996). However, subjective performance measures have been widely used in research on market orientation and its assumed association to SMEs performance (Dawes, 1999).

2.2 Concept of Electronic Customer Relationship Management

The customer relationship management (CRM) literature recognizes the long-run value of potential and current customers. Increased revenues, profits, and shareholder value are the result of marketing activities directed toward developing, maintaining, and enhancing successful company-customer relationships. These activities require an in-depth understanding of the underlying sources of value that the firm both derives from customers, as well as delivers to customers (Boulding *et al.*, 2005).

In order to ensure long-term success, management should understand that customers are the building blocks of a firm therefore it is their responsibility to consistently undertake the role of marketing in a firm is to contribute to building strong market assets, and also take into consideration valuable customer portfolio. E-CRM is an integral part of a company’s strategy, and its input should be actively considered in decisions regarding the development of organizational capabilities, (Donio', Massari, & Passiante, 2006) the management of value creation, and the allocation of resources. E-CRM principles provide a strategic and tactical focus for identifying and realizing

sources of value for the customer and the SMEs and can guide five key organizational processes.

As the marketing dynamics are changing Electronic Customer relationship management (e-CRM) is replacing the traditional 'four Ps' of marketing; product, price, place and promotion. Long-term relationships with customers are the key to stability in an increasingly dynamic market (C. L. Wang & Ahmed, 2004) Electronic Customer relationship management (e-CRM) has become the main strategy to retain customers for companies regardless of its size. It has been regarded as a comprehensive strategy and process of acquiring, retaining, and collaborating with selective customers to create superior value for the company and the customer.

Customer Relationship Management involves the integration of marketing, sales, customer service, and the supply-chain functions of the organization, to achieve greater efficiencies and effectiveness in delivering customer value. With the advent of the internet and new technology, a new concept of CRM is born and changed into electronic Customer Relationship Management (e-CRM) or Web-based CRM (Silverstein, 2001). This includes all the processes needed to be acquired, built and maintain customer relationship through e-business operations.

Implementing ECRM successfully can bring several benefits and profits to the companies and help to get mutual benefits from both parties. (Almotairi, 2009) Indicates that e-CRM could bring many benefits for companies to enhance their ability in the competitive market, increase profits and profit rate, reduce costs, upgrade concentration of the market, and reduce cycle times of implementation of new sales activities, increase times of small-sized target marketing and increase knowledge. Whereas,(Fournier, 1998) indicates that several benefits might be derived

from ECRM, namely; increase customer loyalty, more effective marketing, improve customer service and support, and greater efficiency and cost reduction.

After the advent of internet and new technology, CRM has been converted to electronic CRM (e-CRM). E-CRM is a combination of hardware, software, process, applications and management commitment to improve customer service, retain customer, and provide analytical capabilities (Al-Qirim, 2007). Many companies have spent large amounts of money pursuing the development of a comprehensive e-CRM strategy in an attempt to implement e-CRM. However, despite the large investment made on e-CRM, many companies are dissatisfied with e-CRM implementations, because e-CRM projects are not creating measurable income on investment (Alhaiou, 2000).

The aim of e-CRM systems is to improve customer service, retain customers, provide analytical capabilities, increase customer value and use the proper methods to encourage customers to remain loyal (Zineldin, 2006). The primary goal of e-CRM is to increase incomes and profits while reducing costs. To reach this goal, the customer needs to increase his/her transactional dealings with the service provider. If transactions are made more convenient, useful and less expensive for the customer, it is likely that such customer will give service provider repeat business (Dimitriades, 2006). Satisfaction is considered to be an immediate goal of e-CRM

E-CRM is designed for people at all levels in business who wants to develop relationships with customers electronically. Because of that, it is critical to understand the important role that e- CRM plays within modern business organizations. This research will focus on the impact of e-CRM performance from customers and organizational perspective. Other recent studies found several positive outcomes of e-

CRM performance such as customer satisfaction purchase intentions customer retention(Kirca, Jayachandran, & Bearden, 2005) knowledge management profitability, relationship development, organizational commitment, and customer loyalty.

2.3 Concept of Relationship Quality

Relationship quality represents the “overall caliber of relationship ties and their overall impact on outcomes” (Palmatier *et al.*, 2008). Relationship quality describes the “depth and climate of inter-firm relationships” (Johnson & Greening, 1999), and is “an indicator of the health and wellbeing” of relationships (Crosby, Evans, & Cowles, 1990). Relationship quality has been proposed as a mechanism for distinguishing buyer–supplier relationships along a continuum (low to high relationship quality) to evaluate various aspects of the relationships, including the level of trust (Jap, 1999). Relationship quality is a measure not only of the quality of collaboration relationships, but also can be used to evaluate the value of arm’s length relationships (Johnson & Greening, 1999). Relationship quality represents the overall relationship in an abstract manner rather than as specific dimensions of the relationship (trust) given that it may be difficult to distinguish between the specific relational dimensions and / or to isolate the impact of the specific relational dimensions(Fynes, De Burca, & Mangan, 2008; Palmatier *et al.*, 2008). As such, relationship quality has been proposed as a higher order constructs(Zolkiewski, Turnbull, Ulaga, & Eggert, 2006). Past studies have used as few as two first order factors (Autry, Skinner, & Lamb, 2008; Hibbard, Kumar, & Stern, 2001) and as many as six first-order factors (Dorsch, Smith, & McDonough, 2009) dimensions of relationship quality. Generally, the dimensions most frequently examined are commitment, trust, and satisfaction (Zolkiewski *et al.*, 2006); Skarmeas *et al.*, 2008;

(Athanasopoulou, 2009). In this study, I will use four dimensions: commitment, trust, satisfaction, and relationship-specific investments. Each of the four dimensions of relationship quality will be defined below. Although not always used as a dimension of relationship quality, relationship-specific investments serve as a signal of that firm's intentions and illustrate the firm's integrity with respect to continuing the relationship (Bensaou & Anderson, 1999). As such, relationship-specific investments are an important consideration that should be tested for its inclusion as a dimension of relationship quality.

Commitment refers to an exchange partner's belief that an ongoing relationship with customers is so important as to warrant maximum efforts to maintain the relationship; that is, the committed party believes the relationship is worth working on to ensure it endures indefinitely (Morgan & Hunt, 1994). (Anderson & Weitz, 1992) posit that commitment results in mutual gain for partners in supply chain relationships. As such, the level of commitment in a relationship is a key indicator of relationship quality; that is, high quality relationships are expected to have higher levels of commitment exhibited by both partners. Trust refers to the extent to which relationship partners perceive each other as credible and benevolent (Ganesan, 1994). Several studies have identified trust as a key factor in relationship success (Doney & Cannon, 1997); Geyskens et al. 1999; (Corsten & Kumar, 2005; Whipple & Frankel, 2000). Generally, trust between relationship partners tends to reduce uncertainty and opportunism, and encourages greater openness and shared goals. Firms that trust their partners tend to view the relationship more favorably. Thus, it is expected that the level of trust is substantially greater in high quality relationships. Satisfaction refers to an overall positive appraisal of the aspects of a firm's working relationship with another firm (Dwyer, Schurr, & Oh, 1987). Satisfaction in a relationship reduces

uncertainty and the propensity to switch partners while also increasing the likelihood of future transactions (Moritz Rudasill, Rimm-Kaufman, Justice, & Pence, 2006). Generally, satisfaction encourages relationship partners to pursue common goals and collaborate over a longer period of time, which enhances relationship quality. Thus, it is expected that higher levels of satisfaction are realized in high quality relationships. Relationship-specific investments refer to investments made by a buyer or supplier that are dedicated to a specific relationship and, thus, represent idiosyncratic assets associated with that relationship (John & Jan, 1990).

Companies may consider investing in such assets as a way to enhance efficiency and in an effort to extract additional benefits from the relationship (Vasquez et al. 2007). When a firm dedicates assets (e.g., human, equipment, capacity) to a relationship, that dedication serves as a “credible commitment” to 1 See Møller et al. (2003) for a full description of the four competencies and their characteristics. Impact of Relationship Quality in Supply Chain 347 the partner firm (Williamson 1983; (Bensaou & Anderson, 1999) which signals that a long-term relationship is being sought by the partner making the dedicated investment (Mendoza, Marius, Pérez, & Grimán, 2007). Indeed, relationship-specific assets create an incentive to make the relationship “as fruitful as possible” (Anderson & Weitz, 1992). Further, the more interdependent SMEs are, the more intensely they will engage in and work to make the relationship successful (Zacharia, Nix, & Lusch, 2009). As such, it is expected that high quality relationships exhibit higher levels of relationship-specific investments.

2.4 Concept of Strategic Agility

The concept of agility emerged at the beginning of the 20th century in a research study funded by the US government at the Iacocca Institute in 1991. Along with other research studies in this area, many definitions of agility have emerged. For example,

Goldman and Nagel (1993) defined the concept of agility as changing customer opportunities in a continuous and unpredictable competitive environment so as to enhance profitability. Strategic agility is defined by Tallon and Pinsonneault (2011) as the ability of a company to respond fast to the changes of the business environment, adapt to it and take actions points to control uncertainty. In addition, agility has been defined as the ability to survive and develop in a competitive environment by reacting quickly and efficiently to changing markets driven by specially designed products and services (Gunasekaran, 1999). Strategic agility is more about the ability to think and act differently to bring about new business model innovations (Doz and Kosonen, 2017). In its most general sense, strategic agility can be defined as competitive capabilities that enable organizations to cope with changing environments by constantly perceiving, detecting and capturing with strategic moves and changing organizational configuration (Nejatian *et al.*, 2019).

Agility in business research is a new generation concept and its semantical use varies according to the research area. Studies on agility can generally be divided into two groups. In the first group, agility is considered as a generic capability that allows the company to adapt its operations quickly to rapidly changing market conditions and sudden changes in consumer needs (Braunscheidel and Suresh, 2009). In the second group of studies, agility is considered not only as a capability but also as an integrated strategy, paradigm, and system or management practice built on multidimensional skills (Dyer and Shafer, 1998). Accordingly, an agile firm should be flexible in its operations and be agile in reorganizing its strategy in a manner that is sensitive and adaptive to environmental changes.

Strategic agility requires inventing new business models and new categories rather than rearranging old products and categories. In the context of the concept of strategic

agility, researchers have stated that factors such as developing strategies to cope with discontinuities and disruptions, finding new ways to manage business transformations and renewals, developing dynamic capabilities, creating imitation skills, providing a high level of organizational flexibility and convenience as well as developments in learning are important (Weber and Tarba, 2014). Strategic agility is not about a particular change that an organization is dealing with in response to a major threat or crisis. Instead, strategic agility is about a firm's constant ability to effectively change the flow of action to maintain its competitive advantages (Weber and Tarba, 2014).

2.5 e-CRM strategy and Performance of Small and Medium Enterprise

Considerable empirical work in e-CRM the study has sought to examine the direct relationship between e-CRM and SME performance. However, findings from this work have been conflicting. Some report a negative relationship between e-CRM and SME performance (Reimann *et al.*, 2010; Zablah *et al.*, 2004; Shugan, 2005), while others demonstrate a positive relationship between e-CRM and firm performance (Boulding *et al.*, 2005; Ryals, 2005; Jayachandran *et al.*, 2005; Mithas *et al.*, 2005; Kuo-Chung and Chin-Shan, 2012). Consequently, it is difficult to capture and properly attribute the direct or indirect relationship between e-CRM and SME performance.

e-CRM describe the use of ICT in the management of customer relationships. In the CRM context ICT allows for an efficient processing of customer data (Brady *et al.*, 2002), a wide geographical reach (Javalgi and Ramsey, 2001) and for cost-effective forms of interaction between the organization and its customers (Schroder and Madeja, 2004; Kim and Umanath, 2005). The diversity of ICT and internet-based technologies provides organizations with two e-CRM capabilities: the capability to manage 3 customer information (Jayachandran *et al.*, 2005; Kim *et al.*, 2006;

Padmanabhan et al., 2006) and the capability to communicate with customers (Brady et al., 2002; Tan et al., 2002; Day and Hubbard, 2003).

The customer information management capability focuses on the ability of ICT to assist in the administration, storage and processing of customer data. CRM tools are used for capturing and integrating customer-details (Bradshaw and Brash, 2001; Padmanabhan and Tuzhilin, 2003). Tools and systems which provide organizations with such an information management capability and which are commonly considered in an e-CRM context include customer databases and data warehouses. Other authors refer to these tools as back-office or analytical CRM tools (Ang and Buttle, 2006).

The Internet and web technologies facilitate the implementation of e-CRM (Dolly and Pruthi, 2014; Küster, Vila and Canales, 2016), since they are web-based interaction platforms between the institution and their customers (Abdulfattah, 2012; Grover, 2011). Therefore, the features that make up e-CRM remain critical for managing customer relationships online, and building and maintaining loyalty. These features include concrete websites or Internet-based tools integrated into organizational systems, which, when properly customized, enable the required interaction with the customer (Grover, 2011). Thus, the relationship with the customer cannot be realized through the Internet without effective e-CRM, and, in order to succeed, relationship management, therefore, remains an initiative that requires commitment, a correct mindset, and an overarching strategic CRM ethos (Govender, 2004). Some researchers (Ata and Toker, 2012; Azila and Noor, 2011; Salehi et al., 2015) have suggested that numerous business benefits accrue from the implementation of e-CRM, which enhances customer satisfaction and loyalty. In the light of the aforementioned, this research explores how SME'S may use technology and e-CRM to manage customer relationships and achieve customer loyalty.

Adoption of e-CRM has been a recent strategy in the majority of business organizations, more particularly the developing countries, and, as such, managers have strategically invested in on-line technologies while emphasizing the building and maintaining of worthy linkages with profitable customers (Harrigan et al., 2012; Nguyen and Mutum, 2012; Sigala, 2011; Thuo *et al.*, 2011). Emerging technology, processes and other business activities around the customer has facilitated CRM applications (Abdulfattah, 2012), enabling organizations to recognize the best customer, increase their satisfaction and loyalty (Alhaiou, 2011; Tian and Wang, 2014). Effective use of relationship marketing can help to create competitive advantage (Harrigan et al., 2012; Karimi and Sarkhosh, 2006, p. 706; Thuo et al., 2011); and firms that have implemented fundamental e-CRM practices are reaping numerous benefits ranging from superior customer service, improved profitability, sales, reduced operational costs, enlarged customer base and a broader market share (Jamali et al., 2013; Kihara, 2015). The aforementioned benefits emanating from e-CRM practices are associated with customer satisfaction (Alim and Ozuem, 2014; Rabbai, 2013). It is, therefore, vital to create more value to customers since this nurtures interpersonal ties that lead to repeat purchases that benefit the business and consumer marketing. Recent studies (Abdulfattah, 2012; Rahimiparvar, 2014) on the use of e-CRM in building customer relationships established that it affects online customer satisfaction, service quality and retention (Khalifa and Shen, 2009; Tian and Wang, 2014), and promotes the development of an attractive virtual community which further enhance satisfaction (Alim and Ozuem, 2014). Researchers (Koçoğlu and Kirmaci, 2012) have also identified e-CRM antecedents of loyalty in the financial services industry. Therefore, an organization's resources such as organization-

customer interface, flexibility, speed of response, etc., need to be positively augmented in the relationship between e-CRM practices and marketing throughput.

The advent of new technologies has led to a shift from CRM to e-CRM, and with increasing global penetration of the internet, e-CRM has become a more popular communication tool and relationship-building platform (Lam et al., 2013). Organizations, therefore, are keen to deploy different types of e-CRM strategies to attract, maintain, and enhance customer relationships, which contribute to loyalty and the organization's success (Chess Media Group and Lieberman, 2010; Yun and Good, 2007). However, relationship management is an initiative that requires commitment, strategic CRM tenets and a correct mindset in order for it to succeed (Govender, 2004). Tanveer (2009) postulates that e-CRM infrastructure provides support to valuable customers to remain loyal, since information stored in the e-CRM database assists an organization to look at the actual cost of attracting and retaining customers. The firm can also access new international customers and seize valuable data essential to the firm's competitiveness and market share (Harrigan, Ramsey and Ibbotson, 2009).

Azila and Noor (2011) assert that the association between e-CRM and customer loyalty means that the more customers are satisfied, they repurchase and spread positive word-of-mouth about the service and the provider, which tends to result in longer relationships, trust in, and commitment to the service provider. As such, loyalty will continue to play crucial roles in the organization's competitiveness and profitability (Rahman, 2006). This is supported by some researchers (Gorondutse, Hilman and Nasidi, 2014; Hayes, 2008; Khan and Fasih, 2014; Olupot and Kituyi, 2013) who have suggested that e-CRM impacts on loyalty. Alhaiou (2011) who studied the relationship between e-CRM features and e-loyalty on online shoppers at

the different stages of transaction cycle argued that the use of e-CRM in building consumer relationships affects online consumer satisfaction and loyalty. A similar study by Abdulfattah (2012) investigated the effects of various e-CRM features at different stages of the transaction cycle, on customer satisfaction on banks' websites. The aforementioned researcher also established that e-CRM influences customer relationships and enhances online customer satisfaction and service quality. Rabbai (2013) confirmed the effect of e-CRM on customer loyalty, while Alim and Ozuem (2014) concluded that e-CRM is effective in strengthening relationships with customers and promoting the development of an attractive virtual community, which further enhances satisfaction.

2.6 e-CRM on Relationship Quality

Upong et al (2021) research (1) was to study the opinion level of electronic customer relationship management, relationship quality, customer experience and loyalty (2) to study the Effect of electronic customer relationship management, relationship quality and customer experience on customer toward loyalty and (3) to study the role, correlating and influence of electronic customer relationship management through relationship quality and customer experience leads to loyalty among large commercial banks in the northern region. The samples were collected from the customers who use the service and electronic communication channels of five large commercial banks 522 persons located in the provinces of large economic zones, namely Chiang Mai, Kamphaeng Phet, Nakhon Sawan and Chiang Rai provinces.

The data collected by questionnaires and in-depth interview techniques. Quantitative data was analyzed by descriptive statistics, included frequency, percentage and standard deviation, as well as factor analysis, and structural equation modeling SEM with ADANCO program and Sobel's Test. The research results show that

respondents rate the highest truth on parental loyalty, followed by the electronic customer relationship management, relationship quality and customer experience at a high level in all factors. The results of causal relationships by using structural equations and analyzing the influence variables. It was found that electronic customer relationship management influence the relationship quality and electronic customer relationship management had the most influence on integrated customer experience. Followed by relationship quality influence the loyalty and customer experience influence loyalty. Lastly, electronic customer relationship management had a negative influence the loyalty when indirectly through relationship quality and customer experience.

Taghipourian and Hatami (2019) carried a study on e-CRM on the Relationships Quality and Its Consequences: Evidence from Iranian Private Bank. a questionnaire adapted from George et al and Abdallah scale be determined in the statistical community between private's bank electronic customers of 388 people, after collecting information and data, the questionnaire designed by Likert scale and obtained by use of random sampling, and evaluated and analyzed by structural equations model method and LIZREL software. Data results show that E-CRM had a positive and meaningful effect on the relationships quality and the consequences of customers that include 7 component such as: communication channels, the overall quality of communication, confidence, satisfaction, loyalty, maintenance and the tendency to compromise. The results of research was confirmed the impact and importance of E-CRM on the quality dimensions and relationships consequences with customers like The satisfaction, loyalty and maintenance.

Abdi et al., (2019) investigates the effect of electronic Customer Relationship Management (e-CRM) on the service attributes and quality of customer-bank

relationships, for a study case of Maskan Bank Branches in Tehran. This is applied research in terms of objective and it is descriptive and quantitative in terms of data nature. The statistical population of this research includes the customers who use the Maskan Bank electronic communication service in Tehran city. According to results, the implementation of e-CRM affects the services attributes and quality as well as the outcomes of Customer Relationship with bank Maskan. In addition, the e-CRM implementation also has an indirect effect on relationships quality and outcomes through customer-based service attributes. This study finds that the education and communication duration with bank as an intervening variable affects each of the e-CRM variables, the quality and outcomes of customer-bank relationships.

Fakhraddin et al (2012) examines the results of electronic customer relationship management (e-CRM) system carrying out in the Iran banking industry from customer outlooks. Because most e-CRM carrying outs cannot be directly seen or identified by customers, report survey and interviews with experts in the Iran banking industry were used to develop a new construct called 'customer-based service ascribe' to quantify e-CRM results from customers' outlooks. A full-scale field survey of 684 customers of Iran commercial banks was then directed. A service ascribes model and a model that integrated relationship quality and result were constructed, and their validity and reliability was verified. Analysis of the results by using structural equation modeling demonstrated that e-CRM carrying out has a statistically significant positive relationship with customer- based service ascribe and with the quality and result of customer–bank relationships as well as an indirect effect on relationship quality and result through customer-based service ascribe.

Sivaraks et al., (2011) examined and measures the outcomes of electronic customer relationship management (e-CRM) system implementation in the Thai banking

industry from customers' perspectives. A full-scale field survey of 684 customers of Thai commercial banks was then conducted. A service attribute model and a model that combined relationship quality and outcome were constructed, and their validity and reliability was confirmed. Analysis of the results by using structural equation modelling (SEM) illustrated that e-CRM implementation has a statistically significant positive relationship with customer-based service attributes and with the quality and outcome of customer–bank relationships as well as an indirect effect on relationship quality and outcome through customer-based service attributes.

Sivares (2011) and his colleagues in a study entitled "The Impact of E-CRM (E-CRM) on the Quality and Consequences of Customer-Bank Relations" in Thailand, concluded that: a field study A complete survey of 684 Customers of Thai Business Banks. A special service pattern and a model of quality and relevance were created, verified and verified. The results analysis using Structural Equation Modeling (SEM) showed that the implementation of E-CRM in terms of statistics has a significant positive relationship with service features for the customer and the quality and outcome of bank-customer relations, as well as indirect impact on the quality and the consequence of the relationship through the service features for customer

2.7 Relationship Quality and SME performance

Waseem (2021) examined the impact of relationship quality on organisational performance by testing the relationship quality-relationship outcome conceptual model. Organisational performance is measured in terms of relationship outcomes. A survey was used to collect data from pharmaceutical companies in India. Relationship quality is comprised of trust, commitment, communication quality, and, relationship satisfaction. Relationship outcomes conceived as a dependent variable for this study was also measured using suitable non-financial and relationship centered measures.

The research instruments were refined and validated. The data were analyzed using structural equation modelling. The results indicate that only communication quality and relationship satisfaction emerge as significant predictors of relationship outcomes in the current research context

Nyaga et al., (2011) established relationships that can provide the desired level of performance and competitiveness. Relationship quality provides a global measure of buyer-supplier relationships and can be used to assess the types of relationships a firm has within its supply chain. The findings had an impact of relationship quality on supply chain operational performance and satisfaction with strategic performance while considering both buyer and supplier perspectives and collaborative and arm's length types of relationships.

Tahmasbizadeh et al., (2016) evaluated impact of relationship quality with customer (relationship marketing) on customer loyalty in the customer- oriented strategy (Case Study Agriculture Bank customers in Tehran) that according to the infinity of the statistical population, suitable sample size for distribution is calculated 384, thus 384 questionnaires is distributed throughout the province. The results of analysis show that in the first hypothesis examines the relationship between relationship marketing and customer loyalty in long-term, path coefficient of relationship between relationship marketing and customer loyalty obtained 0.93. In second hypothesis of research is concerned relationship of customer trust and relationship marketing that path coefficient of relationship between customer trust and relationship marketing is 0.81. In the third hypothesis examined relationship of customer commitment with marketing, path coefficient relationship between customer commitment and relationship marketing is 0.77. In the fourth hypothesis examined relationship of how to contact customer with marketing, path coefficient relationship between how to

contact customer and relationship marketing is 0.87. The results of the fifth research hypothesis that is investigated high satisfaction level with customer loyalty, path coefficient of relationship between high level of satisfaction and customer loyalty is 0.74. Consequently, sixth hypothesis of research deals with relationship to continue purchasing and customer loyalty, path coefficient of relationship between continuity of customer and customer - loyalty is 0.63. As it can be seen all hypotheses according to path coefficient is confirmed that this indicates impact of relationship quality with customer (relationship marketing) on customer loyalty in customer- oriented strategy.

Koech (2019) examined effect of relationship quality on customer loyalty. The study adapted a positivist approach because of the use of quantitative data. The study further utilized explanatory research design. A questionnaire was used to collect data from a sample of 309 bank customers in Nairobi, Mombasa, Nakuru, Kisumu and Eldoret who maintained bank accounts in the Kenya Commercial Bank, Cooperative Bank, NIC Bank, Diamond Trust Bank, African Banking Corporation and K-Rep (renamed Sidian) Bank. Correlation analysis was used to establish the relationship among the variables. Multiple and moderated regression analysis was used to test the hypotheses at $\alpha=.05$ level of significance. Model effect size was measured using R-square. The results indicated that relationship quality and the dimensions in the study that is, commitment, communication and conflict handling, were significant in affecting customer loyalty.

Rahmani-Nejad et al., (2014) studied the effect of Service Quality, Relationship Quality and Customer Loyalty in Banking Industry in Iran, Customer loyalty has two meanings: long-term and short-term loyalty. Customers with long-term loyalty do not easily switch to other service providers, while customers with short-term loyalty defect more easily when offered a perceived better alternative. With regard to the

importance of customers in banking industry, this research explores how relationship quality and commitment and mental image influence long-term loyalty. Relationship quality consists of two aspects: satisfaction and trust. So, along with how the above mentioned variables from loyalty in a bank environment, the managers of the branches of private banks are given the chance to design and perform effective and proper strategies leading to customer loyalty. The statistical populations of the research are the customers of private banks and the data was collected using the questionnaire and also the data has been analyzed using SPSS software. The results of the research show the positive effect of the abovementioned variables on loyalty.

Salciuviene and Skudiene, (2011) identify the dimensions of relationship quality that enables professional services companies to establish long-term relations with their clients and fosters the loyalty of the client. The theoretical framework of relationship quality dimensions and customer loyalty interrelationship in a sample of 74 Lithuanian companies' managers buying IT service has been empirically tested. The findings suggest that the three variables (functional quality, trust, and commitment) have a significant effect on IT services customer loyalty. Functional quality construct is the most important in building long-term relationship with customers in a professional services market.

2.8 e-CRM on relationship quality and SME performance

Relationship quality is functioned as a conduit to information flow (Ambler & Styles, 2000). Small businesses are limited by the resource scarcity to acquire knowledge of foreign market which is important for the firms' competitive advantage. Therefore, small businesses use the managerial competences to leverage foreign partner knowledge by means of strong and closed relationship. This in turn enables firm to develop its competitive advantage in foreign markets (Knight & Cavusgil, 2004).

Relationship quality was further analyzed from the importing SME's perspective by Skarmeas et al. (2008) when they considered how market and exporter characteristics affect the establishment of relationship quality. In this study, relationship quality was composed of trust, commitment, and satisfaction. Key findings from the importer's standpoint indicate that psychic distance is negatively associated with relationship quality, while transaction-specific investments in the relationship and role performance exhibit a positive association. However, their study found no link between environmental uncertainty and relationship quality. Capability to broaden customer knowledge and extend successful relationships with customers is laid upon the organization's ability to identify with customers, their individual preferences, expectations and varying needs. Technological development when adopted can be harnessed to achieve competitive advantage (Sigala *et al.*, 2001). With technological advances, it becomes possible to manage both strategic goal like revenue maximization and several other goals simultaneously. This include, adding value, cross-selling, customer satisfaction, loyalty and repeat business (Sigala *et al.*, 2001).

2.9 e-CRM, Strategic Agility and SMEs Performance

For organizations competing in varying environmental conditions, strategic agility can be the key to sustainability in the market. In turbulent environmental conditions, intense competition can define key agility indicators that contribute to the strategic essence of competitive organizations. Agile organizations have the ability to initiate continuous renewal, which includes adapting existing competencies to a constantly changing environment and simultaneously reconfiguring themselves to survive and develop for a long time (Agarwal and Helfat, 2009). Strategic agility is one of the key determinants of a firm's success in a chaotic environment in which new markets emerge, crash, divide, evolve and die. Strategic agility is to be flexible in

understanding new developments, to constantly adjust the company's strategic direction and to develop innovative methods to create value (Teece, 2007; Vecchiato, 2015; Weber and Tarba, 2014).

AlTaweel and Al-Hawary (2021) explored the relationship between strategic agility and organizational performance through the mediating role of innovation capability. The research population consisted of senior managers in industrial corporations, and the sample comprised 224 senior managers. Structural equation modeling (SEM) was used as a statistical method for testing hypotheses. The results showed that there is a significant influence of strategic agility on organizational performance and innovation capability. Furthermore, innovation capability plays a mediating role in improving the relationship between strategic agility and organizational performance

Clauss et al., (2021) proposed that the relationship between firm-level strategic agility and BMI adoption is contingent on the degree of environmental turbulence. Finally, we explore the mediating role that BMI plays in the relationship between firm-level strategic agility and firm performance. Our analysis of data from 432 German firms in the electronics industry indicates that strategic agility is positively related to BMI and that this relationship is indeed strengthened by the degree of environmental turbulence. Additionally, our findings show that, while value proposition and value creation BMIs have positive relationships with firm performance, value capture innovation is negatively related to firm performance; these findings are contrary to our prediction. Finally, the results of our mediation tests indicate that BMI serves as an important intermediary mechanism through which firms' strategic agility contributes to superior firm performance.

Yaşar (2017) the aim of the study is to demonstrate the relationship between strategic agility and firm performance of manufacturing firms operating in Gaziantep by

structural equation modeling. When it is considered in the context of the sample of research, the results of the research are very important for practitioners and future researchers. This is because; Gaziantep is a strong representative of the country's industry, so it can be argued that it is also an important actor in emphasizing the role of strategic agility due to the environmental uncertainties and complexities that have occurred in recent years.

Roberts and Grover (2011) Propose that agility comprises two distinct 22 capabilities, sensing and responding, and we address the issue of alignment between these capabilities and its 23 impact on performance. Using a dynamic capabilities framework, we formulate both matching and mediating 24 perspectives on customer agility. Based on data collected from marketing managers, we tested hypotheses 25 pertaining to the two methods of alignment. The results indicate significant support for the role of both forms 26 of alignment on performance.

Abusalma (2021) identified the degree of strategic agility and its relationship with the competitive advantage in the private hospitals in Jordan. To achieve this goal, a special questionnaire was developed for a sample of managers in hospitals. The study distributed 208 questionnaires to 27 hospitals, and managed to collect 95% of them, properly. The target group was mainly hospital directors, deputy directors, district directors and department heads. The researcher presented a set of recommendations that could be considered necessary to achieve a level of competitive advantage in all fields of hospital work. In the light of the problem of research and its questions and the review of relevant studies, the current research sought to test the validity of the hypotheses of the study. The results of the statistical analysis revealed that there is a statistically significant relationship between the extent of the Agility exercise and the competitive advantage of private hospitals in Jordan. The results also showed that

there was a statistically significant relationship between the strategic sensitivity and competitive advantage of the private hospitals in Jordan. However, the results of the hypothesis did not differ from the second sub-hypothesis, where there was a statistically significant relationship between the substantial and competitive advantages of private hospitals in Jordan. Finally, the statistical analysis found that there is a statistically significant relationship between technology and competitive advantage in private hospitals in Jordan.

