BUYER-SUPPLIER RELATIONSHIP TRAIT, INFORMATION TECHNOLOGY AND SUPPLIER PERFORMANCE AMONG SUPERMARKETS IN UASIN GISHU COUNTY KENYA.

BY

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DECLARATION

Declaration by the Candidate

I declare that this thesis is my original work and has not been presented to any other institution or university. No part of this proposal may be reproduced without prior or express permission of the author or Moi University.

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DEDICATION

I dedicate this thesis to beloved parents Mr. and Mrs. Cherono, brothers and sisters, friends, my spouse and children, Kipyeigor local church for constant and unwavering support, prayers and encouragement throughout the study period. God bless you.

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ABSTRACT

Despite the supermarkets contribution to the economy, their supplier performance has not been impressive. They are experiencing various difficulties in improving their supplier performance. However, some challenges are being attributed on supplier performance; this includes poor output quality, raw material duplication, late deliveries, late delivery, delivery unreliability, order incompleteness, high prices, failure to match specifications and late payments. Therefore, the study's primary purpose was to establish the effect of the buyer-supplier relationship trait, information technology and supplier performance among supermarkets in Uasin Gishu county, Kenya. The study has guided by theory of constraint, resource-based theory and theory of reasoned action. The study has been carried out using an explanatory research design. The target population for this study was 468 supermarkets. The sample size for the survey was 216 supermarkets. The study adopted stratified and simple random sampling methods to select the supermarkets per Sub County. Primary data was collected using questionnaires. The validity test has been carried out using factor analysis and correlation, while the reliability test has been carried out using Cronbach's Alpha. Primary data was used to collect data through distributing questionnaire to respondents (stores managers, sole proprietors and purchasing managers). The collected data was analyzed using both descriptive and inferential statistics. Descriptive statistics were frequency, mean, standard deviation, and percentage. The inferential analysis was done through correlation and hierarchical moderating regression analysis. The data analyzed has been presented in tables. The study findings revealed that Trust positively and significantly affected supplier performance (β_1=0.146, $p<0.05$). Commitment positively and significantly affects supplier performance (β_2=0.376, $p<0.05$). Mutual goal positively and significantly affected business performance (β_3=0.104, $p<0.05$). Information technology had an enhancing moderating effect on the relationship between trust and supplier performance (R^2 change =0.010). Information technology had an enhancing moderating effect on the relationship between commitment and supplier performance (R^2 change=0.014). Information technology had an enhancing moderating effect on the relationship between mutual goal and supplier performance (R^2 change=0.008). The study concluded that buyer supplier relationships traits are very significant in enhancing the performance of supermarkets. Trust encourages individuals to take risks and explore new ideas and trust mitigates the fear of failure and creates an environment conducive to learning and growth. Through commitment it allows an organization to meet its goals and stick to its vision position and organizations should working toward common goals helps create an overall sense of purpose and meaning within a team. The study therefore recommends that there is need for supermarkets to have a long-term partnership with the major suppliers and aim at giving maximum attention to the relationship with suppliers so as to maintain it and enhance competitive advantage which will lead to improved supplier performance. It is also recommended that this study be replicated in different business sectors within other regions.

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DEFINITION OF TERMS

Buyer-supplier relationship- According to Helper and Sako, (2005) buyer-supplier relationships refer to commercial transactions between organizations for the purchase and supply of goods or services.

Commitment- is defined as a desire to develop a stable relationship, a willingness to make short-term sacrifices to maintain the relationship, and a confidence in the stability of the relationship, the supplier considers the relationship as a long-term partnership with loyal business partner (Prahinski and Fan, 2007).

Information technology- refers to systems that are operated, maintained, or used together in an inter-organizational setting (McLaren et al., 2002).

Mutual goal- Wilson (2005) defined the concept of mutual goals as the degree to which partners share goals that can only be accomplished through joint action and the maintenance of the relationship.

Supplier performance- the measure of how well a supplier provides goods or services to a company. It can be measured in terms of quality, delivery time, cost, and other factors (Fredriksson et al., 2011).

Trust- is a condition in which each partner is convinced that the other is fully committed to the common goals. Trust provides an ease to business transactions, enhance customer satisfaction and enhance employee satisfaction (Pirson and Malhotra, 2007).

ABBREVIATIONS

B2B	Business to business
BSR	Buyer - Supplier Relationship
C2B	Customer to business
EDI	Electronic Data Interchange
G.O. K	Government of Kenya
HMRA	Hierarchical moderated regression analysis models
ICT	Information Communication Technology
IS	Information Systems
IT	Information technologies
NACOSTI	National Commission for science, Technology and Innovation
OLS	Ordinary least square
PCM	Principal Component method
PPDA	Public Procurement and Disposal of Public Assets
RBV	Resource based- theory
RFID	Radio frequency identification
SCM	Supply chain management
SCMS	Supply chain management systems
SPSS	Statistical Package for Social Sciences
TOC	Theory of constraint
TRA	Theory of Reasoned Action
U. S	United States
UNCTD	United Nations Conference on Trade and Development

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter presented background of the study, Statement of research problem, objectives of the study, research hypothesis and significance of the study and finally the scope of the study.

1.1 Background of the Study

Relationships emerged during early 20th Century in Japan, when excessive demand for parts of goods after World War I urged many companies to utilize suppliers following the temporary increase in productions (Nishiguchi, 1994). Traditionally, companies in a supply chain network concentrate on the inputs and outputs of the processes, with little concern for the internal management working of other individual players (Waithaka & Waiganjo, 2015) and it is recently that interest in buyer-supplier relationships has manifested and spread across a range of management disciplines reflecting trending global changes in production methods and supply chain organization structures (Yaqub, 2013). In today's environment firms (buyer) are increasingly dependents on the relationships they have with their suppliers in order to have strong relationships, and in order for buyers and suppliers to reach a more sustainable and successful relationship, both have to realize the benefit they will gain from managing such relation (Ambrose et al., 2010).

Supplier performance may be perceived as how a supplier is able to provide the required products to the buyer as evidenced through operational outcomes such as quality, delivery, responsiveness, cost and technical support (Wu, 2016). However, a buying firm cannot expect to perform well without suppliers' satisfaction (Benton and Maloni, 2005). Therefore, to establish a successful relationship or partnership, buying

firms also need to satisfy the requirements of supplier; otherwise, supplier will not contribute to their best to help the buying firms and unsatisfied supplier may produce less quality product and may behave opportunistically (Wong, 2000).

Globally, the U.S. government has a long tradition of contracting with businesses in many sectors, suppliers and buyers has been identified as a driver of agglomeration economies (Feldman et al., 2014), suppliers' performance has created agglomeration benefits through shared pools of skills, technologies, knowledge, fostering innovation, entrepreneurship and specialized inputs (Glaeser and Kerr, 2009).

South Africa is a country that is growing at a rapid rate in all sectors of the economy. Maas and Herrington (2006) confirm this as the state that supplier performance is seen as a significant component of the solution to South Africa's development issues, which include poverty, income inequality, and unemployment.

Historically, Ugandan economy has been suffering from challenges such as long lead times (NIS, 2008), poor quality of services delivered (PPDA Authority, 2008; 2009), specifications are not being met as required (IGG, 2009; 2010). Uganda reported that more than $200 million is lost every year due to suppliers' failure, Authority (2012). With the addressing of supplier performance, the country has improved drastically (PPDA) Authority, 2011). In Kenya, surveys shows that Kenyan organizations continue to struggle with buyer-supplier management, as evidenced in a study in the Ministry of Special Programs shows that it has not achieved high levels of supplier's performance necessary for delivering competitive market advantage (G.O.K, 2006).

However, despite the existence of detailed formal contracts, most suppliers have persistently failed to fulfill contract terms that they signed; little has been done to address such problems in any meaningful way. Although the critical role played by

supplier performance in Kenya, East Africa region, Africa and even globally, the social-economic development of any state or country, the supplier performance needs to remains competitive and to remain relevant to economic development as envisioned. Information technology (IT) is taking center stage in the growth, improve and competitiveness of the relationships existing between buyers and suppliers in order to improve their performance. Thus, improving the quality of service, resource utilization, flexibility, reduced lead-time and innovation thus lead to reduced costs (Basole, 2006). The physical area for the study was Uasin Gishu County, Eldoret being the fifth largest city in Kenya, with a population of 475,716 people according to 2019 National Census and it is currently the fastest growing town in Kenya. The town is home to many retail stores, supermarket chains and various malls. Supermarkets are centralized in the city and widely spread across six sub counties, thus form base area for the study as both unit of analysis and unit of observation is accessed.

1.2 The Statement of the Problem

Supplier performance is the measure of how well a supplier provides goods or services to a company. It can be measured in terms of quality, delivery time, cost, and other factors. A company may use supplier performance to choose which suppliers to do business with and to negotiate better terms with them. Supplier performance management is a business practice which extends supplier evaluation, and is used to measure, analyze, and manage the performance of a supplier in an effort to cut costs, alleviate risks, and drive continuous improvement. It is a function often associated with third party management as defined by Wikipedia. Measuring supplier performance is important to stay competitive (Da Silva & Borsato, 2017), as this can be used to assess how the activities are performed compared to competitors. Performance measurement evaluates qualitative and quantitative measures and,

therefore, analyses and reduces risks and maximizes value (Zeydan, Çolpan & Çobanoğlu, 2011). The most important factors in measuring performance are quality, delivery and costs (Ho, Xu & Dey, 2010). To measure these factors, two of the most occurring problems in supplier performance need to be overcome. These problems are poor management of the supply chain and poor data availability (Da Silva & Borsato, 2017). To actually measure performance, companies need a supplier measurement system that fits the organization, is efficient, reliable, flexible and easy to adopt. From this, companies can provide feedback to the suppliers on how they can improve their performance (Dey, Bhattacharya, Ho & Clegg, 2015).

Retail stores like other business organizations endeavor to promote their brand reputation, increase their market, attain efficiency and gain competitive advantage in the market in order to make profit and remain in business (Kanja & Mwangangi, 2017). However, the local retails stores in Kenya have been struggling to gain a significant market share and create strong brand reputation over the years yet not much has been achieved so far as demonstrated by the demise of Nakumatt Holdings and Tuskys supermarket. Uchumi has also been having issues with its supplies due to late payments. This has been attributed to their lack of supplier development hence inability to meet company obligations (Shajema, 2018) due to the fact that the industry is highly competitive. Poor output quality because of flawed standards, raw material duplication, late deliveries, and continued threats from suppliers throughout litigation because of late payments are all common occurrences. These occurrences' directly affect suppliers and indirectly affect supplier performance due to the late transfer of resources. Poor supplier performance is exemplified by late delivery, delivery unreliability, order incompleteness, poor delivery speed, poor quality of goods or services provided, infrequency of delivery, faulty deliveries, high prices,

failure to match specifications, and unfair conditions under which goods and or services are delivered (Ntayi et al., 2010c), and is seen as a major source of increased costs.

However, due to the complexity of relationships and connections, managing the performance of your suppliers is still a challenge (Maestrini et al., 2017). But commitment and trust influence the level of collaboration between parties, which in turn contributes to better performance in the buyer-supplier relationships and gaining of mutual goals among parties (Frödell, 2014). Numerous studies (i.e., Mutiso and Ochiri, 2019; Korir Loice, 2015; Grace and George, 2014; Abdullahi Abdi Mohamed; 2017; Geoffrey and Anaya, 2019; Bwana and Muturi, 2018; Mburugu and Senelwa, 2019; Momanyi and Paul, 2018; Kepher et al., 2015; Beatrice and Mulyungi, 2018; Murugi and Shalle, 2016; Olusanya, 2018) have examined the influence of supplier relationship management on firm performance. These studies have primarily focused on investigating the direct effect of supplier relationship management on firm performance. However, the researcher has noticed and learned that much research is need on supplier performance. Some of the literature, such as Senelwa (2019), found that supplier evaluation collaboration, supplier development, and trust had a positive statistical relationship on firm performance in state corporations in Kenya; Kathambi et al., (2019) revealed that supplier financing had a significant influence on firm performance; Olusanya (2018) exposed that there is a positive relationship between trust, communication, timely delivery, and organizational performance and among others. Other literature has also examined the moderating role of supplier relationship management on firm performance (Matunga et al., 2021; Ngugi et al., 2021; Iteba, 2017). This literature adopted a different moderating role in the study. Matunga et al., (2021) use monitoring and evaluation as the moderating role in the relationship

between supplier relationship management and the implementation level of public procurement regulations. Similarly, Iteba (2017) adopted customer relationship management and supplier relationship management as the moderation role to investigate the relationship between the dependent variable (electronic data interchange, supplier training, and supplier training) and the independent variable (firm performance). Ngugi et al., (2021) also used monitoring and evaluation to moderate the relationship between procurement staff competency and the implementation level of public procurement regulations. Khaing (2019) also examined the buyer-supplier relationship and procurement performance of electrical panel manufacturing firms in Yangon. The researcher (i.e., Khaing, 2019) used trust as the mediating variable to determine the relationship between the dependent (buyer-supplier partnership, communication, and commitment to supplier) and the independent variable (firm performance).

Eventually, only a little study examined the moderating role of supplier relationship management on firm performance. Amoako-Gymapo et al., (2019) discuss a moderated mediation analysis of supplier relationship management's flexibility capability and ownership structure on firm performance. The researchers found that operational flexibility capability mediates the supplier 6 relationship management – firm performance link. Also, their moderated mediated analyses show that SRM's influence on firm performance is more substantial for locally-owned firms (domestic) than foreign-owned firms, indicating that domestic firms stand to gain more from investments in SRM than firms with foreign ownership. Subsequently, most past studies have investigated or concentrated on the direct, moderating, and mediating role of SRM on firm performance. Still, few studies (i.e., Amoako-Gymapo et al., 2019) have focused on the mediating moderating role of SRM on firm performance.

However, the researcher identified the gap that, no research has been conducted in such a field by using different indicators or variables to examine the information technology as moderator role between the buyer-supplier relationship traits and supplier performance and also the researcher identified that information technology has not been used as moderator between buyer-supplier relationship traits and supplier performance, as prior studies dwelled on procurement performance, firm or organization performance. Recent studies (Yildiz and Yayla, 2015) show that quality, delivery, cost, price and service were the most important supplier selection criteria. According Mwadulo and Munialo (2019), criteria of selecting suppliers changed over time, but some of the criteria such as cost, quality and delivery performance remain important. Recent advancements in technology have influenced major change within many industries. Because of such advancements, businesses and organizations are adapting to a more to information technology-based work environment in order achieve a higher rate of production, output, and accuracy, the importance of ability to integrate IT systems in context of Industry 4.0 (Vrchota and Pech, 2019) are gradually increasing. Consequently, this has created a gap in knowledge concerning the moderating variable that examines the relationship between buyer- supplier and supplier performance. Therefore, this study sought to bridge the gap by examining the relationship between buyer- supplier and supplier performance using moderating (i.e., information technology) variable.

The study looked particularly at three relationship traits; trust, commitment and mutual goals. The study sought to answer the following research objectives: what is the extent of adoption of buyer-supplier relationships by supermarkets in Uasin Gishu County? What is the relationship between buyer-supplier relationships and on the

supplier's performance in supermarkets in Uasin Gishu County? What is the impact of information technology between the buyer-supplier relationship and on the supplier's performance? And what are the challenges that face these firms in the implementation of buyer-supplier relationships?

1.3 Research Objectives

The following where research objectives and were aimed at measuring the buyer-supplier relationship traits variable and the use of Information Technology on supplier performance.

1.3.1 Objectives of the Study

The key primary objective of this study was to establish the buyer-supplier relationship traits, information technology and supplier performance among supermarkets Uasin Gishu County.

1.3.2 Specific Objectives

The specific objectives of the study were intending to sought and achieve the following objectives:

i. To determine the effect of Trust on supplier performance in supermarkets in Uasin Gishu county.
ii. To investigate the effect of Commitment on supplier performance in supermarkets in Uasin Gishu county.
iii. To establish the effect of Mutual goals on supplier performance in supermarkets in Uasin Gishu county.
iv. To determine the moderating effect of Information Technology on the relationship between Trust and supplier performance in supermarkets in Uasin Gishu county.
v. To investigate the moderating effect of Information Technology on the relationship between Commitment and supplier performance in supermarkets in Uasin Gishu county.

vi. To establish the moderating effect of Information Technology on the relationship between Mutual goals and supplier performance in supermarkets in Uasin Gishu county.

1.4 Research Hypothesis

H_{O1}: Trust has no significant effect on supplier performance in supermarkets in Uasin Gishu County.

H_{02}: Commitment has no significant effect on supplier performance in supermarkets in Uasin Gishu County.

H_{o3}: Mutual goals have no significant effect on supplier performance in supermarkets in Uasin Gishu County.

H_{04}a: Information Technology has no moderating effect on the relationship between trust and supplier performance in supermarkets in Uasin Gishu County.

H_{o4}b: Information Technology has no moderating effect on the relationship between commitment and supplier performance in supermarkets in Uasin Gishu County.

H_{o4}c: Information Technology has no moderating the relationship between Mutual goals and supplier performance in supermarkets in Uasin Gishu County.

1.5 Significance of the Study

The primarily beneficiary of this study are supermarkets owners, government and policymakers, researchers, and academicians. It provided an understanding of buyer supplier relationships traits on supplier performance to the supermarkets owners when are able to focus buyer supplier relationship traits, which include trust, commitment and mutual goal to improve their supplier performance in their organizations. In supply chain, the great players who play an integral role in strategic supply chain, will be equipped with great information on all actives and how to cope with challenges

associated with supplier performance in order to strive to the competitive advantage in the market environment for instance the suppliers will be in better position to know their role in the channel of distribution and bargaining power in the market place. Through, the results and suggestions from the study, it will be useful to buying firms, who need to develop or improve on their supplier performance. The financial institution will be in a better position as they will access information concerning buying firms through supplier records (who are esteem customers) for the purpose of financial advices on investment and loan lending and savings for the better planning and coordination. The study provided insights into buyer supplier on supplier performance this ensured uniform operations in the industry by informing the formulation of policies by concerned stakeholders. Therefore, the government formulated policies to ensure that the environment in which the company operates favorable for sustainable performance. Individual stakeholders of the supermarkets will be great beneficiaries since the research on the supplier performance will benefit them. Research organizations will get information through the research recommendations and findings, for further decisions. The general public and publishers will benefit from the study since they wish to be informed of emerging issues in daily business environment. The findings of this study will be useful to the learners, researchers, academicians and even scholars as they will widen their knowledge and have information through realization of this research understanding, as they wish to study the same area and for further research on the same field and identify research gaps.

1.6 The Scope of the study

The study sought to establish the buyer-supplier, information technology and supplier performance among supermarkets in Uasin Gishu County, Kenya. The sample size of 216 supermarkets was drawn from a population of 468 supermarkets. These

supermarkets are found across the entire six sub counties of Uasin Gishu County, Kenya. The study will take a period of three months. The study is anchored on the Theory of Constraints whereby supply chain inefficiencies, including: long supplier lead-times, incoming quality problems, late or unreliable raw material or purchased part deliveries, raw material shortages, poor quality among others is being addressed. Primary data source was employed in the study; data was collected with distributing of questionnaire through drop and pick after two weeks, to collect primary data from the stores managers, purchasing managers and sole proprietors who were respondents.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter reviewed literature with existing studies carried out related to the area of study. It included a Review of Concepts, among the areas reviewed included: The concept of supplier performance, buyer-supplier relationship and concept of IT, Theoretical review and frameworks relating to the study, Empirical review of Literature, Gaps to be filled by the study and finally the Conceptual framework.

2.1 Concept of Supplier Performance

Trend (2005) stated that tight collaboration with suppliers is the only way to thrive in the cutthroat business world of today. The development of long-term relationships with crucial suppliers is a common practice among purchasing organizations in order to construct an efficient supply chain and boost competitiveness, as noted by Xu et al. (2008). Before the rivalry got too much for them to handle recently, businesses did not give their suppliers' performance any thought. As new, more competitive businesses appear with new and alluring terms and conditions of engagement, the number of trustworthy suppliers has steadily decreased over time (Stainly & Wisner, 2002). Numerous researches have examined the connection between supplier practices and performance (Krause et al., 2000; Forker & Hershauer, 2000). Numerous studies indicate that several criteria are used to judge the performance of suppliers. A number of important competitive factors were widely employed to evaluate the performance of the suppliers. Examples of significant variables for gauging the performance of suppliers include product quality, delivery effectiveness, pricing, physical distribution, services, flexibility, and relationships (Simpson et al.,

2002; Prahinski and Benton, 2004; Modi and Mabert, 2007; Humphreys et al., 2004; Gil and Ramaseshan, 2007).

When it comes to operational outcomes like quality, delivery, responsiveness, pricing, and technical assistance, a supplier's ability to meet the buyer's needs can be interpreted as a measure of their performance (Wu, 2016). The efficacy and efficiency of the purchasing company are significantly impacted by the suppliers' performance, which is why it is so important (Fredriksson et al., 2011). Performance is the degree to which a supply chain achieves the goals of flexibility, quality, cost-effectiveness, and dependability (Slack, 2007). Due to the increased reliance on suppliers, buying organizations may experience issues including delivery delays and subpar quality levels as a result of supplier performance or competency deficiencies. However, for other companies, early supplier involvement may result in greater quality or quick integration of the newest technological advancements into the purchasing firm's own products due to superior supplier performance or competence (Kilonzo, 2014). Activities involving direct involvement are essential for raising supplier performance. Suppliers can't get better on their own (Krause, et al., 2000). Investments made by the purchasing company specifically for the purpose of enhancing the supplier's performance and capabilities were regarded as transaction-specific investments (Li et al., 2007). Thus, in order to increase performance, the purchasing company must undertake direct engagement initiatives. A few examples of these initiatives include sending engineering staff to the supplier company to solve technical problems or receive specialist knowledge training (Krause et al, 2000; Li et al, 2007). According to Dyer's (1996) study, buying firms are motivated to improve supplier performance in the production process and reduce costs when they make transaction-specific investments. In a similar vein, research by Humphreys et al. (2004) showed that the

improvement in buyer-supplier performance was mostly attributed to transaction-specific supplier development. As a result, a specific investment made by the purchasing company encourages supplier performance. The development of solid partnerships between supplier and buyer has yielded numerous benefits. Saccani and Perona (2007) have encapsulated the potential of partnerships that enhance the performance of both suppliers and buyers. Essentially, it involves collaborating to bring resources into a necessary relationship to achieve effective operations that align with the goals and strategies of all parties involved, thereby yielding mutual benefits. Better performance in the buyer-supplier interactions is a result of increased collaboration between parties, which is influenced by both commitment and trust (Frödell, 2014).

Many firms are beginning to realize the potential benefits and importance of strategic and cooperative buyer supplier relationships. This includes improved quality, cost reduction, reduced time, lower risks, increased customer and supplier loyalty as well as joint investment. (Li et al., 2007) indicated that effective joint collaboration between the buying firm and supplier has a direct and positive impact on operational effectiveness including product quality and cost. In addition, a closer relationship resulted in more cooperation in production and design between firms in order to reduce or eliminate the non-value adding activities (Li et al., 2007). Managing relationships with supplier has positively impacted on the buying's firm performance which reflected to overall product quality (Kannan and Tan, 2006).

2.2 Concept of Buyer-Supplier relationship

Supplier-Buyer relations when it comes to buying books, there are two kinds of buyer-supplier partnerships: collaborative relationships that last over long periods of time and go beyond any one particular transaction, and arm's length transactional

interactions, in which two parties participate in a single transaction. The establishment of a deep, long-term cooperative partnership in inter-firm relationships is justified by the unpredictability of supply and demand as well as the increased reliance on external resources. Technology advancements and uncertainties are outside the control of individual businesses (Adhaya, 2013). Organizations can collaborate closely with suppliers who can share accountability for the products' success by establishing strategic supplier partnerships (Li, Nathan, B., Nathan, T., and Rao, 2006). To better serve the end user, many forward-thinking companies have discovered that it is more efficient to collaborate with their suppliers. Additionally, recent trends—such as outsourcing instead of manufacturing, buying instead of making, improving quality, reducing inventories, integrating supplier and purchaser systems, and forming partnerships—have highlighted the necessity of exceptional performance, which necessitates negotiation. Members of the internal team must communicate directly with the appropriate counterparts on the supplier side in order to maintain good supplier relationships (Leenders et al., 2006). The channel members can accomplish cost savings, revenue growth, and quality improvements with a deeper and better partnership. Additionally, they offer the capacity to manage supply and demand uncertainties (Lee et al., 1997). Building supplier relationships is facilitated by identifying the overall cost structure and the knowledge of supplier procedures (Liker et al., 2004). Doran and Thomas (2005) state that there is a considerable discrepancy in the expectations of suppliers and buyers regarding the future course of their relationships. Several features of the buyer-supplier interaction were described (Kannan and Tan, 2006). Buyer-supplier relationships were categorized by Saccani and Perona (2007) according to the degree of collaboration and interaction between the firms. They distinguished between four categories of

relationships: project-based partnerships, which involve extensive information sharing and collaboration in the design and development of products and processes, traditional partnerships, which involve little interaction between firms, operational relationships, which involve effective operational planning, information sharing, and specific techniques for operation performance, and evolved partnerships, which involve significant cooperation and interaction. Three categories of buyer-supplier interactions were identified by Crotts et al. (2008): cooperative (involving a cooperative connection with a long-term business partner), interlocking (with exclusive members of specific groups), and adversarial (involving price-based competition). And in light of earlier research, the emphasis in business relationships has evolved from traditional to collaborative relationships (Carr and Pearson, 1999 and Daugherty, 2011). According to Cookray and Ratnatunga (2001), establishing enduring relationships was essential for both parties' commercial success. Currently, there is pressure to improve quality, cut inventory, create just-in-time systems, and shorten time to market (Kamau, 2013). The willingness of both parties to give up time and resources in supplier development relationships is a prerequisite for a long-term business partnership (Krause and Ellram, 1997a). According to Haugland (2009), establishing a relationship that lasts is dependent on relation investment, which is defined as the emotional bond between a buyer and a supplier. This indicates that the purchasing company wants to work with a major supplier who is prepared to maintain long-term commercial partnerships. Furthermore, Campbell (2007) proposed that cooperative problem-solving was the primary success component of buyer-supplier relationship outcomes if buying business wanted to reap the benefits of a deeper relationship with a certain supplier. Similarly, Claycomb and Frankwick (2010)

proposed that during the expansion stage of the development of buyer-supplier relationships, suppliers valued cooperative problem-solving.

When faced with a challenging circumstance, the purchasing company requires more support and understanding from suppliers (Ellram and Hendrick, 2005). This indicates that the buyer understands the value of business partners being committed to working together to find solutions. According to Burnes and Whittle (1995), a partnership needs a clear framework for determining cost, price, and profit in order to foster successful commercial relationships. It was recommended that the customer and supplier come to an agreement on reciprocal benefit sharing, which includes decreased risk, lower costs, and more production and efficiency (Beyond Monitoring Working Group, 2010). Accordingly, the success of partnership interactions depended heavily on the mutual benefit of partners (Ellram, 1991). These factors are crucial for developing a mutually beneficial and cooperative connection between the provider and the buyer. Businesses participate in a cooperative effort to lessen the effects of technological change and uncertainty by promoting group techniques to strengthen collaborative coordination and by acknowledging resource dependency (Kim, 2010). Collaborative relationships work best in situations where the customer is exposed to high risk; the product being supplied is technically complex, resulting in high switching costs; the product supply market is rapidly changing; the product supply market is restricted due to laws and technology; or there are few competent and trustworthy supplier firms. According to Adhaya (2013), a collaborative environment necessitates a high degree of mutual trust and inter-firm dependency, as well as strong commitment to shared goals, inter-organizational full satisfaction capability, and management that fosters a network culture of mutual power dependency. Providing the participating supply chain partners with significant benefits and advantages is the

fundamental goal of these long-term partnerships. If the relationship is to last and be deemed successful, it is critical that both partners believe they are getting something from it (Narayandas and Rangan, 2004). It is commonly believed that meaningful connections revolve around the management of certain attributes, such as coordination, collaboration, commitment, communication, trust, flexibility, and power dependency, by businesses (David, 2012). Businesses can collaborate closely with suppliers who can share accountability for the accomplishment of the shared objective by establishing strategic supplier relationships (Li, Nathan, B., Nathan, T., and Rao, 2006). Regarding this, suppliers need to be able to give customers exactly what they want, and strong buyer-supplier relationships are necessary to improve chain performance (Maloni and Benton, 2000). (Moore, 1998).