Most studies on agility and competitive advantage have focused on supply chain efficiency and agility. And few studies have evaluated the factors that determine strategic agility and its impact on organizations financial, competitive and operational factors (Christensen, 2001). Khoshnood and Nematizadeh (2017) studied the concept of strategic agility for the Iranian banking sector. They also developed a model to investigate the effect of strategic agility on competitiveness. They showed that strategic agility had a significant impact on the competitiveness of private banks in Iran. Moreover, among the dimensions of strategic agility, visual acuity was the most important factor influencing competitive capabilities. Shin et al. (2015) examined the nature and the role of agility as a strategic goal and their effects on operational and firm performance. They developed theoretical connections between the strategic agility of small and medium enterprises (SMEs) and their core dimensions, including technology capability, collaborative innovation, organizational learning, and internal alignment. They also proposed a conceptual model to study the penetration network of the relationship between strategic agility, operational performance (accountability) and firm performance. In their study, company performance was measured through customer retention and financial performance. They reported that the strategic goal of Korean SMEs on agility had a positive effect on operational performance and

customer retention, but not on financial performance. Al-Azzam et al. (2017) investigated the mediating impact of strategic agility on the relationship between intellectual capital and introductory organizational excellence in Jordanian service industry. Haider and Kayani (2020) investigated the effect of customer knowledge management capability on project performance-mediating role of strategic agility. The results showed that structural equation modeling, in which the components of creation, transfer, integration and penetration were the most important tasks in clarifying customer knowledge and increasing the ability to understand customer needs and their demands, which could lead to reducing project delays, exceeds budget consumption. Strategic agility is one of the most modern concepts in the strategic field. Contemporary organizations are characterized by these types of strategies and are used in the field of strategic planning. This has contributed to the organizations' ability to quickly and accurately excel in their competitors and gain an advanced market share in competitive markets in the business environment. Oyedijo (2012) studied the role of strategic agility and competitive performance on the Nigerian telecommunication industry. He found that strategic agility had an effect on the competitive performance of telecommunication firms and also reported that strategic agility maintained a significant impact on and was a good predictor of competitive performance. Lu and Ramamurthy (2011) performed an investigation to understand the link between information technology capability and organizational agility. They highlighted that information technology was generally considered an enabler of a firm's agility.

2.10 Theoretical Foundation

The purpose of a tenet is to increase scientific understanding through systematic structures capable of both explaining and predicting phenomena (Hunt, 2002).

Resource-Based View (RBV) and Relationship Marketing (RM) theories provide the theoretical basis for this study. CRM strategies and its relation to firm performance among selected SMEs in Kenya will be discussed in light of the above theories.

2.10.1 Resource Based View (RBV) Theory

The use of the RBV theory in marketing research has grown exponentially in the past decade, suggesting its' significance as a framework for explaining and predicting competitive advantage and performance outcomes (Kozlenkova, 2013; Barney *et al.*, 2011). RBV theory of the firm was introduced by Wernerfelt (1984) and was expounded by Barney (1991). RBV theory show that resources or assets that are valuable, rare and hard to duplicate increase sustainable competitive advantage and lead to superior performance (Wernerfelt, 1984). Additionally, Barney (1991) expresses that firm resources are inclusive of; all assets, capabilities, organizational processes, firm attributes and information, knowledge among others controlled by a firm. These resources enable a firm to conceive and implement strategies that improve its efficiency and effectiveness in terms of performance. CRM dimensions as a resource has in recent times been acknowledged by CRM researchers. Consequently, they have adopted RBV as the most appropriate theoretical framework to evaluate firm performance (Keramati *et al.*, 2010; Kim and Kim, 2009; Rapp *et al.*, 2010).

RBV theory which shoots from the principle of the source of firms' competitive advantage (enhanced performance), is positioned on a firms' internal resources as opposed to the external environment. That is, competitive advantage of a firm depends on the unique resources and capabilities it poses rather than merely evaluating environmental opportunities and threats in conducting business. The RBV of the firm predicts that certain resources possessed and organized by the firm have the potential to create a competitive advantage and eventually superior firm

performance (Ainuddin *et al.*, 2007). Resources that are valuable, rare, inimitable and non-substitutable allow the firm to do a better job of taking planned actions. If the actions undertaken capitalize resources, it creates a competitive advantage, which in turn enhances performance (Ketchen Jr. *et al.*, 2007).

In relation to this study, Information system researchers have highlighted the potential of the RBV and related theories to provide explanations as to how and why firms can derive strategic value from IT investments (Al-Hawary & Alhajri, 2020). Proponents of the RBV suggest that the competitive advantage of the firm reside in organizational resources, capabilities, and competences that are valuable, rare, inimitable, and non-substitutable. Information Systems (IS) researchers have been debating this topic over the past two decades. IT business value research, a major stream in IS literature, examines the impact of IT investment on firm performance. Although the productivity paradox, that is, the proposition that increased expenditures on computers do not lead to productivity improvements researchers are still struggling to determine how IT improves firm performance (Le, *et al.*, (2022). Meta-analytic studies on IT business value point out two directions for future research: application of RBV of the firm to explain IT business value, and further research identifying management practices that may complement IT in creating business value.

2.10.2 Relationship Marketing (RM) Theory

Relationship Marketing (RM) was first mentioned by Berry in 1983 and the origins of its' approach are considered to be in the Business to Business (B2B) and service industries due to their special characteristics and the need for closer buyer-seller relationships. Berry (1983), defines RM as marketing activities that attract, maintain and enhance customer relationships. Additionally, RM is a recent approach in the

industry and its main focus is to establish close and long-term relationships in order to fully understand customers and meet their expectations (Ndubisi, 2007). Morgan and Hunt (1994) define RM as all marketing activities directed towards establishing, developing and maintaining successful relational exchanges. Palmatier (2008) defines RM as the process of identifying, developing, maintaining, and terminating relational exchanges with the purpose of enhancing performance. It is this definition based on existing RM definitions that is adopted in this study. Armstrong and Kotler (2000) argue that RM is a relationship practice for creating, retaining, and increasing mutual value between enterprises and customers or other stakeholders.

RM emphasizes a long-term process, with the goal of transferring long-term value to customers. In order to understand the evolution of CRM, it is important to look at the principles of RM where CRM stems from. As industries have matured, changes in the market demand and competitive intensity occurred that have led to a shift from transaction marketing to RM (Payne, 2006). RM is grounded on interactions with networks and relations. CRM emphasis is on the interactions between customers and firms. RM is the broader superseding concept of CRM. RM focuses on networks (Gummesson, 2003), and its emphasis is on the establishment of management of long-term relationships with different stakeholders in firms (Berndt, *et al.*, 2009).

Further, RM aims to build mutually satisfying long-term relationships with important constituents in order to earn and retain their business (Gummesson, 2003). CRM evolved from RM as importance of customer retention and loyalty progressively improved through the management of customer relationships (Berndt *et al.*, 2009; Ndubisi, 2007; Berry, 2002).

In the marketing context, relationships between various stakeholders are important. (Gronroos, 1990). This important aspect is captured by various authors. Gronroos (1990) defines marketing as “to establish, maintain and enhance relationships with consumers and other partners, so that the objectives of the parties involved are met. This is realized by a mutual exchange and fulfilment of promises.” Also, Hunt and Arnett (2006) reason that firms that exist in a market-based economy, enter into relational exchanges to enhance their performance.

In practice, RM is different from other forms of marketing in that it identifies the long term value of customer relationships and extends communication beyond invasive advertising and sales promotional messages. Additionally, RM is an arrangement where both the buyer and seller have mutual interest in providing a more satisfying exchange. To create stronger ties with customers, RM tries to surpass the simple post purchase-exchange process by making truthful and richer contact through providing a more all-inclusive personalized purchase. RM is also termed as cross-functional marketing. It is structured around processes that include all aspects of the organization. In fact, some reviewers prefer to call RM "relationship management" in appreciation of the fact that it involves much more than what is customarily included in marketing.

RM and CRM have taken a focal point in marketing strategy in the past two decades. A variety of factors including; shift to service-based economies; improvements in communication, logistics, and computing technologies; improved global competition; and more rapidly product commodization have enhanced the salience of “relationship-based loyalty” to sellers compared with other marketing mix elements. Moreover, some of these tendencies are simultaneously increasing customers’ aspiration for the

unique characteristics found in relationship-based exchanges. These trends include; reduced perceived risk, higher trust, enhanced cooperation, and greater flexibility. Thus, in many situations, both sellers and customers are becoming more interested in conducting business transactions embedded within relationships (Palmatier, 2008).

According to Palmatier (2008) CRM is an important trend in RM, it is based on the concept of a firm's effort to develop long-term mutually beneficial links with its customers. In the current challenging environment, the profitability of customers and services by firms is essential for any on-going mutually beneficial relationship. Companies adjust their approaches to become more customer-focused by trying to optimize both customer satisfaction and profits (Roberts-Lombard and Plessis, 2012).

The relationship between CRM and RM can be summarized as follows: CRM is a collection of a firm's functions and facilities that are used in combination, in order to enable a more direct approach to the customer and to improve the management of customer relationships leading to enhanced performance (Palmatier, 2008). RM is a philosophy of strategically managing relationships with stakeholders, with a strong focus on customer retention (Baran *et al.*, 2008). e-CRM gives a company the capacity to offer more than a product or service, but develop a relationship with customers that is mutually satisfying and successful (Chen, 2008). Consequently, firm managers expend resources on RM with the belief that it would eventually lead to enhanced SMEs performance (Palmatier, 2008).

2.10.3 Diffusion of innovations theory

This theory posits that five perceived innovation attributes influence adoption: relative advantage, compatibility, complexity, observability, and trialability (Chuchuen and Chanvarasuth, 2013). The diffusion of innovations theory (Rogers 1995, Tornatzky

and Klein 1982 has been employed to study a wide range of phenomena including the adoption and usage of technology. Within the technology adoption and usage area, this theory was used to examine a variety of factors that are thought to be determinants of IT adoption and usage including individual user characteristics Brancheau and Wetherbe 1990, information sources and communication channels Nilikanta and Scammell, 1990, and innovation characteristics

Hoffer and Alexander 1992 IS researchers also integrated the intentions and innovations theories combining concepts from the Theory of Reasoned Action Moore and Benbasat 1991 and the Theory of Planned Behavior Taylor and Todd 1995, Chau and Hu 2001 with the perceived characteristics of innovations Rogers 1995. Since the innovations characteristics such as relative advantage, compatibility, and observability are applied in diverse situations and easily integrated with constructs from other theories and models, it is useful to consider appropriate innovations attributes to examine the diffusion of broadband.

Diffusion of Innovation (DOI) theory is a broad social psychological or sociological theory. This theory is used to explain the patterns of adoption explain the mechanism and assist in predicting whether and how a new invention wills success. According to Rogers (1993), diffusion is a process by which an innovation is communicated through certain channels over a period of time among the members of a social system. An innovation is an idea, practice, or object that is perceived as new by an individual or other unit of adoption.

In the diffusion approach, the Rodger's Diffusion of Innovation (DOI) theory is used to explain the role of the media and interpersonal contact in providing information that influences a person's opinion and judgment of the technology that leads to the

adoption of the technology. DOI theory is used to view the adoption stages and factors leading to adoption. From the DOI theory, the Rogers' Innovation- Decision Process model is used to gain further understanding of the adoption process related to issue of access. ICT adoption by SMEs is studied in many settings. In the Italian industries, Atzeni and Carboni (2006) revealed that weak ICT penetration is due to the size of industry, the lower reorganization of work practices and the sectoral specialization. For the Malaysian SMEs, Khong and Eze (2008) confirmed the factors of DOI theory and added two other factors which are ICT security and costs.

2.11 Conceptual Framework

From the above literature review it is evident that most of the previous studies have dealt with direct effect relationships. There is scarce literature on moderation effects between e-CRM strategies and SMEs performance hence this study proposed figure 2.1 to fill the identified gaps. Figure 2.1 is also a conceptual model which indicates five direct effect hypothesis (H_{01} to H_{05}) and four moderating hypotheses ($H_{06,7 \&8}$)

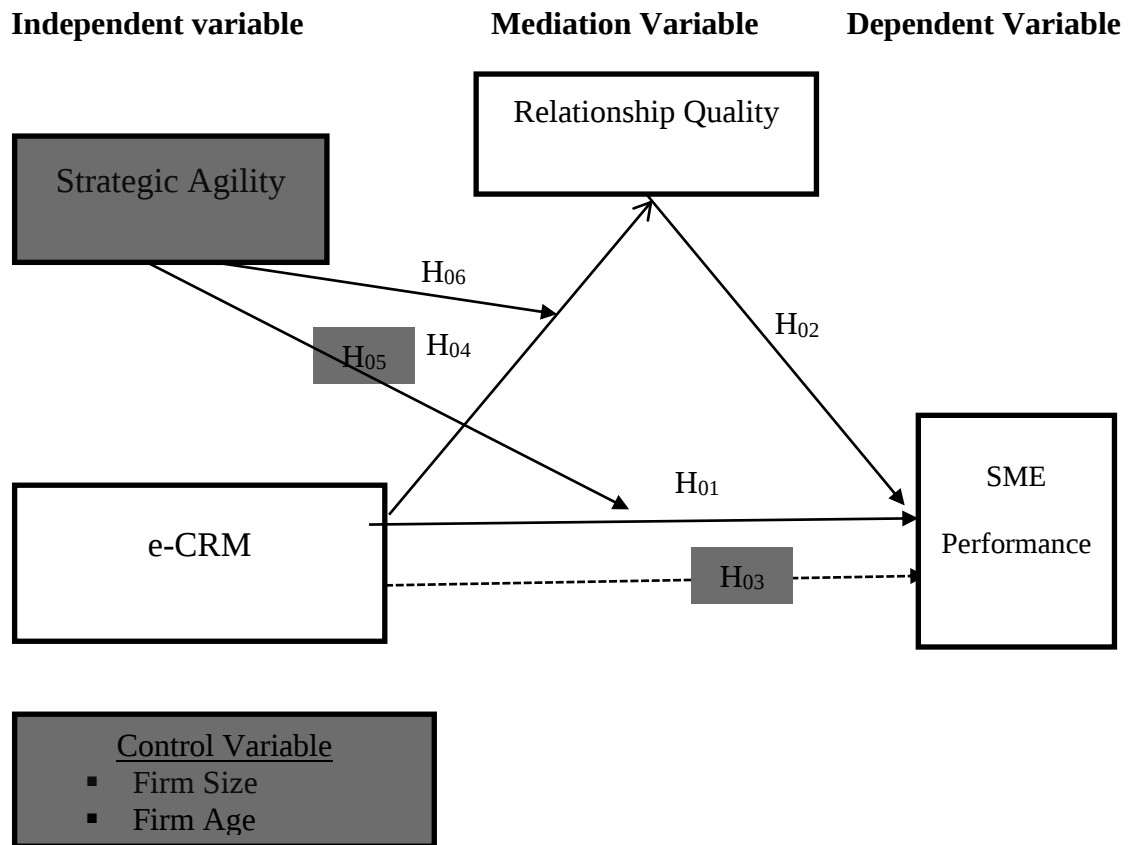


Figure 2. 1: Conceptual Framework

Source: (Researcher, 2023)

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.0 Introduction

This chapter covers the philosophy, research design, and study area, target population, sample size, sampling design, data collection instruments and procedures, validity and reliability of research instruments, data collection and analysis procedure and ethical consideration.

3.1 Research Philosophy

The study used positivism philosophy approach towards arriving at the conclusions of the problem, researchers who follow the positivism view believe that the philosophical position of the natural scientist which emphasizes working with observable social reality to create generalizations (Saunders, 2016).a positivist view of science is seen as a way to identify truths and if the truth can be understood, we may predict outcomes (Caldwell,1980)positivism believe that research can be undertaken by using a well-developed hypothesis derived from literature or existing theory and tested using a large number of randomly selected samples (Saunders, Lewis &Thornhill). This epistemological closeness to positivism is in line with pragmatism which according to Zikmund & griffin, (2013) gives the researcher freedom to choose techniques, methods and procedures that best suit their needs and purposes. According to the researchers, knowledge of the social phenomena being studied can be obtained primarily, however not exclusively, by searching for laws, causal relationships, and regularities between the constituents of the social world. Knowledge is thus seen as the main objective to arrive at a description of reality. In this regard, the current study's knowledge about the phenomena under investigation;

e-CRM, relation quality strategic agility and SME performance, was gathered through quantitative measurement using Likert scale.

Therefore, the study adopted quantitative research, which is defined as a type of research in which phenomena are explained by the collection and analysis of numerical data using statistical based methods (Vukojevic et al.,2016). The study measured description and exploration of the perceived reality of e-CRM, relation quality, strategic agility and SME performance. However, when it came to choosing the research paradigm, it follows that the transition zones that constitute meta paradigm approaches (Gioia & Pitre, 1990) was suitable for the current study. The researchers asserted that multi paradigm methods give the option of generating new perspectives because they begin from distinct ontological and epistemological assumptions and can therefore explore distinct facets of organizational phenomena and generate distinctly distinct and unique theoretical opinions of the events being studied (Gioia & Pitre, 1990).

Walliman, (2017) argued that reality is independent of human beings and emphasizes the importance to reach and discover theories based on empirical research. This is summarized in the reasoning that logical reasoning and mathematical proof are rationally justified rather than focusing on subjectivity and interpretation. The argumentation discussed above is connected to this study since it was statistically tested. Positivism is often linked with quantitative, scientific, traditionalist and objective research especially when the data is predetermined and highly structured which is related to the understanding of this research. This study was consistent with the prerequisites for quantitative research in which social reality is objectively

ascertained using strict guidelines in the data collection and evaluation process (Vukojevic et al.,2016).

3.2 Research Design

The study adopted an explanatory research design as it is appropriate in explaining the nature of the existing relationship in investigating the cause-and-effect relationship between the study variables in arriving at the study conclusions (Saleh,Mark &Jordan,2009). According to Cooper and Schindler (2003), an explanatory study uses theories or hypotheses to account for the forces that caused a certain phenomenon to occur. They further said it goes beyond description and attempts to explain the reasons for the phenomenon. Orodho (2003) explained that an explanatory study analyses the cause-effect relationship between two or more variables. This design was best for determining the effects of electronic customer relationship management strategies on performance of SMEs in Kenyan Nairobi.

Pinsonneault and Kraemer (1993) defined a survey as a “means for gathering information about the characteristics, actions, or opinions of a large group of people.” Surveys can also be used to assess needs, evaluate demand, and examine impact (Salant and Dillman, 1994). Therefore, survey was used because it is inclusive in the types and number of variables that can be studied, require minimal investment to develop and administer, and is relatively easy for making generalizations (Bell, 1996). Similarly, surveys can elicit information about attitudes that are otherwise difficult to measure using observational techniques (McIntyre, 1999).

Research design is a specific method a researcher uses: to collect, analyze and interpret data (Stagor, 2014).it is a master plan that specifies the methods and procedures for collecting and analyzing the collected information (Zikmud et al.,

2014).Hence ,research design sets out the procedure on the methods to be applied to collect data analyze data and to answer the research questions .according to Bhadra & Kumar (2011),a research design is a plan ,a structure and a strategy of investigation conceived to obtain answers to research questions or problems.

3.3 Target Population

A target population is the entire group of people that the researcher wishes to investigate so as to make inferences upon (Sekeran & Bougie, 2016). Population is an extensive collection of all the subjects from which a sample is drawn (Zikmud et al., 2014). The target population for this study was 2,821 registered SMEs within Nairobi CBD was considered (Nairobi County, Department of Trade, 2022). The unit of analysis in the study was Managers or owners were selected purposively on the grounds that they are in a higher management level to comprehend e-CRM decision issues of SMEs and in a position to give the correct data. The choice of Nairobi county was informed by the fact that it has a wide range of companies suitable for the study as per the data available in the trade department.

Table 3. 1: Target Population

Strata	No. of SME
Manufacturing	392
Hospitality	759
Consulting	267
Information technology	157
General shops	627
Tours & travel	619
Total	2821

Source: (Nairobi County, Department of Trade, 2022)

3.4 Sample Design and Sampling Techniques

Sampling is the process of selecting several individuals for a study in such a way that they represent the entire population from which they were selected. According to Kibet (2016), the main aim of sampling is to get a representative group, which enables the researcher to gain information about the entire population when faced with constraints of time funds and energy.

The strategy of sampling contains utilizing part of a population to make deductions about the entire population (Zikmund *et al.*, 2010). The study employed stratified sampling technique in selecting the SMEs that participated in the study. From the County Government of Nairobi department of trade, the SMEs were stratified based on the type of business. There are 6 strata's; manufacturing, hospitality, consulting, information technology, general shops, tours and travel. Random sampling was used to select the SMEs that participated in the study within each stratum. Neyman allocation formulae (1976) was used to distribute the sample into 6 stratus.

Stratified random sampling accurately reflects the population being studied because the researcher stratifies the entire population before applying random sampling methods. Researcher ensured each sub-group (stratum) within the population receives proper representation within the sample. As a result, stratified random sampling provided better coverage of the population since the researcher have control over the subgroups to ensure all of them are represented in the sampling. To determine the sample size for large populations, the researcher used normal approximation to the hyper-geometric distribution formulae. Similar studies Morris (2014) have adopted the hyper-geometric distribution due to its ability to estimate sample sizes from large populations accurately.

A total of 416 questionnaires were administered. The sample size formula for large (hyper-geometric) populations is shown as follows:

$$n = \frac{Nz^2pq}{\{E^2(N-1) + Z^2pq\}} \dots \dots \dots \text{Equation (1)}$$

Where;

n= is the required sample size

N= is the population size (2,821)

Z= is the level of confidence of the sample size (set at 95%) thus Z=1.96

P and q are the population proportions (Each set to 0.5).

E- sets the accuracy of the sample proportions (set to 0.05).

Therefore;

$$n = \frac{2821 \times 1.96^2 \times 0.5 \times 0.5}{\{0.05^2(2821 - 1) + 1.96^2 \times 0.5 \times 0.5\}} = \frac{2709}{6.50} = 416$$

Hence, 416 was the suitable sample size for the population of 2,821 SMES in Nairobi CBD based on hyper-geometric distribution formulated by Morris (2014). The number of firms that participated in the study were selected proportionately based on the population in each strata using simple random sampling as indicated in table 3.2.

Table 3. 2: Sample Size

Strata	No of SMEs	Proportion	Sample Size
Manufacturing	392	=392/2821*416	58
Hospitality	759	=759/2821*416	112
Consulting	267	=267/2821*416	39
Information technology	157	=157/2821*416	23
General shops	627	=627/2821*416	92
Tours & travel	619	=619/2821*416	91
Total	2821		416

Source: Researchers Computation (2023)

3.5 Data type, Data Collection Instruments and Procedures

3.5.1 Type of Data

The study involved primary data which was collected directly from the respondents using questionnaires.

3.5.2 Data Collection Instruments

Accurate details essential to maintain the integrity of any research.both the choice of of an appropriate data collection method and the clearly defined guidelines is needed in order to reduce the likelihood of errors arising in the final analysis of the results. Data collection is the process of gathering the required information for each selected unit in the survey. Questionnaires were administered to all the respondents and preferred because they were used to gather data quickly from a large sample population, primary data is defined as the data which is collected afresh and for the first time and thus happen to be original in character (Kothari, 2004) primary data are those items that are original to the problem under study (Lancaster, 2007). A questionnaire is a data collection tool or instrument designed by the researcher and whose main aim or purpose is to communicate to the respondents on what is intended and to elicit desired research objectives. In other words, the questionnaire is a means of eliciting the feelings, beliefs, experience, perceptions, or attitudes of some sample of individuals (Zikmund,2013) the questionnaire can reach a large number of people and a researcher can use them to cover a wide geographical are (Phellas, Bloch, & Seale, 2011).They were efficient in terms of time and cost. For these reasons the questionnaires were self-administered by research assistants and collected immediately. The issues arising from understanding of questions clarification was made during the data collection since the respondent had a chance to seek clarification.

Past study has revealed that Likert-type scales and other attitude and opinion assessments employ either a five- or seven-point response scale (Bearden & Netmeyer, 1999). A five-point Likert scale (1 = strongly disagree to 5 = strongly agree) were used to rate responses since it is easy for the respondent to understand (Worcester & Downham, 1986) and the researcher was able to compare the reliability of coefficients with other studies which have used the same scales (Saleh & Ryan, 1991).

3.5.3 Data collection procedure

After the researcher received approval from the university through the chairperson post Graduate to go to the field and collect data, the researcher sought a permit from the National Council for science and technology and innovation (NACOSTI) to allow him conduct a research in Nairobi County. The permit was issued on 17th July 2023. A total of 416 questionnaires were administered by the five research assistants after being trained by the researcher on: data collection process, how to handle respondents with different personalities with courtesy and respect, maintain confidentiality of the respondent's information, how to secure research materials, the general research study procedure and how to administer questionnaires to targeted respondents in order to get accurate and reliable information for this research. A self-administered questionnaire was accompanied by a covering letter, which explains the purpose of the study and assure respondents strict confidentiality. Closed ended questionnaires offered the respondent a list of responses, any of which they could choose. The list of responses was defined clearly and meaningfully by research assistants who were well vetted for the collection and understand the study.

Proportionate stratified random sampling technique was used to select the respondents that best represented the entire population consisting of six strata under study. Proportionate stratified random sampling was done by dividing the entire population into homogenous groups or strata and a proportionate stratified random sampling involved taking random samples from stratified groups in proportion to the population. The sample taken from each stratum or group was proportional to the relative size of that stratum. Each group or stratum was treated the same way with exactly the same sampling of target number of respondents giving any single element within the population an equal chance of being selected (Haque, 2010). The respondents filled the questionnaire by way of ticking respective responses that were reflective of their opinions and perceptions about the various statements in the questionnaire (Saunders et al., 2007); Vagias, 2006) both descriptive and quantitative data were collected using the questionnaires that were administered to the respondents. The researcher coordinated the whole process of data collection by: providing guidance, logistical support, and feedback to the research assistants.

3.6 Measurement of Variables

This study relied on and adopted the existing operational items that were previously used and accepted in previous studies hence appropriate scales for this constructs were developed through review of the relevant literature. Appropriate adoptions were made to suit the uniqueness of this study by making the tool content specific where necessary. All study variables were in ordinal scale and was measured using a five-point Likert scale because it delivers deeper insight into what people are thinking and feeling and produces reliable quantitative data that can be analyzed with relative ease (Vonglao, (2017). According to Zikmund et al., (2013). These variables are among the commonly cited e-CRM critical success factors (CSFs) in the literature (Chen and

Ching, 2004; Kim and Kim, 2009; King and Burgess, 2008; Mendoza *et al.*, 2007). Several authors have contended the importance of these dimensions working systematically in a firm to guarantee its enhanced performance (Fox and Stead, 2001; Sin *et al.*, 2005; Yim *et al.*, 2004). The moderating variable measured was relationship quality (Khandwalla, 1972; Jaworski and Kohli, 1993).

3.6.1 Dependent Variable – SME Performance

A dependent variable is a process outcome that is predicted and/or explained by other variables. In this study, the dependent variable is SME performance. SME performance was measured using seven items adopted from Abdulateef *et al.*, (2010), Yim *et al.*, (2004). The respondent was asked if there is growth in sales in relation to your expectations, there is growth in sales in relation to your competitors, there is growth in profits in relation to your expectations, there is growth in profit level in relation to your competitors, there is increased market size in new markets in relation to your expectation, there is increased market size in new markets in relation to your competitors, there is growth in capital from operations, and there is high level of customer loyalty. It was measured using a scale of 1 to 5 from 1 strongly disagree to 5 strongly agree.

3.6.2 Independent Variable – e-CRM strategies

An independent variable is expected to influence the dependent variable in some way or to predict the outcome of the phenomenon studied. In this study, e-CRM variable on the questionnaire was adapted and revised from previous related studies (Al-Hawary & Alhajri, 2020; Alhaiou *et al.*, 2012; Al-Hawary & Alhajri, 2020; Ismail and Hussin, 2016). The review of many of the studies that attempted to measure the dimensions of electronic customer relationship management strategies indicates that

there are many acceptable measures, in this study Website use, Facebook account, Mpesa till, twitter handle, privacy and security, and delivery time was considered to be the dimensions of electronic customer relationship management. 10 items were used to measure e-CRM using a scale of 1 to 5 from 1 strongly disagree to 5 strongly agree.

3.6.3 Mediating Variable – Relationship quality

Relationship quality was considered as a mediator in this study which was measured using 14 items. Our respondents were asked to what extent they agree/disagree with the following statement, Our firm has higher integrity, We work in close cooperation, Our firm has good will reputation, Our firm is trust worthy, We have consistent in providing quality services, Our firm is reliable in providing unique services, We remain loyal to a client to enjoy the relationship, Firm is looking out for my interest, I have strong sense of loyalty toward the firm, Our firm completely meets my expectations, Our firm shows a sincere interest in solving complaints, Our employees work in a tidy professional way, Our clients feel satisfied with all services offered and Our firm tries very hard to establish long term relationship. Thus, the study was limited to those scales that utilize a Likert-type response to a series of statements aimed at evaluating the relationship.

3.6.4 Moderating Variable- Strategic Agility.

Strategic agility is the moderating variable in this study. This study tested the moderating effect of strategic agility on the relationship between eCRM strategies and SME performance. The questionnaire, used as a measurement tool in the research, consists of strategic agility scale (Shin et al., 2015), the scales is used to measure strategic agility dimensions of strategic sensing, strategic learning and strategic

responsiveness. The scale has been used by scholars such as Ahammad *et al.*, (2021): Clauss *et al.*, (2021).

3.6.5 Control Variables

Control variables are held constant or are measured throughout a study for both control and experimental groups. A large number of extraneous variables (also known as control variables) exist that may affect a given relationship. Control variables are included to reduce the possibility of spurious results caused by correlations among the variables and constructs of interest. When examining the relationship between eCRM strategies and SME performance, the study identified; firm size firm age (number of years in operation), as extraneous variables to control possibility of variance.

Large firms can be more efficient compared to small firms by exploiting economies of scale and scope. In regard to age of the firm, older firms are more experienced, enjoy the benefits of learning, are not prone to liabilities of newness and can therefore enjoy superior performance. Controlling of these variables would allow accounting for mean differences of performance across the different sizes. In order to identify the true relationship between the independent and dependent variables, the effect of the extraneous variables was controlled.