But a buyer cannot be responsive or provide a service or product that meets the expectations of the consumer if the supplier is not happy (Benton and Maloni, 2005). The success of a relationship is contingent upon the efforts put forth by supply chain partners (Kannan and Tan, 2006). Typically, this is gauged by the buyer's intention to maintain the relationship in the future (Ambrose et al., 2010) or by the buyer's assessment of the supplier's performance (Zaheer et al., 1998). This suggests that in order to gain efficiency, flexibility, and a sustained competitive advantage, businesses must establish collaborative partnerships with their supply chain partners (Nyaga et al., 2010). A true desire to succeed, mutual sharing of risks and rewards, a high degree of commitment and trust, a clear understanding of each other's roles and responsibilities, a long-term focus, mutual information sharing, and responsiveness to each other's and the end customer's needs are all necessary for a successful relationship (Lemke, Goffin, and Szwejczewski, 2002). In terms of the relationship aspects taken into consideration, the empirical models of buyer-supplier relationship

qualities complement one another. The majority of them agree that common goals, commitment, trust, and power dependency are necessary for successful relationships to exist between the buyer and the supplier. The study's theoretical framework is comprised of the factors mentioned above.

2.3 Concept of Information Technology

Electronic data interchange, which allows both parties to communicate data, is a major way that information technology supports connections between suppliers and customers. This technology gives the company access to quick, accurate information as well as increased business efficiency (Mulligan and Gordon, 2002). All technology used to create, capture, alter, communicate, exchange, present, and use information in its various forms is referred to as information technology (IT) (Martin et al., 1999). IT can be further divided into internal and shared IT (Ryssel et al., 2004). Integrating IT systems is a common practice these days to make sure online transactions, marketing, and information exchange are carried out. Because they no longer function in a vacuum, manufacturers and suppliers have been compelled to take these developments into account. Systems that are used, maintained, or operated jointly in an inter-organizational context are referred to as shared IT (McLaren et al., 2002). Within the literature on networks and partnerships between organizations, shared IT is one of the major topics. Information systems have been demonstrated to support information availability, visibility, and management in the purchasing and supply chain management domains as well as effective transaction management and execution, decision-making and planning, cooperation and collaboration, and planning (Auramo et al., 2005; Lancioni, Smith, & Schau, 2003; Simchi-Levi et al., 2003; Laseter & Stasior, 1998). These technical advancements have made the adoption and use of IT a major factor in the development of numerous socioeconomic

shifts (Dierckx and Stroeken, 1999). The adoption of innovative IT can result in new business prospects and a number of advantages as IT is used and commercialized more widely around the world. The primary driver of information technology adoption in business partnerships is the shift in the roles of those involved, who are released from routine duties and have more time for contact and communication (Archer and Yuan 2000, p. 393). According to Carr and Smeltzer (2002), p. 302, communication between the parties is increasing in frequency and clarity, and partner coordination is getting simpler and quicker.

New technical advancements either place new demands on businesses or open up new avenues for the expansion or enhancement of market operations and goods. The use of information technology in commercial transactions by industrial organizations is one instance of this type of technical growth (Deeter-Schmelz, 2002, Pires and Aisbett, 2003). Because information technologies are so diverse, there are many ways that businesses can use them to carry out their transactions. (Borders et al., 2001; Ovalle and Marquez, 2003; Mukhopadhyay and Kekre, 2002; Prasad et al., 2001; Archer and Yuan, 2000; Egan et al., 2003). Geographically distributed users can share databases and immediately copy and deliver messages to a large number of recipients with certain solutions (Claycomb et al., 2004, Deeter-Schmelz, 2002, Reunis et al., 2005, Öhrwall and Rönnbäck, 2002). Supply chain management systems, which connect suppliers to the purchasing organization and foster supplier intimacy, were made possible in part by information systems (Landon and Landon 2005). Additionally, it has resulted in the use of the internet in the application of electronic data exchange systems. For instance, Electronic Data Interchange (EDI) allows certain information flows to occur solely through the use of information technology, such as product ordering and delivery information or payment (Angeles and Nath, 2000). Integrated

EDI improves productivity and enables time and cost savings for business partnerships (Hill and Scudder, 2002; Laage-Hellman, 2009).

Information technology (IT) has been said to be essential for managing business-to-business (B2B) ties between enterprises, especially when supply chain participants are located in different countries (Wang et al., 2006). Furthermore, Tan et al. (2009) describe IT adoption as the use of ICT (information and communication technologies) equipment, such as computer hardware, software, and networks needed for internet connectivity. On the other hand, Carr and Smeltzer (2002) characterized IT in terms of supplier relationships as using computer-to-computer connectivity with important suppliers, automated purchasing systems, supplier links through electronic data exchange (EDI), and information systems. The way business is performed has changed dramatically as a result of the present economic environment, which is characterized by globalization, hyper competitiveness, and the revolution in knowledge and information (Pavic et al., 2007).

Information technology does, in fact, play a part in the connections between buyers and suppliers. The exponential growth in the ubiquity and reach of IT, which makes it possible for enterprises to effectively co-create value, is one factor contributing to the birth of a network society. Over the past few decades, the operating environment for businesses has grown more complex. Most inter-organizational interactions take place inside inter-organizational relationships, nets, and networks rather than as individual transactions (e.g., Coviello et al., 2002; Möller & Rajala, 2007; Powell, 1990). Businesses are a part of these intricate and dynamic networks that direct resource integration and value creation efforts, and as such, they have a significant influence on many facets of society at large (Castells, 2016, for example). The exponential growth of information technology's complexity and reach, as well as networks that

facilitate effective and efficient communication across enterprises, are factors contributing to the establishment of a network society (Van Dijk, 2012). Information technology (IT) has raised the percentage of customization and knowledge intensity in generated solutions (Tuli, Kohli, & Bharadwaj, 2007) and made it easier for managers to concentrate on core competencies (see Prahalad & Hamel, 2008). Information technology and related systems are essential for managing these networks as businesses shift to more networked modes of operation (Kärkkäinen et al., 2007).

Nonetheless, the majority of the studies that have already been conducted have focused on the advantages of information sharing and interorganizational communication technologies, or on evaluating the effect of certain technologies on supply chain effectiveness (Kärkkäinen et al 2007). Less is known about how businesses genuinely use IT in an interorganizational context, including how it interacts with other connections and supply network components and for what goals (see Ryssel & Ritter 2004; Boyd et al 2004; Campo et al 2010; Jap & Mohr 2002). Put differently, a significant portion of previous research views information systems as distinct entities rather than as parts that are integrated into relationship structures and value creation processes (cf. Salo 2006; Carr and Smeltzer, 2002). As such, our comprehension of IT's function and place in the context of buyer-supplier relationships is constrained. This study aims to propose IT in connection to supplier performance and the buyer-supplier relationship. Information technology is viewed as an entity made up of structural and procedural aspects connected to the individual organizations and their reciprocal relationship between suppliers and buyers (refer to McLaren et al., 2002; Lancioni, Smith, &Schau, 2003; Ryssel & Ritter, 2004).

2.4 Theoretical Review and Frameworks

There are many vibrant theories that have been put in place to explain and illustrate the rationality behind buyer-supplier relationships. The most important and well formulate theories include: Theory of Constraints and Resource-Based Theory and Technology Acceptance Model (Manoj and Gahan, 2012), these vibrant theories exhibit different forms of relationships, ranging from situation where there is a high degree of interdependence and common goals to the situation where the parties are interdependent and pursue their own goals and objectives.

2.4.1 Theory of Constraints

In the contemporary global business landscape, companies depend on their external resource relationships to effectively navigate the trends of globalization and transformation (Su et al., 2008). In Africa, supply-related limitations frequently rank highest among the barriers to export success. The unpredictable domestic raw material supply, delays, low-quality products, and expensive transaction expenses are commonplace. Tesfom and Lutz (2006), Fugazza (2004), and UNCTAD (2008) According to Vincent Ochieng's (2014) theory, Eliyahu M. Goldratt created the Theory of Constraints (TOC), a management and improvement concept, and presented it in his book The Goal. It is predicated on the idea that, in any complicated system at any one time, there is typically just one component that is restricting the system's capacity to accomplish more of its objective, much like a chain with its weakest link. That constraint needs to be recognized and taken into consideration while managing the entire system if any appreciable progress is to be achieved. By adopting this idea, buyers try to pinpoint the supply chain bottlenecks that result from strained relationships between suppliers and buyers. They then collaborate to remove these bottlenecks, enhancing the goals and operations of all parties involved

particularly the buyer's procurement functions. When combined, the Theory of Constraints (TOC) Thinking Processes offer a comprehensive approach to problem-solving that tackles both the creation of solutions and the teamwork and communication necessary for the efficient execution of supply chain operations. Strong generic "starting-point" solutions have been developed with them to address a range of supply chain inefficiencies, such as extended lead times from suppliers, incoming quality issues, unreliable or delayed deliveries of purchased parts or raw materials, shortages of raw materials, and poor quality. Given this, there's a significant possibility that an organization's supply chain, as well as the procedures and policies governing your interactions with suppliers, are its main sources of limitation. Getting what you need from your suppliers to be effective—better delivery performance, quality, or any other facet of what they give to the organization—is the problem. Employees already in place can utilize the tried-and-true Theory of Constraints to boost productivity (sales), dependability, and quality while lowering inventory, work-in-progress, late deliveries, and overtime. The Theory of Constraints is also used by successful companies to guide tactical and strategic choices for ongoing development.

2.4.2 Resource-Based Theory

According to resource-based theory, a firm's capabilities and resources are its most valuable assets. As a result, the main issue it addresses in order to acquire a competitive edge is how to gain access to another firm's core capability. Suppliers who are "sufficiently bound to a firm" can be considered resources, according to Steinle and Schiele (2008). With these presumptions, they unmistakably adhere to the relational perspective, which is an extension of the expanded resource-based approach as stated by Dyer and Singh (1998) and suggests that resources can also be accessed through inter-firm connections with the outside world. They begin by putting

suppliers in perspective using the four resource traits that are listed in the United Kingdom's International Journal of Economics, Commerce, and Management. Under Creative Commons license. According to Ni (2006), the resource-based perspective's four resource criteria—value, rareness, uniqueness (inimitability), and non-substitutability—are all satisfied when relationships are viewed as resources (Barney, 1991). It is necessary to build capabilities via both internal and external relationships, as they cannot be purchased (Sue et al., 2009).

Barney (1991), as well as necessary to obtain a competitive edge. In accordance with his reasoning, suppliers may be said to enhance a competitive advantage if they provide valuable products, are unique in the sense that they cannot be easily replaced, and the supplier-buyer relationship is challenging to replicate Steinle and Schiele (2008). According to the argument, a company's competitive advantage can be bolstered by becoming a preferred customer of one of the few suppliers in the sector who provide valuable resources, as suggested by Steinle and Schiele (2008). Consequently, in order to gain a competitive edge, the resource-based approach considers the buyer-supplier relationship while making decisions on the supplier portfolio. Being a supplier's preferred customer gives businesses not only preferential treatment but also the ability to put distance between themselves and competitors who do not share the same status, which can ultimately result in a stronger competitive position. Suppliers are viewed as valuable resources themselves or as the source to access them. According to Kenneth (2012), a company's reputation is its ability to inspire confidence in its dependability, accountability, credibility, and trustworthiness. According to Harrison and St. John (1996), this theory examines long-term partnerships with a number of important suppliers based on the win-win concept, which can produce a sustainable competitive advantage over that of a competitive

bidding system. According to this notion, a firm's distinctive resources serve as the foundation for its competitiveness.

2.4.3 Technology Acceptance Model

At the corporate and individual levels, information technology adoption and use can have both short- and long-term advantages, including enhanced productivity, cost and time savings, and convenience (Foley Curley, 1984; Sharda, Barr & McDonnell, 1988). For a considerable time, IS management research has been driven by the potential benefits that technology can offer to investigate people's readiness to adopt new technologies (Davis, 1989). The 1980s saw a surge in the use of personal computers, which made studies on technology adoption increasingly important. However, a significant roadblock in the development of studies on PC adoption was the absence of actual data on how consumers responded to the functionality of the computer system. Prior to the creation of TAM, research on IS had been advanced by a number of technological and organizational viewpoints (e.g., Benbasat, Dexter & Todd, 1986; Robey & Farrow, 1982; Franz & Robey, 1986). Studies have highlighted the significance of elements like users' participation in information system design and deployment (Robey & Farrow, 1982; Franz & Robey, 1986). The practitioners' emphasis on information system development, particularly with regard to assessing and improving system features and design, had served as the foundation for a second line of research (Gould & Lewis, 1985; Good et al., 1986). Subjective performance perception scales were commonly employed in that research, although the validity of those measures' measures was not validated. Consequently, there was insufficient evidence of a correlation between those subjective measures and actual use to support their internal and external validity (De Sanctis, 1983; Ginzberg, 1981; Schewe, 1976; Srinivasan, 1985). Therefore, it was necessary to create trustworthy metrics in order

to look into the attitudinal elements that were mediating the relationship between IS features and system utilization. Ajzen and Fishbein (2011) established the Theory of Reasoned Action (TRA), which was utilized to forecast the attitudes that underlie a variety of behaviors in a broad range of contexts. But because TRA is so general, there has been a lot of debate about the theoretical constraints on using the model in the IS sector (Davis, Bagozzi & Warshaw, 1989; Bagozzi, 1981). Technology-specific variables were not measured by the model. Therefore, it was necessary for academics to pinpoint the key elements that influence how technology and information systems are used. Davis (Davis, 1989) created the technology acceptance model (TAM), which is based on TRA, to solve the shortcomings associated with the absence of a theoretical model and scales to quantify the acceptance of technology. The fundamental tenet of the paradigm was that, in the context of technology use, particular attitudes about technology use, rather than a general attitude toward behavioral intention, affected behavioral intention. TAM was designed to serve as a framework for analyzing a broad spectrum of technological user behaviors while adhering to a frugal methodology (Davis, 1989). TAM's main goal was to shed light on the mechanisms that support technology adoption in order to forecast its behavior and offer a theoretical justification for its effective application.

2.5 Empirical review of variables

The modern buyer-supplier relationship, according to Newman (1988), has moved away from hiring a large number of suppliers and toward using a smaller number of recognized or qualified providers. Regarding Supplier performance, this change offers some advantages (Chen and Paulraj, 2004b): Lower costs for inventory management, more scalability based on order volume, faster order fulfillment times because of dedicated capacity, supplier work-in-process inventory, volume consolidation, and

quantity discounts. When there is a lack of commitment and trust in a relationship, both sides will take the initiative to act opportunistically (Williamson, 1975 and 1979). According to the Theory of Constraints, companies that participate in regular, long-term transactions are frequently given incentives to refrain from acting opportunistically, which gradually encourages them to build trust (Croom, 2001; Zsidisin & Ellram, 2001). Establishing alliances and partnerships is one strategy used by businesses to manage their suppliers, according to Pyke and Johnson (2003). Similar to this, businesses are focusing more on supply chain partners and supply integration as a result of growing pressure to perform better in areas like cost reduction and product development (Flynn, Huo, & Zhao, 2010; Sheth & Sharma, 2006).