Table 3. 3: Measures of Variables

Variables	Number of items	Sources
Independent Variables		
1. e-CRM	10	Abdulfattah, 2012
Moderator Variable		
2. Relationship quality	14	Graham, Diebels, and Barnow (2011) and Funk and Rogge (2007)
Dependent Variable		
3. SMEs performance	7	Yim <i>et al.</i> (2004); Day and Bulte (2002)
Control variables		
4. Firm size		Number of employees
5. Firm age		Number of years in operation

Source: Research Data (2022)

3.6.6 Pilot test

Before actual data collection exercise began, a pilot study was carried out in some selected organizations in Uasin Gishu County to ensure the research instruments had the appropriate content validity. The study was done by randomly selecting 10 respondents from the six stratus for pre testing of the research instruments. A total 60 respondents filled the questionnaire used to analyze the pilot test findings which were considered adequate and representative. According to Hertzog (2008), samples ranging in size from 10% to 40% of the anticipated sample size is considered adequate .in this study 60 questionnaires out of 416 sample size were administered and it constituted 41.6 % which is more than the minimum threshold of 10%.it is during the pre –testing of the instruments that the researcher is able to assess the clarity of the instruments and its ease to use. The study sought the opinion from the supervisors and the experts in the research field on the face and content validity. The items that were identified as sensitive or ambiguous or biased in any way were

modified or omitted to increase content validity of the instrument. The results from the pilot test were used to validate the research instrument and increase reliability.

3.7 Data Reliability and Validity

The quality of research study depends to a large extent on the accuracy of data collection procedures and the instruments used to collect data. Reliability and validity measures the relevance and correctness of data collected.

3.7.1 Reliability

Reliability is a measure of the degree to which a research instrument yields consistent results or in repeated trials (Nishiguchi *et al.*, 2012). It is dependability or consistency of measurement instruments .in other words, it is the extent to which the instrument yield the same results on repeated trials (Ngulube, 2005) Reliability was tested using Cronbach's Alpha coefficient to ascertain whether the data obtained was reliable and hence, the findings were reliable. Cronbach Alpha measures how well a set of items or variables, measure a single uni-dimensional latent construct that is a coefficient of reliability or consistency. Reliability is expressed as a coefficient between 0 and 1.00. The higher the coefficient, the more reliable is the test. A threshold of a Cronbach Alpha of 0.7 and above was acceptable (Cronbach Alpha, 1951). The study generated Cronbach's Alpha to test reliability of research questionnaire. The study considered a Cronbach's Alpha coefficient of 0.7 and above, Hair *et al.* (2010) recommends that composite reliability values should be larger than .70 above as sufficient for data collection to proceed.

3.7.2 Validity

According to Heale & Twycross (2015), validity is the degree to which results obtained from the analysis of data actually represent the phenomenon under study. It is therefore the extent to which an instrument can measure what it ought to measure.

Validity is the level to which an instrument measures what it is actually expected to measure. As an accuracy of measurement, it measures the accuracy of the research instrument. It is regarded as utility (Kothari, 2015 & Nachmias & Nachmias, 2014). Various classifications of validity are used to test the fitness of measures but a globally acknowledged classification consists of four main forms: criterion, face validity, content validity, criterion-related validity and construct validity. Validity deals with trustworthiness, lawfulness and germane of research (Creswell & Creswell, 2018).

Criterion validity is a measure of the degree to which data obtained from an instrument meaningfully and accurately reflects or represents a theoretical concept. This approach is often used where no criteria or domain of content is generally accepted as an adequate measure of a concept. The measurements need to conform to the theoretical expectations. If the measurements are consistent with the theoretical expectations, then data has construct validity.

Face validity was attained when the questionnaire was critiqued by supervisors and experts and necessary adjustments were done. According to Middleton (2020) face validity considers how appropriate the content of a test appears to be on the surface, if the content of the test appears to be suitable to its aims. Face validity can be done in the early stages of developing the questionnaire.

According to Croswell & Eklud (2006), content validity is the degree to which the questions on the instrument and the ratings on these questions reflect on all possible questions that could be asked about the content or the construct. This means that the questionnaire contained an adequate range of items that were used to test the concept. According to (Uone & Sekaran, 1992) and Mohajan (2018) there is no statistical test to determine whether a measure adequately covers a content area, content validity usually depends on the judgement of experts in the field. The confusing and vague issues were modified, and the ineffective and non-functioning issues were removed by the recommendations of the reviewers.

This study used content validity to check if the items fully measured what they are intended to measure, that is, if a test is representative of all relevant parts of the subjects it aimed to cover. The study tested for content validity using the Content Validity Index (CVI), 2 colleagues and 4 experts from research field were purposefully selected based on high level of expertise with self-management support. Content validity was assessed by total number of valid questions related with goodness of an item with 3 (neutral), 4 (agree) or 5 (strongly agree) by total number of questions in the questionnaire as shown below

$$CVI = \frac{\text{Total Number of Valid Questions (rated as 3, 4 and 5)}}{\text{Total Number of questions in the questionnaire}}$$

According to Polit & Beck (2006) a content validity index with at least six experts should give a maximum CVI of 0.8.

Further, to accomplish construct validity, convergent and discriminant validity were tested using factor analysis as postulated by Straub *et al.*, (2004).

3.8 Data Analysis

The basic steps in the analytical process consist of identifying issues, assessing the availability of appropriate data, deciding which techniques were suitable for answering questions of interest, applying relevant method, evaluating them, summarizing and reporting the findings.

The study used quantitative method to analyze data. The information was coded and entered into a spread sheet and analyzed using SPSS version 23. The data was analyzed using descriptive statistical methods for instance measures of central tendency such as mean, mode and standard deviation. Inferential statistics such as Pearson correlation coefficients r and multiple regression models were used.

3.8.1 Data processing

Processing of data included coding the questionnaires, cleaning, screening the data and selecting the appropriate data analysis strategy for testing the hypothesis. Coding involved assigning a mark to enable quick data entry and to minimize errors hence facilitating further analysis. Each item in the questionnaire was assigned a code that upon completion was entered into a statistical analysis software package SPSS Version 23. Cleaning and screening data included checking for inconsistencies, missing response, checking for outliers and other errors to ensure accuracy and completeness.

3.8.2 Data Analysis and Presentation

Descriptive statistics such as frequencies, mean and standard deviation was used, since the study was a cause and effect relationship, a correlation test was conducted to assess the presence of relationship between the variables under investigation. Correlation coefficient test and significant levels were conducted to check the

magnitude of the linear relationship between the study variables. The determinant of correlation matrix was generated to provide the information on multi-collinearity.

A principal component factor analysis with varimax was conducted to cluster the variables for the questionnaire into several factors according to their loadings. Factors with Eigen values less than one was considered insignificant and were excluded from the study.

3.8.3 Data transformation

After complete collection of data and all questionnaires availed to the researcher, data transformation was carried out to change the data from five Likert scale to ratio scale prior to analysis of inferential statistics. Data transformation involved moving data from its original data type to a new format using arithmetic method to make it suitable for further analysis. It involved reducing categories, coding, breaking down variables from multiple questions to creating a composite variable by re-specifying the numerical or logical transformation of data. The mean of single scores were loaded with items that were used to create composite scores. It is standardization, normalization or creation of Z Scores. A z-score is difference between a score or a statistic and the mean for that score or statistics divided by the standard deviation for that score or statistic (Abdi, 2007). It can be used to form inferential statistics, to find the proportion of a population that has given a score, and to identify possible outliers in a set of scores.

Finally, data was analyzed using statistical package for social scientist software version 23. Hierarchical and multiple regression analysis was done using Hayes model 1, 4 and 8, Hayes model 1 & 4 to test mediation process for direct effects and model 8 to test moderated mediation effects respectively using process macro

computation tool version 3.4. the findings of the study were presented through tables, percentages, descriptions, graphs and discussions.

3.8.4 Assumption of regression model

Before carrying out regression analysis, the researcher tested several assumptions of regression model. This is because if the assumptions are not met the results may not be trustworthy, resulting to Type I or Type II error, or over -or under-estimation of significance or effect size(s). The following assumption were tested from raw data before running multiple regression model

3.8.4.1 Linearity

Of the relationship between dependent and independent variable, Standard multiple regressions can only accurately estimate the relationship between dependent and independent variable if the relationships are linear in nature. In case of non-linear relationships, it is essential to examine analysis for non-linearity. If relationships between dependent and independent variable are not linear, the results of the regression analysis will underestimate the true relationships.

Independence of the errors; most authors estimate (Cronbach's alpha) of 0.7 to 0.8 are acceptable (Nunnally, 1978). Hence, a test of instrument reliability must be carried out for reliability tests; if it's low then correction should be done.

This was examined through the use of scatter plots of the scores represented by a straight line (Pallant, 2013) and was also proved through correlation coefficient.

3.8.4.2 Homoscedasticity

Homoscedasticity refers to equal level of variance maintained between independent and dependent variables, which can be tested through Levine's test (Al Mandil, 2016;

Tabachnick & Fidell, 2007). Laverne's test examines the null hypothesis which suggests the quality of variance, however, if the null hypothesis is rejected, the assumption of homogeneity of variance is violated (Field, 2013) and hence should be checked by visual examination of a plot of the standardized residual (errors) by the standardized predicted value.

According to (Berry and Feldman, 1985) and (Tabachnick and Fidell, 1996) slight heteroscedacity has little effect on significance tests; however, when heteroscedacity is marked it can lead to serious distortions of findings and seriously weaken the analysis thus increasing the possibility of Type I error. According to Breusch and pagan, the null hypothesis of homoscedasticity is accepted if the p values corresponding to the chi-square test statistics are greater than the 5% level of significance.

3.8.4.3 Normality

Testing for normality is an essential procedure in many parametric tests that are based on the normal distribution (Doornick & Hansen, 2008; Field, 2013). According to Demir (2022), a departure from normality is manifested by two measures: Skewness which affect test of means, (it measures the symmetry of a distribution with acceptable range being -2 and +2) while Kurtosis largely impacts tests of variance and covariance (used to measure the peakness or flatness of a distribution with acceptable range also being -2 and +2 Tabachnick & Fidell, 2007; George & Mallery 2010).

Normality test was also tested by the use of Histogram and finally by the use of P-P plot which indicate that the data points are close to the diagonal line and do not

deviate from it. To ascertain normality of data in this study, there was visual inspection of data to identify outliers.

3.8.4.4 Multicollinearity

Refers to the situation when the independent variables are highly correlated ($R > 0.9$). assessing multicollinearity can be done through tolerance and variance inflation factor (VIF). Tolerance addresses the amount of variance in the independent variable that is not explained by the other independent variables, thus, tolerance should be high to minimize the amount of shared variance with the other independent variables (Al Mandil, 2016). On the other hand, VIF is the inverse of the tolerance value ($VIF = 1/\text{tolerance}$), and its square root $\sqrt{VIF}$ represents the degree to which the standard error has been increased because of multicollinearity (Hair et al., 2014). According to Garson (2012), if the tolerance value is less than cut off value .20, the independent should be dropped from the analysis due to multicollinearity. The rule of thumb is that $VIF > 4.0$ indicate a serious multicollinearity. Some authors use the more lenient cut-off of $VIF \geq 5$ when multicollinearity is a problem (Gujarati & Porter, 2003) thus giving incorrect regression results (Palaniappan, 2017). The presence of multi-collinearity makes the assessment and hypothesis testing on regression coefficient unknown thus frustrating interpretation of the model coefficient. The test done showed that there was no multi-collinearity in this study

3.8.5 Model specification

The study adopted the following four statistical hierarchical equation models achieve the objectives of this study; regression model, mediation model, moderation model, and moderation mediation model.

$$Y = \beta_0 + \beta_1 \text{Firm size} + \beta_2 \text{Firm Age} + \epsilon \dots\dots\dots M1$$

$$Y = \beta_0 + \beta_1 \text{Firm size} + \beta_2 \text{Firm Age} + \beta_3 \text{eCRM} + \varepsilon \dots \text{M2}$$

$$Y = \beta_0 + \beta_1 \text{Firm size} + \beta_2 \text{Firm Age} + \beta_3 \text{eCRM} + \beta_4 \text{RQ} + \varepsilon \dots \text{M3}$$

$$Y = \beta_0 + \beta_1 \text{Firm size} + \beta_2 \text{Firm Age} + \beta_3 \text{eCRM} + \beta_4 \text{RQ} + \beta_5 \text{eCRM} * \text{RQ} + \beta_6 \text{SA} + \varepsilon \dots \text{M4}$$

Where,

Y= SMEs performance,

β_0 = constant,

β_1 = the slope which represents the degree in which business performance changes as the independent variable change by one-unit variable.

e-CRM Electronic Customer Relation,

RQ- Relationship quality,

SA- Strategic Agility and

ε = error term

3.8.6 Mediation Model Testing

In order to test the mediating effect of relationship quality on the relationship between e-CRM and performance of small and medium enterprises were tested using conditional process modeling (PROCESS macro) for SPSS (Hayes, 2017). PROCESS macro has been used in various studies published in prestigious journals (Palmer et al., 2016). PROCESS macro enabled us to conduct mediation (Hayes Model 4). Using the illustration below, mediation was depicted in the following way:

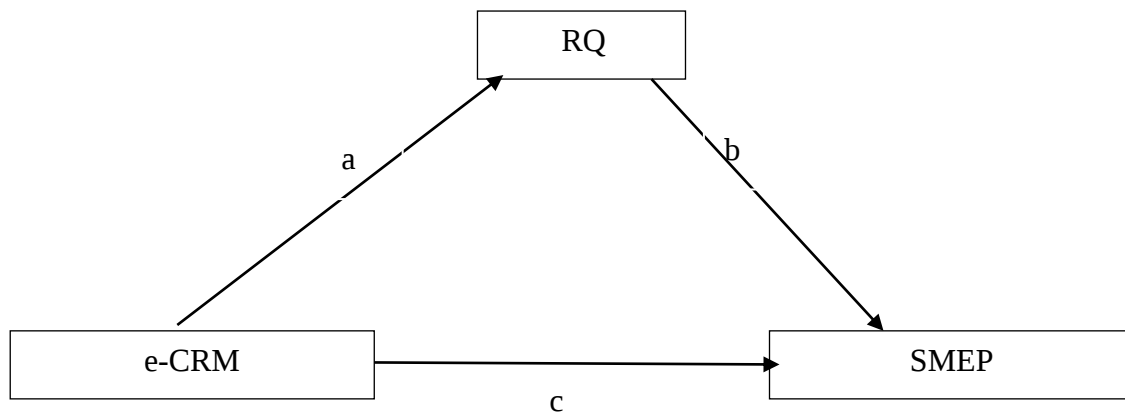


Figure 3. 1: Mediation Model

Source: (Researcher, 2023)

‘e-CRM’ must have a sign effect ‘RQ’ $RQ = a_1 e\text{-CRM} + \epsilon$

i) ‘RQ’ must have a sign effect ‘SMEP’ $SMEP = b_1 RQ + \epsilon$

ii) $SMEP = b_1 RQ + C^0 X eCRM + \epsilon$ = Partial Mediation

iii) Mediation = $a_1 eCRM b_1$ or C (Total effect) – C^0 (Direct effect)

3.8.7 Testing for Moderation Effect

In order to test the moderating effect of strategic agility on the relationship between eCRM and performance of small and medium enterprises was tested using conditional process modeling (PROCESS macro) for SPSS (Hayes, 2017). PROCESS macro has been used in various studies published in prestigious journals (Palmer *et al.*, 2016). PROCESS macro enabled us to conduct mediation (Hayes Model 1). Using the illustration below, this moderation is represented by the following model:

Statistical Model

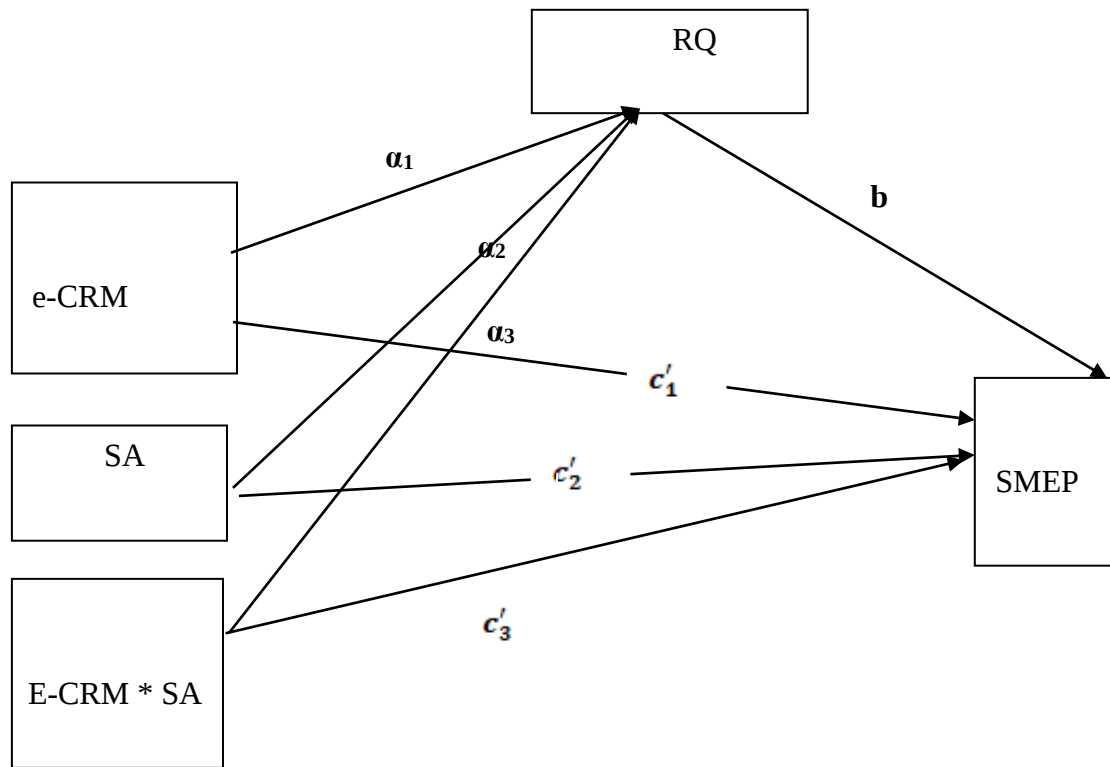


Figure 3. 2: Statistical diagram for strategic agility on the relationship between e-CRM and performance of small and medium enterprises.

Source (Hayes, 2013)

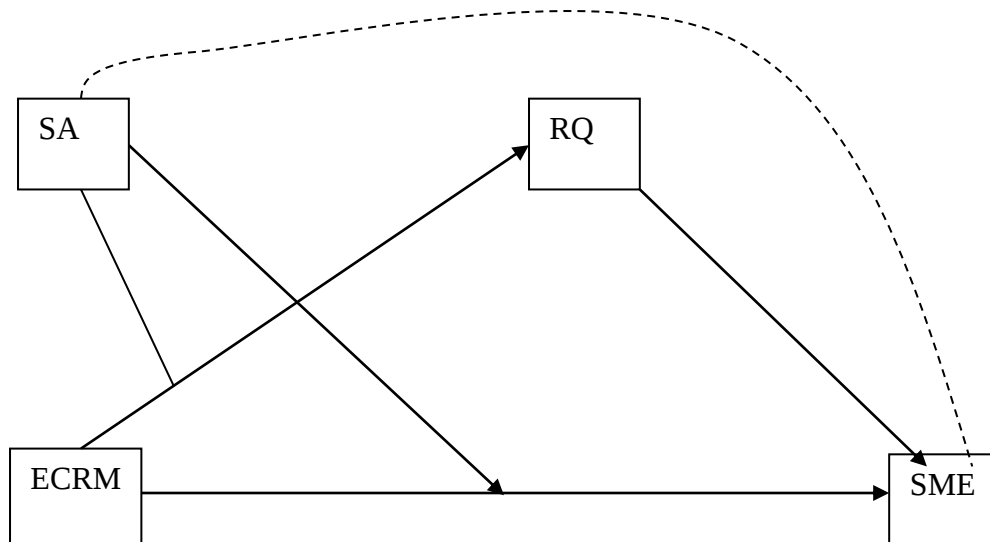
$$RQ = \alpha_1 eCRM + \alpha_2 SA + \alpha_3 eCRM.SA + \epsilon$$

$$SMEP = c_1 eCRM + c_2 SA + c_3 eCRM.SA + \epsilon$$

Where e-CRM is the independent variable, RQ is the mediating variable, SMEP is the dependent variable. The paths (coefficients) are denoted by α , b and c' . According to Baron and Kenny (1986), a full mediation is evident if the effect of mediating variable (path c') becomes non-significant after controlling the independent variable. On the other hand, a partial mediation exists if the relationship between the independent variable and the dependent variable remains significant with decline of beta coefficient and p value less than 0.05.

3.8.8 Testing for Moderated Mediation Effect

The study adopted Hayes model eight to test moderation mediation of strategic agility and relationship quality on the relationship between e-CRM and SMEs performance.



Source: Researcher 2023

$$a_1\beta_1 + a_3\beta_1 SA = (a_1 + a_3SA) b_1$$

RQ: represent the mediator variable (relationship quality)

a_1 : represent the effect of independent variable (e-CRM) on the mediator (relationship quality)

a_2 : represent the effect of the moderator (strategic agility) on the mediator (relationship quality)

a_3 : represent the effect of the of the interaction of the independent variable eCRM) and the moderator (strategic agility) on the mediator (relationship quality)

eCRM: represent the effect of independent variable

SA: represent the moderator variable (strategic agility)

eCRM*SA: Represent the product of the interaction of the independent variable (e CRM) and the moderator (strategic agility)

SMEP: represent the intercept of the dependent variable (SME performance)

c₁: represent the effect of independent variable (eCRM) on the dependent variable (SME performance)

c₂: represent the effect of the moderator (strategic agility) on the dependent variable (SME performance)

c₃: represent the effect of the interaction of the independent variable (eCRM) and the moderator (strategic agility) on the dependent variable (SME performance).

3.9 Ethical Considerations

There are two aspects relating to ethics in research; researchers individual values, relating to honesty, frankness and personal integrity and secondly researcher's treatment of other research subject which are consent, anonymity, confidentiality, and courtesy (Walliman, 2017). These are the principles that the researcher should abide with while conducting research (Owen, 2006). The researcher sought the relevant approvals, enabling voluntary participation of the respondent, ensure safety of the participants guaranteeing of anonymity confidentiality in responses, avoiding deceptions and analyzing of the findings. The initial approval was first sought from Moi University Chair of post Graduate and from the National Commission for science, Technology and Innovation (NACOSTI) to conduct the study to avoid suspicion or resistance from the respondent. The approval letter was submitted to Nairobi County Secretary with a copy of the questionnaire, a letter from Moi University chair of post graduate (Appendix I), and a cover page explaining the importance of the study and expected findings for the county to be aware of the exercise within the enterprises in their jurisdiction. similar copies were shared with respondents in different companies.

The privacy of participants was assured by way of not identifying the individual respondents and by keeping the questionnaire under lock and key accessed only by

the researcher and research assistants. Informants were made anonymous in the study to ensure their privacy (Hurdley, 2010). respondents right to privacy and confidentiality of information provided was upheld while respecting Autonomy, avoiding harm and deception and treating all respondents equitably. There was no harm to the respondents because the study was engaged in a voluntary manner and there was no coercion into taking part in the research but were informed about the objectives of the research, what is expected of them and their consent sought (Saunders, et al., 2015). The questionnaires were administered at the respondents work place with the anticipation that there was no influence or interference from other people during the administration of the questionnaires. For follow up purpose, the email of the researcher was also provided to the respondents so that follow up communication between the researcher and respondent was maintained.

The research collected information from the research study subject without in any way revealing the identity, contact or any personal information (Tamariz et al., 2013) in reporting the findings, the researcher was careful to accurately represent what actually was reported by the respondents without disclosing their identity. to avoid deception the researcher identified himself to the respondents and for clarity was available to clarify where the respondent needed clarification. Five research assistants were trained on the use of the questionnaire and engaged. The researcher coordinated the data collection process and provided guidance to the research assistants to mitigate personal bias risk from the researcher.

CHAPTER FOUR

DATA ANALYSIS, INTERPRETATION AND DISCUSSIONS

4.1 Introduction

This chapter presents data analysis based on the study's goals. This chapter describes the data cleaning process, data coding, outlier detection and removal, and the reliability of the constructs in the research instrument. The chapter also presents the Factor analysis, correlation analysis, moderation, mediation, and moderated mediation analysis. Results are presented both in descriptive and inferential statistics. Descriptive statistics include the mean, standard deviation, minimum and maximum which are key central measures of tendency. Inferential statistics involves the model estimations and test of hypotheses. The chapter also discusses diagnostic tests including normality, linearity, multicollinearity and homoscedasticity,

4.2 Data Preparation

Data preparation includes data screening, cleaning, coding and checking for outliers. It is critical to screen survey data for a variety of potential issues related to missing data, which aids in identifying and correcting errors that may have occurred during data entry into the software (Barnett & Lewis, 1994; Tabachnick & Fidell, 2013) and also ensures that the data subjected to additional statistical investigations is error-free, resulting in the generation of useful inferences. After receiving questionnaires, the researcher numbered each one to ensure that each questionnaire was accounted for and prepared them for further screening. Prior to conducting data analysis, the researcher cleaned the data. This was done by identifying outliers. Outliers are a small percentage of observations in a data set that display patterns distinct from those of the majority of observations in the data set (Taha, & Hadi, 2019). Diverse techniques were employed in this study to search for outliers. An examination of frequency was

first performed using the minimum and maximum values. The data were cross-checked to look for any extremely high or low numbers outside of the Likert scale values that might have been accidentally entered. Data coding, as stated by (Donovan & Sanders, 2005), is the process of dividing up acquired data into groups that may be examined for useful information.

The data was coded by utilizing an Excel spreadsheet to assign the following codes to each of the constructs: 1-strongly disagree, 2-disagree, 3-Neutral, 4-agree, and 5 strongly agree. After that, it was exported to SPSS for analysis. Missing values were checked using case processing. As illustrated by Table 4.1, there is no identification of identification for missing data. This was accomplished through the use of list-wise exclusion. There were no missing values in the table.

Table 4. 1: Identification for Missing Values

	Case Processing Summary			
	Valid		Missing	
	N	Percent	N	Percent
SME Performance (SMEP)	392	100.0%	0	0.0%
Electronic Customer Relationship (eCRM)	392	100.0%	0	0.0%
Relationship Quality (RQ)	392	100.0%	0	0.0%
Strategic Agility (SA)	392	100.0%	0	0.0%
Firm Size	392	100.0%	0	0.0%
Firm Age	392	100.0%	0	0.0%

Source: Research Analysis, 2023

Outliers were examined by creating visualizations using the boxplot shown in Figure 4.1 to identify data points that lie far from the bulk of the data. Some of the outliers were removed by creating Z-score to standardize keeping in mind that the decision to remove outliers should be made carefully, and you should consider the impact on your analysis and the goals of the study. Z-score measures how many standard deviations a data point is away from the mean. Removing outliers from a dataset is a common

preprocessing step in data analysis and machine learning to improve the quality of the data and the results of subsequent analyses. Outliers are data points that significantly deviate from the majority of the data and may distort statistical analyses or machine learning models (Aguinis, et al., 2013).

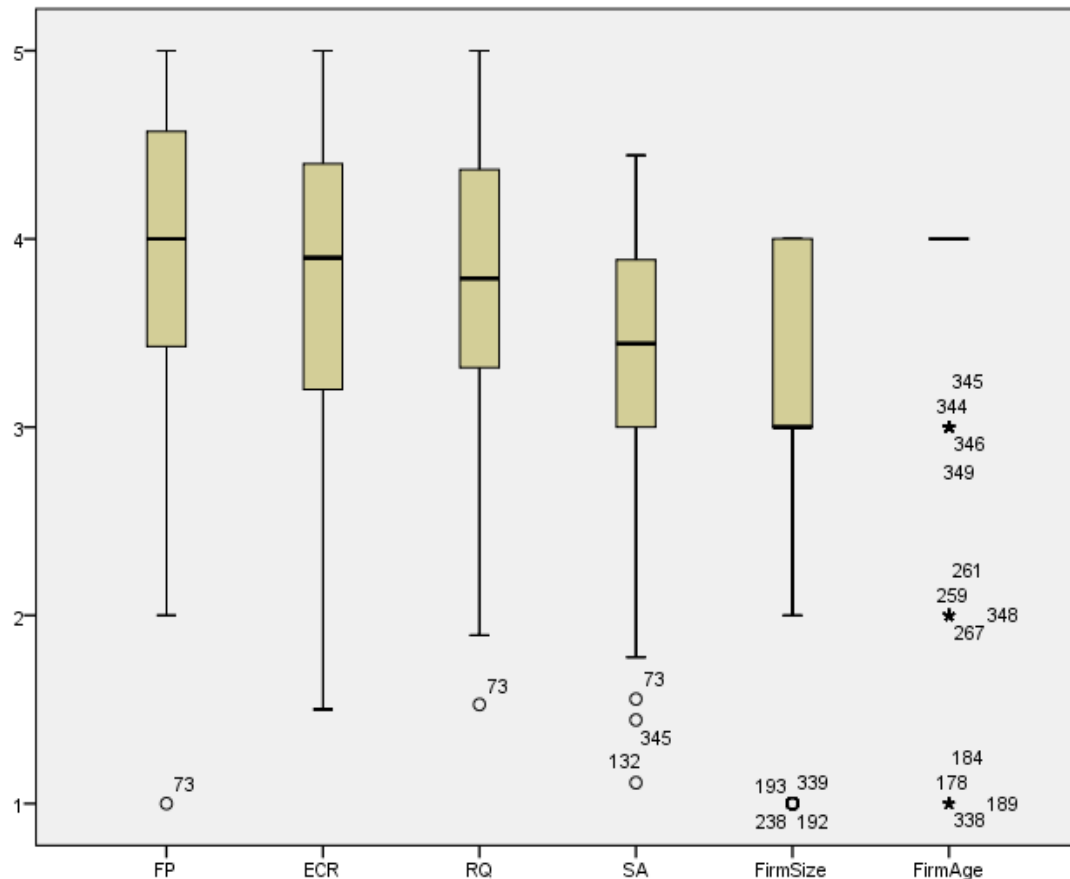


Figure 4. 1: Identifying Outliers Using Boxplot
Source: Research Analysis, 2023

4.3 Response Rate

According to Hair et al. (2010) and Holbrook et al. (2008), response rates in research are crucial since they ensure that the questionnaires used in the studies are valid for analysis. The response rate is the percentage of respondents who participated in a particular survey out of the set sample size for the study (Hamilton, 2008). The number of questionnaires with complete responses divided by the total number of participants who were eligible for the sample was used to compute the response rate in this study. From the formula used to identify the possible number of respondents

suggested a possible sample size formula for large (hyper-geometric) populations of 416 respondents.

The survey was carried out and found that some of the questionnaires (24) were irregularly filled and had some errors. They were erroneously completed or had inconsistent information, making them unusable for data analysis and hence they were removed from the study. A total of 392 questionnaires were properly filled and this constitutes 94.23 percent. This high response rate was as a result of the well trained research assistants that made the questions more understandable, which decreased restricted response bias and boosted data confidence, which in turn helped explain the high response rate. The response rate of 67 and above the 67 percent according to Ndinda (2019) is acceptable response rate needed for survey-based research.