In a partnership, trust can function as either an input or an output. It is possible to carry over the prior trust into a business partnership in the first role. This could occur in the early phases of a commercial partnership's development (Heffernan, 2004). A more measured and logical form of trust between two business partners is included in the second role. The goal is to get closer to a supply chain that is vertically integrated in both situations. Establishing partnerships among the various agents in a supply chain is contingent upon trust, which can be classified as either interpersonal or inter-firm (Johnston, Mccutcheon, Stuart, & Kerwood, 2004). It is possible to link a nation's cultural background to the development of trust in inter-firm relationships (Dyer & Chu, 2003; Sako, 1992; Zaheer & Zaheer, 2006). In this regard, significant levels of supplier trust in the US, Japan, and Korea were discovered by Dyer and Chu (2000) in their excellent study. The institutional setting has an impact on these variations. These authors propose that the frequency and duration of interactions—what they termed "process-based trust"—are key factors in determining supplier trust.

They do acknowledge, though, that the automobile purchasers they researched had to pay more to establish this kind of relationship. Information technology modifies the way supplier performance is controlled, potentially resulting in reduced lead times and inventory costs, among other benefits (Simchi-Levi et al., 2003). Simchi-Levi et al. (2003) assert that by utilizing information technology within the supply chain, one can design and run the chain much more effectively and efficiently. The so-called bullwhip effect is lessened in the supply chain thanks to information technology. The use of IT systems in supply chain management has had an impact on supplier performance as well as the development of supply chain management. By offering real-time information on inventory level, manufacturing requirements, product availability, and shipment status, information technology improves supplier performance (Salcedo and Grackin, 2000). According to Tuli, Kohli, and Bharadwaj (2007), information technology (IT) has raised the percentage of customization and knowledge intensity in created solutions and made it easier for managers to focus on core competencies (see Prahalad & Hamel, 1990).

Information technology has been demonstrated to support information availability, visibility, and management in the purchasing and supply chain management domains as well as effective transaction management and execution, decision-making and planning, cooperation and collaboration, and planning (Auramo et al., 2005; Lancioni, Smith, &Schau, 2003; Simchi-Levi et al., 2003; Laseter & Stasior, 2008). Nonetheless, the majority of previous research has focused on evaluating the effects of certain technologies on supply chain efficiency or the advantages of information sharing and inter-firm communication technologies (Kärkkäinen et al., 2007). Fewer things are understood about how and why businesses genuinely use IT in an inter-firm context, as well as how IT interacts with other components of supply networks and

relationships (Ryssel & Ritter 2004; Boyd et al., 2004; Campo et al 2010; Jap & Mohr 2002). Put differently, a significant portion of previous research views information systems as distinct entities rather than as parts that are integrated into relationship structures and value creation processes (cf. Salo 2006; Carr and Smeltzer, 2002). As such, our comprehension of IT's function and place in the context of buyer-supplier relationships is constrained. This study aims to propose IT in connection to supplier performance and buyer-supplier interactions. Information technology is viewed as an entity made up of structural and procedural aspects connected to the individual companies and their mutual supplier-buyer interaction (McLaren et al., 2002; Lancioni, Smith, & Schau, 2003; Ryssel & Ritter, 2004). When concentrating on two strategically aligned buyer-supplier relationships enabled by IT, with distinct objectives for creating value: the connection centered around innovation and added value, and the relationship centered around operational efficiency (see to Möller & Rajala 2007).

2.6 Relationship between Buyer-Supplier Relationships and Supplier Performance

In this area, the researcher tries to figure out the impact of buyer-supplier relationship variables and the result on the performance of the supplier.

2.6.1 Effect of Trust and supplier performance

Today, buyers and suppliers are coming together to produce mutual benefits and the relationship between them has become strategic in nature, therefore both buyer and supplier can be considered as “business partner”. At this stage, trust becomes the leading actor to govern the buyer-supplier relationship. A sincere desire is required for companies to proceed in trust building activities. Trust is a condition in which

each partner is convinced that the other is fully committed to the common goals. Trust provides an ease to business transactions (Noteboom, 1996), enhance customer satisfaction (Doney and Cannon, 1997), and enhance employee satisfaction (Pirson and Malhotra, 2007). Trust boosts creativity, innovation, knowledge sharing (Politis, 2003), and enhances cooperative behavior within the organizations (Osterloh and Frey, 2000). Building a high level of trust encourages one partner to reciprocate trust towards the other partners. Existence of trust between buyer and supplier reduces the degree of complexity of negotiations (Buttler, 1999), and allows them to discuss important matters for mutual gain. Therefore, due to existence of trust, consumption of time and resources in the negotiations gets reduced. The climate of trust allows open sharing of information. Sometimes, buyer and supplier hesitate in delivering the required information, because they think, it will increase their vulnerability. These unsatisfactory relationships must be changed to improve the performance of both buyer and supplier and this can be done only by development of trust. Trust plays a significant role in shaping interaction and long-term relationship building (Andersen & Kumar, 2006). Trust is a main factor affecting the strength of any inter-firm's relationships (Lambe et al., 2001) and its effective management as well (Pantnayakuni and Seth 2006). Therefore, it is considered a basic relational norm for any buyer-supplier relationship (Pantnayakuni and Seth 2006). It is directly and significantly related to the frequency of commitment, shared values in terms of power dependency, degree of satisfaction (Lambe et al., 2001), cooperation of within relationships (Jap 1999; Lambe et al., 2001), reducing power opportunism and promoting long-term orientation and commitment within inter-firm relationships (Terawatanavong and Quazi 2006).

The more valuable the exchange benefits and the more frequent the commitment are, the higher the degree of trust created among the buyer-supplier relationship (Lambe. et al. 2001). Gullett et al., (2010: 331) contend that trust (among buyers and sellers in an alliance) must rise to the level of a behavior that demonstrates the degree to which an individual is personally willing to surrender control to the party being trusted. Trust has been described as one of the most critical success factors of a firm's ability to establish successful inter organizational relationships such as alliances (Robson et al., 2008). Effective partnerships are characterized by mutual trust between firms and their partners, this may facilitate more open communication, information sharing and conflict management, which are all essential for firms' success (Seppanen, Blomqvist & Sundqvist 2007). Firms that demonstrate effective trusting behavior are able to improve their overall supply chain's activities and performance as well as essential to achieve supply chain proximity, which is characterized by strategic practices such as just in time (JIT) (Narasimhan & Nair 2005). Furthermore, supply chain partners' abilities and willingness to collaborate in a trusting environment are regarded as a key factor that enables them to maintain and enhance their performance through sound and effective supplier integration (Al-Abdallah, Abdallah & Hamdan 2014). Trust also has a positive and significant influence on firms' competitive performance and is a central predictor factor promoting supply chain performance (Ireland & Webb 2007).

Buyer-supplier trust has multiple impacts on supplier performance transactions between firms (Koh et al., 2009). It reduces transaction costs (Chiles and McMackin, 1996), improves governance choices and exchange performance (Gulati & Nickerson, 2008). Buyer-supplier trust creates cooperation and commitment, enables firms to accumulate strategic resources that are rare, valuable, and rare to mimic with no

readily substitutes (Hoyt and Huq, 2000). It also enhances information sharing (Dyer and Chu, 2003), and reduces negotiations and conflicts (Zaheer et al., 1998a; Johnston et al., 2004) between organizations. All these aforementioned outcomes directly translate to better supplier delivery performance. Poor supplier performance is exemplified by late delivery, delivery unreliability, order incompleteness, poor delivery speed, poor quality of goods or services provided, infrequency of delivery, faulty deliveries, high prices, failure to match specifications, and unfair conditions under which goods and or services are delivered (Ntayi et al., 2010c), and is seen as a major source of increased costs.

There has been a noticeable increase in the last quarter of the twentieth century of the importance of trust in partnerships and alliances in management literature (Sahay, 2003). Krause and Handfield (2007) discussed three main types of trust; Competence trust: where supplier believes that the buying firm is to perform what promised to perform. Contractual trust: a belief that the buying firm will continue its contracts. And Goodwill trust: a belief that the buying firm will avoid taking unfair advantage, and will always act on mutual benefit basis. Moreover, Trust building should not be the concern of the buying firm only. Saleemi (2002) in his research on relationship management and organization performance concluded that trust is also essential and advantageous to the supplier firm, which has to make efforts to establish, extend, and retain the buying firm trust, especially when such trust can lead to more benefits for the supplier. It also concluded that although trust building is a costly, difficult, and time-consuming procedure, it leads to strong, successful, and long-term buyer-seller relationship. Trust is therefore, reflected by confidence, predictability, credibility, ability, competence, expertness, consistence and friendliness (Morgan & Hunt, 2004). A study conducted by (Fawcett et al., 2011) presents a dynamic systems model that

elaborates on the process of building trust to improve collaboration, innovation, and competitive performance. The survey shows that the tendency to act opportunistically is prevalent and power-based negotiations are widespread; as a result, relatively few firms are able to leverage trust effectively. It is a common knowledge that trust needs to be developed over a period of time (Sahay 2003). After repeated exchanges, a relationship can progress and trust has the opportunity to develop into goodwill trust; however, it takes time to develop a transparent relationship and to establish a certain level of trust that must be present between parties (Kwon and Suh, 2004). The study presented by Nyaga et al., (2010) conclude that antecedents of trust (e.g., information sharing) are most important to suppliers while the outcomes of trust (e.g., satisfaction and performance) are most important to buyers. Under these circumstances, the conclusion of this research show that the perception of trust can differ between buyers and suppliers. Benefits of building trust in business relationship, Decrease transaction costs in an exchange relationship (Ganesan 1994; Noordewier et al., 2000) Reduce the risk of opportunistic behavior (Ganesan 1994) Increase long-term orientation (Doney and Cannon 2007; Ganesan 2004; Liu and Wang 2000) Willing to make idiosyncratic investments (Ganesan 1994) Willing to engage in future business opportunity (Doney and Cannon 2007; Ganesan 2004; Liu and Wang 2000) Facilitate cooperative transaction(Lui 2008)

2.6.2 Effect of Commitment and supplier performance

Commitment is defined as a desire to develop a stable relationship, a willingness to make short-term sacrifices to maintain the relationship, and a confidence in the stability of the relationship (Anderson and Weitz, 1992) business partner plays an important role to maintain the ongoing relationship for long-term success (Morgan and Hunt, 1994) the supplier considers the relationship as a long-term partnership

with loyal business partner (Prahinski and Fan, 2007). Therefore, it is considered to be very important for the supplier to continue business operations with the commitment of meeting or even exceeding the buying firm's needs (Prahinski and Benton, 2004) there are three major dimensions of operationalising commitment; instrumental commitment, where an actor is constrained by the costs and inconveniences of leaving the current collaboration (Gilliland and Bello, 2002); normative commitment, which is based on the partners 'value in the collaboration' (Brown et al., 1995); and affective commitment which relates to a partner 'identification and involvement with the others' (Brown et al., 1995; Porter et al., 1974; Allen and Meyer, 1990) based on several literatures, each commitment type is mainly measured in terms of emotional and continuance relationship, for example, the study of Wu et al (2004) measured the commitment between partners based on affective commitment, continuance commitment and normative commitment.

The buying firm and its partner (supplier) are committed to work together to improve the quality, reduce the cost, and improve the reliability of the products they supplied (Burnes and New, 1996). Therefore, business partners are committed to make continuous improvement in all related activities (Burnes and Whittle, 1995). However, the commitment was also based on the development of transactional-specific investment (Williamson, 1985) specific investments by buyers encourage suppliers to have commitment in business relationship (Ghijsen et al, 2010) the buying firm needs to play a significant role and engages human or capital resources to maintain the relationship such as make a direct investment in their suppliers to customized equipment and tools, provide personnel to the supplier's facilities, or specialized training programs (Li et al., 2007) and (Lai et al., 2005). Therefore, buyer-supplier relationships and transaction-specific investment are the key elements for

commitment between buying firms and suppliers. Krause et al (2007) in is study found that the commitment between buying firms and suppliers is important to establish performance goals, and provides value to buying firms and transaction-specific investment is positively related to supplier performance.

2.6.3 Effect of mutual goal and supplier performance

Mutual goal plays an important role in high-value strategic relationships, where specific investments are high, and contractual governance alone is not adequate. In such relationships, it is important that both parties perceive that they are gaining value from the relationship if it is to continue and the relationship is to be considered a success (Narayandas and Rangan, 2004). Wilson (1995) defined the concept of mutual goals as the degree to which partners share goals that can only be accomplished through joint action and the maintenance of the relationship. These mutual goals provide a strong reason for relationship continuance. Wilson, Soni and O'Keeffe (1994) suggest that mutual goals influence performance satisfaction which, in turn, influences the level of commitment to the relationship. Shared- values is a similar but broader concept. Morgan and Hunt (1994, p. 25) define shared values as, "the extent to which partners have beliefs in common about what behaviors, goals and policies are important, unimportant, appropriate or inappropriate, and right or wrong." Although the wider concept of shared values has some appeal it seems too broad to be effectively operationalized. Norms are the rules by which values are operationalized. Most likely, mutual goals encourage both mutuality of interest and stewardship behavior that will lead to achieving the mutual goals. Perhaps it is easier to measure the degree to which the partners share the same goals than it is to measures values and norms.

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In a more recent study, Mburu (2012) emphasized that it is buyers' duty to select the best suppliers for any given job. He also he reiterated that successful relationships with suppliers will naturally result into buyers' success that can be sustained for a longer period. According to Narain and Singh (2012), trust and communication is what can make or destroy relationships between buyers and suppliers. They also argued that politeness works in managing relationships with suppliers. They also stated that "supplier relationship management is a formidable tool in global competition". Mutual goals refer to the degree partners share goals that can only be accomplished through joint action and the maintenance of the relationship. These mutual goals provide a strong reason for relationship continuance. Wilson, Soni and O'Keeffe (1994) suggest that mutual goals influence performance, satisfaction which in turn influences the level of commitment to the relationship.

Shared values are a similar but broader concept as defined by Morgan and Hunt (1994) as, "the extent to which partners have beliefs in common about what behaviors, goals and policies are important, unimportant, appropriate or inappropriate, and right or wrong." Norms are the rules by which values are operationalized. Heide and John (1992) stated that individual goals create norms of competitive behavior whereas, relational exchange norms are based on the expectation of mutuality of interest, essentially prescribing stewardship behavior, and are designed to enhance the wellbeing of the relationship as a whole. Most likely, mutual goals encourage both mutuality of interest and stewardship behavior that will lead to achieving the mutual goals. It is easier to measure the degree to which the partners share the same goals than it is to measure values and norms.