4.4 Reliability Analysis

To determine the accuracy of the research instrument used, a reliability test was conducted. Table 4.2 includes the reliability index evaluation and presentation. This was accomplished by calculating Cronbach's alpha. SME Performance had 7 items in the scale and a Cronbach alpha of 0.888, while Electronic Customer Relationship (eCRM) had 10 items and a Cronbach alpha of 0.868. Additionally, the Relationship Quality (RQ) had 14 components with 0.851 Cronbach alpha value. Finally, 19 constructs were used to Strategic Agility (SA), yielding a Cronbach alpha result of 0.883. Ursachi, Horodnic, & Zait, (2015) claim that a cut-off alpha coefficient of 0.7 is sufficient to demonstrate the consistency and reliability of the item in the scale. All of the used constructs have Cronbach alpha values over 0.7, which indicates remarkable reliability. In business and decision-making, reliability is crucial. Managers and decision-makers rely on data for making informed choices. Unreliable data can lead to poor decisions and financial losses.

Table 4. 2: Cronbach Reliability Test Results

Variable	Number of items in the scale	Cronbach alpha
SME Performance (SMEP)	7	0.888
Electronic Customer Relationship (eCRM)	10	0.868
Relationship Quality (RQ)	14	0.851
Strategic Agility (SA)	19	0.883

Source: Research Analysis, 2023

Reliability, according to Mohajan (2017) and Joppe (2000), is the degree to which findings endure through time and faithfully represent the total population. If people's responses to many items vary or are not connected to one another, it would be impossible to maintain that they are measuring the same underlying constructs. Internal consistency can be assessed by data collection and analysis. It is used as a metric for scale reliability. The findings showed that all coefficients fell within the generally accepted range of 0.7 proposed by Lee Cronbach in 1951.

4.5 Univariate Descriptive Statistics

This entails the statistics describing the demographics of the study and also the description of the study variables. Univariate descriptive statistics refer to the statistical analysis of a single variable. These statistics are used to summarize and describe the essential characteristics of that variable, providing insights into its central tendency, dispersion, and shape of the distribution. Some common univariate descriptive statistics include mean, standard deviations, minimum and maximum.

4.5.1 Descriptive Statistics for Control Variables

The performance of Small and Medium-sized Enterprises (SMEs) can be influenced by various factors, including firm size and firm age. These factors can have both direct and indirect effects on SME performance. It's important to note that the

relationship between firm size, firm age, and SME performance is not direct and can vary depending on the industry, market conditions, and other contextual factors. Additionally, SMEs can leverage their unique strengths and address weaknesses to improve their performance regardless of their size or age. Therefore, a comprehensive analysis of SME performance should consider a wide range of factors beyond just firm size and age

Table 4.3 indicate that majority of SMEs have between 21-30 employees constituting 44.1 percent of the SMEs sampled. This was followed by those with firm size of 31 and above employees (40.1 percent). The least number had 1-10 employees and constituted 5.4 percent. SMEs often benefit from economies of scale, which means they can produce goods or deliver services more efficiently and at lower costs per unit. This can lead to higher profit margins and better overall financial performance. Larger SMEs typically have greater access to financial resources, such as bank loans, equity financing, or venture capital. This can enable them to invest in technology, research and development, and marketing, which can improve their competitiveness and performance. Larger SMEs may have a stronger market presence and brand recognition, which can lead to increased customer trust and loyalty. This can translate into higher sales and revenue. Bigger SMEs may have a more diverse product or service portfolio, reducing their reliance on a single product or market. Diversification can help mitigate risks and stabilize revenue streams. Larger SMEs may have the resources to hire and retain skilled employees, implement better management practices, and adopt advanced technologies, all of which can enhance their competitive advantage and performance.

Table 4. 3: Descriptive Statistics for Firm Size and Firm Age

		Frequency	Percent	Cumulative Percent
Firm Size	1-10 Employees	21	5.4	5.4
	11-20 Employees	41	10.5	15.8
	21-30 Employees	173	44.1	59.9
	31 and Above Employees	157	40.1	100.0
	Total	392	100.0	
Firm Age	0-5 Years	10	2.6	2.6
	6-10 Years	27	6.9	9.4
	11-15 Years	47	12.0	21.4
	16 and Above Years	308	78.6	100.0
	Total	392	100.0	

Source: Research Analysis, 2023

On firm age, most of the sampled firms aged 16 and above years (78.6 percent). Older SMEs often have accumulated industry-specific knowledge and expertise over time. This experience can lead to better decision-making and operational efficiency. Older SMEs may have established networks of suppliers, customers, and partners, which can facilitate business transactions and growth opportunities. A long-established SME may be perceived as more stable and reliable by customers, suppliers, and investors. This can enhance its ability to attract clients and secure partnerships. While older SMEs may have established practices and processes, they also need to adapt to changing market conditions and technologies. The ability to adapt and innovate is critical for sustained performance. Older SMEs may have developed risk management strategies and financial reserves to weather economic downturns and unexpected challenges, which can contribute to their long-term performance.

4.5.2 Descriptive Statistics of the SME Performance (SMEP)

The study described the measures of central tendency. These are means, standard deviation, minimum and maximum values. These statistics are fundamental in data analysis and can provide valuable insights into the characteristics of a dataset. They

are often used to summarize data, assess its distribution, and make comparisons between different datasets. Each variable was measured using several constructs. Each construct was rated in a five Likert-scale. These include 5-strongly agreed, 4-agreed, 3-undecided, 2-disagree and 1-strongly disagree.

Table 4. 4: Descriptive Statistics of the SME Performance

5-Strongly Agree (SA), 4-Agree (A), 3-Undecided (U), 2-Disagree (D), 1-Strongly Disagree(SD)						
		Minimum=1, Maximum=5				
	Percent	SA	A	U	D	SD
There is Growth in sales in relation to your expectations	F	229	121	27	5	10
	%	58.4	30.9	6.9	1.3	2.6
There is Growth in sales in relation to your competitors	F	164	138	54	23	13
	%	41.8	35.2	13.8	5.9	3.3
There is Growth in profits in relation to your expectations	F	169	139	47	27	10
	%	43.1	35.5	12.0	6.9	2.6
There is Growth in profit level in relation to your Competitors	F	136	137	71	30	19
	%	34.7	34.9	18.1	7.7	4.6
There is Increased market size in new markets in relation to your expectation	F	133	122	70	42	25
	%	33.9	31.1	17.9	10.7	6.4
There is Growth in capital from operations	F	115	157	58	41	21
	%	29.3	40.1	14.8	10.5	5.4
There is High level of customer loyalty	F	128	139	54	43	28
	%	32.7	35.5	13.8	11.0	7.1
Overall	Mean=3.96 Standard dev.= 0.683					

Source: Research Analysis, 2023

Table 4.4 indicate most of the respondents strongly agreed (n=229, 58.4%) that there was growth in sales in relation to their expectations. On the growth in sales in relation to your competitors, majority of the respondents strongly agreed at 41.8% (n=164), 13.8% (n=54) were undecided while 3.3% (n=13) strongly disagree with that statement. In general, majority of the SME agreed and strongly agreed that there was growth in profits in relation to their expectations. Also they were in agreement that growth in profit level and that there was increased market size in new markets in relation to their expectation. The overall mean of 3.96 (approximate 4=agree) and a

standard deviation of 0.683 provide important information about a dataset concerning the respondents. The mean of 3.96 indicates that, on average, the values in the dataset tend to cluster around 4. It serves as a measure of central tendency, suggesting that the majority of respondents were in agreement with constructs:

The standard deviation of 0.683 suggests that the data points in the dataset are tightly clustered around the mean (4=agree). They are not spread out to some extent. This smaller standard deviation indicates less variability, if larger standard deviation would have been experienced, it would have implied more variability. The standard deviation also provides information about the variability or consistency of the data. A smaller standard deviation indicates that data points are relatively close to the mean, while a larger standard deviation means that data points are more spread out from the mean. A larger standard deviation might indicate the presence of outliers or extreme values in the dataset. Outliers can significantly impact the mean and standard deviation, so it's important to consider them when interpreting these statistics. In summary, the mean and standard deviation are key summary statistics that provide insights into the central tendency and variability of a dataset. They are essential for understanding the characteristics of the data and for making comparisons or inferences.

4.5.3 Descriptive Statistics of the Electronic Customer Relationship (eCRM)

Table 4.5 presents descriptive statistics for Electronic Customer Relationship (eCRM). There are ten items used to measure and the respondents rated each item in a 5-Likert scale. The overall response had a mean of 3.81 and standard deviation of 0.696. The average response was approximate 4 which is 'agree' from the Likert scale. The standard deviation of 0.696 was small compared to the mean signifying responses of each items not far from the average response.

Majority strongly agreed that their organization had an operational web site (36.5%), Their enterprise had an active Facebook account that is interactive (38.3%), that the organization had an Mpesa till for business transactions (38.3%), their customers have a lot of ease in sending customer feedback through our Facebook page (33.9%), the organization has a twitter account that's active (34.9%). They also agreed that majority of their referred customers appreciate our social media accounts used for marketing (34.9%), the enterprise's web site is capable to provide customers with the needed information quickly and precisely (34.2%). They believed confidence in the enterprise's service to the customers (36.0%), they trusted the website to keep our customer information safe (32.7%) and finally they agreed that electronic services provided in my enterprise were reliable (38.5%).

Table 4. 5: Descriptive Statistics of the Electronic Customer Relationship

5-Strongly Agree (SA), 4-Agree (A), 3-Undecided (U), 2-Disagree (D), 1-Strongly Disagree(SD)						
Minimum=1, Maximum=5						
	Percent	SA	A	U	D	SD
My Organization has an operational web site	F %	143 36.5	125 31.9	62 15.8	40 10.2	22 5.6
The enterprise has an active Facebook account that is interactive	F %	150 38.3	138 35.2	53 13.5	36 9.2	15 3.8
My organization has an Mpesa till for business transactions	F %	113 28.8	150 38.3	61 15.6	45 11.5	23 5.9
Our customers have a lot of ease in sending customer feedback through our Facebook page	F %	133 33.9	143 36.5	64 16.3	31 7.9	21 5.4
My organization has a twitter account that's active	F %	137 34.9	131 33.4	64 16.3	36 9.2	24 6.1
Majority of our referred customers appreciate our social media accounts used for marketing	F %	125 31.9	137 34.9	54 13.8	53 13.5	23 5.9
The enterprise's web site is capable to provide customers with the needed information quickly and precisely.	F %	134 34.2	123 31.4	68 17.3	49 12.5	18 4.6
I have confidence in the enterprise's service to the customers.	F %	141 36.0	133 33.9	63 16.1	33 8.4	22 5.6
I trust the website to keep our customer information safe.	F %	128 32.7	134 34.2	72 18.4	35 8.9	23 5.9
The electronic services provided in my enterprise are reliable	F %	111 28.3	151 38.5	65 16.6	38 9.7	27 6.9
Overall	Mean=3.81	Standard dev.=0.696				

Source: Research Analysis, 2023

4.5.4 Descriptive Statistics of Relationship Quality (RQ)

The study sought to examine the influence of Relationship Quality as mediating variable. From the descriptive statistics presented in Table 4.6, this variable had 14 items each rated with a five Likert scale. Overall, the average response was 3.79 (approximate 4- agree) and standard deviation of 0.652. Mean and standard deviation are essential statistical measures that provide valuable insights into a dataset's characteristics. The mean represents the average of a dataset. It gives you a central point around which the data points tend to cluster. For normally distributed data, the mean is the most representative measure of central tendency.

Standard deviation quantifies the amount of variation or dispersion in a set of values. If the standard deviation is small, it means the values tend to be close to the mean, while a large standard deviation indicates the values are spread out over a wider range. The respondents agreed that their firm has higher integrity (n=121, 30.9%). They strong agreed that they work in close cooperation (n=132, 33.7%) and their firm is trustworthy (n=202, 51.5%). Further, they were in agreement that they have been consistent in providing quality services (n=158, 40.3%) and that their firms were reliable in providing unique services (n=131, 38.0%) and remain loyal to a client to enjoy the relationship (n=131, 33.4%).

Majority agreed that their firm completely meets my expectations (n=138, 35.2%) and the firm shows a sincere interest in solving complaints (n=151, 38.5%). Their employees work in a tidy professional way (n=138, 35.2%), clients feel satisfied with all services offered (n=141, 36.0%) and the firm tries very hard to establish long term relationship (n=140, 35.7%).

These descriptive statistics (mean and standard deviation) are fundamental statistical metrics that provide insights into the central tendency and spread of data. They are

4.5.5 Descriptive Statistics of Strategic Agility (SA)

Table 4.7 provides the description of Strategic agility which refers to an organization's ability to adapt, evolve, and respond effectively to rapidly changing market conditions, customer needs, technological advancements, and other external and internal factors. It involves being flexible, innovative, and proactive in making strategic decisions and implementing changes. In this study, Strategic Agility was measured by 19 items. These items were categorized into Strategic sensitivity, Strategic responsiveness and Strategic learning. Strategic agility is vital in today's fast-paced business environment, where disruptive technologies and rapidly changing customer expectations can quickly render traditional business models obsolete. Companies that embrace strategic agility are better positioned to navigate uncertainties, seize opportunities, and maintain a competitive edge in the market

From the analysis on the strategic sensitivity, most of the respondents agreed and strongly agreed that they periodically anticipate the relevant opportunities in external environment (n=152, 38.8%), periodically anticipate the significant threats in external environment (n=151, 38.5%) and that they frequently predict the fundamental shifts in their industry (n=138, 35.2%). Strategic sensitivity refers to an organization's ability to recognize and understand changes and trends in its external environment. It emphasizes the awareness and understanding of shifts in market conditions, customer preferences, technological advancements, regulatory changes, and other external factors that could impact the organization.

Table 4. 7: Descriptive Statistics of Strategic Agility

5-Strongly Agree (SA), 4-Agree (A), 3-Undecided (U), 2-Disagree (D), 1-Strongly Disagree(SD)							
		Minimum=1, Maximum=5					
		Percent	SA	A	U	D	SD
Strategic sensitivity							
We periodically anticipate the relevant opportunities in external environment.	F	140	152	59	24	17	
	%	35.7	38.8	15.1	6.1	4.3	
We periodically anticipate the significant threats in external environment.	F	117	151	63	37	24	
	%	29.8	38.5	16.1	9.4	6.1	
We frequently predict the fundamental shifts in our Industry.	F	119	138	78	40	17	
	%	30.4	35.2	19.9	10.2	4.3	
We successfully pursue the competitive actions by rivals.	F	123	141	78	27	23	
	%	31.4	36.0	19.9	6.9	5.9	
we continuously try to discover the additional needs of customers and working hardly on satisfy them	F	132	140	64	35	21	
	%	33.7	35.7	16.3	8.9	5.4	
Strategic responsiveness							
We respond rapidly to significant changes in external environment	F	168	134	42	27	21	
	%	42.9	34.2	10.7	6.9	5.4	
We continuously redeploy the key internal assets and capabilities in order to exploit the external opportunities	F	158	104	66	43	21	
	%	40.3	26.5	16.8	11.0	5.4	
We emphasize the strategic alignment of resources to enhance the internal dynamic capabilities	F	116	149	75	30	22	
	%	29.6	38.0	19.1	7.7	5.6	
We ensure the flexibility of operations by emphasizing teams work building.	F	116	117	77	45	37	
	%	29.6	29.8	19.6	11.5	9.4	
We highly concerned with the rationality of our decisions depending on real time information.	F	122	142	56	42	30	
	%	31.1	36.2	14.3	10.7	7.7	
We ensure the continuing communications with all stake holders inside and outside the organization.	F	141	146	64	21	20	
	%	36.0	37.2	16.3	5.4	5.1	
We enhance relevant digitization options (digitizing customer side, digitizing supply chain, digitizing procurement process) to sustain our abilities in responding to customer needs.	F	125	113	88	38	28	
	%	31.9	28.8	22.4	9.7	7.1	
Strategic learning							
We frequently make deliberate search for the new knowledge about customers and markets.	F	128	123	65	49	27	
	%	32.7	31.4	16.6	12.5	6.9	
We actively bringing new external knowledge into our internal context depending on relevant means such as conversations and interactions .	F	108	152	73	34	25	
	%	27.6	38.8	18.6	8.7	6.4	
We consider the information concerning past events and solutions in relation to our process and/or customer.	F	117	151	63	37	24	
	%	29.8	38.5	16.1	9.4	6.1	
We highly concerned with fitting the new knowledge into the internal context for understanding and actions.	F	119	138	78	40	17	
	%	30.4	35.2	19.9	10.2	4.3	

We recognize the importance of Conflicting assumptions and alternatives interpretations in enhancing the learning process	F	123	141	78	27	23
	%	31.4	36.0	19.9	6.9	5.9
Our culture encourages questioning and development of new insights as a pillars in ensuring the strategic learning	F	132	140	64	35	21
	%	33.7	35.7	16.3	8.9	5.4
We periodically test the applicability of the new knowledge into actions (structures, procedures and strategies)		130	132	72	36	22
		33.2	33.7	18.4	9.2	5.6

Overall **Mean=3.39 Standard dev.=0.608**

Source: Research Analysis, 2023

On the strategic responsiveness, they agreed that they respond rapidly to significant changes in external environment (n=168, 42.9%), have continuously redeploy the key internal assets and capabilities in order to exploit the external opportunities (n=158, 40.3%), emphasized the strategic alignment of resources to enhance the internal dynamic capabilities (n=149, 38.0%), ensured the flexibility of operations by emphasizing teams work building (n=117, 29.8%), highly concerned with the rationality of our decisions depending on real time information (n=142, 36.2%), ensured the continuing communications with all stake holders inside and outside the organization (n=146, 37.2%) and that they have enhanced relevant digitization options (digitizing customer side, digitizing supply chain, digitizing procurement process) to sustain our abilities in responding to customer needs (n=125, 31.9%).

Strategic responsiveness pertains to the organization's ability to quickly and effectively adapt its strategies and operations in response to changes in the external environment. It emphasizes the speed and efficiency with which an organization can adjust its products, services, processes, or business models to align with new market demands or challenges. Strategic responsiveness is crucial for staying competitive. Companies that can respond swiftly to market changes can capitalize on new opportunities and mitigate risks effectively.

Finally, strategic learning refers to the organization's capacity to acquire knowledge, assimilate insights from experiences, and apply this learning to improve its strategies and decision-making processes. It emphasizes the organization's ability to learn from both successes and failures, from internal and external sources, and to institutionalize this learning into its culture and operations. Continuous learning allows organizations to evolve, innovate, and make informed strategic choices. Learning from past experiences helps in avoiding repeated mistakes and adapting strategies based on real-world outcomes.

From the analysis, respondents strongly agreed that they frequently make deliberate search for the new knowledge about customers and markets (n=128, 32.7%), they are actively bringing new external knowledge into our internal context depending on relevant means such as conversations and interactions (n=152, 38.8%), consider the information concerning past events and solutions in relation to our process and/or customer (n=151, 38.5%). Further, they highly concerned with fitting the new knowledge into the internal context for understanding and actions (n=138, 35.2%), recognize the importance of conflicting assumptions and alternatives interpretations in enhancing the learning process (n=141, 36.0%), culture encourages questioning and development of new insights as a pillars in ensuring the strategic learning (n=140, 35.7%). and periodically test the applicability of the new knowledge into actions (structures, procedures and strategies) (n=132, 33.7%).

4.6 Dimension Reduction Using Factor Analysis

Factor analysis is a statistical technique used to identify patterns in the relationships among a set of observed variables. The essence of doing factor analysis lies in its ability to simplify complex data sets, discover underlying structures, and provide insights into the underlying factors that explain the observed correlations between

variables. Factor analysis condenses large amounts of data into a smaller set of underlying factors. This reduction in the number of variables makes it easier to analyze and interpret the data, especially when dealing with large datasets.

By identifying underlying factors, factor analysis can help researchers decide which variables to focus on in subsequent analyses. This is important for hypothesis testing and building predictive models, as it allows researchers to concentrate on the most relevant variables. In fields like market research, factor analysis can improve predictions by reducing the number of variables and focusing on the most influential ones. This can lead to more accurate models and better decision-making. In brief description, factor analysis is a powerful tool that helps researchers uncover hidden patterns, simplify data, and gain a deeper understanding of the relationships between variables. There several techniques to estimate factor analysis. The study used Principal Component Analysis (PCA). This is because the primary goal is data reduction.

4.6.1 Factor Analysis on SME Performance

Since the dependent variable was measured using several items, factor analysis helps in identifying latent variables or constructs that are not directly observable. For example, SME Performance is latent variable that was not measured directly but can be inferred from multiple observable variables. Factor analysis uncovers relationships between variables. It identifies set of variables that tend to co-occur, providing insights into the underlying structure of the data.

Table 4.8 presents eigenvalues explaining the total variance. Factor analysis method allows for the extraction of as many components as possible. The results were discussed on each of the variables. Initial communalities show how much percentage of the variation in the variable is caused by the other variables. The extraction

communalities show how much percentage of the variation in the variable is caused by the factors. Table 4.8 is divided into three parts. First part shows initial Eigen Values, which indicates how much percent of variance can be explained by a particular factor (% of variance) and the factor along with previous factors how much percent of variance can be explained (cumulative %). Second part shows how many factors are extracted from the data or in other words how many factor are sufficient to explain the variation in the data. As per rule of thumb the factors having Eigen value >1.0 are sufficient to explain the data. Third part shows the rotated sum of square loadings, which is the result obtained by the rotation of the factor. It distribute the % of variance explained by the factors approximately equal to each factor. In our results the Eigen values for first two factors are more than 0.9 and it can explain 52.84 % of total variation in the data.

SME Performance had eigenvalues for component one 2.756 giving a total initial variability of 39.37 percent. Normally, the sum of eigenvalues equals the number of variables. Proportion indicates the relative weight of each factor for component 1 and factor 2 accounted for rotation sums of squared loadings 52.84 percent of the total variation. After varimax rotation, the second component has been enhanced to explain 21.27 percent from the initial 13.47 percent variability.

Table 4. 8: Factor Analysis on SME Performance

Component	Total Variance Explained								
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.756	39.371	39.371	2.756	39.371	39.371	2.210	31.567	31.567
2	.943	13.470	52.841	.943	13.470	52.841	1.489	21.274	52.841
3	.782	11.168	64.009						
4	.749	10.705	74.715						
5	.681	9.733	84.448						
6	.609	8.696	93.144						
7	.480	6.856	100.000						

Extraction Method: Principal Component Analysis.

Source: Research Analysis, 2023

4.6.2 Factor Loadings on SME Performance

Table 4.9 presents results for rotated and unrotated factor loadings on SME Performance which is the dependent variable was measured using seven items. The Kaiser-Meyer-Olkin (KMO, 1974) measure of sampling adequacy ($0.801 > 0.70$) and significant Bartlett's Test of sphericity which is a chi-square test ($p = 0.000$) implying the correlation matrix is identity and reveals that data was adequate for extraction using principal components analysis. KMO involves comparing the magnitudes of the observed correlation coefficients with the magnitudes of the partial correlations. If the partial correlations are small relative to the actual correlations, KMO will be close to 1, indicating that factor analysis might be appropriate. The total variance explained by two extracted factors (having eigenvalues more than one) was 52.82 % of the total variation. The type of rotation technique was varimax. Varimax is an orthogonal rotation. It assumes that factors are uncorrelated. It simplifies the interpretations that reflect the real-world situation accurately.

According to Basilevsky (2009) loadings are essential because they help researchers understand which observed variables are most strongly influenced by which latent factors. This information is crucial for interpreting the underlying structure of the data and making theoretical sense of the relationships between variables. During factor analysis, the goal is to estimate these loadings accurately to understand the patterns of relationships between observed variables and latent factors, allowing for a more concise and interpretable representation of the data. Loadings represent the correlations between observed variables (also known as manifest variables) and latent factors.

Loadings indicate how much of the variance in an observed variable is explained by a latent factor. They represent the strength and direction of the relationship between an observed variable and a latent factor. Loadings can range from -1 to 1: A loading of 1 indicates a perfect positive correlation, meaning that the observed variable is entirely determined by the latent factor. A loading of -1 also indicates a perfect correlation, but in the opposite direction. A loading close to 0 suggests a weak or no correlation between the observed variable and the latent factor. Loadings are essential because they help researchers understand which observed variables are most strongly influenced by which latent factors. This information is crucial for interpreting the underlying structure of the data and making theoretical sense of the relationships between variables.

Under rotated components, the construct 'There is Growth in sales in relation to your expectations' was loaded with 0.726, 'There is Growth in sales in relation to your competitors' loaded with 0.735. 'There is Growth in profits in relation to your expectations' had a loading of 0.565. 'There is increased market size in new markets in relation to your expectation' loaded with 0.615.

Table 4. 9: Loadings on the SME Performance

	Unrotated Component Extraction		Rotated Component Matrix ^a	
	1	2	1	2
There is Growth in sales in relation to your expectations	0.572		0.726	
There is Growth in sales in relation to your competitors	0.701		0.734	
There is Growth in profits in relation to your expectations	0.634		0.565	
There is Growth in profit level in relation to your Competitors	0.657		0.590	
There is Increased market size in new markets in relation to your expectation	0.656	0.692	0.615	
There is Growth in capital from operations	0.518			0.863
There is High level of customer loyalty	0.635			0.688
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization a. Rotation converged in 3 iterations.				
KMO and Bartlett's Test				
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.				0.801
Bartlett's Test of Sphericity	Approx. Chi-Square			436.056
	Df			21
	Sig.			0.000

Source: Research Analysis, 2023

Each of the constructs had factor loadings above the threshold of 0.5. The loadings after rotation confirmed that these constructs met the criteria as suggested by Yong & Pearce, (2013). Therefore, the study included two components two measure the SME Performance.

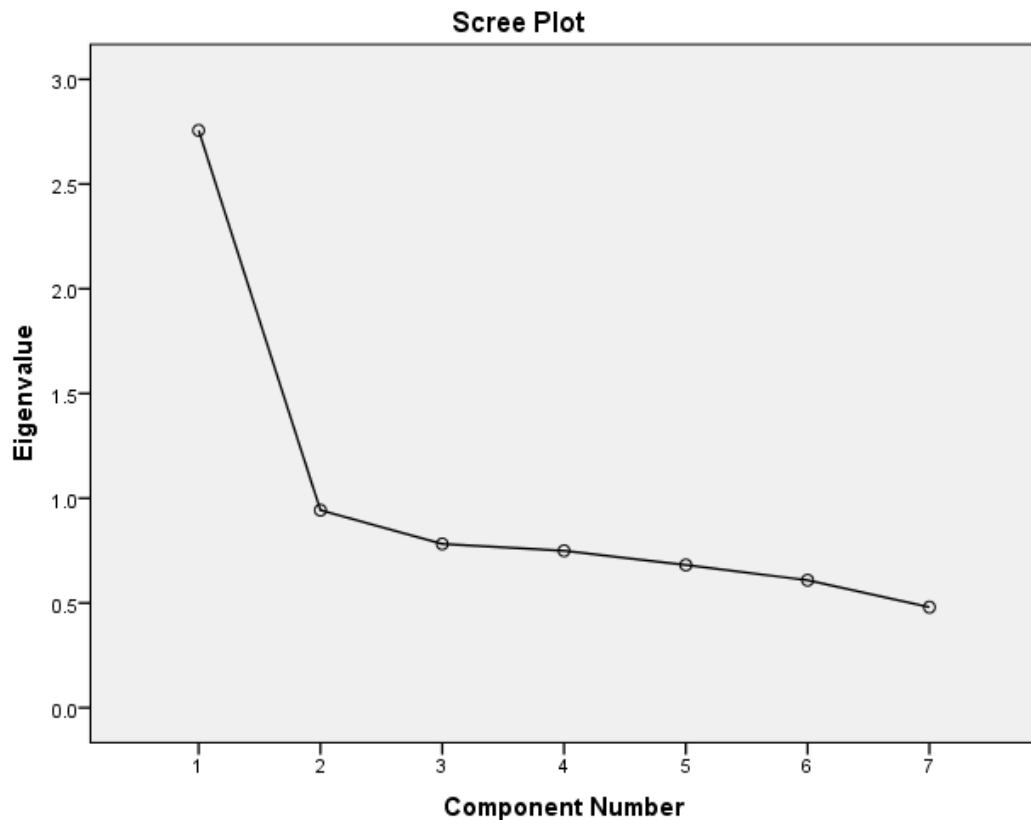


Figure 4. 2: Scree Plot of Eigenvalues for SME Performance under Varimax Rotation

Source: Research Analysis, 2023

Figure 4.2 show a scree plot of eigenvalues after factor analysis had been done. The scree plot is a popular tool for determining the number of factors to be retained. (Luckman, 2004; Rabe-Hesketh, and Everitt, 2007). A scree plot is a plot of the eigenvalues shown in decreasing order (Cattell, 1966). Factors or components to the left of the plot (at the beginning) are significant and account for most of the variance in the data. Factors or components to the right (after the elbow) contribute less to the overall variance. The study fit a factor model, extracting factors with the principal factor method. The plot suggests two factors should be retained, because of the shape of the scree plot and Kaiser's well-known criterion suggesting that factors with more eigenvalue value should be retained.

4.6.3 Factor Analysis on Electronic Customer Relationship Management Strategies

There were ten items used in measuring Electronic Customer Relationship Management Strategies, the independent variable. The eigenvalues associated with two items with higher variability were two.

Table 4. 10: Factor Analysis on Electronic Customer Relationship

Component	Total Variance Explained						Rotation Sums of Squared		
	Initial Eigenvalues			Extraction Sums of Squared			Loadings		
	Total	% of Variance	Cumulative %	Total	Variance	Cumulative %	Total	Variance	Cumulative %
1	3.570	35.699	35.699	3.570	35.699	35.699	2.390	23.897	23.897
2	1.018	10.180	45.879	1.018	10.180	45.879	2.198	21.982	45.879
3	.891	8.914	54.793						
4	.817	8.173	62.966						

Extraction Method: Principal Component Analysis.

Source: Research Analysis, 2023

The two items explained 45.88%. Before varimax rotation that maximizes variability, the first component explained 35.70% and the second component 10.18% of the total variability. After varimax rotation, component 1 and 2 explained a total of 23.90% and 21.98% respectively as shown in Table 4.10.

4.6.4 Factor Loadings on Electronic Customer Relationship Management Strategies

As discussed earlier, loadings are essential understanding which observed variables are most strongly influenced by which latent factors. This information is crucial for interpreting the underlying structure of the data and making theoretical sense of the relationships between variables. They indicate how much of the variance in an observed variable is explained by a latent factor. They represent the strength and direction of the relationship between an observed variable and a latent factor. Table 4.11 indicate only one item had a negative loading of -0.50 indicating a correlation in the opposite direction. The study suppressed the loadings below 0.50 as indicated by the empty spaces.

Kaiser-Meyer-Olkin (1974) measure of sampling adequacy shows the proportion of variance that might be caused by underlying factors. The value of 0.866 is high value and it indicates the usefulness of the analysis. Bartlett's test of sphericity was used to test the null hypothesis that the correlation matrix was an identity matrix. The p-value smaller than 0.05 and it showed the correlation matrix is not identity and Factor Analysis may be useful. From the analysis the value of KMO measure is 0.866 which shows that factor analysis is useful in this case and Bartlett's test shows that the correlation matrix is not identity.