2.7 Moderating Effect of Information Technology

Although the use of IT thus is recognized to be as a relevant facilitator in developing and coordinating buyer–supplier relationships (Hvolby and Trienekens2002), Information technology (IT) has facilitated the managerial focus on core competences (see Prahalad & Hamel, 1990) and increased the share of customization and knowledge intensity in produced solutions (Tuli, Kohli, & Bharadwaj, 2007). In supply chains, the use of information and communication technologies has been shown to exert great impact on SC operational efficiency (Lee 2000) and to sustain the network of relationships (Saraf et al. 2007). Information technologies (IT) used for SCM, including supply chain management systems (SCMS), Internet/Web, electronic data interchange (EDI), ratio frequency identification (RFID), and mobile technologies, allow firms to exchange timely information, carry out plans precisely and perform various SC functions and activities efficiently. For example, EDI technologies, which have been used in supply chain management for many decades, automate transactions between two trading partners. Nonetheless, the theoretical and empirical research regarding the role of supply chain IT in facilitating/inhibiting a supply chain's ability to manage knowledge is scarce (Malhotra et al. 2005). As supply chain relationships are going beyond price-focused, arm's-length relationships and becoming knowledge-driven, four collaborative relationships (Van de Ven 2005), it is important to understand how supply chains can harness IT in building the capabilities of managing knowledge resources.

As companies move towards increasingly networked forms of operation, information technology and related systems are an imperative in order to manage these networks (Kärkkäinen et al., 2007). IT is seen as an entity comprising procession and structural elements that are linked to the respective organizations and their mutual buyer-

supplier relationship (see McLaren et al. 2002; Lancioni, Smith, &Schau, 2003; Ryssel& Ritter, 2004). Less is known regarding the questions of how and for what purposes companies actually use IT in an inter-organizational setting and how IT posits to other elements of the relationships and supply networks (see Ryssel& Ritter 2004; Boyd et al 2004; Campo et al 2010; Jap & Mohr 2002).

Recent advances in information technology offer new ways of managing inter firm's relationships. Internal use of information technology makes suppliers to be more reliable because it supports decision making, production planning and quality management by improving the scanning and monitoring of environment (Dawett and Jones 2001) this in turn through utilizing of information technology suppliers will provide buying firms with high quality products and services which results in higher satisfaction, as such buying firms trust will increase. Consequently, the satisfaction of the customer with this relationship increases with the use of information technology (Ritter et al. 2001). The bonds between buyer and supplier are positively affected by the extent of use of the internet, resulting in increased trust, commitment, and mutual goals that thus can be linked with improved performance of the firm business and that of the partners like suppliers. The findings of Carr and Smeltzer (2002) are in contrary to the above findings; they have reported that increased use of IT between buyer and supplier have improve levels of trust, commitment, positive mutual goal between buyer and seller.

Supplier portals are online extranet services that provide organizations a mechanism to integrate systems and processes with their suppliers to improve suppliers' performance (Dias, 2001; Makkonen and Vuori, 2014). Aimed at improving communication and information sharing across the supply chain, such portals may provide benefits to the inter-organizational relationships beyond the improvements of

purchase process efficiency and the performance of logistics processes (Al-Debei et al., 2013;Baglieri et al., 2007;Dias, 2001).Prior research highlights the importance for organizations to develop their supplier relations (Chatain, 2011;Geiger et al., 2012;Jap, 1999) as well as the value of inter-firm cooperation and information sharing with their suppliers (Gavirneni et al., 1999;Makkonen and Vuori, 2014) . Such efforts to strategically foster long-term, cooperative relationships and communication can help the organization develop greater responsiveness to the needs of their suppliers (Carr and Pearson, 1999; Daniels et al., 1995; Narasimhan and Nair, 2005; Zhou and Benton, 2007).

The globalization of market economies, facilitated by developments in information and communications technology, has led to a shift towards collaboration and partnership as the models for commercial success. The knowledge economy and the strategic importance of information-based organizations further demand a more trust-based approach to innovation and competitiveness (Maclean, 1994; Gold, 1994). This is exemplified particularly by Keen et al (1999), and various papers by Snowden (2000). This transformation to collaborative business models both in construction, e-business and more generally, has been found to require a change of culture, the adoption of new working practices and an ability to respond more quickly to change and the needs of customers or clients. The role and value of trust therefore is in facilitating this new regime both within and between organizations and in the marketplace in general. In the digital economy, the incidence of trust may benefit the establishment and sustainability of B2B relationships. Conversely, the application of IT-based solutions may facilitate the adoption of modern business practices, for example through the enhancement of knowledge sharing or more effective exploitation of competitive advantage. This is exemplified in the European

Commission's statements on technology transfer and innovation (see EC, 2001; Day, 1993; Barlow & Jashapara, 1998). The use of the term 'trust' may therefore be deceptive, but this is not to argue that examining the idea of trust in commercial relationships is inappropriate. On the contrary, the impact of E-Commerce exposes a range of issues that previously had been ignored, and the bases and prerequisites for exchange are central ones. It is even more critical when the exchange relationship is not immediate, and still more so when it does not centre on a physical item. Thus, there are particular facets of trust that emerge in the context of electronic markets and on-line transactions that are different from more traditional approaches. The need for security and reliability of IT systems to protect confidentiality between both B2B (such as new products or research) and customer to business [C2B] relationships (such as personal information and credit card details) are significant examples

The commitment in turn depends on the importance and the attainability of the goal for the individual commitment giver as well as the self-efficacy to accept feedback that helps to set and perform goals depends on whether or not goals are assigned or self-set. Hinsz (1995) summarize that goal commitment is assured if individuals feel somehow involved in the selection of assigned goals or if it is ensured that self-set goals are specific and challenging and e. g. Locke (1996) and Locke and Latham (2006) explain that assigning goals without explanation result in less commitment. Thus, goal commitment is important link goal and behavior (Klein et al., 2001). Besides, when implementing a goal setting and tracking exercise it needs to be considered that the process is influenced by past experience and affected by direction, persistence, effort, and training to not fall back to old habits (Locke 1996). With the integration of IT teams are typically responsible for developing, operating, and maintaining integrations between the company's IT systems as well as with 3rd party

systems and services, thus achieving commitment. While the term "digitize commitment "refers to the implementation of IT to code and transfer information in new ways, the term "digitalization" concerns the transformation of whole industries when exchanges and operations are digitized. In a business relationship, there is the issue of implementing and using IT because it requires large-scale investment in technology-based systems and personnel skills (Makkonen and Vuori, 2014; Ekman et al., 2015; Lindh, Rovira and Nordman, 2017). Such investments are interpreted in terms of relationship behavior, which suggests a commitment to IT. (Locke 1996). Therefore, Locke (1996) defines goal commitment as “the degree to which the person is genuinely attached to and determined to reach the goals.” This in turn working toward common goals helps create an overall sense of purpose and meaning within a team. Furthermore, it ensures everyone is on the same page. A company's synergy is crucial to its growth and ability to collaborate. In the long run, internal synergy supports an organization run smoothly and sustaining itself Makkonen and Vuori (2014). Teamwork refers to the collaboration and cooperation between individuals towards a common goal. It involves sharing knowledge and resources, providing support and feedback, and working towards a shared vision. Effective teamwork requires open communication, trust, and mutual respect; Makkonen and Vuori (2014).

2.8 Summary of the literature Gaps

From the reviewed literature, there is evidence of some existing research gaps from the existing literature and empirical studies that were done by other researchers on buyer supplier relationship management, by Wachira (2013), Mburu (2012), Mutiso and Ochiri, 2019; Korir Loice, 2015; Grace and George, 2014; Abdullahi Abdi Mohamed; 2017; Geoffrey and Anaya, 2019; Bwana and Muturi, 2018; Mburugu and

Senelwa, 2019; Momanyi and Paul, 2018; Kepher et al., 2015; Beatrice and Mulyungi, 2018; Murugi and Shalle, 2016; Olusanya, 2018) concentrated more on supplier relationship management on firm performance. They dwell more on factors contributing to successful buyer supplier relationship and did little on the effect of the relationship on the performance of the buying firms. Other researchers on literature have also examined the moderating role of supplier relationship management on firm performance (Matunga et al., 2021; Ngugi et al., 2021; Iteba, 2017). This literature adopted a different moderating role in the study. Matunga et al., (2021) use monitoring and evaluation as the moderating role in the relationship between supplier relationship management and the implementation level of public procurement regulations. Similarly, Iteba (2017) adopted customer relationship management and supplier relationship management as the moderation role to investigate the relationship between the dependent variable (electronic data interchange, supplier training, and supplier training) and the independent variable (firm performance). The researcher (i.e., Khaing, 2019) used trust as the mediating variable to determine the relationship between the dependent (buyer-supplier partnership, communication, and commitment to supplier) and the independent variable (firm performance).

Eventually, only a little study examined the moderating role of supplier relationship management on firm performance. Amoako-Gymapo et al., 2019) discuss a moderated mediation analysis of supplier relationship management's flexibility capability and ownership structure on firm performance. Subsequently, most past studies have investigated or concentrated on the direct, moderating, and mediating role of SRM on firm performance. Still, few studies (i.e., Amoako-Gymapo et al., 2019) have focused on the mediating moderating role of SRM on firm performance. The linkage between buyer-supplier relationship trait, and the part they play on the

supplier performance are limited and the current research seeks to fill that particular gap. Moreover, the studies were in the manufacturing industry and not in retail sector like supermarkets. For this reason, the researcher felt the need for adopting moderating role of information technology on exploring the buyer supplier relationship traits on supplier performance among supermarkets in Uasin Gishu County, Kenya.

2.9 The Conceptual Framework

Independent Variable Moderating Variable Dependent variable

Buyer supplier relationship

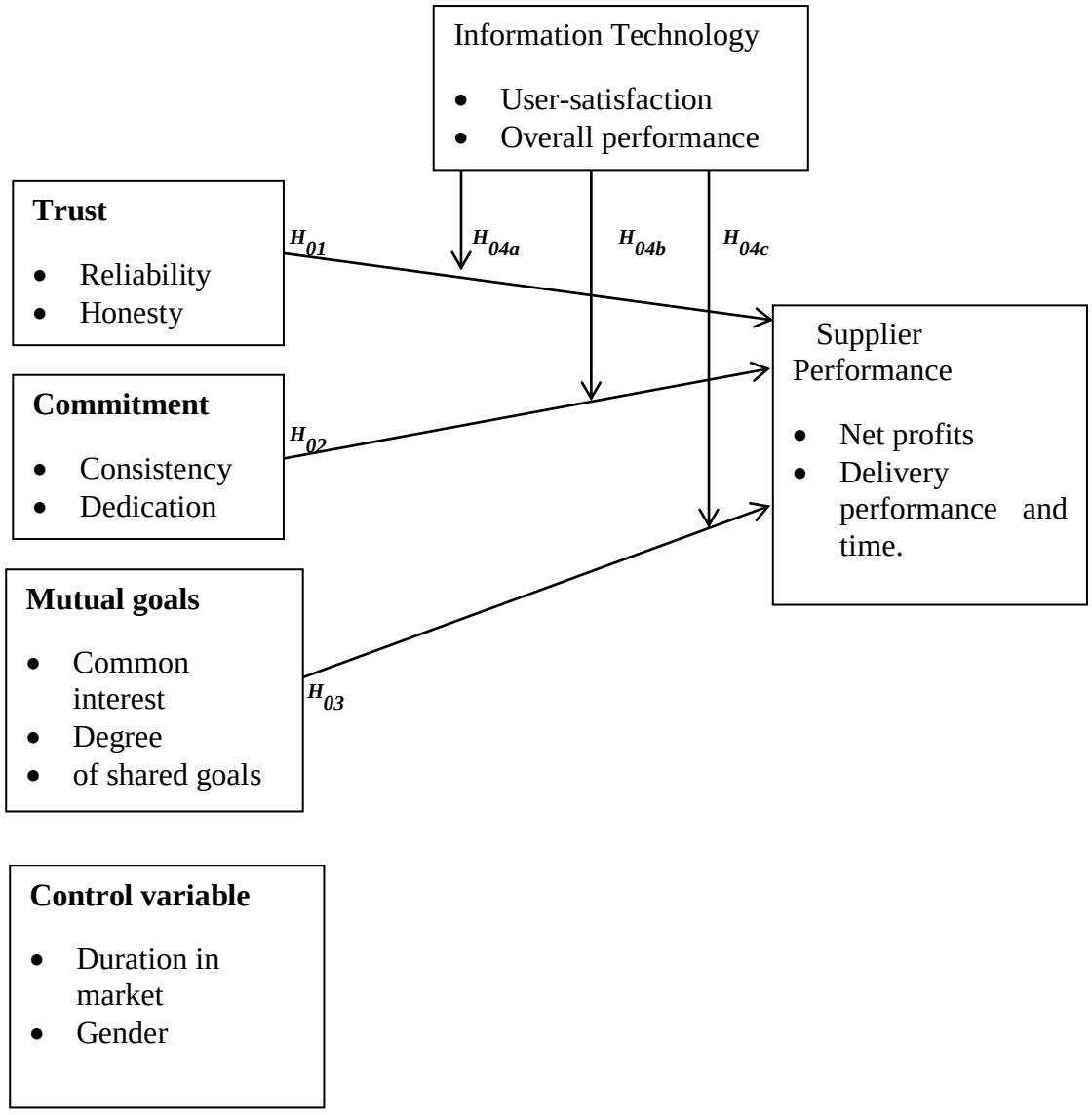

Figure 2.1: Conceptual Framework

Source: Researcher, 2022

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter presented the design and the methodology that was used to test the hypotheses that were developed. It discussed the research design, the study area, the target population, description of the sample size and sampling procedures, data collection instrument, pilot testing, validity and reliability of the research instrument, data analysis, and finally ethical consideration.

3.1 Research Design

This study adopted an explanatory research design. Explanatory research design was chosen as the most suitable method for this study because of the need to gain an understanding of the broader contexts of the relationships among the research variables. Explanatory research is used for understanding phenomenon in terms of likely causes. This type of research was used to measure what impact a specific change would have on existing norms and assumptions. Explanatory research implies that the research in question is intended to explain, rather than simply to describe, the phenomenon studied (Maxwell & Mittapalli, 2008). Most social scientists seek causal explanations that reflect tests of hypotheses. Causal effect occurs when variation in one phenomenon, the dependent variable (Somekh & Lewin, 2005).