Table 4. 11: Loadings on Electronic Customer Relationship

	Unrotated Component Extraction		Rotated Component Matrix ^a	
	1	2	1	2
My Organization has an operational web site	0.587			
The enterprise has an active Facebook account that is interactive	0.548		0.556	
My organization has an Mpesa till for business transactions	0.605		0.686	
Our customers have a lot of ease in sending customer feedback through our Facebook page	0.537		0.677	
My organization has a twitter account that's active	0.660		0.700	
Majority of our referred customers appreciate our social media accounts used for marketing	0.569			
The enterprise's web site is capable to provide customers with the needed information quickly and precisely.	0.656			0.541
I have confidence in the enterprise's service to the customers .	0.614			0.595
I trust the website to keep our customer information safe.	0.595	-0.50		0.772
The electronic services provided in my enterprise are reliable	0.591			0.756
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization a. Rotation converged in 3 iterations.				
KMO and Bartlett's Test				
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.				0.866
Bartlett's Test of Sphericity	Approx. Chi-Square			766.399
	Df			45
	Sig.			0.000

Source: Research Analysis, 2023

The scree plot provides a visual aid to make an informed decision about the number of factors or components to retain for further analysis. Figure 4.3 is a scree plot which is a graphical representation of the eigenvalues of factors or principal components in a dataset. It is commonly used to determine the number of factors or components to retain for further analysis. Factors or components to the left of the plot (at the beginning) are significant and account for most of the variance in the data. Factors or components to the right (after the elbow) contribute less to the overall variance. The plot suggests two factors should be retained, because of the shape of the scree plot and Kaiser's well-known criterion suggesting that factors with more eigenvalue value should be retained.

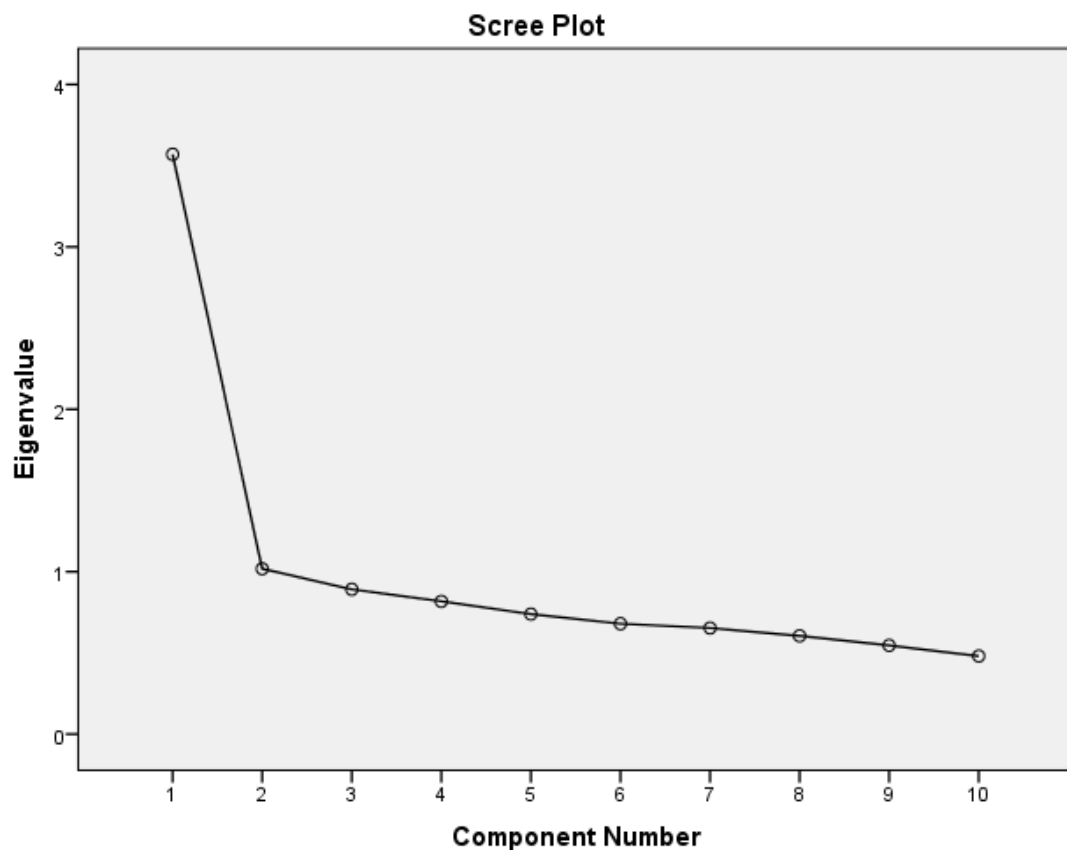


Figure 4. 3: Scree Plot of Eigenvalues for Electronic Customer Relationship under Varimax Rotation

Source: Research Analysis, 2023

4.6.5 Factor Analysis on Relationship Quality (RQ)

There were fourteen items used in measuring relationship quality. From the principal component analysis, the eigenvalues associated with higher variability more than one were two explaining an overall of 43.97%. After varimax rotation component 1 and 2 explained a total of 28.54% and 15.42% respectively as shown in Table 4.12. Therefore, these two factor can be considered sufficient for the data.

Table 4. 12: Factor Analysis on Relationship Quality

Component	Total Variance Explained								
	Initial Eigenvalues			Extraction Sums of Squared			Rotation Sums of Squared		
	Loadings			Loadings			Loadings		
	% of	Cumulative		% of	Cumulative		% of	Cumulative	
	Total	Variance	%	Total	Variance	%	Total	Variance	%
1	4.914	35.101	35.101	4.914	35.101	35.101	3.996	28.544	28.544
2	1.241	8.865	43.965	1.241	8.865	43.965	2.159	15.421	43.965
3	.954	6.812	50.777						
4	.903	6.450	57.227						
5	.840	5.997	63.224						

Extraction Method: Principal Component Analysis.

Source: Research Analysis, 2023

4.6.6 Factor Loadings on Relationship Quality (RQ)

Table 4.13 presents factor loading on the relational quality. The sampling were adequate for factor analysis as suggested by Kaiser-Meyer-Olkin (1974) measure of sampling adequacy of 0.894 showing the proportion of variance that might be caused by underlying factors. The value of 0.894 is high value and it indicates the usefulness of the analysis. Bartlett's test of sphericity results indicate the matrix of correlation was not an identity matrix since the p-value smaller were less than 0.05 and it Factor Analysis may were useful. From the analysis the value of KMO measure is 0.894 which shows that factor analysis is useful in this case and Bartlett's test shows that the correlation matrix is not identity.

Table 4. 13: Loadings on Relationship Quality

	Unrotated Component Extraction		Rotated Component Matrix ^a	
	1	2	1	2
Our firm has higher integrity	0.612		0.583	
We work in close cooperation	0.565			
Our firm has good will reputation	0.749		0.587	
Our firm is trust worthy	0.546		0.502	
We have consistent in providing quality services	0.552		0.579	
Our firm is reliable in providing unique services.	0.652		0.710	
We remain loyal to a client to enjoy the relationship.	0.602		0.605	
The firm is looking out for my interest.	0.605		0.673	
I have strong sense of loyalty toward firm	0.578		0.645	
Our firm completely meets my expectations.	0.665		0.582	
Our firm shows a sincere interest in solving complaints.	0.636			
Our employees work in a tidy professional way.	0.547			
Our clients feel satisfied with all services offered	0.501	0.641		0.806
Our firm tries very hard to establish long term relationship.		0.665		0.781

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization

a. Rotation converged in 3 iterations.

KMO and Bartlett's Test			
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.			0.894
Bartlett's Test of Sphericity	Approx. Chi-Square		1435.895
	Df		91
	Sig.		0.000

Source: Research Analysis, 2023

In order to make an informed decision on how many elements or components to keep for additional study, the scree plot offers a visual aid. A scree plot, or graphical depiction of the eigenvalues of factors or principal components in a dataset, is shown in Figure 4.4. It is frequently used to decide how many elements or factors to keep for additional examination. A scree plot is a graphical representation of the eigenvalues

of factors or principal components in a dataset. It is commonly used in techniques like factor analysis and principal component analysis (PCA) to determine the number of factors or components to retain for further analysis

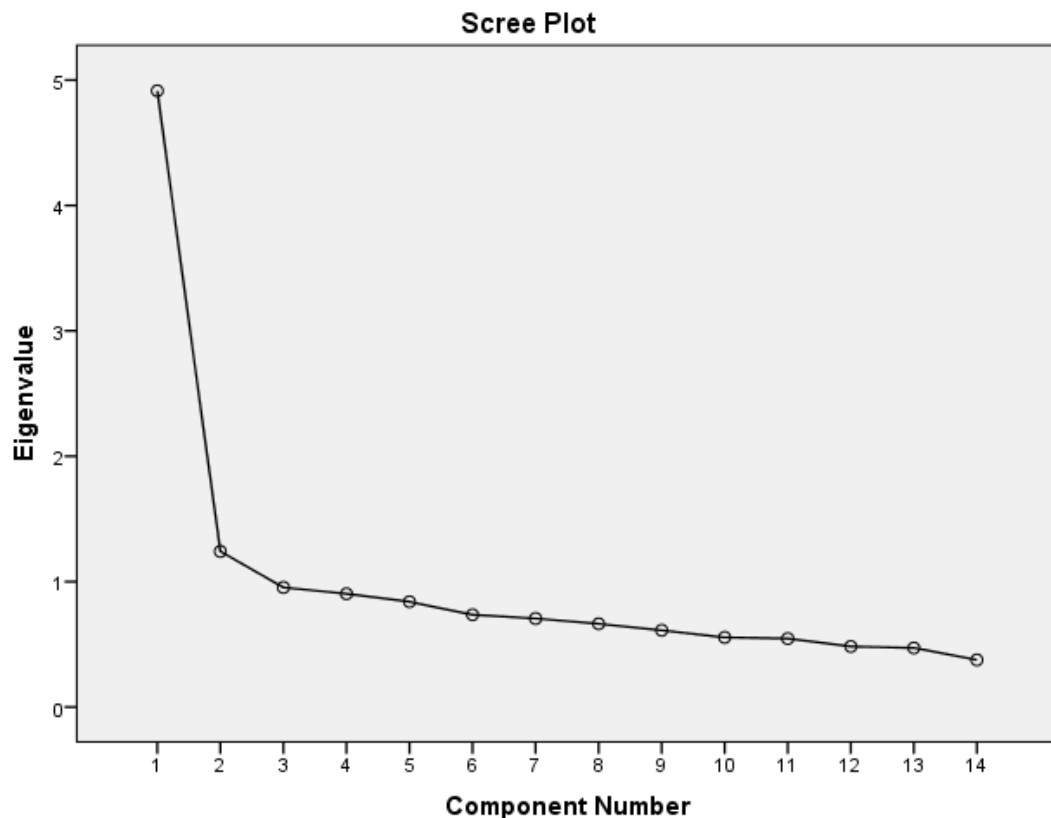


Figure 4. 4: Scree Plot of Eigenvalues for Relationship Quality under Varimax Rotation

Source: Research Analysis, 2023

4.6.7 Factor Analysis on Strategic Agility

The moderating variable, Strategic Agility, was measured using nineteen items. There were four items with more than one eigenvalues. Two items that had greater variability at 42.82% were retained. The first component explained 32.49 and the second component 10.33% of the total variability prior to varimax rotation, which maximized variability. As indicated in Table 4.14, component 1 and component 2 explained a total of 24.51% and 18.31%, respectively, following varimax rotation.

Table 4. 14: Factor Analysis on Strategic Agility

Component	Total Variance Explained								
	Initial Eigenvalues			Extraction Sums of Squared			Rotation Sums of Squared		
	Loadings			Loadings			Loadings		
	% of	Cumulative		% of	Cumulative		% of	Cumulative	
Total	Variance	%	Total	Variance	%	Total	Variance	%	
1	6.173	32.489	32.489	6.173	32.489	32.489	4.656	24.507	24.507
2	1.963	10.333	42.821	1.963	10.333	42.821	3.480	18.314	42.821
3	1.433	7.540	50.361						
4	1.394	7.337	57.697						
5	1.138	5.991	63.689						

Extraction Method: Principal Component Analysis.

Source: Research Analysis, 2023

4.6.8 Factor Loadings on Strategic Agility

According to Kaiser, H. (1974), KMO values ranges between 0 and 1. Values close to zero show that there are large partial correlations in comparison to sum of correlation. In other words, there is a widespread correlation and it implies that there are problems for factor analysis. The study extracted factors using factor analysis techniques; this was done after confirmation from KMO in which the study found that KMO values for each variable were above 0.70 (Kaiser, 1974; Field, 2005). In factor analysis, there are factor loadings. The Kaiser-Meyer-Olkin (KMO, 1974) measure of sampling adequacy ($0.823 > 0.70$) and significant Bartlett's Test of sphericity which is a chi-square test ($p = 0.000$) implying the correlation matrix is identity and reveals that data was adequate for extraction using principal components analysis. KMO involves comparing the magnitudes of the observed correlation coefficients with the magnitudes of the partial correlations. If the partial correlations are small relative to the actual correlations, KMO will be close to 1, indicating that factor analysis might be appropriate. From the analysis all the items used were appropriate for factor analysis. The study suppressed those loadings which were below 0.50. The recommended loading for an item according to Hair et al., (2014) is a factor loading

of 0.50 and above. Factor dimensionality is relevant when the factor loading is higher. A negative value indicates an inverse impact on the factor.

Table 4. 15: Loadings on Strategic Agility

	Unrotated Component Extraction		Rotated Component Matrix ^a	
	1	2	1	2
Strategic sensitivity				
We periodically anticipate the relevant opportunities in external environment.	0.552			
We periodically anticipate the significant threats in external environment.	0.643		0.599	
we frequently predict the fundamental shifts in our Industry.	0.579		0.702	
We successfully pursue the competitive actions by rivals.	0.655			0.765
we continuously try to discover the additional needs of customers and working hardly on satisfy them	0.583	-0.647		0.867
Strategic responsiveness				
We respond rapidly to significant changes in external environment	0.529		0.504	
We continuously redeploy the key internal assets and capabilities in order to exploit the external opportunities	0.622		0.592	
We emphasize the strategic alignment of resources to enhance the internal dynamic capabilities	0.540		0.538	
We ensure the flexibility of operations by emphasizing teams work building.	0.508		0.628	
We highly concerned with the rationality of our decisions depending on real time information.			0.537	
We ensure the continuing communications with all stake holders inside and outside the organization.	0.544	-0.641	0.517	
We enhance relevant digitization options (digitizing customer side, digitizing supply chain, digitizing procurement process) to sustain our abilities in responding to customer needs.	0.580		0.512	
Strategic learning				
We frequently make deliberate search for the new knowledge about customers and markets.				
We actively bringing new external knowledge into our internal context depending on relevant means such as conversations and interactions .	0.578			
We consider the information concerning past events and solutions in relation to our process and/or customer.	0.643	0.599		
We highly concerned with fitting the new knowledge into the internal context for understanding and actions.	0.579	0.702		
We recognize the importance of Conflicting assumptions and alternatives interpretations in enhancing the learning process	0.655			
Our culture encourages questioning and development of new insights as a pillars in ensuring the strategic learning	0.583		0.765	
We periodically test the applicability of the new knowledge into actions (structures, procedures and strategies)	0.512		0.867	
Extraction Method: Principal Component Analysis.				
Rotation Method: Varimax with Kaiser Normalization				
a. Rotation converged in 3 iterations.				
KMO and Bartlett's Test				
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.				0.823
Bartlett's Test of Sphericity		Approx. Chi-Square		1284.741
		Df		121
		Sig.		0.000

Source: Research Analysis, 2023

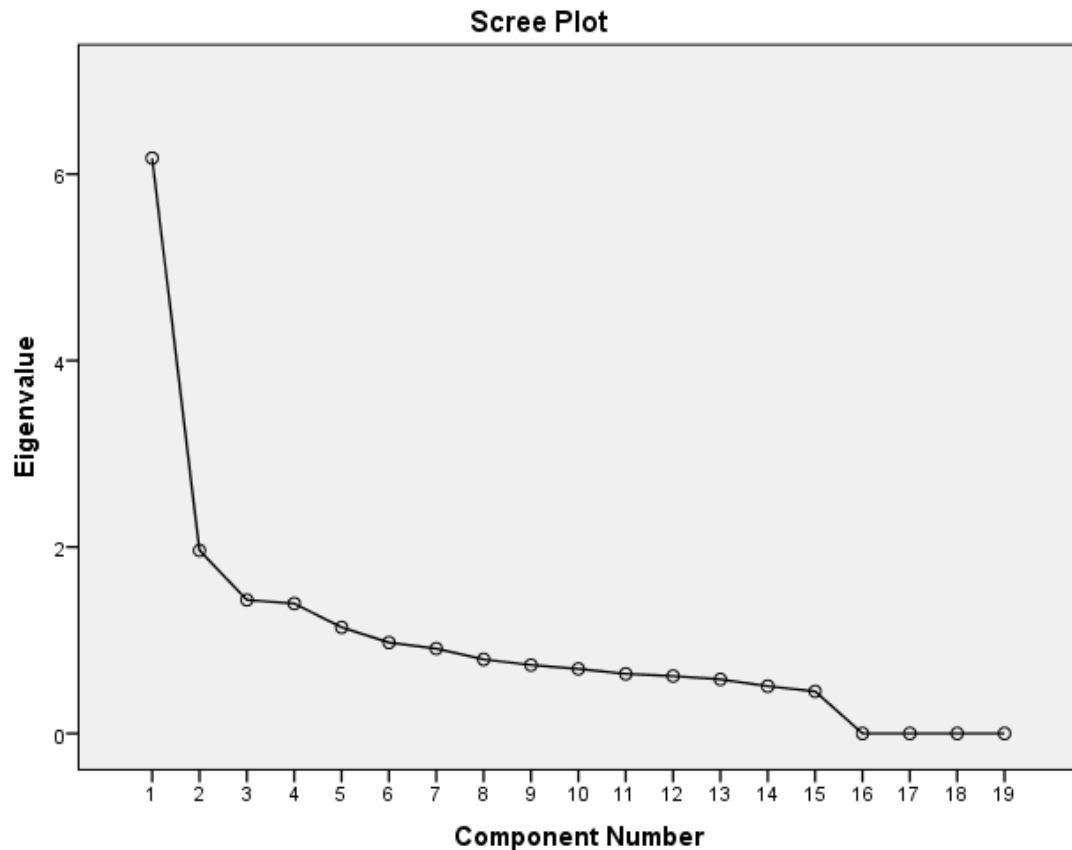


Figure 4. 5: Scree Plot of Eigenvalues for Strategic Agility under Varimax Rotation

Source: Research Analysis, 2023

Following factor analysis, the eigenvalues are displayed in a scree plot in Figure 4.5. One often used method for figuring out how many elements to keep is the scree plot (Everitt and Rabe-Hesketh, 2007). A representation of the eigenvalues displayed in decreasing order is known as a scree plot (Cattell 1966). The majority of the variance in the data is explained by factors or components to the left of the diagram (at the beginning). Elbow-after factors or components have a smaller overall variance contribution.

4.7 Diagnostics Checks

Multiple linear regression analysis is predicated on a number of principles. The diagnostic tests include normality, which determines whether the residuals of the

multiple regressions are normally distributed. Homoscedasticity, which determines whether the variance of the error terms is similar across the values of the independent variables, multicollinearity, which determines whether the predictors are highly correlated among themselves. The researcher tested a number of the regression model's presumptions regression analysis. If these assumptions are violated then the anticipated outcomes would not be trustworthy and could result in incorrect findings and recommendations. This is caused by the potential for Type I or Type II error, as well as an estimation that is too high or too low for significance or impact magnitude. Tests for, normality, linearity, multicollinearity, and homoscedasticity were conducted to ensure that the data met the requirements for this inquiry. According to Hair et al. (2010), regression analysis assumptions are essential for guaranteeing that the results were accurately representative of the sample and for achieving the best outcomes.

4.7.1 Normality Test Results

For the study to be able to draw trustworthy conclusions from the model estimate, the residuals from the regression should have a normal distribution. Table 4.16 confirmed Jarque-Bera value of 0.107 and probability of 0.961 that the null hypothesis of data had a normal distribution was accepted. According to Kline (2011) and Tabachnick and Fidell (2013), skewness evaluates a distribution's symmetry while kurtosis measures how peaky it is. The skewness (0.152) and kurtosis (3.851) of the research variables show that the data was normally distributed because of symmetry (Kline, 2011). As a result, the analysis concluded that the data's distribution was normal.

Table 4. 16: Jarque Bera Test for Normality

Skewness	0.152
Kurtosis	3.851
Jarque- Bera	0.107
Probability	0.961

H_0 : Data Follow Normal Distribution

Source: Researcher, 2023

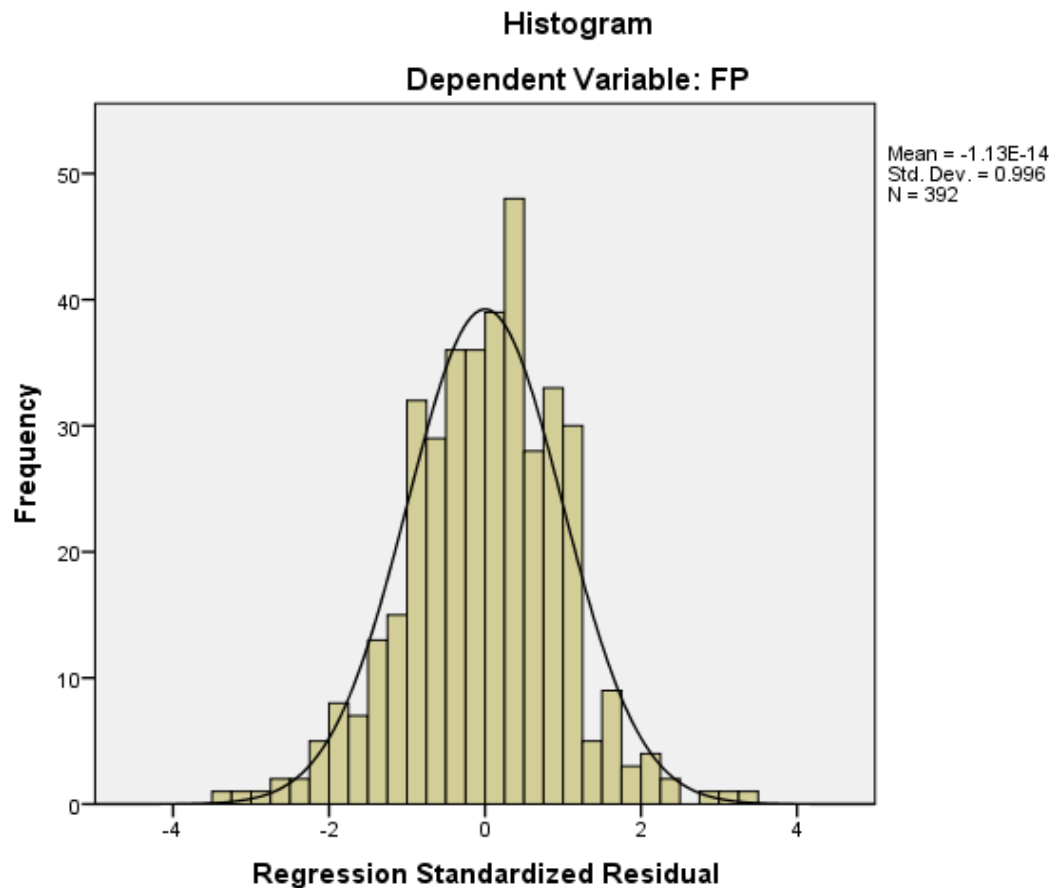


Figure 4. 6: Normal Distribution Graph

Source: Research Analysis, 2023

The results of the normality test can also be confirmed by looking at skewness and kurtosis values. The study further plotted the residuals using the histogram in Figure 4.6 which shows the size and distribution of the data, to test for normalcy. The histogram of the standardized residuals showed an approximately normal curve when the assumption of regression and most other methods that the error terms are normally distributed was met, as stated by Garson (2012). Garson (2012) states that one should anticipate a normal distribution of error for any predictive technique, with the majority of predictions being at or near zero and then falling into "high prediction" and "low prediction" tails.

4.7.2 Linearity Test Results

In this study, the P-P plot of the scores represented by a straight line was used to quickly evaluate the linearity assumption (Pallant, 2013). Residuals were used in P-P plots. The error terms, or the residuals between the observed and predicted values of the dependent variable, make up the residuals.

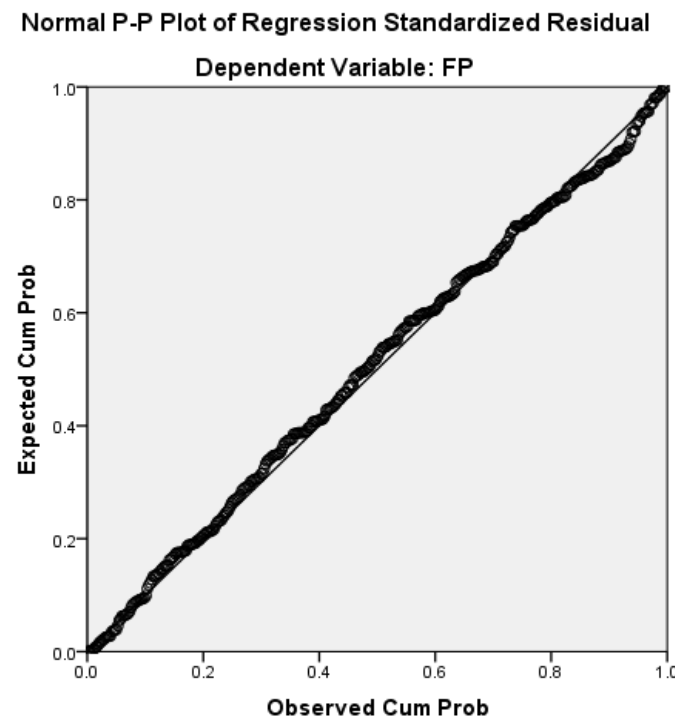


Figure 4. 7: Linearity of the Residuals

Source: Research Analysis, 2023

Figure 4.7 showed residual have a diagonal line. The linearity assumption was satisfied because the observed and expected values were located along the diagonal line, with no significant departures from it, based on the regression standardized residual. The Figure exhibits a linear relationship among variables.

4.7.3 Multicollinearity Test Results

This is an essential assumption that no particular high degree of correlation between the predictors. Tolerance and VIF were examined using the regression results from the collinear diagnostics. Garson (2012) states that if the tolerance value greater than

the threshold value of 0.1 or VIF should be 10.0, for variables to have no collinear relationship. When values are less than 0.1, then multicollinearity is a concern, the independent variable should be eliminated from the analysis due to multicollinearity. From the results in Table 4.17, the minimum value for the tolerance was 0.277 and maximum of .942 thus no collinear relationship between independent variables.

Table 4. 17: Collinearity Statistics

Model	Coefficients^a	
	Tolerance	VIF
(Constant)		
Electronic Customer Relationship	.551	1.816
Relationship Quality	.277	3.605
Strategic Agility	.278	3.603
Firm Size	.942	1.061
Firm Age	.888	1.126

a. Dependent Variable: SME Performance (SMEP)

Source: Research Analysis, 2023

4.7.4 Homoscedasticity Test Results

The homoscedasticity is the presumption that the data distribution is the same over the whole range of the dependent variable, the absence of homoscedasticity is shown by more mistakes (residuals) in some regions of the range than in others. There is needs to be satisfied in order to create an unstructured cluster of points from residuals The homoscedasticity assumption must be met (Garson, 2012). this is also supported by (Osborne & Waters,2002) who claims that residual should fall between -2and/or +2 points. based on the data plot of standard residual values vs standard anticipated values

The study tested Breusch- pagan test. The null hypothesis of homoscedasticity hypothesis was correct. According to Breusch and Pagan (1979), the null hypothesis of homoscedasticity is accepted if the p values corresponding to the chi-square test statistics are greater than the 5% level of significance.

Table 4. 18: Heteroscedasticity Test for Residuals

Breusch-Pagan / Cook-Weisberg test for Heteroscedasticity	
Ho: Constant variance	
chi2(1) =	1.517
Prob > chi2 =	0.747

Source: Research Data, 2023

According to the findings of this test, which are presented in the Table 4.18, the residuals of the model are of a Heteroscedasticity distribution. This is substantiated by the p values that correspond to the chi-square test statistics of 0.747, which is greater than the significance limit of 5 percent (0.05). Because of this, we can deduce that the model's residuals have a constant variance.

4.8 Bivariate Correlation Analysis between the Variables

In statistical analysis, correlation analysis indicates the direction, strength of association and to which variables are related to one another. Correlation coefficients range from -1 to 1. A coefficient closer to 1 indicates a strong positive correlation, while a coefficient closer to -1 indicates a strong negative correlation. The significance level (p-value) indicates whether the observed correlations are statistically significant or occurred by random chance. In Table 4.19 all correlations are significant at the 0.01 level (2-tailed), meaning they are highly associated with the SME Performance for example there was a strong positive correlation of SME Performance with Electronic Customer Relationship Management Strategies (eCRM) ($r = 0.669$, $p < 0.01$). This suggests that firms with better electronic customer relationships tend to have better performance. Businesses that invest in enhancing their electronic customer relationships and relationship quality often prioritize customer satisfaction. Satisfied customers are more likely to continue their business relationships and are likely to recommend the company's products or services to others. This, in turn, can boost SME Performance.

Positive correlation of SME Performance with relational quality (RQ) ($r = 0.634$, $p < 0.01$), implies satisfied and loyal customers are more likely to engage with the company, provide valuable feedback, and participate in surveys. This feedback loop helps the organization identify areas for improvement and implement changes effectively, further enhancing SME Performance. Companies with strong eCRM often excel in communication with customers. Effective communication helps in understanding customer needs, preferences, and feedback. This understanding enables the company to tailor its products, services, and strategies to meet customer expectations, resulting in improved SME Performance

A positive correlation with strategic agility (SA) ($r = 0.595$, $p < 0.01$) indicate companies can adapt quickly to changing market demands and customer preferences. This strategic agility allows them to respond promptly to market opportunities, giving them a competitive advantage and contributing to better overall performance. The associated between the SME Performance and with Firm Size ($r = 0.475$, $p < 0.01$) was weak positive correlation and weak positive correlation with Firm Age ($r = 0.291$, $p < 0.01$).

Pearson correlation was relevant in this study because it quantifies the strength and direction of a linear relationship between two continuous variables. It provides a numerical measure indicating how much one variable changes as another variable changes. Variables that are highly correlated with the target variable (positively or negatively) are often useful predictors in regression models. Correlation analysis helped in understanding the patterns and relationships within data. It was especially useful when exploring large datasets with multiple variables to identify which variables were related and might influence each other. The strong positive correlation between SME performance, electronic customer relationship, relationship quality, and

strategic agility can be attributed to customer satisfaction, effective communication, adaptability, positive brand image, and customer retention. Businesses that focus on building and maintaining strong relationships with their customers are better positioned to adapt to market changes, innovate, and perform well in the long run.

Table 4. 19: Pearson Correlation Coefficients

		Correlations					
		SMEP	eCRM	RQ	SA	Firm Size	Firm Age
SMEP	Pearson Correlation	1					
	Sig. (2-tailed)						
	N	392					
eCRM	Pearson Correlation	.669**	1				
	Sig. (2-tailed)	.000					
	N	392	392				
RQ	Pearson Correlation	.634**	.618**	1			
	Sig. (2-tailed)	.000	.000				
	N	392	392	392			
SA	Pearson Correlation	.595**	.599**	.806**	1		
	Sig. (2-tailed)	.000	.000	.000			
	N	392	392	392	392		
Firm Size	Pearson Correlation	.475**	.299**	.242**	.197**	1	
	Sig. (2-tailed)	.000	.000	.000	.000		
	N	392	392	392	392	392	
Firm Age	Pearson Correlation	.291**	.186**	.170**	.185**	.154**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.002	
	N	392	392	392	392	392	392

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Research Analysis, 2023

4.9 Model Estimation of Parameters

After confirming that the multivariate linear regression model met all of the presumptions regarding normality, linearity, multicollinearity, and homoscedasticity as covered in the previous section, the study used a multiple regression model, utilizing Hayes (2018) Model 1 for the moderation effect of strategic agility, Model 4 for the mediation effect of relational quality, and Hayes Model 8 for the testing of moderated mediation effects of the strategic agility and relationship quality on the SME performance.

4.9.1 Hierarchical Regression Results (Direct effects)

Prior to testing for the direct effect hypotheses, the study examined the effect of the control variables in this study. This was done by adopting hierarchical regression analysis as presented by Table 4.20.

The first model of the table indicates the effect of control variables on the dependent variable. Firm size and firm age showed a significant effect at 5% level of significance on SME performance. In the model summary, there was small R-square of 27.5% indicating the variation of SME performance in Nairobi County can be explained by firm size and firm age. The study investigated the changes in the R-square when the independent, mediating and moderating variables were hierarchically added into the model. When electronic customer relationship management strategies was added (model 2), the R-square changed to 55.1% indicating a significant effect of electronic customer relationship management strategies in explaining variation of electronic customer relationship management strategies.

Moreover, eCRM had a positive and significant direct effect on SME performance ($\beta=0.533$, $p<0.000$). Model 3 gives the contribution of relational quality when added to the regression equation. The effect of relationship quality on SME performance was positive and significant at $\beta=0.333$ ($p<0.000$). The coefficient of determination (R square) increased to 61.4% with significant model fitness (F-statistic). The last section of the tables (model 4) shows the summary of the results when the all the variables were hierarchically added, and results indicates that these variables enhanced the R-square from 27.50% to 61.9% implying a significant influence of predictors in explaining SME performance in Nairobi County. In the final model, electronic customer relationship management strategies (eCRM) and relationship quality (RQ) had a positive and significant influenced the SME performance with

respective coefficients $\beta=0.333(p<.05)$ and $\beta=0.245 (p<0.000)$. Strategic agility (SA) also had a significant direct effect on the SME performance ($\beta=0.138, p <0.05$).

Table 4. 20: Direct Effects (Hierarchical Regression Model)

Variables	Model 1 Coeff. (β)	Model 2 Coeff. (β)	Model 3 Coeff. (β)	Model 4 Coeff. (β)
Constant	1.894***	0.593***	.125	0.063
Firm Size	0.180***	0.115***	0.102***	0.099***
Firm Age	0.410***	0.268***	0.250***	0.253***
eCRM	-	0.533***	0.352***	0.333***
RQ	-	-	0.333***	0.245***
SA	-	-	-	0.138**
R ²	0.275	0.551	0.614	0.619
Adj. R ²	0.271	0.548	0.610	0.614
F- statistic	73.653	158.775	153.797	125.257
P>F	0.000	0.000	0.000	0.000

*P<0.05, **P<0.01 ***P<0.001

Source: Researcher, 2023

4.9.2 Moderation Analysis Using Hayes Model 1

Table 4.21 presents the moderation analysis results of strategic agility. The study used the moderation strategy recommended by Hayes (2012). Memon et al. (2019) posit that a moderating variable has the ability to either strengthen, weakened, or antagonize the association between the predictor and outcome variables. The degree to which the dependent and independent variables interact may change if the moderator variable is significant (Memon et al., 2019). The interaction of an independent and moderating variable can be used to demonstrate a moderator's influence (Lee et al 2015).

Table 4. 21: Moderation Analysis (Hayes Model 1)

Variables	Mediator (Relationship quality) Coef. (SE)	Dependent variable (SME Performance) Coef. (SE)
Electronic Customer Relationship (eCRM)	β_1 -0.410** (0.158)	0.440*** (0.187)
Strategic Agility (SA)	β_2 0.064 (0.182)	0.392 (0.215)
Interaction (eCRM *SA)	β_3 0.179** (0.047)	-0.019 (0.055)
Firm size	C_1 0.008 (0.023)	0.098*** (0.027)
Firm age	C_2 0.034 (0.027)	0.265*** (0.032)
Constant	α_0 2.629*** (0.598)	-0.075 (0.707)
	$R^2 = 0.6916$	$R^2 = 0.6011$
	$\Delta R^2 = 0.012$	$\Delta R^2 = .00001$
	F=173.153 P= 0.000	F=116.315 P= 0.000

Note: Coef.. = coefficient, SE = standard error. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Source: Researcher, 2023

According to the findings in this study, there was a positive and significant moderating role of strategic agility between electronic customer relationship management strategies and the relationship quality ($\beta=0.179$, $p<0.000$). Since the impact of electronic customer relationship management strategies was negative and significant on relationship quality, but by introducing the strategic agility the relationship became positive. This kind of moderation is said to be enhancing. The R-square change has also been improved by 1.2%.

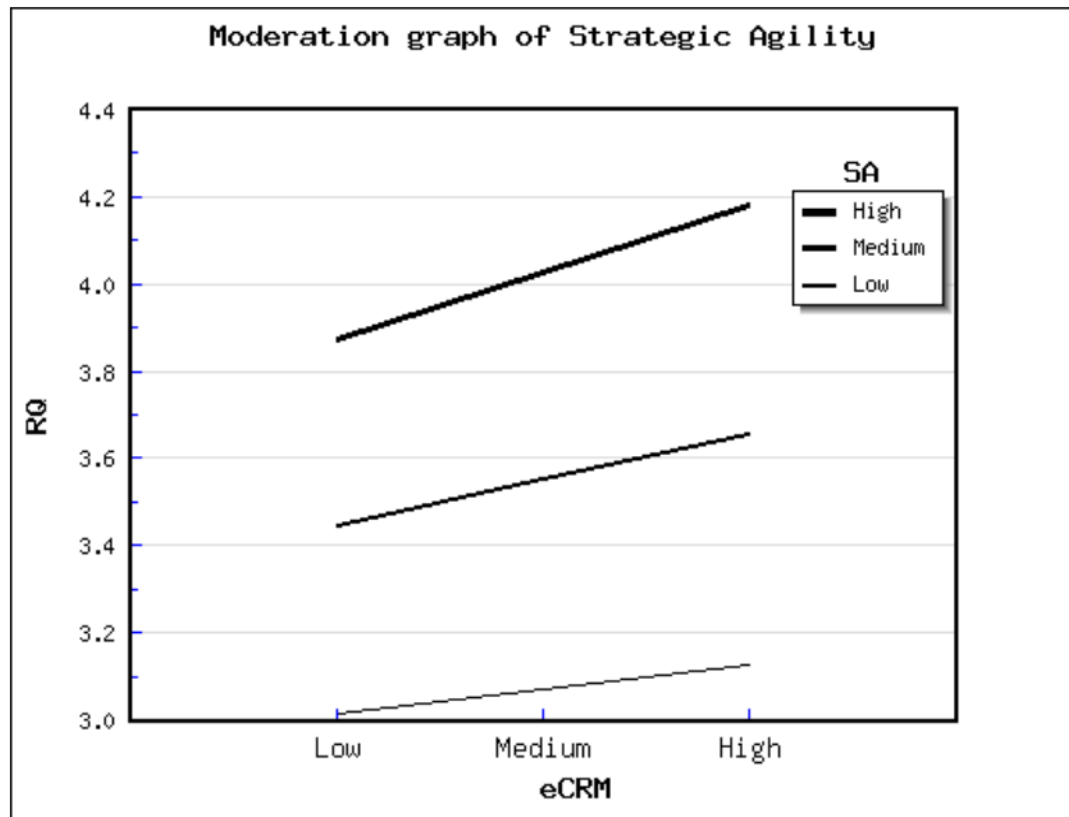


Figure 4. 8: Moderation graph of the Interaction between eCRM and SA on RQ
Source: Researcher, 2023

The link between the mediating variable and the independent variable was the subject of the first moderation. A mod graph of the interaction is shown in Figure 4.8. It is evident that as electronic customer relationship management strategies improve from low to high in terms of high strategic agility, relationship quality is expected to increase. Developing strategic agility is essential to raising the caliber of relationships. Secondly, the other moderation was about the relationship between electronic customer relationship management strategies and the SME performance. Results showed a positive and significant between electronic customer relationship management strategies and SME performance ($\beta=0.440$, $p<0.000$). The introduction of strategic agility as moderator did not show a significant moderation effects ($\beta=-0.019$, $p>0.000$). Therefore, the study concludes that the strategic agility has no moderating role. All the F statistic for the models were significant at 5% significance

level implying that the moderation model was fit and the interpretations of the results were reliable.

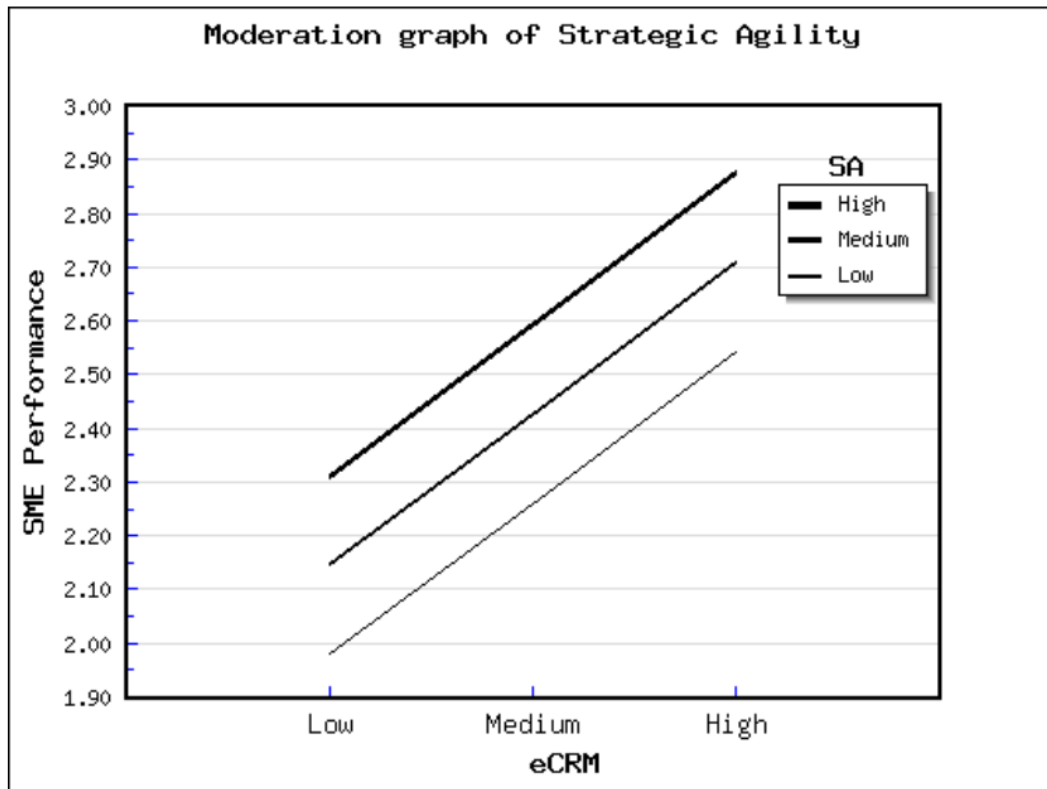


Figure 4. 9: Moderation graph of the Interaction between eCRM and SA on SME Performance

Source: Researcher, 2023

4.9.3 Mediation Analysis Using Hayes Model 4

The study employed Hayes model 4 in Process-Macro to analyze the mediation of relationship quality of the SME in Nairobi, Kenya. It was hypothesized that relationship quality can transmit the causal effect of electronic customer relationship management strategies in influencing the SME performances in Nairobi County. Can the relationship quality transmit the influence of electronic customer relationship management strategies in influencing the SME performances? The study answered this question by analyzing the collected data. In mediation analysis according to Barron and Kenny (2012) the effect of independent variable (electronic customer relationship management strategies) on the dependent variable (SME performances) is

referred to as total effect and that effect is then partitioned into a combination of a direct effect of independent variable on dependent and an indirect effect of independent variable on dependent variable via mediating variable (relationship quality).

Table 4. 22: Mediation Analysis (Hayes Model 4)

Variables		Mediator (Relationship Quality) Coef. (SE)	Dependent variable (SME Performance) Coef. (SE)
Electronic Customer Relationship (eCRM)		β_1 0.545*** (0.039)	0.352*** (0.039)
Relationship Quality (RQ)		β_2 -	0.333*** (0.042)
Firm Size		C_1 0.039 (0.032)	0.102*** (0.026)
Firm age		C_2 0.052** (0.037)	0.250*** (0.031)
Constant		α_0 1.409** (0.181)	0.125 (0.161)
		$R^2 = 0.3885$	$R^2 = 0.6138$
		F=82.168	F=153.797
		P> F= 0.000	P> F= 0.000
	Index	SE (Boot)	Boot 95% CI
Mediation	0.182	0.036	0.117 0.257

Note: Coef.. = coefficient, SE = standard error, CI = confidence interval.

95% confidence interval for conditional direct and indirect effect using bootstrap.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Source: Researcher, 2023

Table 4.22 indicate that the relationship between the eCRM and RQ have a positive significant relationship ($\beta=0.545$, $p<0.000$). This relationship is referred to path 'a'. The relationship between eCRM and SME performance was also positive and significant ($\beta=0.352$, $p<0.000$) and it is referred to path 'c' in mediation analysis suggested by Zhao et al., (2010). The effect of RQ on SME performance was positive and significant ($\beta=0.333$, $p<0.000$) the path 'b' according to Barron and Kenney

(2012) and Zhao et.al. (2010). The significance of path $a*b$ indicates mediation effect (Zhao et.al. 2010).

In this study, the coefficient is 0.182 was significant because the bootstraps confidence interval does not contain zero that is the bootstrap lower limit confidence interval (bootLLCI) was positive (0.117) and bootstrap upper limit confidence interval (bootULCI) was positive (0.257). The bootstrapping method is a resampling technique used to estimate statistics on a population by sampling a dataset with replacement. It can be used to estimate summary statistics such as the mean or standard deviation (Hesterberg, 2011). Bootstrap methods can be remarkably be more accurate than the classical inferences based on Normal or t distributions. Since the bootstrap standard error was 0.036, and the coefficient is 0.182 and by conventional method, t -statistic can be calculated by dividing coefficient with standard error; $0.182/0.036 = 5.06 > 1.96$ at 5 percent significance level. The study therefore concludes by stating that partial mediation effect was realized. Further, since the mediation coefficient was positive, relationship quality is a key factor in enhancing the SME performance among the SMEs in Nairobi County in Kenya.

The effects of mediation analysis on causal mediation have drawn criticism time and time again, despite the fact that it is widely used. Mediation is a comprehensive approach because it typically allows for the randomization of only one of the three variables in the mediation hypothesis. The independent and dependent variables' causal relationships are not supported by the independent variable's randomization. MacKinnon and Pirlott (2015) overcome these drawbacks by applying recent statistical advances in the field of causal mediation studies. Within-subjects designs usually involve the same subject in both the control and experimental conditions.

4.9.4 Moderated Mediation Analysis Using Hayes Model 8

Previously, the study found that electronic customer relationship management strategies (eCRM) had a significant impact on the SME performance in the direct effects. The study further found that relationship quality enhanced the performance as a mediator. Further, strategic agility as a moderator enhanced the relationship. The study investigated the significant influence of this moderator on the SME performance via relationship quality (RQ). The study found that RQ positively mediated the relationship eCRM and SME performance. Further, introduction of SA to act as a moderator, the relationship was more enhanced. Table 4.23 indicate that the SME performance was significantly impacted by eCRM ($\beta = 0.546$, $p < 0.000$). The interaction between eCRM and SA (eCRM*SA) on SME performance was negative and insignificant ($\beta = -0.065$, $p > 0.000$).

Table 4. 23: Moderated Mediation (Hayes Model 8)

Variables		Mediator (Relationship Quality) Coef. (SE)	Dependent variable (SME Performance) Coef. (SE)
Electronic Customer Relationship (eCRM)	β_1	-0.410*** (0.158)	0.546*** (0.185)
Strategic Agility (SA)	β_2	0.640 (0.182)	0.376 (0.210)
Interaction (eCRM *SA)	β_3	0.179*** (0.047)	-0.065 (0.055)
Relationship Quality (RQ)	β_4	-	0.257*** (0.059)
Firm Size	C_1	0.008 (0.023)	0.096*** (0.026)
Firm Age	C_2	0.034 (0.027)	0.256*** (0.031)
Constant	α_0	2.629*** (0.598)	-0.753 (0.708)
		$R^2 = 0.6916$ $\Delta R^2 = 0.0117$ F=173.153 P= 0.000	$R^2 = .6201$ $\Delta R^2 = 0.0014$ F=1047229 P= 0.000
		Index SE (Boot)	Boot 95% CI
Moderated mediation		0.046 0.019	0.015 0.089

Note: Coef. = coefficient, SE = standard error, CI = confidence interval. 95% confidence Interval for conditional direct and indirect effect using bootstrap.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Source: Researcher, 2023

The moderated mediation further was positive and significant. This is because the bootstrap lower limit confidence interval (BootLLCI) and bootstrap upper limit confidence interval (BootULCI) is non-zero. That is, the boot lower limit was positive and boot upper limit confidence interval was positive. Using other convention method where t-value can be calculated as $0.046/0.019 = 2.42$ which is greater than critical value of 1.96 at 5 percent level of significance. Thus, the research concludes that strategic agility can act as a moderator both on the direct effects and also on the indirect effects (moderated the mediation).

4.10 Test of Hypotheses and Interpretation of the Findings

This study aimed at determining the moderated mediation effect of relationship quality on the relationship between electronic customer relationship management and the SME performance. Each of the objectives was hypothesized, tested and the results showed some significant findings. Specifically, the study determined the effect of eCRM on performance of small and medium enterprises, determine effect of eCRM on relationship quality, determine effect of relationship quality on SME performance, determine mediating effect of relationship quality on relationship between eCRM on SME performance, determine moderating effect of strategic agility on the relationship between eCRM on SME performance and determine moderating effect of strategic agility on the relationship between eCRM on SME performance via relationship quality.

4.10.1 Hypothesis H₀₁: There is no significant effect of eCRM on SME Performance in Nairobi County, Kenya.

The first objective was to determine effect of eCRM on performance of small and medium enterprises in Nairobi County, Kenya. Results indicated a significant direct

effect of electronic customer relationship management strategies on SME performance with coefficient of $\beta=0.533$ ($p<0.05$). This implies that the first null hypothesis was rejected in favor of the alternative hypothesis since the p value is less than .5. Electronic Customer Relationship Management (eCRM) refers to the use of digital technologies, such as the internet, social media, email, and mobile apps, to manage and improve relationships with customers. Implementing effective eCRM strategies can have several positive effects on Small and Medium Enterprises (SMEs) performance. eCRM tools allow SMEs to gather and analyze customer data effectively. By understanding customer behavior and preferences, businesses can tailor their products and services to meet customer needs more precisely. This customer-centric approach can lead to higher customer satisfaction and loyalty.

Further, eCRM enables SMEs to provide faster and more efficient customer service. Through features like live chat support, automated responses, and self-service options, businesses can resolve customer queries and issues promptly. This improved service can lead to increased customer satisfaction and positive word-of-mouth referrals. eCRM systems help SMEs segment their customer base and target specific groups with personalized marketing messages. Personalization enhances the relevance of marketing campaigns, making customers more likely to respond positively. Tailored promotions and offers can boost sales and customer engagement. By understanding customer preferences and behavior, SMEs can cross-sell or upsell products and services. Additionally, personalized marketing and improved customer service can lead to higher conversion rates. These factors contribute to increased sales and, consequently, higher revenue.

Furthermore, automated eCRM processes can streamline various business operations, reducing manual effort and operational costs. Automated responses, online self-

service options can handle routine customer inquiries, allowing employees to focus on more complex tasks. This increased efficiency leads to cost savings. Building strong relationships with customers through personalized interactions and excellent service can enhance customer loyalty. Satisfied and loyal customers are more likely to make repeat purchases and recommend the business to others. Retaining existing customers is often more cost-effective than acquiring new ones. Implementing electronic customer relationship management strategies positively affects SME performance by enhancing customer understanding, improving service quality, increasing sales, reducing costs, fostering customer loyalty, enabling data-driven decisions, and providing a competitive advantage in the market.

4.10.2 Hypothesis H₀₂: There is no significant effect of RQ on SMEs performance in Nairobi County, Kenya.

The second objective was to determine effect of relationship quality (RQ) on SME performance in Nairobi County, Kenya. This objective was hypothesized and tested as there is no significant effect of RQ on SMEs performance in Nairobi County, Kenya. Results indicate a positive and significant influence on SME performance. The magnitude of the coefficient was $\beta=0.333$ ($p<0.05$) implying the hypothesis was rejected as p value is less than 0.5. The study concludes that there was sufficient evidence that relationship quality have an effect on SME performance. When SMEs invest in building strong relationships with their customers, these customers are more likely to remain loyal. Loyal customers tend to make repeat purchases, leading to a stable revenue stream. They are also more likely to recommend the SME to others, expanding the customer base. Higher relationship quality often translates to longer-lasting relationships with customers. As a result, the total revenue a business can

generate from a customer over their lifetime increases. This long-term revenue stream can significantly impact the financial stability and growth of an SME.

In business, conflicts and issues are inevitable. However, SMEs with strong relationship quality can navigate these challenges more effectively. Positive relationships with customers, employees, and suppliers foster effective communication and understanding, making it easier to resolve disputes and maintain positive working relationships. SMEs often collaborate with partners, suppliers, and other businesses. High-quality relationships foster trust and openness, encouraging collaborative efforts. This collaboration can lead to innovative ideas, joint ventures, and access to new markets, enhancing the SME's product offerings and market presence. SMEs depend on suppliers for raw materials and resources. Positive relationships with suppliers can lead to better terms, timely deliveries, and higher quality materials. This can streamline operations, reduce costs, and improve the overall efficiency of the SME.

Positive relationships within the workplace, between employees and management, contribute to a healthy work environment. Satisfied employees are more motivated, engaged, and productive. This increased productivity can positively impact the quality of products and services, customer satisfaction, and overall business performance. SMEs with strong relationships are often more adaptable to changes in the market. Feedback from customers and partners can help SMEs make necessary adjustments to their products, services, or business strategies promptly. This agility can be a competitive advantage, allowing the SME to respond effectively to market demands.

4.10.3 Hypothesis H₀₃: There is no significant effect of SA on SMEs performance

The third objective was to determine the effects of strategic agility on SME performance in Nairobi County, Kenya. The findings indicate that strategic agility did

not show a direct effect on the SME performance with a positive insignificant coefficient $\beta=0.138(p<0.05)$. This implies that the hypothesis was rejected since the p value is less than 0.5. The study concludes that there was sufficient evidence that strategic agility had a direct influence of the performance of small and medium enterprise in Nairobi County.

This implies that SMEs with strategic agility can quickly adapt to changes in the market, whether these changes are related to customer preferences, technological advancements, or competitive actions. This responsiveness helps them stay relevant and capitalize on emerging opportunities faster than their less agile competitors. Agility encourages a culture of innovation within SMEs. Agile SMEs can develop unique products and services that meet the evolving needs of their customers by being open to change and willing to experiment with new ideas. This can lead to a competitive advantage and improved market positioning.

Strategic agility involves a streamlined decision-making process that allows SMEs to make informed decisions quickly. This is crucial in a dynamic business environment where delayed decisions can result in missed opportunities or the inability to mitigate risks effectively. Agile SMEs can better allocate and utilize their resources, including time, money, and human capital. SMEs in Nairobi can redirect resources to areas that offer the most potential for growth and profitability by being flexible and adaptive, thereby enhancing overall performance. Being strategically agile means that SMEs can quickly respond to customer feedback and changing demands. This responsiveness leads to higher customer satisfaction and loyalty, which are essential for sustaining growth and competitive advantage.

In conclusion, strategic agility significantly enhances the performance of SMEs by fostering a responsive, innovative, and adaptive business environment. This agility

not only helps SMEs in Nairobi navigate the complexities of the market but also positions them for sustained growth and success. SMEs can improve their decision-making processes, resource allocation, customer satisfaction, and overall competitiveness by embracing strategic agility.

4.10.4 Hypothesis H₀₄: There is no significant effect of eCRM on RQ

Fourth, another objective was to evaluate the effects of e-CRM on relationship quality on SME performance in Nairobi County. Relationship quality was the mediating variable. The study analyzed the direct effect of eCRM on RQ. Results indicate an insignificant negative effect of eCRM on RQ at 5 percent significance level. The coefficient of $\beta = -0.410 (p < 0.05)$ implying there was evidence to support the objective. The hypothesis was rejected. While electronic customer relationship management (e-CRM) systems offer numerous benefits, they can also negatively influence relational quality under certain circumstances.

The negative effects evident in this research may be associated with the fact that e-CRM systems often rely heavily on automated responses and interactions, which can lack the personal touch that many customers value. This impersonal communication can make customers feel undervalued and disconnected, leading to a decline in the quality of the relationship. When companies overly rely on e-CRM systems, they might neglect the importance of human interaction. Customers often appreciate and trust interactions with real people more than automated systems. An over-reliance on technology can thus lead to customer frustration and a sense of neglect.

Further, if the data within the e-CRM system is inaccurate or outdated, it can lead to misinformed decisions and interactions that do not meet customer expectations. This can cause dissatisfaction and erode trust in the company's ability to manage relationships effectively. e-CRM systems need to be well-integrated across various

touch points (e.g., email, social media, phone). If there is inconsistency in the information or the quality of service provided across these channels, it can confuse customers and degrade the overall relational quality

4.10.5 Hypothesis H₀₅: There is no significant moderating effect of SA on relationship between eCRM on SMEs performance

The fifth aim of the study was to determine the moderating effect of strategic agility on the relationship between e-CRM and SMEs performance in SME performance in Nairobi County, Kenya. This objective was hypothesized as H₀₅: There is no significant moderating effect of strategic agility on relationship between e-CRM on performance of small and medium enterprises. The findings show no significant effect on the moderation of SA on the relationship between eCRM and SMEs performance. The magnitude of coefficient $\beta = -0.019$ ($p > 0.05$) implies the hypothesis H₀₅ failed to be rejected. No enough evidence to conclude that SA moderates the relationship.

4.10.6 Hypothesis H₀₆: There is no significant moderating effect of strategic agility on the relationship between e-CRM and RQ

The sixth objective evaluated the moderating effect of strategic agility on the relationship between e-CRM and relationship quality in Nairobi County, Kenya. The finding indicates a significant interaction (eCRM *SA) term between the CRM and Strategic Agility. The interaction had a positive effect on RQ ($\beta = 0.179$, $p < 0.05$). These results imply the hypothesis H₀₆ was rejected and concluded that strategic agility strengthens the relationship. e-CRM refers to the strategies, technologies, and practices that companies use to manage and analyse customer interactions and data throughout the customer lifecycle. In the context of SMEs, e-CRM often involves the use of digital tools and platforms to enhance customer relationships, gather data, and

improve customer satisfaction. Strategic agility is a company's ability to quickly adapt and respond to changing market conditions, customer preferences, and competitive pressures. It involves being flexible, innovative, and responsive in strategic decision-making. In the context of SMEs, strategic agility is vital for staying competitive in dynamic markets. In statistical terms, moderation refers to a situation where the strength or direction of the relationship between two variables (in this case, e-CRM and relationship quality) changes based on the level of a third variable (strategic agility).

In the context of SMEs, the moderation effect of strategic agility on the relationship between e-CRM and relationship quality implies that the impact of e-CRM practices on relationship quality is not constant but varies depending on how strategically agile the SME is. If an SME is highly strategically agile, it can adapt its e-CRM strategies quickly based on customer feedback and market changes. In this scenario, e-CRM practices are likely to have a stronger positive impact on relationship quality. Rapid responses to customer needs and preferences can enhance trust and satisfaction, leading to a higher relationship quality. On the other hand, if an SME lacks strategic agility and cannot adapt its e-CRM strategies effectively, the impact of e-CRM on relationship quality might be weaker. Inflexibility in adapting to changing customer demands could lead to dissatisfaction and reduced trust, resulting in a lower relationship quality. The level of strategic agility within an SME can either amplify or diminish the positive effects of e-CRM practices on relationship quality. A highly strategically agile SME can leverage e-CRM effectively, fostering strong and lasting relationships with customers, whereas a lack of agility might hinder these efforts, potentially leading to weaker customer relationships.

4.10.7 Hypothesis H₀₇: There is no mediating effect of RQ on the relationship between eCRM and SMEs performance.

Last but not least, the study determined mediating effect of relationship quality on relationship between e-CRM on performance of small and medium enterprises in Nairobi County, Kenya. Results from the mediation analysis from Hayes model 4 indicate a positive mediation effect of relationship quality. The bootstraps confidence interval was non zero (LLCI=0.117 and ULCI= 0.257) and the mediation effect of 0.182 (from Table 4.22). This indicates that the hypothesis H₀₇ was rejected and concluded that effective e-CRM practices enhance the quality of relationships SMEs have with their customers. Through personalized communication, efficient problem resolution, and tailored offerings, customers feel valued and satisfied with their interactions with the business. High relationship quality translates into positive outcomes for the SME. Satisfied and loyal customers are more likely to make repeat purchases, recommend the business to others, and provide positive reviews. This, in turn, leads to increased sales, customer retention, and positive word-of-mouth marketing, all of which contribute to improved SME performance.

As relationship quality continues to mediate the relationship between e-CRM and SME performance, the business experiences sustainable growth, profitability, and competitiveness in the market. Moreover, loyal customers often cost less to serve and bring in more revenue over the long term, further boosting the SME's financial performance. The positive relationship between effective e-CRM implementation and SME performance is mediated by the quality of relationships the SME builds with its customers. By focusing on enhancing customer satisfaction, trust, and loyalty through e-CRM initiatives, SMEs can achieve significant improvements in their overall High relationship quality, characterized by excellent customer service and satisfaction,

fosters customer loyalty. Loyal customers tend to make repeat purchases, resulting in increased sales and revenue for the SME. Moreover, loyal customers are more likely to continue doing business with the SME, contributing to customer retention and ensuring a stable revenue stream.

Satisfied customers are more likely to share positive experiences with others, leading to positive word-of-mouth marketing. This word-of-mouth can attract new customers to the SME, increasing its customer base. Additionally, a positive reputation built on strong relationships can enhance the SME's brand image, attracting more customers and driving sales. Loyal customers who have a positive relationship with the SME are more likely to become advocates for the business. They can provide valuable feedback and testimonials, which can be utilized by the SME for product/service improvement and marketing purposes. This feedback loop ensures that the SME stays attuned to customer needs, leading to the development of products/services that align with customer preferences, ultimately driving sales and enhancing performance.