3.2 The Study Area

The study sought to investigate in depth the moderating effect of IT between buyer-seller relationship and supplier performance in supermarkets and in Uasin Gishu County, Kenya. The physical area of this study was Uasin Gishu County, Eldoret being the fifth largest city in Kenya, most populated urban area, and it is currently the fastest growing town in Kenya with 475,716 people according to 2019 National

Census. The town is home to many retail stores, supermarket chains and various malls. As evidenced with high growth, population, modern buildings, this serves as encouragement to investors. Supermarkets are centralized in the city and widely spread across six sub counties, thus form base area for the study as both unit of analysis and unit of observation is accessed. Therefore, considered providing a most important and appropriate part, for the study since they deal with suppliers and they have embraced technology.

3.3 The Target Population

The population refers to group of firms, individual or study subjects with the same similarities and which form part of the study in a particular survey. (Kerlinger, 2003). The target population of 468 was drawn from supermarkets in Uasin Gishu County, as registered in the ministry of Trade and industrialization, Uasin Gishu County 2023). The sole proprietors, store managers and purchasing managers of these supermarkets were targeted as the respondents for study, because they were in better place to give information and normally deal with potential suppliers.

Table 3.1: Target Population

Sub county	Number of supermarkets	Percentage
Ainabkoi	68	15%
Moiben	79	17%
Turbo	85	18%
Kapseret	74	16%
Kesses	66	14%
Soy	92	20%
Total	**468**	**100%**

Source: (The ministry of Trade and industrialization, Uasin Gishu County 2021).

3.4 Sampling Size

Sample size refers to a small number of an entire target population. From the target population of 468 supermarkets, Yamane (1973) sample size formula was used to

select a sample size of 215 supermarkets as shown below;

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

Where

n is the sample size required

N is the population size =468

e is the level of precision =0.05

n =468/ (1+468*0.05^2)

n =216

Table 3.2: Sample Size

Sub county	Proportion	Sample size
Ainabkoi	68/468*216	31
Moiben	79/468*216	36
Turbo	85/468*216	39
Kapseret	74/468*216	20
Kesses	66/468*216	30
Soy	92/468*216	42
Total	468/468*216	216

Source: (Researcher, 2021)

3.5 Sampling Design and Procedures

A sample of supermarkets was chosen from the entire population for the study within Uasin Gishu County. The study adopted both stratified and simple random sampling methods. Stratified random sampling was adopted to select supermarkets across six sub counties of uasin Gishu County. Stratified random sampling involves the division of a population into smaller groups, known as strata. In stratified random sampling, the strata are formed based on members' shared attributes or characteristics (Etikan & Bala, 2017). This method provides greater in precision and often requires a smaller

sample, which saves money and time. The study adopted the simple random sampling method to select the study sample; Simple random sampling is suitable for selecting a sample from a large population. In simple random sampling, each member of the population is equally likely to be chosen as part of the sample. The logic behind simple random sampling is that it removes bias from the selection procedure and should result in representative samples (Sharma, 2017).

Stratified random sampling is a method of sampling that involves the division of a population into smaller sub-groups known as strata. In stratified random sampling or stratification, the strata are formed based on members' shared attributes or characteristics. Stratified random sampling allows researchers to obtain a sample population that best represents the studied population. Stratified random sampling involves dividing the entire population into homogeneous groups called strata. Stratified random sampling differs from simple random sampling, which involves selecting data from an entire population so that each possible sample is equally likely to appear in the sample.

3.6 Types of Data, Sources and Collection Instruments

3.6.1 Types and Sources of data

Primary data was collected using questionnaires. The main advantage of using primary data is that data were collected specifically for this study (Bryman & Cramer, 2012). Primary data was collected by distributing questionnaire to collect primary data from the stores managers, purchasing managers and sole proprietors who were respondents.

3.6.2 Data collection instruments

This study used comprehensive close ended questionnaires as a tool for data collection and the questionnaires consisted of only closed ended questionnaire because they are easier to administer and analyze since each item is followed by alternative answer. The nature of the questionnaires was adopted. Also, questionnaire was made short and clear with specific end goal to minimize the respondents time (Leeds, 2005). The development of questionnaire in this study will be divided into a number of steps and been guided by the objectives of the study (Aaker, Kumar & Day 1998). The constructions of questionnaires covered the respondent's general information (Gender, time of operation, position held, and working experience) in section A. Section B captured questions on effect of buyer-supplier relationships traits (trust, commitment, mutual goals) on supplier performance of supermarkets in Uasin Gishu County. Also, it captured questions on both dependent (supplier performance) and independent variables (information technology) on supermarkets in Uasin Gishu County. Questionnaires were preferred in this study because they are very economical in terms of time, energy, and finances. The structured questions were used to save money and time and facilitate a more accessible analysis as they are immediately usable. The questionnaire was divided into two sections that included demographic information; the rest covered the three independent, moderator variable and dependent variables. The study adopted Likert scale questions. The Likert scale is a question that contains five response options. The choices range from strongly agree to strongly disagree so the researcher can get a holistic view of people's opinions and their level of agreement (Roopa & Rani, 2012).

3.6.3 Data Measurement

Research instruments used in this study were developed using measures from previous studies. The study adopted Likert scale questions. Likert scale is a question which contains 5 response options. A Closed ended questionnaire was used to provide ordinal data (which can be ranked). This involved use of a detailed 5- point Likert scale structured questionnaire; this was adopted for the purpose of the questionnaire. Labeled 1 to 5 as indicated 1- Strongly Agree, 2 -Agree, 3- Neutral 4 –Disagree, 5 - Strongly Disagree with each variable with three items. The researcher transformed data from the Likert scale to numeric data using SPSS software. To run the regression, a transformation of data for each objective was done based on the objective items/questions. The respondent was to indicate the extent to which he or she agree or disagree with statements (Augustin, 2020).

Table 3.3 Data Measurements

Type of variable	Variable	Measurement of Variable	Measurement scale	Authors (Citations)
Independent Variable	Trust	• Reliability • Honesty.	5-point Likert scale	Petersen, Ragatz and Monczka (2005)
Independent Variable	Commitment	• Consistency • Dedication	5-point Likert scale	(Rhoades, Stanley, & Markman,2006; Stanley, 1986)
Independent Variable	Mutual goals	• Common goals. • Degree of shared goals.	5-point Likert scale	Wilson, Soni and O'Keeffe (1994) Heide and John (1992)
Dependant Variable	Supplier Performance	• Net-profits • Delivery performance	5-point Likert scale	Kumar et al., (2006) Gagliano et al., (2014)
Moderating Variable	Information technology	• Use-satisfaction • Overall quality service	5-point Likert scale	Remenyi and money (2019), Gupta et al., 2011 Delone and McLean (2003)
Control Variable	Demographic information	• Gender • Age of the business		

3.7 Data Collection Procedure

The researcher first obtained clearance from Moi University Graduate School. This allowed the researcher to apply for a research permit from the National Council of Science, Technology, and Innovation (NACOSTI) before entering the field. The researcher also wrote a letter of transmittal of data collection instruments to individualrespondents. The questionnaires were hand-delivered to the respondents by the researcher. Follow-ups were made after two days to monitor the respondents'

progress in filling out the questionnaires. The data collection exercise took approximately three weeks.

3.8 Pilot Testing

A pilot study was conducted in Iten town to check for the validity and reliability of research instruments. To discover if there were any errors in the instrument and to train the research team, a pilot test was carried out before the final and actual data collection process. All necessary changes were made and questions in the questionnaire revised appropriately. The pilot test ensured that the questions asked to the respondents (sole proprietors, purchasing manager and stores manager) were easily understood by them and that they could respond to them in the shortest time possible due to the nature of their work (Kannan & Gowri0, 2015). A number of two supermarkets from a different six sub counties of uasin gishu county, were identified ones pre-tested the questionnaire to test the appropriateness of the questions and their comprehension. Pilot studies are important in detecting ambiguity, evaluating the type of answers given to determine whether they help in achieving the laid down objectives (Robson, 2002). Mugenda (2012) reported that a pre-test sample should be between 1% and 10% depending on the sample size. The respondents who participated in the pilot study were excluded in the final study. The findings from the pilot study were used to refine the questionnaire for final administration.

3.8.1 Reliability of the research instrument

According to Kaul (2005), reliability is the consistency of measurement, or the degree to which an instrument gives the same results each time it is used on the same subjects under the same condition. In this study the reliability of the research instrument will be measured by measuring the internal consistency of the responses. The Cronbach's

Alpha technique will be used to measure the internal consistency technique, where alpha values range from 0 to 1, with the reliability increasing as the alpha value increases. The commonly used coefficient of reliability is 0.6 to 0.7, with greater than or equal to 0.8 indicating a good reliability (Kothari, 2014). In this study, a Cronbach's Alpha of 0.7 and above was accepted (Fraenkel and Wallen, 2000). To ensure reliability, the questionnaires were pre-tested on a pilot scale through selected respondents outside the study area. Reliability in every research gives the same results on frequent assessment from and experiment or test by using similar methodology (Joppe, 2006). Reliability in research is influenced by the degree of error (Creswell, 2003). As random error increases, reliability decreases (Mugenda, 2012). In order for results to be usable in further research steps they must be reliable and valid. The questionnaires were subjected to overall reliability analysis of internal consistency.

3.8.2 Validity of the research instrument

Validity of Research Instruments Validity is the degree to which the test measures what it is supposed to measure. The questionnaire should be in line with the definition used in the research. When a measure is reliable and valid the results can be correctly utilized and understood (Griffith & Elstak, 2013). Validity of the instrument was established by reviewing the items and taking care of construct validity and content validity. For construct validity, the questionnaire was divided into several sections to ensure that each section assessed information for a specific objective, and also to ensure that the same closely ties to the conceptual framework of this study. On the basis of the evaluation, the instrument was adjusted appropriately before subjecting it to the final data collection exercise. The review comments were used to ensure that content validity was enhanced. This was acquired with help and guidance of supervisors who checked the instrument to identify and make any changes as

emphasized by Cooper and Schindler (2003). Factor analysis was used to test construct validity. For construct validity, the questionnaire was divided into several sections to ensure that each section assessed information for a specific objective, and also to ensure that the same closely ties to the conceptual framework of this study. On the basis of the evaluation, the instrument was adjusted appropriately before subjecting it to the final data collection exercise. The review comments were used to ensure that content validity was enhanced. Factor analysis was used to test construct validity.

3.9 Data Analysis and Presentations

Data analysis process refers to the packaging the collected data and putting it in an orderly way, and structuring the core elements in a way that the results of the data collected can be efficiently and easily communicated (Creswell, 2013). After data collection, data was cleaned, coded, and entered into the computer and analyzed and were entered by using SPSS (statistical package for social sciences, version 26.

3.9.1 Descriptive Analysis

Quantitative data collected using the questionnaires for all the three objectives; effect of trust on supplier performance of supermarkets, effect of commitment on supplier performance of supermarkets effect of mutual goal on supplier performance of supermarkets in Uasin Gishu County, Data were analysed by use of descriptive statistics (mean, standard deviation, Skewness and kurtosis) for all the observations. ANOVA was used to compare the means of the quotas. The analysis showed that all variables have good measurement properties so the Pearson correlations between the information technology, buyer-supplier and supplier performance was computed.

Table 3.3 Summary of Data Analysis Techniques

Objective	Independent Variable	Dependent Variable	Analysis Method	Thresholds for interpretation
To determine the effect of trust on supplier performance of supermarkets.	Trust	Supplier Performance	Descriptive statistics Regression Analysis and Correlation	Likert scale ranging from 1-5 p-value <0.00
To investigate the effect of commitment on supplier performance of supermarkets.	Commitment	Supplier Performance	*Descriptive statistics Regression Analysis and Correlation*	Likert scale ranging from 1-5 p-value <0.00
To establish the effect of mutual goals on supplier performance of supermarkets.	Mutual goals	Supplier Performance	*Descriptive statistics Regression Analysis and Correlation*	Likert scale ranging from 1-5 p-value <0.00
To determine the moderating effect of information technology on the relationship between trust, commitment and mutual goals and supplier performance of supermarkets.	Information technology use on the relationship between trust, commitment and mutual goals.	Supplier Performance	Descriptive statistics Regression Analysis and Correlation	Likert scale ranging from 1-5 p-value <0.00

3.9.2 Inferential Analysis

Inferential analysis was done using correlation and regression analysis.

(i) Correlation Analysis

The main purpose of conducting a correlation analysis was to measure the strength of association between two variables (Keller, 2005:602). Various methods of correlation

analysis exist and the method to be used in a study depends on the nature of data of that particular study at hand.

The Pearson Product Moment correlation method is a parametric type of statistical test and it is applied to populations with a normal distribution (Keller, 2005:602). The Spearman Rank Order correlation method is a non-parametric type of test and is applied to a data set of which the population is not normally distributed or when considering severely skewed data.

The results from the descriptive statistics should reveal the nature of the data, whether the data are parametric or non-parametric. It will, therefore, indicate which correlation method should be used in the study. The study will conduct a correlation analysis to establish the strength of the relationship between the independent variable and the dependent variable for all the study objectives; effect of trust on supplier performance of supermarkets, effect of commitment on supplier performance of supermarkets, effect of mutual goal on supplier performance of supermarkets in Uasin Gishu county. As well as moderating variable of the objectives, this was done in order to know if there was existence of a correlation between the three study variables with dependent variable as well as the moderating variable. Correlation value of 0 shows that there was no relationship between the dependent and the independent variables on the other hand a correlation of ±1.0 means there is a perfect positive or negative relationship (Hair et al., 2010). The values will be interpreted between 0 (no relationship) and 1.0 (perfect relationship). The relationship will be considered weak when $r = \pm 0.1$ to ± 0.29, while the relationship will be considered medium when $r = \pm 0.3$ to ± 0.49, and when $r = \pm 0.5$ and above, the relationship will be considered strong.

(ii) Regression Analysis;

In testing the study hypotheses, the study will use multiple regression analysis for test statistics and interpretation for the decision. This will involve regressing the dependent variable against the three dependent variables. The decision rule will be that if calculate value will be less than 0.05 the null hypothesis will be rejected and the conclusion will be made on the alternative hypothesis. Moderating effect will be tested using hierarchical moderating regression analysis. Ordinary least square (OLS) equation and hierarchical moderating regression analysis equations will be created involving scores for independent variable y, scores for second predictor x and scores for third predictor variable z (Aquinis & Gottfredson, 2018).

To determine the presence of moderating effect of information technology on the relationship between buyer-supplier relationship traits and supplier performance of supermarkets in Uasin Gishu county Kenya. Hierarchical moderating linear regression analysis will be used where by OLS models will be compared with the HMRA models (Tutz, 2021). In testing the moderation, the interaction effect between x and z is checked and whether or not such an effect is significant in predicting Y. The hierarchical model calls for a determination of R^2 and the partial coefficients of each variable at the point at which it is added to the equation. The hierarchical MRR analysis the analyst entered the IVs in the specified order and determining R^2 after each addition in order to check incremental variance. Moderation testing steps before introducing model one and model two;

i. Standardizing all variables
ii. Fitting a regression model (block 1) Y from predictor variables x

iii. Fitting a regression model (block 2) predicting the outcome variable Y from both the predictor variable x and the moderator variable z. Both effects as well as the model in general (R^2) should be significant.

iv. Add the interaction effect to the previous model one by one and check for a significant R^2 change as well as a significant effect by the new interaction term and the coefficient of the interaction should be different from zero. If both are significant, then moderation is occurring.

Equation 1: Regression the independent variables on dependent variables.

Ordinary least square Equation

$$Y= \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \varepsilon$$

Moderated regression model

$$Y = a + c + e \text{ ……..……..……...(i)}$$

$$Y = a + c + \beta1X1+ \beta2X2 + \beta3X3 + \varepsilon1\text{…….…… (ii)}$$

$$Y = a + c + \beta1X1 + \beta2X2 + \beta3X3 +\beta4M + \varepsilon2\text{.....(iii)}$$

$$Y = a + c + \beta1X1 + \beta2X2 + \beta3X3 +\beta4M + \beta5M\bullet X1+ \varepsilon3 \text{…….....(iv)}$$

$$Y = a + c+ \beta1X1 + \beta2X2 + \beta3X3 + \beta4M + \beta5M \bullet X1+ \beta6M\bullet X2+ \varepsilon4\text{……(v)}$$

$$Y = a + c+ \beta1X1 + \beta2X2 + \beta3X3 + \beta4M + \beta5M\bullet X1 + \beta6M\bullet X2+ \beta7M\bullet X3+ \varepsilon4\text{…...(vi)}$$

$$Y= a+ c + \beta_0+\beta_1X_1+ \beta_2X_2+\beta_3X_3+\beta_4X_1\bullet M+ \beta_5X_2\bullet M_+ \beta_6X_3\bullet M_+ \varepsilon4\text{……..……. (vii)}$$

Whereby:

Y represents Supplier performance of supermarkets

β_0 represents constant

β_i represents beta coefficients

X_1 represents trust

X_2 represents commitment

X_3 represents mutual goals M represents information technology

ε represents error term

3.9.3 Regression Assumptions

This study will use regression analysis. The data will therefore be checked for violations of assumptions of normality and linearity, multi collinearity and heteroscedasticity.

Testing for the Normality

Normally distributed data is distributed symmetrically around the Centre of all scores and is characterized by a bell-shaped curve (Ong & Puteh, 2017). Non-normal data has characteristics of skewness and kurtosis. Normality was determined through assessment of the two common statistics; the commonly used to measure normality are Skewness and Kurtosis. According to Cain, Zhang and Yuan (2017), a skewness level with absolute values greater than three is regarded as extreme, and a kurtosis level with absolute values greater than eight is described as extreme. Violation of the acceptable level of skewness and that of kurtosis suggests a problem that should be addressed before performing any inferential statistical analysis.

Testing for the Assumption of Linearity

Linearity is the assumption that a straight-line relationship exists between two variables (Tabachnick & Fidell, 2013). Testing for linearity was deemed necessary since linearity is an assumption of regression which must be satisfied. Pearson's correlation coefficients were used to test linearity. Results shown in Table 4.15

revealed that there were significance positive correlations between each of the information technology on buyer-supplier relationship and on supplier performance. Linearity requirement was therefore satisfied.

Testing for Homoscedasticity

Homoscedasticity applies to multiple regressions and as noted by Tabachnick and Fidell, (2013), assumes uniform variability in scores for dependent variable in relation to the independent variables. Testing for homoscedasticity was necessitated by the use of hierarchical multiple regression as the principal inferential statistical approach. Homoscedasticity also referred to as homogeneity of variance or uniformity of variance was tested using levene's test of equality of variances of information technology on buyer-supplier relationship and on supplier performance.

Testing for the Multi collinearity

Multi collinearity is the linear inter-correlation among independent variables in the study which will examines the level of correlation between independent variables as well as correlation coefficient among variables, displayed in SPSS regression output. Multi collinearity increases the standard errors of the coefficients and thus makes some variables statistically not significant while they should otherwise be significant (Osborne and Waters, 2002). Multi collinearity will be tested using (variance inflation factor). If VIF >5 but less than 10, this is an indication of moderate presence of multi collinearity. If VIF ≥10, this indicates high multi collinearity.

3.10 Ethical Considerations

The researcher sort permission from Moi University Graduate School and This allowed the researcher to apply for a research permit from the National Commission for Science, Technology and Innovation (NACOSTI) before proceeding for field

research. Before an individual becomes a respondent, he/she was notified of The researcher wrote a letter of transmittal of data collection instruments to individual respondents by notifying the aims, methods and anticipated benefits of the research and the confidential nature of his/her replies. Creswell (2003) stated that the researcher has an obligation to respect the rights, needs, values and desires of the informants. The questionnaires were hand-delivered to the respondents by the researcher. Follow-ups were made after two days to monitor the respondents' progress in filling out the questionnaires. The data collection exercise took approximately two weeks. Finally, high standards of integrity were maintained throughout the study so as to guarantee the accuracy of the data and, at the same time, respect participants personality, rights, wishes, beliefs, consent and freedom (Tharenou, Donohue & cooper 2007).

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, AND INTERPRETATION

4.0 Introduction

This chapter summarizes the study's analysis and findings in line with the research methodology. The results were presented on buyer-supplier relationship trait, information technology and supplier performance among supermarkets in uasin gishu county Kenya.

4.1 Response Rate

The study's responses obtained from the study are summarized in Table 4.1 below.

Table 4.1 Response rate

Response	Frequency	Percentage (%)
Responded	198	92%
Not Responded	18	8%
TOTAL	**216**	**100%**

Source: Research Data (2022)

4.2 Data Preparation and Screening

Collected data was first screened for response rates. This is because it was necessary to establish that the response rate met the threshold adequate for generalizations of the study findings. It was also necessary to ensure that data that was invalid and any data that represented outliers were removed before analysis. This activity ensured that the data used for subsequent statistical investigationswas error-free and could provide valuable inferences for the study. As described in sections 4.2.1 and 4.2.2, data screening and cleaning were performed to check for missing values and deal with outliers.

4.2.1 Missing Value and Treatment

The study targeted a sample of 216 respondents. However, out of 216 questionnaires distributed 198 respondents completely filled in and returned the questionnaires, this represented 92% response rate. Mugenda and Mugenda (2003) postulates that questionnaires having a response rate of 50% are adequate for analysis and a response rate of 70% is very good. Therefore 92% is excellent. This high response rate was realized because the target respondents were staffs who are based at the respective supermarkets. The researcher also personally delivered the questionnaires, explained to the management staff the utility of the questionnaires and collected them after a reminder.

A missing value in a dataset is the absence of data point. When a respondent fails to answer a question, there is a data entry problem on the part of the researcher, or there are errors in the data collection process. The collected data was analyzed for frequency, and 18 cases were discovered to have a value that were less than 10% and deemed usable, so missing values were ignored, as recommended by (Hair et al., 2010). The data contained missing data at random (MAR). The option has fewer convergence problems: the factor loading estimates are relatively free of bias, and the option is simple to implement using any statistical programme (Hair, 2010). However, 8% of the respondents were reluctant to respond to fill the questionnaire this was due to reasons like, the respondent was not available to fill them in at the required time and even after subsequent follow-up there were no positive reactions from them.

4.2.2 Outliers Detection and Treatment

Outliers are data points that appear anomalous or outside the expected range of values. Outliers may represent errors or data unrelated to the rest of the data set (Zhang, Meratnia & Havinga, 2010). This study used the Mahalanobis D2 measure to identify and deal with multivariate outliers, as Tabachnick and Fidell (2018) recommended. Handling multivariate outliers would also take care of univariate outliers. However, treating univariate outliers does not always address multivariate outliers (Hairet al., 2010). As a result, Mahalanobis D2 was calculated in SPSS using linear regression methods, followed by the Chi-square value. Given the four variables, three represent the degree of freedom in the chi-square Table with p 0.001, Fidell and Tabachnick (2018). Any case with a Mahalanobis D2 probability less than 0.001 is a multivariate outlier and should be removed. There were no multivariate outliers because no values of the new probability variable were less than.001.

4.3 Pilot Study Results

The study conducted a pilot study to test the reliability and validity of the research instrument, and the pilot study used 21 respondents from Iten town, 10% of the total sample size. A pilot test is a small-scale kind of research project that collects data from respondents similar to those that will be used in the future survey. Pilot test is conducted to detect weaknesses in design and instrumentation and to provide proxy data for selection of a probability sample (Cooper & Schindler, 2011). It assists the research in determining if there are flaws, limitations or other weaknesses within the questionnaire design and allows for necessary revisions to the questionnaire prior to the implementation of the study. Pilot tests conducted included reliability test. Reliability Test Reliability according to Mugenda (2012) is a measure of the desired research instrument to yield consistent results after repeated trials. It is carried out

through the undertaking of a pilot test. In the study, reliability study was done on all items, which were also validated by component factor analysis. Cronbach (2003) noted that the more consistent an instrument is, the more the reliable the measures and noted that the coefficient ranges from 0 to 1. Cooper and Schindler, (2011) accepted an alpha of 0.8 and above while Mugenda (2013) noted an alpha of 0.6 and below to be poor. The Cronbach's Alpha is a reliability measure which shows how well the items in the instrument are correlated to each other, while factor analysis was conducted in order to reduce the data to a meaningful and manageable set of factors.

4.3.1 Scale Reliability for the Study

The reliability of the questionnaire was tested using Cronbach alpha (α) measurements for all the study variables. The results are presented in Table 4.2 below.

Table 4.2: Reliability test results for the study variables

Variable	Cronbach's Alpha	No. of Items
Trust	.796	6
Commitment	.736	6
Mutual goals	.705	6
Information technology	.726	6
Supplier performance	.702	6

Source: Research Data (2023)

The reliability coefficients for the independent variables (buyer- supplier relationship) are: trust 0.796, Commitment (0.736) and Mutual goals (0.705). The alpha coefficient for the combined Information Technology was .726 Reliability coefficients for the combined measures of supplier performance (dependent variable) was .702 Reliability coefficients for all the variables were above 0.7, which concurs with

suggestions made by (Kothari, 2014). Thus, the reliability results for all the study variables indicated that the data collection instrument was reliable.

4.3.2 Validity of the Instruments

The validity of this research instrument was ascertained through the opinion of expertsand during the pilot study. Any ambiguity or non-clarity in the questionnaire item has been cleared before the questionnaires are taken to the field for data collection. Also, factor analysis was used to test the validity of research instruments. Factor analysis results are presented in Tables 4.3 and 4.4.

To asses construct validity for buyer- supplier relationship traits; factor analysis was conducted on, six items from trust, six items from commitment and six items from mutual goals. Using the principal components method (pcm) with verimax rotation. Three items explained 67.435% of the variance. Factor loadings ranged from on an average value between 0.5 and 0.6 is acceptable for sample sizes between 100 and 200 as suggested (MacCallum et al., 1999). And KMO measure of sampling adequacy was found to be 0.725 which is above the threshold of 0.5 (Field, 2009). The Bartletts' test statistic confirms the appropriateness of the factor analysis for the data set. The sphericity is significant in this study with Chi-square ($\chi 2$)=1446.643, $p<0.0001$). Table 4.3 results shows that the extracted five components had Eigen values greater than 1 and collectively account for 67.435% of the variance in the original data. Components with Eigen values greater than 1 should be retained. Therefore, the Kaiser-Meyer- Olkin (KMO) value of 0.725 and significance of Bartletts' test statistic confirm the appropriateness of the factor analysis. This captured in the Table 4.3 and Table 4.4 below.

Table 4.3: KMO and Barlett's Test for suitability of FA

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.725
Bartlett's Test of Sphericity	Approx. Chi-Square	1446.643
	df	171
	Sig.	.0001

Source: Research Data (2022)

The component matrix results (Table 4.4) shows the correlation of each item with the component. This result shows that five components were extracted. Component one comprising of Trust and it explains most variance (15.779%) in the original data. Component two comprise three items of Commitment and it accounts for 14.489% of the original data. Similarly, component three comprised mutual goals and accounts 14.383% variance and supplier performance accounts 13.316 % Components information technology accounts 67.435%. (Table 4.4).

Table 4.4: FA Variance explained

	Initial Eigenvalues			Rotation Sums of Squared Loadings		
Component	**Total**	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**
1	6.126	32.243	32.243	2.998	15.779	15.779
2	2.338	12.305	44.548	2.753	14.489	30.269
3	1.762	9.275	53.823	2.733	14.383	44.652
4	1.496	7.873	61.696	2.530	13.316	57.967
5	1.090	5.739	67.435	1.799	9.467	67.435
6	.946	4.978	72.413			
7	.854	4.497	76.910			
8	.718	3.781	80.691			
9	.614	3.233	83.923			
10	.560	2.946	86.870			
11	.463	2.435	89.305			
12	.422	2.222	91.526			
13	.350	1.840	93.366			
14	.306	1.612	94.979			
15	.297	1.564	96.543			
16	.232	1.220	97.763			
17	.198	1.040	98.802			
18	.128	.671	99.474			

Source: Research Data (2022)

Table 4.5: FA; Rotated Component Matrix

	Component				
Code	1	2	3	4	5
Trust1	.755				
Trust2	.749				
Trust 3	.710				
Trust 4	.661				
Commitment 1		.826			
Commitment 2		.771			
Commitment 3		.708			
Mutual goals 1			.826		
Mutual goals 2			.717		
Mutual goals 3			.705		
Mutual goals 5			.586		
Information Technology 1				.826	
Information Technology 2				.770	
Information Technology 3				.720	
Supplier Per3					.787
Supplier Perf1					.676
Reliability Results	.804	.2	.774	.749	.742

Source: Research Data (2022)

4.3.3 Factor Analysis for Information Technology

Factor extractions involve determining the smallest number of factors that can be used to best representation interaction among the set of variables. Therefore, the construct validity for the information technology was examined using the principal components method (PCM) with verimax rotation. The factor loading for information technology were 0.809. 0.823 and 0.849. One (1) item explained 68.65% of the variance. Those for state of information technology were 0.845 and 0.936, with on item explaining 78.50% of the variance. The KMO test of sphericity indicated measures for in information technology were both above the threshold of 0.5 (Field, 2005), being 0.693 and 0.668 for respectively. The Bartlett's test of sphericity for both these variables were also significant with x^2 of 312.254 and 619.158 (P-value <= 0.000) for information technology information shown respectively. Therefore, factor analysis

for the data in respect of these variables was appropriate as shown in the table 4.6 below.