Relationship quality plays a crucial role as a mediator in enhancing SME performance by fostering customer loyalty, positive word-of-mouth and customer advocacy. SMEs can achieve sustainable growth, increased sales, and overall business success. Building and maintaining strong relationships with customers are fundamental to the long-term success and profitability of SMEs performance and long-term sustainability in the market.

4.10.8 Hypothesis H₀₈: There is no significant moderating effect of SA on the relationship between eCRM on SME performance via RQ

Finally, the study investigated the moderating effect of strategic agility on the relationship between e-CRM on performance of small and medium enterprises via relationship quality. Results in Table 4.21 indicate that relationship quality mediated the relations and more so when moderated by the strategic agility. Thus the positive moderated mediation index of 0.046 was significant since the interval 0.015 and 0.089 from the bootstraps 95 % confidence interval was none zero. This implies that the type of mediation was partial and the hypothesis H₀₈ was rejected. In conclusion the study had evidence to support the argument.

In a moderated mediation model, the positive influence of relationship quality on SME performance is contingent upon the level of strategic agility. High strategic agility amplifies the positive impact of relationship quality on SME performance, while low strategic agility might dampen the potential benefits derived from strong customer relationships. Businesses with high strategic agility can maximize the advantages of positive customer relationships, leading to enhanced performance, while those with low strategic agility may struggle to translate relationship quality into tangible business outcomes.

When an SME possesses high strategic agility, it can effectively leverage relationship quality to respond to market changes. For instance, it can quickly adapt its product offerings or customer service strategies based on the feedback received from the customers. In this scenario, the positive impact of relationship quality on SME performance is amplified.

In contrast, if an SME lacks strategic agility, even high relationship quality might not translate into significant improvements in performance. Limited ability to adapt and innovate could hinder the SME's ability to capitalize on the positive aspects of relationship quality fully

The Electronic Customer Relationship Management (eCRM) strategies can significantly enhance relationship quality by leveraging digital technologies to manage interactions with customers. eCRM tools facilitate real-time communication between businesses and customers. Through channels like email, social media, and chat support, businesses can engage with customers promptly, addressing their queries, concerns, and feedback. Timely and personalized communication fosters a sense of importance among customers, strengthening the relationship.

eCRM systems collect and analyze customer data, allowing businesses to create personalized experiences. By understanding individual preferences and purchase history, businesses can tailor their offerings and communications. Personalized interactions make customers feel valued and understood, leading to a higher perception of relationship quality. eCRM platforms enable businesses to gather customer feedback efficiently. By conducting surveys and collecting feedback through digital channels, businesses can gain insights into customer satisfaction levels. Actively seeking and acting upon customer opinions shows that the business values their input, leading to improved relationship quality. eCRM ensures consistency in customer interactions across various touch points. Regardless of whether a customer interacts with the business through social media, email, or the website, eCRM systems store relevant information. This consistency in information and service delivery enhances the customer experience, leading to a positive perception of the relationship. eCRM tools streamline the process of identifying,

tracking, and resolving customer issues. Prompt and effective issue resolution demonstrates the business's commitment to customer satisfaction. When problems are resolved quickly and efficiently, it builds trust and strengthens the relationship between the customer and the business. eCRM systems enable businesses to engage customers through targeted marketing campaigns, promotions, and personalized content. Engaging customers with relevant and valuable information keeps them interested and connected with the brand. Regular engagement fosters a sense of community and loyalty, contributing to the quality of the relationship. eCRM platforms provide businesses with valuable insights based on customer behavior and preferences. Analyzing this data helps businesses understand their customers better. By leveraging these insights, businesses can make informed decisions, ensuring that their products, services, and communications align with customer expectations, thus improving relationship quality. eCRM systems empower customers by providing self-service options, enabling them to manage their accounts, track orders, and find solutions to common issues independently. Empowered customers appreciate the convenience and control, leading to a positive perception of the relationship with the business

4.11 Discussion of the Findings

4.11.1 Effects of Electronic Customer Relationship Management (eCRM) on SME performance

Based on the results, eCRM is statistically significant with a p-value $p=0.000 < 0.05$, hence it has significant impacts on the small and medium enterprises. Notably, eCRM has a beta coefficient of 0.533 which is a positive, this implies that for one unit increase in eCRM will results to an increase of the firm performance by 0.533 units, hence it is a good idea for SMEs to adopts eCRM in order to boost significantly there

performance. Electronic Customer Relationship Management (eCRM) can be described as the integration of traditional CRM strategies with digital technologies and platforms, such as web portals, email, and social media (Khalifa & Shen, 2005). In today's digital age, eCRM is a critical component for many businesses, especially for Small and Medium-sized Enterprises (SMEs), which might not have the vast resources of larger corporations but still wish to remain competitive and relevant.

An effective adoption and implementation of the eCRM in the SMEs in Nairobi will lead to improved engagement with customers, hence it will foster closer relationships and provided personalized experiences thus boosting firm's performance (de Oliveira Santini et al., 2020). Our study concurs with the research done by de Oliveira Santini et al., (2020), that Electronic customer management strategies are fundamental in enhancing firms performance since it emphasized on the customer engagement was has led to positive relationship amongst the SMEs firms in Nairobi and its customers. Customer engagement is mainly influenced by factors such as positive emotions, customers satisfaction and trust, hence when this factors are attained by the SMEs, firms performance will improve significantly.

In the de Oliveira Santini et al., (2020) study, the results shows that customer satisfactions has a greater predictive capacity for customer engagement in contexts featured by high convenience as opposed to low convenience, in business-to-business (B2B) settings compared to business-to-consumer (B2C) settings, and on the Twitter platform relative to Facebook and Blogs. This was attained as a results of effective adoption and implementation of eCRM in firms, thus positive customer engagement helps in enhancing firm's performance, therefore SMEs firms in Nairobi are recommended to develop a positive relationship with its customers in order to build good customer relationship and wins customers loyalty (Ransbotham & Kiron, 2018).

Customer engagement has been identified as having significant value for firms, as it directly influences corporate performance, behavioral intention, and word-of-mouth. Furthermore, it can be observed that hedonic consumption exhibits a significantly higher level of consumer involvement in relation to its impact on company performance, with a magnitude roughly three times greater than that of utilitarian consumption.

Electronic Customer relationship management (eCRM) is fundamental towards enhancing SMEs performance since it is a prerequisite for the success of contemporary firms in the modern day, hence it is recommended that firms in Nairobi should invest on the implementation of technology for effective business operations (Ahmed et al., 2015). The advent of technology and the Internet has prompted organizations to adapt their operations to electronic and online business practices, with an aim to improve business performance and boost firm's sales and widen the market coverage. The utilization of the Internet has led to the emergence of novel business practices, particularly in the realm of electronic customer relationship management, inside the corporate management domain. The advent of the Internet and online business has significantly elevated the practice of electronic customer relationship management (eCRM), empowering organizations to offer web-based access to their customers and suppliers. The electronic customer relationship management (e-CRM) is an advanced version of CRM technologies that incorporates internet platforms for its implementation, to improve firm's performance (Almajali et al., 2022). Jelassi and Enders (2008) assert that the use of e-CRM ultimately results in the establishment of enduring customer relationships, enhanced buyer profitability, and a concentration on high-value clients.

E-CRM is an enhancement of traditional CRM approaches that makes use of technologies such as the web, wireless technology, and voice technology. As a result, it has become an essential part of the overall customer relationship management strategy of an organization (Pan and Lee, 2003). Among the many different e-CRM features, search functions, online forums, loyalty programs, online credit card payment options, question and answer platforms, and personalized services for individual online buyers are some of the ones that significantly contribute to the generation of profitable loyal customers and their long-term retention (Harrigan et al., 2012). Small and medium-sized enterprises (SMEs) are increasingly implementing relatively uncomplicated information and communication technologies (IBTs) in order to enhance their capabilities in customer communication and information management. This strategic move is aimed at gaining a competitive edge by leveraging electronic customer relationship management (e-CRM) practices. Small and medium-sized enterprises (SMEs) perceive the communication component of electronic customer relationship management (e-CRM) as more manageable, yet encounter challenges in effectively incorporating client information into their decision-making processes (Achuama & Usoro, 2010). Overall, it can be observed that electronic customer relationship management (e-CRM) implementation in small and medium-sized enterprises (SMEs) is often characterized by an ad hoc approach rather than a strategic one.

Despite the high cost associated with software solutions for e-CRM, its utilization can be justified as an investment in fostering enduring client relationships, enhancing customer retention, and ultimately bolstering long-term profitability (Chi, 2021). Hence, it is imperative for small and medium-sized enterprises (SMEs) in Nairobi to adopt a forward-looking approach and ensure their survival in the market by adapting

to emerging trends in customer relationship management (Adlin et al., 2019). This may be achieved by enhancing the utilization of information-communication technologies, hence facilitating the maintenance of high-quality customer interactions. E-CRM is fundamental for SMEs in Nairobi since it provides the establishment and maintenance of enduring connections between businesses and their clients through the utilization of various electronic channels, including email and web browsers, over the Internet (Manyanga et al., 2022). The primary objective of the SMEs firms is to enhance not just the marketing sector but also its internal operational efficiency, for it to realize tremendous improvement of the performance.

4.11.2 Effects of Relationship Quality (RQ) on SME performance

The results of our study shows that relationship quality is statistically significant at 95% confidence level with a p-value of $0.000 < 0.05$, this implies that relationship quality is a key parameter which affects significantly SMEs performance in Nairobi City. Also, relationship quality has a positive coefficient, $\beta = 0.333$, this implies that for one unit increase in relationship quality will lead to an increase of SMEs performance by 0.333 units, hence firms should improve relationship quality for them to record significant improvement in their performance and gain a competitive advantage over other firms. The relationship between Relationship Quality (RQ) and SME performance, especially in dynamic urban settings like Nairobi, is multifaceted. High-quality relationships often pave the way for greater trust between businesses and their stakeholders. In the competitive landscape of Nairobi's SME scene, businesses that maintain good relations with suppliers, customers, and other partners tend to build a strong reputation (Kuhlmeier & Knight, 2010).

This credibility can lead to increased customer loyalty, more favorable supplier terms, and potential partnership opportunities, all of which can enhance the overall

performance and growth trajectory of an SME. An organization with relationship quality with its customers has a high access to resources, hence when utilized appropriately it will enhance SMEs performance within Nairobi city. In this perspective, increased access to resources can be obtained through suppliers who provides flexible payments terms, a business partner offering access to their distribution network or even friendly business sharing market intelligence, hence this access to resources can provide the SMEs in Nairobi with a competitive advantage, hence they will realize a significant improvement in their business performance (Ismail et al., 2014).

An SME in Nairobi which has well established and high relationship quality gains emotional support and resilience from its customers and business partners, hence it will drive the firms to be successful in their business operations. The demanding nature of the small and medium-sized enterprise (SME) setting frequently gives rise to feelings of stress and ambiguity (Basah, 2019). Robust interpersonal connections provide individuals with valuable emotional assistance, so enabling business proprietors and personnel to more effectively navigate the fluctuations in their professional endeavors. In the context of Nairobi, enterprises encounter distinctive obstacles like as traffic congestion, infrastructure deficiencies, and sporadic political upheavals. In this regard, the cultivation of emotional resilience through positive connections can significantly contribute to the long-term viability of businesses. The business environment in Nairobi is distinguished by dynamic shifts and advancements. Small and medium-sized enterprises (SMEs) that possess strong relationships frequently position themselves as leaders in industry trends as a result of their proficient knowledge exchange practices. This phenomenon can lead to enhanced decision-making capabilities, expedited adjustment to market fluctuations,

and the early recognition of novel prospects ahead of competition (Farida et al., 2017). The crucial part that relationship quality plays in boosting the overall profitability of smaller businesses in Nairobi is to ensure that firms management team are competent and committed towards delivering to meets customers satisfaction.

Relationship quality is an effective factor which influence the SMEs performance, since it helps in problem solving (Casidy & Nyadzayo, 2019). Based on the existing empirical evidence, relationship quality enhances the competitive capacity of small and medium companies (SMEs) to attain prosperous worldwide business stands as a crucial priority within the economic development agenda of emerging markets (Ledikwe et al., 2019). In order to address the constraints posed by limited internal resources, small and medium-sized enterprises (SMEs) seek to establish cooperative relationships with overseas partners, which function as a valuable source of additional resources within this particular context. The performance of small enterprises exhibits a significant correlation with human capital, particularly in terms of management skills, which ensures their high relationship quality amongst the shareholders. This study seeks to examine the impact of relationship quality on the SMEs performance, which subsequently influences the competitive advantage of small businesses. According to the study done by Ismail et al., (2014), the findings illustrate that firms' managerial competence is a function of a relationship quality which is positively correlated with a competitive advantage, hence SMEs firms in Nairobi should ensure that they have effective managerial personnel in order to attain relationship quality which in turn enhances firms' performance. In this case, relationship quality mediates electronic customer relationship management strategies and strategic agility to ensure that firms with efficiently implemented e-CRM and relationship quality have a good performance.

4.11.3 Effects of eCRM Mediated by Relationship Quality on SME Performance

Based on the results, where relationship quality acts the mediator between e-CRM and the SMEs performance in Nairobi, it is statistically significant non zero bootstraps confidence interval, hence it is a key factor which can be integrated by firms to improves their performance. Electronic Customer Relationship Management, often known as E-CRM, refers to the practice of managing interactions with existing as well as prospective clients through the utilization of digital communication tools and technologies (Harrigan et al., 2010). This includes interacting with customers through databases, websites, email, and social media in order to boost sales, manage leads, and improve customer service. The quality of the relationship between a company and its consumers, on the other hand, refers to the total breadth and depth of that relationship. Relationship quality is frequently exemplified by trust, commitment, satisfaction, and loyalty (Taghipourian, Hatami, & Chalous, 2019). The integration of electronic customer relationship management (e-CRM) methods and the prioritization of relationship quality can yield various impacts on the performance of Small and Medium Enterprises (SMEs) such as customer loyalty and retention.

The use of efficient electronic customer relationship management (e-CRM) solutions has the potential to enhance the quality of relationships with customers, hence fostering increased levels of customer loyalty (Çelik & Karakaş, 2021). Customers who exhibit loyalty towards a small and medium-sized enterprise (SME) are more inclined to engage in repeat purchases, hence contributing to the overall increase in revenue for the business, which depicts an effective performance of the firms as results of increased sales volume. At its essence, Customer Relationship Management (CRM) is the effective management and cultivation of the relationships that exist between a business and its customers.

Through the utilization of e-CRM systems, small and medium-sized enterprises (SMEs) are able to effectively monitor and analyze consumer behaviors, preferences, and interactions across several digital touch points, including email, websites, and social media platforms. This dataset enables small and medium-sized enterprises (SMEs) to gain a deeper comprehension of their client base and subsequently customize their offerings to align with customer preferences and needs. The establishment of a sense of value and understanding by a firm towards its clients has been found to positively influence the development of customer loyalty towards the brand. Electronic customer relationship management (e-CRM) solutions have the potential to assist small and medium-sized enterprises (SMEs) in effectively dividing their client base into distinct segments (Monteiro, 2013). By doing so, SMEs can then provide tailored promotions, reminders, and loyalty programs to these segmented groups, thereby fostering increased customer engagement and satisfaction.

In the modern world, technology has improved significantly, hence firm's shifts to use of technology in terms of management, marketing and most business operation with an aim to increase firm's performance. The shifts of SMEs to the establishment of enduring relationships with esteemed consumers is commonly regarded as the fundamental driver of profitability within a rapidly evolving market, since when e-CRM is integrated successfully with relationship quality as illustrated by the study results to have positive correlations in enhancing firms performance, it will enable SMEs in Nairobi to compete effectively with other developed companies which deals with the same products (Mang'anyi et al., 2017). Electronic Customer Relationship Management (e-CRM) is widely recognized as a key strategic endeavor in contemporary industries. The dominant paradigm in the field of relationship

marketing inside the digital realm has emerged, this will significantly helps SMEs in Nairobi to boost significantly their performance.

Based on other researcher literature, e-CRM and Relationship quality impacts positively SMEs performance since it ensure firms attain a wider market share which increases sales volume through the use of e-CRM and meets customers satisfaction and wins their loyalty by maintaining relationship quality by ensuring there is a competent management personnel (Dehghanpouri et al., 2020). E-CRM helps firms to develop a functional partnership as a result of relationship quality which enhances the competitive capacity of small enterprises. Therefore, it is advisable for small enterprises to explore the potential of cultivating a robust and intimate association, commonly referred to as relationship quality and integrate with electronic customer relationship management in order to enhance firms performance through opening up of new markets and increase sales which earn them more revenue that can be used to expand the market share to other cities in Kenya. The concept of inter-organizational relationship quality when incorporated with e-CRM with an aim to examine the effects it has on SMEs performance has illustrated a positive relationship, since relationship quality partially mediates e-CRM to increase its contributions on SMEs performance in Nairobi (Khaligh et al., 2012). The success of E-CRM systems is contingent upon customer happiness, which is the optimal output of relationship quality, hence this factors co-jointly affects SMEs performance and firms in Nairobi cities should considered keenly this factors and invest on them to enhance their efficiency in order for firms to perform extremely well in the competitive environment which is comprised of developed industries.

According to Ring and Van de Van (1992), the establishment of a connection is contingent upon the successful completion of previous transactions. When a company

adheres to established relationship rules and fulfills the expectations of its partners, customers view the relationship to possess significant value. Consequently, this phenomenon leads to an augmentation in the degree of relationship strength and intimacy, as well as enhanced information exchange. The empirical study conducted by Combe et al. (2012) reveals that customer information plays a crucial role in enabling enterprises to adapt their organizational processes in response to changing consumer needs. This adaptation ultimately leads to the development of enhanced customer value and satisfaction.

Nevertheless, the generation of superior customer value is a consequence of a sequence of transactions among partners and extends beyond the immediate expectations of the current partner, encompassing the anticipated needs and demands of said partner. This is due to the fact that customers' wants and requirements undergo changes over time. This observation aligns with the perspective put forward by Elham (2010), who posits that the establishment of a lasting client connection occurs when the firm directs its attention beyond the immediate requirements of the consumer. The fulfillment of customer expectations serves as a testament to the exporter's dedication to maintaining a successful connection. Moreover, the inclusion of a behavioral dimension in the provision of exceptional customer value is commonly regarded as being foreseeable and predictable. This, in turn, fosters the development of stronger trust between partners (Katsikeas, Skarmeas, & Bello, 2009) and ultimately leads to the enhancement of relationship quality.

Moderated mediations

4.11.4 Effects of e-CRM when Moderated by Strategic Agility on SME Performance

Strategic agility and relationship quality does not have direct effects on SMEs performance, but when it is moderate by e-CRM, it has positive effects which imply that strategic agility contributes towards enhancing firm's performance. In this perspective where strategic agility is used as the moderator, it helps firms to swiftly and effectively adapt, innovate, and compete in an ever-changing business environment (ALfarajat, 2023). Notably, due to positive moderation, it implies that SMEs in Nairobi possesses high strategic agility, thus the benefits of e-CRM can be amplified.

An agile SME can swiftly implement changes suggested by e-CRM insights, tailoring its strategies to better suit customer needs and expectations. The concept of relationship quality pertains to the comprehensive nature of the relationship that a small and medium-sized enterprise (SME) maintains with its consumers. High-quality relationships are distinguished by the presence of trust, commitment, and satisfaction. The effectiveness of e-CRM activities is positively influenced by good relationship quality, as customers exhibit greater trust in the organization and demonstrate a greater willingness to exchange data and engage in more meaningful interactions (Reed, 2021). e-CRM subsequently emerges as a technology that further augments the quality of this relationship. On the other, in cases when the quality of the relationship is poor, customers may exhibit skepticism towards e-CRM initiatives, perceiving them as intrusive or primarily driven by self-interest. This has the ability to nullify any prospective advantages.

The latter viewpoint regarding strategic agility appears to be more attractive, as the ability to innovate and transform institutions in order to thrive in a rapidly changing business environment requires the integration of new ideas and adaptable behaviors across various aspects such as products, services, processes, technology, and management techniques, this new ideas leads to reliance of e-CRM which enhances firms efficiency and general performance.

4.12 Summary of Hypotheses Tested and the Decision Made on Null Hypothesis

Table 4.24 presents a summary of hypotheses the study was testing in regard to the objectives.

Table 4. 24: Summary of Hypotheses

Hypothesis Statement	Model used	Parameters used	Decision
H₀₁: There is no significant effect of e-CRM on performance of small and medium enterprises SME performance in Nairobi County, Kenya.	Hierarchical regression	β , p-values and $\alpha = 0.05$	Null hypothesis rejected
H₀₂: There is no significant effect of relationship quality on SMEs performance in Nairobi County, Kenya.	Hierarchical regression	β , p-values and $\alpha = 0.05$	Null hypothesis rejected
H₀₃: There is no significant effect of strategic agility on performance of small and medium enterprises.	Hierarchical regression	β , p-values and $\alpha = 0.05$	Null hypothesis rejected
H₀₄: There is no significant effect of e-CRM on relationship quality	Hayes model 1 (Process Macro)	β , p-values and $\alpha = 0.05$	Null hypothesis rejected
H₀₅: There is no significant moderating effect of strategic agility on relationship between e-CRM on performance of small and medium enterprises	Hayes model 1 (Process Macro)	β , p-values and $\alpha = 0.05$	Null hypothesis failed to be rejected
H₀₆: There is no significant moderating effect of strategic agility on the relationship between e-CRM on performance and relationship quality	Hayes model 1 (Process Macro)	β , p-values and $\alpha = 0.05$	Null hypothesis rejected
H₀₇: There is no mediating effect of relationship quality on the relationship between e-CRM and SMEs performance.	Hayes model 4 (Process Macro)	Bootstrapping confidence interval and $\alpha = 0.05$	Null hypothesis rejected
H₀₈: There is no significant moderating effect of strategic agility on the relationship between e-CRM on performance of small and medium enterprises via relationship quality	Hayes model 8 (Process Macro)	Bootstrapping confidence interval and $\alpha = 0.05$	Null hypothesis rejected

Source: Researcher, 2023

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a brief summary of key findings. It is followed by conclusions of the study, implications of the study in practice and theory, the conclusions drawn and recommendations made thereof. The last section offers the suggestions for further research.

5.2 Summary of Findings

Following the survey, it was discovered that 24 of the questionnaires had errors and were filled out incorrectly in some cases. They were eliminated from the study because they were incomplete or contained inconsistent data that could not be used for data analysis. A total of 392 questionnaires out of 416 were correctly completed constituting 94.23 percent. According to Ndinda (2019), a response rate of 67 percent or higher is considered acceptable for survey-based research. To determine the accuracy of the research instrument used, a reliability test was conducted. This was accomplished by calculating Cronbach's alpha. SME Performance had 7 items in the scale and a Cronbach alpha of 0.888, while Electronic Customer Relationship (eCRM) had 10 items and a Cronbach alpha of 0.868. Additionally, the Relationship Quality (RQ) had 14 components with 0.851 Cronbach alpha value. Finally, 19 constructs were used to Strategic Agility (SA), yielding a Cronbach alpha result of 0.883. Ursachi, Horodnic, & Zait, 2015) claim that a cut-off alpha coefficient of 0.7 is sufficient to demonstrate the consistency and reliability of the item in the scale. All of the used constructs have Cronbach alpha values over 0.7, which indicates remarkable reliability.

Factor analysis under PCA was employed to reduce the dimensionality of the study variables. Results indicated that SME Performance had eigenvalues for component one 2.756 giving a total initial variability of 39.37 percent. Normally, the sum of eigenvalues equals the number of variables. Proportion indicates the relative weight of each factor for component 1 and factor 2 accounted for rotation sums of squared loadings 52.84 percent of the total variation. After varimax rotation, the second component has been enhanced to explain 21.27 percent from the initial 13.47 percent variability. The Kaiser-Meyer-Olkin (KMO, 1974) measure of sampling adequacy ($0.801 > 0.70$) and significant Bartlett's Test of sphericity which is a chi-square test ($p = 0.000$) implying the correlation matrix is identity and reveals that data was adequate for extraction using principal components analysis.

The eigenvalues for Electronic Customer Relationship Management Strategies, the independent variable associated with items with higher variability were two. The two items explained 45.88%. Before varimax rotation that maximizes variability, the first component explained 35.70% and the second component 10.18% of the total variability. After varimax rotation, component 1 and 2 explained a total of 23.90% and 21.98% respectively. The KMO value of 0.866 was high value and it indicated the usefulness of the analysis. Bartlett's test of sphericity was used to test the null hypothesis that the correlation matrix was an identity matrix. The p-value smaller than 0.05 showed the correlation matrix was not identity and Factor Analysis was useful. The eigenvalues for RQ associated with higher variability more than one were two explaining an overall of 43.97%. After varimax rotation component 1 and 2 explained a total of 28.54% and 15.42% respectively. The KMO value of 0.894 was high value and it indicates the usefulness of the analysis. Bartlett's test of sphericity results indicate the matrix of correlation was not an identity matrix since the p-value

smaller were less than 0.05. Finally, two items that had greater variability at 42.82% were retained in SA dimensionality. The first component explained 32.49 and the second component 10.33% of the total variability prior to varimax rotation, which maximized variability. Component 1 and component 2 explained a total of 24.51% and 18.31%, respectively, following varimax rotation.

5.2.1 Effect of eCRM on performance of small and medium enterprises in Nairobi County, Kenya

Results indicated a significant direct effect of electronic customer relationship management strategies on SME performance with coefficient of $\beta=0.533(p<0.05)$. This implies that the first null hypothesis was rejected in favor of the alternative hypothesis. The term electronic customer relationship management, or eCRM, describes how to manage and enhance customer relationships by using digital technologies like social media, email, mobile payments, and the internet. The performance of small and medium-sized enterprises (SMEs) can benefit from the implementation of efficient eCRM strategies in a number of ways. SMEs can efficiently collect and evaluate customer data with the help of eCRM tools. Businesses can more precisely meet customer needs by customizing their products and services based on their understanding of customer behavior and preferences. Higher levels of customer satisfaction and loyalty may result from this customer-centric strategy.

5.2.2 Effect of relationship quality (RQ) on SME performance in Nairobi County, Kenya

Another objective was to determine effect of relationship quality (RQ) on SME performance in Nairobi County, Kenya. This objective was hypothesized and tested as there is no significant effect of RQ on SMEs performance in Nairobi County, Kenya.

Results indicate a positive and significant influence on SME performance. The magnitude of the coefficient was $\beta=0.333$ ($p<0.05$) implying the hypothesis was rejected. The study concludes that there was sufficient evidence that relationship quality has an effect on SME performance. When SMEs invest in building strong relationships with their customers, these customers are more likely to remain loyal. Loyal customers tend to make repeat purchases, leading to a stable revenue stream. They are also more likely to recommend the SME to others, expanding the customer base. Higher relationship quality often translates to longer-lasting relationships with customers. As a result, the total revenue a business can generate from a customer over their lifetime increases. This long-term revenue stream can significantly impact the financial stability and growth of an SME.

In business, conflicts and issues are inevitable. However, SMEs with strong relationship quality can navigate these challenges more effectively. Positive relationships with customers, employees, and suppliers foster effective communication and understanding, making it easier to resolve disputes and maintain positive working relationships. SMEs often collaborate with partners, suppliers, and other businesses. High-quality relationships foster trust and openness, encouraging collaborative efforts. This collaboration can lead to innovative ideas, joint ventures, and access to new markets, enhancing the SME's product offerings and market presence. SMEs depend on suppliers for raw materials and resources. Positive relationships with suppliers can lead to better terms, timely deliveries, and higher quality materials. This can streamline operations, reduce costs, and improve the overall efficiency of the SME.

5.2.3 Effects of strategic agility on SME performance in Nairobi County, Kenya

The third objective was to determine the effects of strategic agility on SME performance in Nairobi County, Kenya. The findings indicate that strategic agility did not show a direct effect on the SME performance with a positive insignificant coefficient $\beta=0.138(p>0.05)$. This implies that the hypothesis failed to be rejected. The study concludes that there was a sufficient evidence that strategic agility had a direct influence of the performance of small and medium enterprise in Nairobi County. This implies that SMEs with strategic agility can quickly adapt to changes in the market, whether these changes are related to customer preferences, technological advancements, or competitive actions. This responsiveness helps them stay relevant and capitalize on emerging opportunities faster than their less agile competitors. Agility encourages a culture of innovation within SMEs. Agile SMEs can develop unique products and services that meet the evolving needs of their customers by being open to change and willing to experiment with new ideas. This can lead to a competitive advantage and improved market positioning.

5.2.4 Effects of e-CRM on relationship quality for SMES in Nairobi County.

Fourth, another objective was to evaluate the effects of e-CRM on relationship quality for SMEs in Nairobi County. Relationship quality was the mediating variable. The study analyzed the direct effect of eCRM on RQ. Results indicate a significant negative effect of eCRM on RQ at 5 percent significance level. The coefficient of $\beta=-0.410(p<0.05)$ implying there was evidence to support the objective. The hypothesis was rejected. The negative effects evident in this research may be associated with the fact that e-CRM systems often rely heavily on automated responses and interactions, which can lack the personal touch that many customers value. This impersonal communication can make customers feel undervalued and disconnected, leading to a

decline in the quality of the relationship. When companies overly rely on e-CRM systems, they might neglect the importance of human interaction. Customers often appreciate and trust interactions with real people more than automated systems. An over-reliance on technology can thus lead to customer frustration and a sense of neglect.

5.2.5 Moderating effect of strategic agility on the relationship between e-CRM and SMEs performance in Nairobi County, Kenya

The other aim of the study was to determine the moderating effect of strategic agility on the relationship between e-CRM and SMEs performance in SME performance in Nairobi County, Kenya. This objective was hypothesized as H05: There is no significant moderating effect of strategic agility on relationship between e-CRM on performance of small and medium enterprises. The findings show no significant effect on the moderation of SA on the relationship between eCRM and SMEs performance. The magnitude of coefficient $\beta = -0.019$ ($p > 0.05$) implies the hypothesis H05 failed to be rejected. No enough evidence to conclude that SA moderates the relationship.

5.2.6 Moderating effect of strategic agility on the relationship between e-CRM and relationship quality in Nairobi County, Kenya

The sixth objective evaluated the moderating effect of strategic agility on the relationship between e-CRM and relationship quality in Nairobi County, Kenya. The finding indicates a significant interaction (eCRM *SA) term between the CRM and strategic agility. The interaction term had a positive effect on RQ ($\beta = 0.179$, $p < 0.05$). These results imply the hypothesis H06 was rejected and concluded that strategic agility strengthens the relationship. e-CRM refers to the strategies, technologies, and practices that companies use to manage and analyse customer interactions and data

throughout the customer lifecycle. In the context of SMEs, e-CRM often involves the use of digital tools and platforms to enhance customer relationships, gather data, and improve customer satisfaction. Strategic agility is a company's ability to quickly adapt and respond to changing market conditions, customer preferences, and competitive pressures. It involves being flexible, innovative, and responsive in strategic decision-making. In the context of SMEs, strategic agility is vital for staying competitive in dynamic markets. In statistical terms, moderation refers to a situation where the strength or direction of the relationship between two variables (in this case, e-CRM and relationship quality) changes based on the level of a third variable (strategic agility).

5.2.7 Mediating Effect of RQ on the relationship between eCRM and SMEs performance

Results from the mediation analysis from Hayes model 4 indicate a positive mediation effect of relationship quality. The bootstraps confidence interval was non zero (LLCI=0.117 and ULCI= 0.257) and the mediation effect of 0.182. This indicates that the hypothesis H07 was rejected and concluded that effective e-CRM practices enhance the quality of relationships SMEs have with their customers. Through personalized communication, efficient problem resolution, and tailored offerings, customers feel valued and satisfied with their interactions with the business. High relationship quality translates into positive outcomes for the SME. Satisfied and loyal customers are more likely to make repeat purchases, recommend the business to others, and provide positive reviews. This, in turn, leads to increased sales, customer retention, and positive word-of-mouth marketing, all of which contribute to improved SME performance.

As relationship quality continues to mediate the relationship between e-CRM and SME performance, the business experiences sustainable growth, profitability, and competitiveness in the market. Moreover, loyal customers often cost less to serve and bring in more revenue over the long term, further boosting the SME's financial performance. The positive relationship between effective e-CRM implementation and SME performance is mediated by the quality of relationships the SME builds with its customers. By focusing on enhancing customer satisfaction, trust, and loyalty through e-CRM initiatives, SMEs can achieve significant improvements in their overall High relationship quality, characterized by excellent customer service and satisfaction, fosters customer loyalty. Loyal customers tend to make repeat purchases, resulting in increased sales and revenue for the SME. Moreover, loyal customers are more likely to continue doing business with the SME, contributing to customer retention and ensuring a stable revenue stream.

5.2.8 Moderating effect of SA on the relationship between eCRM on SME performance via RQ

Relationship quality mediated the relationship between eCRM on SME performance and more so when moderated by the strategic agility. Thus the positive moderated mediation index of 0.046 was significant since the interval 0.015 and 0.089 from the bootstraps 95 % confidence interval was none zero. This implies that the type of mediation was partial and the hypothesis H08 was rejected. In conclusion the study had evidence to support the argument. In a moderated mediation model, the positive influence of relationship quality on SME performance is contingent upon the level of strategic agility. High strategic agility amplifies the positive impact of relationship quality on SME performance, while low strategic agility might dampen the potential benefits derived from strong customer relationships. Businesses with high strategic

agility can maximize the advantages of positive customer relationships, leading to enhanced performance, while those with low strategic agility may struggle to translate relationship quality into tangible business outcomes.

When an SME possesses high strategic agility, it can effectively leverage relationship quality to respond to market changes. For instance, it can quickly adapt its product offerings or customer service strategies based on the feedback received from the customers. In this scenario, the positive impact of relationship quality on SME performance is amplified. In contrast, if an SME lacks strategic agility, even high relationship quality might not translate into significant improvements in performance. Limited ability to adapt and innovate could hinder the SME's ability to capitalize on the positive aspects of relationship quality fully

5.3 Conclusions

Based on the findings, the study made some conclusions in relation to the significant ones. Implementing e-CRM strategies enables SMEs to build and maintain personalized, efficient, and responsive relationships with their customers. This enhanced interaction fosters customer satisfaction, trust, and loyalty. e-CRM help SMEs in understanding customer preferences and behavior, allowing them to tailor their products or services accordingly. Satisfied and loyal customers are more likely to remain with the SME, leading to increased customer retention rates. e-CRM facilitate quick and effective problem resolution. Addressing customer issues promptly not only ensures customer satisfaction but also prevents negative publicity, preserving the SME's reputation. By fostering meaningful customer relationships, e-CRM not only enhances customer satisfaction and loyalty but also drives increased sales, positive word-of-mouth, and efficient problem resolution. Furthermore, eCRM empowers SMEs with data-driven insights, granting them a competitive advantage

and ensuring long-term sustainability in the dynamic business landscape. Building strong customer relationships through e-CRM contributes to the long-term sustainability of SMEs. Loyal and satisfied customers provide a stable revenue stream, ensuring the SME's financial stability and growth over time. SMEs with well-implemented e-CRM strategies often gain a competitive edge. They can respond swiftly to market changes, adapt to customer preferences, and provide superior customer experiences, setting them apart from competitors.

The impact of e-CRM practices on relationship quality is not constant and varies depending on how strategically agile the SME is, according to the moderating effect of strategic agility on the relationship between e-CRM and relationship quality in the context of SMEs. A highly strategically agile SME can quickly modify its e-CRM strategies in response to changes in the market and customer feedback. In this case, relationship quality is probably going to be more positively impacted by e-CRM practices. Quick responses to client requirements and preferences can boost client satisfaction and trust, which raises the caliber of the relationship. On the other hand, the effect of e-CRM on relationship quality may be less pronounced if a SME lacks strategic agility and is unable to modify its e-CRM strategies successfully.

Inability to adjust quickly enough to changing customer needs may cause discontent and erode trust, which would lower the quality of the relationship. The beneficial effects of e-CRM practices on relationship quality can be amplified or diminished depending on the degree of strategic agility within a SME. While a lack of agility may impede these efforts and possibly result in weaker customer relationships, a highly strategically agile SME can effectively leverage e-CRM to foster strong and long-lasting relationships with customers.

On mediation of relationship quality, satisfied customers are more likely to share positive experiences with others, leading to positive word-of-mouth marketing. This word-of-mouth can attract new customers to the SME, increasing its customer base. Additionally, a positive reputation built on strong relationships can enhance the SME's brand image, attracting more customers and driving sales. Loyal customers who have a positive relationship with the SME are more likely to become advocates for the business. They can provide valuable feedback and testimonials, which can be utilized by the SME for product/service improvement and marketing purposes. This feedback loop ensures that the SME stays attuned to customer needs, leading to the development of products/services that align with customer preferences, ultimately driving sales and enhancing performance.

Relationship quality plays a crucial role as a mediator in enhancing SME performance by fostering customer loyalty, positive word-of-mouth and customer advocacy. SMEs can achieve sustainable growth, increased sales, and overall business success. Building and maintaining strong relationships with customers are fundamental to the long-term success and profitability of SMEs performance and long-term sustainability in the market.

By using digital technologies to manage customer interactions, Electronic Customer Relationship Management (e-CRM) strategies can greatly improve the quality of relationships. Real-time communication between businesses and customers is made possible by e-CRM tools. Businesses can interact with customers quickly by responding to their questions, concerns, and feedback via channels like email, social media, and chat support. Customers feel more important when they receive timely and personalized communication, which improves the relationship. Personalized experiences can be created by businesses through the collection and analysis of

customer data by e-CRM systems. Businesses can customize their offerings and communications by gaining insight into individual preferences and purchase history. Customers perceive relationships as being of higher quality when they receive personalized interactions, which help them feel understood and valued.

Businesses can efficiently collect customer feedback thanks to e-CRM platforms. Businesses can learn more about customer satisfaction levels by using digital channels to conduct surveys and gather feedback. Asking for and acting upon feedback from customers demonstrates to them that the company values their opinions, which improves the quality of the relationship. Consistency in customer interactions across multiple touch points is ensured by e-CRM. e-CRM systems retain pertinent data regardless of how a customer communicates with the company—via email, social media, or the website, for example. The customer experience is improved by this consistency in information and service delivery, which fosters a favorable opinion of the partnership. Customer issue identification, tracking, and resolution are made easier with the help of e-CRM tools. The company's dedication to customer satisfaction is demonstrated by prompt and efficient issue resolution.

Providing customers with useful and pertinent information maintains their interest and strengthens their bond with the brand. Frequent interaction improves a sense of belonging and loyalty, which enhances the quality of the partnership. eCRM systems give companies insightful data about the behavior and preferences of their customers. Businesses can gain a better understanding of their customers by analyzing this data. Businesses can improve the quality of their relationships by making well-informed decisions and ensuring that their communications, services, and products meet customer expectations. Customers are empowered by eCRM systems because they offer self-service options that let them track orders, manage their accounts, and solve

common problems on their own. Customers who feel empowered value the ease and control, which improves their opinion of the company's relationship.

5.4 Recommendations

The made some recommendations based on managerial/practice, policy and suggestions on further studies. By implementing these managerial and policy recommendations, SMEs can harness the synergies between eCRM, relationship quality, and strategic agility to enhance their performance, foster customer loyalty, and achieve long-term sustainability in the competitive business landscape

5.4.1 Managerial Recommendations

- i) SME managers should invest in advanced eCRM systems and tools. Proper training and utilization of these technologies can enhance customer data management, automate marketing processes, and improve overall customer interactions.
- ii) Emphasize the importance of customer relationship quality. Train employees in customer service and communication skills. Encourage personalized interactions, active listening, and prompt problem resolution to build strong, long-lasting customer relationships.
- iii) Foster a culture of innovation and adaptability within the organization. Encourage employees to propose and implement new ideas. Stay informed about market trends and emerging technologies to make timely strategic decisions.
- iv) Align eCRM initiatives with the overall strategic goals of the SME. Use customer data gathered through eCRM to inform strategic decisions related to

product development, marketing strategies, and customer service enhancements.

- v) Regularly monitor customer interactions and feedback. Utilize analytics to gain insights into customer behavior, preferences, and satisfaction levels. Act on this information to continually improve products, services, and customer experiences.

5.4.2 Policy Recommendations

- i) Governments can initiate programs to enhance digital literacy among SME owners and employees. Understanding the potential of eCRM tools is crucial for SMEs to effectively implement these technologies.
- ii) Offer financial incentives, grants, or low-interest loans to SMEs looking to invest in e-CRM technologies. Financial support can significantly lower the initial barriers to adopting advanced customer management systems.
- iii) Establish training programs focused on customer relationship management and strategic agility. Government-supported workshops and seminars can enhance the skill set of SME employees, enabling them to better utilize e-CRM tools and foster strategic agility.
- iv) Facilitate collaboration between SMEs and technology providers. Create platforms where SMEs can connect with e-CRM solution providers, fostering a supportive ecosystem for technology adoption and implementation.
- v) Allocate funds for research and development grants specifically focused on enhancing e-CRM technologies and strategies. Encouraging innovation in this area can lead to the development of more accessible and effective solutions for SMEs.

5.5 Theoretical Implications

The positive effects of Electronic Customer Relationship Management (eCRM), relationship quality (RQ), and strategic agility (SA) on Small and Medium-sized Enterprises (SME) performance have several theoretical implications that contribute to the understanding of business dynamics and customer relationship management strategies. The effects of eCRM, relationship quality, and strategic agility on enhancing SME performance have significant implications for Resource-Based View, Relationship Marketing Theory and Diffusion of Innovation Theory

5.5.1 Resource-Based View (RBV)

From an RBV perspective, eCRM tools, relationship quality, and strategic agility are valuable resources that SMEs can leverage to gain competitive advantage. The integration of these resources enhances the firm's capabilities, making it more adaptive to market changes and customer needs, ultimately leading to superior performance. Understanding these theoretical implications provides a framework for SMEs and researchers to analyze, design, and implement effective eCRM strategies, cultivate high relationship quality, and foster strategic agility. These strategies collectively contribute to enhanced SME performance and sustainability in today's dynamic and customer-centric business environment.

5.5.2 Relationship Marketing Theory

Relationship Marketing Theory emphasizes the importance of building and maintaining long-term relationships with customers. The positive effects of eCRM and relationship quality underline the significance of personalized interactions and customer-centric approaches. SMEs, by implementing effective eCRM systems and enhancing relationship quality, can establish enduring relationships with their customers, aligning with the core tenets of Relationship Marketing Theory. Further,

Relationship Marketing Theory suggests that loyal customers are more valuable in the long run. By providing exceptional customer experiences through e-CRM practices and maintaining high relationship quality, SMEs can foster customer loyalty. Loyal customers are more likely to stay with the SME, make repeat purchases, and become advocates, all of which enhance customer retention, a central theme in Relationship Marketing Theory.

5.5.3 Diffusion of Innovation Theory

The positive effect of e-CRM and strategic agility on SME performance aligns with the Diffusion of Innovation Theory, which posits that certain factors influence the rate of technology adoption. SMEs embracing e-CRM technologies and demonstrating strategic agility are perceived as innovators or early adopters in their industry. Their successful outcomes serve as examples for other SMEs, potentially accelerating the diffusion of e-CRM practices within the SME community.

According to the Diffusion of Innovation Theory, innovations are adopted when they offer perceived relative advantage over existing practices. The positive impact of e-CRM, relationship quality, and strategic agility on SME performance illustrates the clear advantages these strategies offer. SMEs recognizing these advantages are more likely to adopt eCRM technologies and focus on enhancing relationship quality and strategic agility to stay competitive in their markets. Diffusion of Innovation Theory emphasizes the role of social influence and observability in the adoption process. Successful cases of SMEs improving performance through e-CRM, high relationship quality, and strategic agility are visible to others in the industry. Positive word-of-mouth and observable improvements in performance can influence other SMEs, encouraging them to adopt similar strategies to achieve comparable outcomes.

5.6 Suggestions for Future Research

Future research may focus in exploring the relationship between sustainable practices (environmental, social, and economic) and SME performance. Investigate how sustainable initiatives can lead to cost savings, customer loyalty, and improved reputation, ultimately contributing to long-term SME success.

They may study the strategies SMEs employ to succeed in e-commerce and online marketplaces. Analyze factors influencing online customer trust, satisfaction, and repeat business. Investigate innovative e-commerce models and digital marketing strategies tailored to SMEs.

Another area is to study the influence of government policies, regulations, and support programs on SME performance. Investigate the effectiveness of policies related to taxation, incentives, and entrepreneurship training. Evaluate the impact of policy changes on SME competitiveness and growth.

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APPENDICES

Appendix I: Questionnaire

Dear Manager,

I am a Ph.D. candidate in School of Business and Economics of Moi University, Eldoret, conducting research study on **“EFFECTS OF ELECTRONIC CUSTOMER RELATIONSHIP MANAGEMENT STRATEGIES, ON SMALL AND MEDIUM ENTERPRISES PERFORMANCE. THE MODERATING EFFECT OF STRATEGIC AGILITY AND MEDIATING EFFECT OF RELATIONSHIP QUALITY IN NAIROBI COUNTY, KENYA.”**.

You have been selected as one of the respondents for this study. Kindly complete this questionnaire as honestly and precisely as possible. The information you give is purely intended for academic purposes and will be treated with utmost confidentiality. Your participation is entirely voluntary and the questionnaire is completely anonymous.

Thank you,

Instructions

- a) Please indicate the extent to which you disagree or agree with the following statements about CRM, performance and competitive intensity in your business
- b) Use the scale: **Strongly Agree (SA)** = 5; **Agree (A)** = 4; **Undecided** = 3; **Disagree (D)** = 2 and **Strongly Disagree (SD)** = 1
- c) Make an X in the most appropriate block

SECTION A: GENERAL INFORMATION

Please answer the following questions by placing a cross (X) in the appropriate block or by filling in the blank spaces

1. What is the total number of employees

1-10 ☐ 11-20 ☐ 21-30 ☐ 31 and above ☐

2. How long has your firm been in operation

1-5 years ☐ 5-10 years ☐ 11-15 years ☐ 16 years and above ☐

3. What is your highest level of educational? (Please check one)?

Diploma ☐ Higher Diploma ☐ Bachelor's Degree ☐ Master's ☐

4. When did your SME start to embark on customer relationship management (CRM)?

Less than 1 year ☐ 1-2 years ☐ 3-4 years ☐ above 5 years ☐

SECTION B ELECTRONIC CUSTOMER RELATIONSHIP MANAGEMENT

STRATEGIES

		SA	A	U	D	SD
IBCC1	My Organization has an operational web site					
IBCC2	The enterprise has an active Facebook account that is interactive					
IBCC3	My organization has an Mpesa till for business transactions					
IBCC4	Our customers have a lot of ease in sending customer feedback through our Facebook page					
IBCC5	My organization has a twitter account that's active					
IBCC6	Majority of our referred customers appreciate our social media accounts used for marketing					
IBCC7	The enterprise's web site is capable to provide customers with the needed information quickly and precisely.					
IBCC8	I have confidence in the enterprise's service to the customers .					
IBCC9	I trust the website to keep our customer information safe.					
IBCC10	The electronic services provided in my enterprise are reliable					

SECTION C: RELATIONSHIP QUALITY

		SA	A	U	D	SD
RQ1	Our firm has higher integrity					
RQ2	We work in close cooperation					
RQ3	Our firm has good will reputation					
RQ4	Our firm is trust worthy					
RQ5	We have consistent in providing quality services					
RQ6	Our firm is reliable in providing unique services.					
RQ7	We remain loyal to a client to enjoy the relationship.					
RQ8	The firm is looking out for my interest.					
RQ9	I have strong sense of loyalty toward firm					
RQ10	Our firm completely meets my expectations.					
RQ11	Our firm shows a sincere interest in solving complaints.					
RQ12	Our employees work in a tidy professional way.					
RQ13	Our clients feel satisfied with all services offered					
RQ14	Our firm tries very hard to establish long term relationship.					

SECTION D STRATEGIC AGILITY

With regard to strategic agility dimensions in your organization, please indicate how much you agree or disagree for each of the statements below, by selecting the appropriate responds. The item scales are five-point Likert type scales with **1 = strongly disagree** , **2 = disagree**, **3=Undecided**, **4 = agree**, **5 = strongly agree**.

	Strategic agility dimensions					
	Strategic sensitivity	SD	D	U	A	SA
SA1	We periodically anticipate the relevant opportunities in external environment.					
SA2	We periodically anticipate the significant threats in external environment.					
SA3	we frequently predict the fundamental shifts in our Industry.					
SA4	We successfully pursue the competitive actions by rivals.					
SA5	we continuously try to discover the additional needs of customers and working hardly on satisfy them					
	Strategic responsiveness					
SA6	we respond rapidly to significant changes in external environment					
SA7	we continuously redeploy the key internal assets and capabilities in order to exploit the external opportunities					
SA8	we emphasize the strategic alignment of resources to					

	enhance the internal dynamic capabilities					
SA9	we ensure the flexibility of operations by emphasizing teams work building.					
SA10	we highly concerned with the rationality of our decisions depending on real time information.					
SA11	we ensure the continuing communications with all stake holders inside and outside the organization.					
SA12	we enhance relevant digitization options (digitizing customer side, digitizing supply chain, digitizing procurement process) to sustain our abilities in responding to customer needs.					
	Strategic learning					
SA13	we frequently make deliberate search for the new knowledge about customers and markets.					
SA14	we actively bringing new external knowledge into our internal context depending on relevant means such as conversations and interactions .					
SA15	we consider the information concerning past events and solutions in relation to our process and/or customer.					
SA16	we highly concerned with fitting the new knowledge into the internal context for understanding and actions.					
SA17	we recognize the importance of Conflicting assumptions and alternatives interpretations in enhancing the learning process					
SA18	our culture encourages questioning and development of new insights as a pillars in ensuring the strategic learning					
SA19	we periodically test the applicability of the new knowledge into actions (structures, procedures and strategies)					

SECTION D: SME PERFORMANCE

Please rate your performance, relative to your competitors over the last three years on the following:

Below is statement that your business might have achieved since inception. Please rate the following statements according to the best of your knowledge (5= **very high**; 4= **high**; 3=**Undecided**; 2= **low**; 1=**poor**).

SME Performance		1	2	3	4	5
FP1	There is Growth in sales in relation to your expectations					
FP2	There is Growth in sales in relation to your competitors					
FP3	There is Growth in profits in relation to your expectations					

FP4	There is Growth in profit level in relation to your Competitors					
FP5	There is Increased market size in new markets in relation to your expectation					
FP6	There is Growth in capital from operations					
FP7	There is High level of customer loyalty					

Thank you for your participation.

Kindly check that you have answered every question and no more than one option per question has been marked.

Appendix II: Summary of Literature Review

Authors	Topic	Methodology	Findings and conclusion	Knowledge gaps
Ng and Zulkifli (2012)Ng Kim-Soon,	The Impact of electronic customer relationship management (e-CRM) on The Business performance of small company	The study used a cross-sectional research design and Survey method in collecting data from a sample size of 200.	Perceived uses of e-CRM in small company are also found to be significantly related with its business performance.	The study was done in Malaysia targeting 200 respondents using survey method. The current study is being done in Kenya using explanatory research design and stratified random sampling techniques with a sample size of 293. Therefore, there is a contextual and methodological gap
(van Everdingen, Sloot, & Verhoef, 2008)	The Moderating Roles of Relationship Quality and Dependency in Retailers' New Product Adoption Decisions	Longitudinal approach was used in data collection targeting 392 firms	The results show significant positive main effects of gross margin, consumer support, product uniqueness, relationship quality and the retailer's dependency on the manufacturer on the adoption decision	The study used a sample of 393 Dutch retail firms. The current study will be done in Kenya targeting 293 SMEs. explanatory research design hence there is a methodological gap.
(Al-Refaie, Tahat, & Bata, 2014)	CRM/e-CRM Effects on Banks Performance and Customer Bank Relationship Quality	The study used survey research design in collecting qualitative data.	e-CRM significantly influences customer based-service attribute; information received by the customer, customer convenience, and customer communication channels,	The study focused on 14 selected banks .the current study is being done in Kenya targeting 293 SMES. Explanatory research design and stratified random sampling technique will be used in collecting Quantitative data Therefore there is a contextual and methodological gap.

(Khalifa & Shen, 2005)	Effects of electronic customer relationship management on customer satisfaction: a temporal model	The study employed longitudinal online survey	Survey provided strong support for the model and revealed the dominant role of pre-purchase eCRM in satisfaction formation at the attraction phase and the prevalence of post-purchase eCRM at the retention phase.	The study was conducted in hongkong. The current study will be conducted in Kenya using explanatory research design hence there is contextual and methodological gap
Mozaheb, Alamolhodaei, and Ardakani (2015)	Effect of Customer Relationship Management (CRM) on Performance of Small-Medium Sized Enterprises (SMEs) Using Structural Equations Model (SEM)	survey method and questionnaire were used to identify the effect among variables. Sample size was 105 managers	Results showed that CRM has significant effect on the performance of enterprises. Technology is a key factor which influences SMEs and leads to superiority on competitors	The current study is being done in Kenya with samples 293 firms hence there is a contextual and methodological gaps
(Azila & NoorNeeraj, 2011)	Electronic Customer Relationship Management Performance: Its Impact on Loyalty from Customers' Perspectives	Survey research design was used and Data collected by self-reporting questionnaires in Jordan Universities.	Results supported that e-CRM performance significantly related to customer loyalty.	The current study will use explanatory research design and collect data using closed ended questionnaires

(Harrigan et al., 2010)	Internet Technologies, ECRM Capabilities, and Performance Benefits for SMEs:	An Exploratory Study	The study finds strong empirical evidence in support of the hypotheses regarding these benefits for SMEs	A survey across 286 SMEs in Ireland The study has a contextual gap
(Alnassar, 2014)	The Factors That Impact of e-Customer Relationship Management Performance (e-CRM) of Mobile Services in Jordan	Survey method was used in data collection, self-administered questionnaires.	The study concluded that the antecedents of e-CRM performance are quite diverse in their nature and origin.	Study targeted Jordan university students and the current study will use explanatory research design and collect data using closed ended questionnaires there is contextual gap and methodological gap

Appendix III: Raw Output from Process Macro

MODERATION OF SA ON ECR AND FP

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 3.5 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2018). www.guilford.com/p/hayes3

Model : 1
Y : FP
X : ECR
W : SA

Covariates:
FirmSize FirmAge

Sample
Size: 392

OUTCOME VARIABLE:
FP

Model Summary	R	R-sq	MSE	F	df1	df2	p
	.7753	.6011	.1796	116.3149	5.0000	386.0000	.0000

Model	coeff	se	t	p	LLCI	ULCI
constant	-.0751	.7071	-.1062	.9155	-1.4654	1.3152
ECR	.4404	.1872	2.3529	.0191	.0724	.8085
SA	.3920	.2151	1.8222	.0692	-.0310	.8150
Int_1	-.0190	.0552	-.3438	.7312	-.1274	.0895
FirmSize	.0977	.0267	3.6558	.0003	.0451	.1502
FirmAge	.2647	.0317	8.3633	.0000	.2025	.3270

Product terms key:
Int_1 : ECR x SA

Test(s) of highest order unconditional interaction(s):	R2-chng	F	df1	df2	p
X*W	.0001	.1182	1.0000	386.0000	.7312

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
95.0000

----- END MATRIX -----

MODERATION OF SA ON ECR AND RQ

Model : 1
 Y : RQ
 X : ECR
 W : SA

Covariates:
 FirmSize FirmAge

Sample
 Size: 392

OUTCOME VARIABLE:

RQ

Model Summary

R	R-sq	MSE	F	df1	df2	p
.8316	.6916	.1286	173.1526	5.0000	386.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	2.6287	.5984	4.3927	.0000	1.4521	3.8052
ECR	-.4095	.1584	-2.5850	.0101	-.7209	-.0980
SA	.0641	.1820	.3524	.7247	-.2938	.4221
Int_1	.1785	.0467	3.8243	.0002	.0868	.2703
FirmSize	.0081	.0226	.3567	.7215	-.0364	.0525
FirmAge	.0336	.0268	1.2554	.2101	-.0190	.0863

Product terms key:

Int_1 : ECR x SA

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.0117	14.6251	1.0000	386.0000	.0002

Focal predict: ECR (X)
 Mod var: SA (W)

Conditional effects of the focal predictor at values of the moderator(s):

SA	Effect	se	t	p	LLCI	ULCI
2.7778	.0865	.0419	2.0646	.0396	.0041	.1688
3.4444	.2055	.0340	6.0386	.0000	.1386	.2724
4.0000	.3047	.0463	6.5844	.0000	.2137	.3957

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:
 95.0000

W values in conditional tables are the 16th, 50th, and 84th percentiles.

----- END MATRIX -----

MEDIATION OF RQ ON THE RELATIONSHIP BETWEEN ECR AND FP

Model : 4
 Y : FP
 X : ECR
 M : RQ

Covariates:
 FirmSize FirmAge

Sample
 Size: 392

OUTCOME VARIABLE:

RQ

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6233	.3885	.2537	82.1676	3.0000	388.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	1.4085	.1810	7.7803	.0000	1.0526	1.7644
ECR	.5453	.0388	14.0667	.0000	.4691	.6215
FirmSize	.0392	.0315	1.2464	.2134	-.0227	.1011
FirmAge	.0518	.0374	1.3846	.1670	-.0218	.1254

OUTCOME VARIABLE:

FP

Model Summary

R	R-sq	MSE	F	df1	df2	p
.7835	.6138	.1734	153.7973	4.0000	387.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	.1246	.1609	.7746	.4391	-.1917	.4410
ECR	.3519	.0394	8.9363	.0000	.2745	.4293
RQ	.3328	.0420	7.9302	.0000	.2503	.4153
FirmSize	.1024	.0261	3.9250	.0001	.0511	.1536
FirmAge	.2495	.0310	8.0479	.0000	.1885	.3105

***** DIRECT AND INDIRECT EFFECTS OF X ON Y *****

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI
.3519	.0394	8.9363	.0000	.2745	.4293

Indirect effect(s) of X on Y:

Effect	BootSE	BootLLCI	BootULCI
RQ .1815	.0363	.1165	.2574

MODERATED MEDIATION OF SA ON THE RELATIONSHIP BETWEEN ECR AND FP VIA RQ

Run MATRIX procedure:

***** PROCESS Procedure for SPSS Version 3.5 *****

Written by Andrew F. Hayes, Ph.D. www.afhayes.com
Documentation available in Hayes (2018). www.guilford.com/p/hayes3

Model : 8
Y : FP
X : ECR
M : RQ
W : SA

Covariates:
FirmSize FirmAge

Sample
Size: 392

OUTCOME VARIABLE:
RQ

Model Summary	R	R-sq	MSE	F	df1	df2	p
	.8316	.6916	.1286	173.1526	5.0000	386.0000	.0000

Model	coeff	se	t	p	LLCI	ULCI
constant	2.6287	.5984	4.3927	.0000	1.4521	3.8052
ECR	-.4095	.1584	-2.5850	.0101	-.7209	-.0980
SA	.0641	.1820	.3524	.7247	-.2938	.4221
Int_1	.1785	.0467	3.8243	.0002	.0868	.2703
FirmSize	.0081	.0226	.3567	.7215	-.0364	.0525
FirmAge	.0336	.0268	1.2554	.2101	-.0190	.0863

Product terms key:
Int_1 : ECR x SA

Test(s) of highest order unconditional interaction(s):	R2-chng	F	df1	df2	p
X*W	.0117	14.6251	1.0000	386.0000	.0002

Focal predict: ECR (X)
Mod var: SA (W)

Conditional effects of the focal predictor at values of the moderator(s):

SA	Effect	se	t	p	LLCI	ULCI
2.7778	.0865	.0419	2.0646	.0396	.0041	.1688
3.4444	.2055	.0340	6.0386	.0000	.1386	.2724
4.0000	.3047	.0463	6.5844	.0000	.2137	.3957

OUTCOME VARIABLE:
FP

Model Summary	R	R-sq	MSE	F	df1	df2	p
	.7874	.6201	.1715	104.7229	6.0000	385.0000	.0000

Model	coeff	se	t	p	LLCI	ULCI
constant	-.7531	.7081	-1.0636	.2882	-2.1452	.6391
ECR	.5461	.1845	2.9598	.0033	.1833	.9088
RQ	.2579	.0588	4.3882	.0000	.1424	.3735
SA	.3755	.2102	1.7858	.0749	-.0379	.7888

Int_1	-.0650	.0549	-1.1838	.2372	-.1730	.0430
FirmSize	.0956	.0261	3.6610	.0003	.0443	.1469
FirmAge	.2561	.0310	8.2615	.0000	.1951	.3170

Product terms key:

Int_1 : ECR x SA

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.0014	1.4014	1.0000	385.0000	.2372

***** DIRECT AND INDIRECT EFFECTS OF X ON Y *****

Conditional direct effect(s) of X on Y:

SA	Effect	se	t	p	LLCI	ULCI
2.7778	.3655	.0486	7.5151	.0000	.2698	.4611
3.4444	.3221	.0411	7.8354	.0000	.2413	.4029
4.0000	.2860	.0564	5.0748	.0000	.1752	.3968

Conditional indirect effects of X on Y:

INDIRECT EFFECT:

ECR -> RQ -> FP

SA	Effect	BootSE	BootLLCI	BootULCI
2.7778	.0223	.0148	-.0025	.0551
3.4444	.0530	.0177	.0224	.0921
4.0000	.0786	.0251	.0356	.1334

Index of moderated mediation:

	Index	BootSE	BootLLCI	BootULCI
SA	.0460	.0187	.0151	.0891

***** ANALYSIS NOTES AND ERRORS *****

Level of confidence for all confidence intervals in output:

95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:

5000

W values in conditional tables are the 16th, 50th, and 84th percentiles.

----- END MATRIX -----

Appendix IV: NACOSTI Research License

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