Table 4.6: Factor Analysis for Information Technology

Component	Factor Loadings	Initial Eigen values		Rotations sums of squared Loadings		
Information Technology		Total	% of variance	Cumulative%	Total	% of cumulative variance %
1	.809	2059	68.650	68.649	2059	68.650
2	.823	522	16.360	85.021		
3	.849	421	13.890	100.00		

Kaiser- Meyer-Olkin (KMO) MSA=693 Barlett's Test for Sphericity (X^2) =312.254, sig 0.000

Information Technology							
1	846	2.355	78495	78495	2455	78495	78495
2	873	453	15.07 7	93572			
3	935	193	6428	100.00			

Kaiser-Meyer-Olkin (KMO) =668, Barlett's Test for Sphericity (x2) =619158
Extraction method principal components Analysis with Verimax Rotation
Source: Research Data (2022)

4.3.4 Factor Analysis for Supplier Performance

Factor extractions involve determining the smallest number of factors that can be used to best representation interaction among the set of variables. Construct validity for the supplier performance variables (Net profit and Delivery performance) were examined using the principal components method (PCM) with varimax rotation. The factor loading for change in net profit was 0.933. Those for delivery performance were 0.945, 0.815. The KMO measure of sampling adequacy indicated that the measure for supplier performance was above the threshold of 0.5 (Field, 2005), being 0.793. The Barlett's test of sphericity for this variable was also significant with χ^2 of 6243.880 (P-Value<0.00), hence factor analysis for the data in respect of these variables was appropriate. This information is indicated in the table 4.7 below.

Table 4.7: Factor Analysis for Supplier Performance

Component Supplier performance	Factor Loadings	Initial Eigen values Total % of variance		Rotations sums of squared Loadings Cumulative%	Total	% of cumulative variance %	
1	.933	5.863	73.284	73.283	5.853	73.244	73.284
2	.945	1.460	18.245	91.539	1.450	18.235	91.549
3	.815	.472	5.895	97.434	473	5.885	97.434

Kaiser-Meyer-Olkin (KMO) =793, Barlett's Test for Sphericity (x2) =6344 890. Sig 0000
Extraction method principal components Analysis with Verimax Rotation
Source: Research Data (2022)

4.4 Demographic Information

The study aimed to present information regarding to the general information about the respondent, as well as well as information pertaining to their supermarkets. The respondents being sole proprietors, store manager and purchasing officer, were in position to provide the answers to the questions posed in the questionnaire as the positions they held in the supermarkets placed them in full knowledge and capacity that the study sought.

Table 4.8 Demographic characteristics of respondent

Background Information	Respondent information	Frequency
Gender	Male	60 %
	Female	40%
Position held	Sole proprietor	15%
	Store manager	35%
	Purchasing officer	50%
Time of operation	Less than 5 years	10%
	6-10 years	20%
	11-15 years	40%
	0ver 16 years	30%
Years of operation	1-5 years	10%
	5-10 years	20%
	10-15 years	40%
	Over 15 years	30%

Source: Research Data (2022)

From the findings of the study, the study revealed that 60% and 40% respondents were males and females respectively. From study majority of the respondents 40% had operated in the supermarkets for 10-15 years, 30% had operated in the supermarket for over 15 years, 20% had operated in the supermarkets for 5-10 years while 10% had operated in the supermarket for 1-5 years. The study findings revealed that, majority of the respondents 50% were purchasing managers, 35% were stores managers while the remaining 15% were sole proprietors.

4.5 Descriptive Statistics for the Study Variables

The study sought information regarding the respondents' levels of agreement to the items presented for each of the study variables. To identify the aggregate patterns of agreement, descriptive statistics (mean, standard deviation, Skewness and kurtosis) were computed for all the observations. In this section, descriptive statistics were given for the dependent, moderator and independent variables. The computations have been summarized in the table against each of the variables measured.

4.5.1 Effects of Trust on supplier performance

From the findings, the study established that the respondents were in agreement that there is a high level of trust between our firm and that of our suppliers, Trust in buyer-supplier relationships results in better firm performance for our firm, Lack of trust between buyers and suppliers leads to failure of buyer -supplier relationships, Trust has strengthen the relationship between our firm and that of our suppliers, Trust levels has increased with the use of information technology between our firm and our suppliers and Through trust we have maintained long term relationship in our firm and that our suppliers with a mean of 4.2505, 4.4174, 4.3302, 4.4735, 4.4735, 4.1682 and 4.3894 respectively. The average mean was 4.3382.

The findings conquer with the study done by Noteboom (1996), Buyers and suppliers are coming together to produce mutual benefits and the relationship between them has become strategic in nature, therefore both buyer and supplier can be considered as "business partner". At this stage, trust becomes the leading actor to govern the buyer-supplier relationship. A sincere desire is required for companies to proceed in trust building activities. Trust is a condition in which each partner is convinced that the other is fully committed to the common goals. Trust provides an ease to business transactions enhance customer satisfaction and enhance employee satisfaction. Table 4.9 shows the results of the study.

Table 4.9 Descriptive analysis on Trust

Statement	**Mean**	**Std. Deviation**	**Skewness**	**kurtosis**
There is a high level of trust between our firm and that of our suppliers	4.2505	0.8749	-1435	.594
Trust in buyer-supplier relationships results in better firm performance for our firm	4.4174	0.7867	-1125	-247
Lack of trust between buyers and suppliers leads to failure of buyer - supplier relationships	4.3302	0.8120	-1.243	-525
Trust has strengthened the relationship between our firm and that of our suppliers	4.4735	07675	-1.032	-341
Trust levels has increased with the use of information technology between our firm and our suppliers	4.1682	0.7724	-1.036	-239
Through trust we have maintained long term relationship in our firm and that our suppliers	4.3894	0.7034	-1136	-562
Average mean	**4.3382**	**0.7860**		

Source: Research Data (2022)

4.5.2 Effect of Commitment on supplier performance

The study further aimed to establish the commitment and buyer -supplier relationship of the respondents who worked at the supermarkets. Table 4.10 shows the results of the study.

Table 4.10 Descriptive analysis on Commitment

Statement	Mean	Std. Deviation	Skewness	kurtosis
There is a high level of commitment between our firm and that of our suppliers	3.8816	09971	-1.333	.346
Commitment in buyer-supplier relationships results in better firm performance for our firm	4.3291	0.8599	-1.223	-239
Lack of commitment causes failure of buyer-supplier relationships	4.3084	0.8559	-1.032	-238
Commitment has strengthened the relationship between our firm and that of our suppliers	4.0529	1.0339	-1.116	-221
Commitment levels has increased with the use of information technology between our firm and our suppliers	4.3302	0.8812	-1.192	.159
Through commitment we have maintained long term relationship in our firm and that our suppliers	4.1682	0.7724	-1.245	-249
Average mean	**4.1784**	**0.9001**		

Source: Research Data (2022)

The findings of the study revealed that the respondents were in agreement that there is a high level of commitment between our firm and that of our suppliers, Commitment in buyer-supplier relationships results in better firm performance for our firm, Lack of commitment causes failure of buyer-supplier relationships, Commitment has strengthen the relationship between our firm and that of our suppliers, commitment levels has increased with the use of information technology between our firm and our suppliers and through commitment we have maintained long term relationship in our firm and that our suppliers with a mean of 3.8816, 4.3291, 4.3084, 4.0529, 4.3302

and 4.1682 respectively. The average mean was 4.1784.The findings agreed with the study done by Anderson and Weitz (1992) business partner plays an important role to maintain the ongoing relationship for long-term success .The supplier considers the relationship as a long-term partnership with loyal business partner .Therefore, it is considered to be very important for the supplier to continue business operations with the commitment of meeting or even exceeding the buying firm's needs there are three major dimensions of operationalising commitment; instrumental commitment, where an actor is constrained by the costs and inconveniences of leaving the current collaboration normative commitment, which is based on the partners 'value in the collaboration' and affective commitment which relates to a partner 'identification and involvement with the others.

4.5.3 Mutual goal on supplier performance

The study further aimed to establish the mutual goal and buyer -supplier relationship of the respondents who worked at the supermarkets. Table 4.11 shows the results of the study.

Table 4.11 Descriptive analysis for Mutual goals

Statement	Mean	STD	Skewness	kurtosis
There exist mutual goals between our company and our suppliers	3.85	0.788	-1.223	-469
Mutual goal in buyer-supplier relationships has resulted in better performance for our firm.	4.17	0.437	-1.112	-233
Low levels of mutual goals between the supplier and the buyer leads to failure or poor buyer supplier relationships	4.14	0.859	-1.025	-234
A mutual goal has strengthened the relationship between our firm and that of our suppliers.	4.26	0.681	-1.042	.436
Mutual goal has increased with the use of information technology between our firm and our suppliers	4.00	0.816	-1.324	-246
Through mutual goals we have maintained long term relationship in our firm and that our suppliers	4.04	0.681	-1.126	-612
Average mean			**3.85**	**4.0766.**

Source: Research Data (2023)

The researchers requested the respondents to indicate the extent of which Mutual goal and buyer affected supplier relationship. From study results most of respondents pointed out effectively that Mutual goal in buyer-supplier relationships has resulted in better performance for our firm, Low levels of mutual goals between the supplier and the buyer leads to failure or poor buyer supplier relationships, A mutual goal has strengthened the relationship between our firm and that of our suppliers, Mutual goals has increased with the use of information technology between our firm and our suppliers and through mutual goals we have maintained long term relationship in our firm and that our suppliers with a mean of 4.17, 4.14, 4.26, 4.00 and 4.04 respectively. Respondents also indicated that there exist mutual goals between their company and our suppliers with a mean of 3.85 and the average mean is 4.0766.

The findings agreed with the study done by Narayandas and Rangan (2004), Mutual goal plays an important role in high-value strategic relationships, where specific investments are high and contractual governance alone is not adequate. In such relationships, it is important that both parties perceive that they are gaining value from the relationship if it is to continue and the relationship is to be considered a success, defined the concept of mutual goals as the degree to which partners share goals that can only be accomplished through joint action and the maintenance of the relationship. These mutual goals provide a strong reason for relationship continuance. Mutual goals influence performance satisfaction which, in turn, influences the level of commitment to the relationship. Shared- values is a similar but broader concept.

4.5.4 Descriptive Analysis for Supplier Performance

The study further aimed to establish the performance and buyer -supplier relationship of the respondents who worked at the supermarkets. Table 4.12 shows the results of the study.

The researcher requested the respondents to indicate on the extent of effectiveness performance and buyer -supplier relationship. Most of the respondents pointed that in general, buyer-supplier relationships have helped in improving performance in our firm, the use of information technology has increased the level of confidence with our suppliers, Poor performance of suppliers leads to poor buyer supplier relationships, Non-existence of information technology between the supplier and the buyer leads to failure of buyer supplier relationships and Performance levels has increased with the use of information technology between our firm and our suppliers with a mean of 4.6800, 4.1600, 4.7600, 4.5600 and 4.6800 respectively. Respondents also indicated that there exists clear understanding of each other's roles and responsibilities between their firm and their suppliers with a mean of 3.5200. As shown in table 4.12 below.

Table 4.12 Descriptive Analysis for Supplier Performance

Statement	N. Statistic	Skewness	kurtosis	Mean	Std. Error	Std. Deviation
There exists clear understanding of each other's roles and responsibilities between our firm and our suppliers	198	-1.221	-339	3.5200	.14283	.71414
In general, buyer-supplier relationships have helped in improving performance in our firm	198	-1.176	-028	4.6800	.09522	.47610
The use information technology has increased the level of confidence with our suppliers	198	-1.118	-317	4.1600	.12490	.62450
Poor performance of suppliers leads to poor buyer supplier relationships	198	-1.258	.029	4.7600	.08718	.43589
Non-existence of information technology between the supplier and the buyer leads to failure of buyer supplier relationships	198	-1.249	-013	4.5600	.10132	.50662
Performance levels has increased with the use of information technology between our firm and our suppliers	198	-1.187	-0.052	4.6800	.09522	.47610

Source: Research Data (2022)

4.5.5 Descriptive Analysis for Information Technology

The findings were tabulated on the table showing measures of information technology which and from include the findings it was found out that With use of information technology has Improved trust between our firm and that of our suppliers had a mean of M=4.1200, SD=.61314, Information has increased level of commitment between our firm and that of our suppliers on supplier with a mean of M=4.7800, SD=.48610, Through technology, we have both enjoyed the mutual goals with our suppliers had a mean of M=4.2700, SD=.62450, Information Technology has increased on the performance in our firm and that of our suppliers with a mean of M=4.6600, SD=.32589. Technology can add significant value to your business. Net profit Cost, and delivery performance with a mean of M=4.4600, SD=.40652 and finally Technology has strengthened the relationship between our firm and suppliers with a mean of M= 4.7800, SD=.37510. As shown in table 4.7 below. The findings agree with the study done by (Mulligan and Gordon, 2002). Information technology plays a significant role in supporting relationships between the customer and the supplier using electronic data interchange to share data between both sides, this technology provides fast, accurate information, and business efficiency to the firm, generally information technology can add significant value to any firm that has adopted and embrace it.

The findings agreed with the study done by (Leek et al., 2003), to strengthen their position in today's highly-competitive and fast-paced business environment, supplier firms often engage in relationships with their customers like the buying firms, Recent advances in information technology offer new ways of managing inter-firm’s relationships. Internal use of information technology makes suppliers to be more reliable because it supports decision making, production planning and quality

management by improving the scanning and monitoring of environment this in turn through utilizing of information technology suppliers will provide buying firms with high quality products and services which results in higher satisfaction, as such buying firms trust will increase. As shown in table 4.13 below.

Table 4.13 Descriptive Analysis for Information Technology

Statement	N. Statistic	Skewness	kurtosis	Mean	Std. Error	Std. Deviation
With use of information technology has Improved trust between our firm and that of our suppliers on suppliers	198	-1.241	-321	4.1200	.13283	.61314
Information has increased level of commitment between our firm and that of our suppliers on suppliers	198	-1.286	-026	4.7800	.08522	.48610
Through technology, we have both enjoyed the mutual goals with our suppliers	198	-1.217	-216	4.2700	.13470	.62450
Information Technology has increased on the performance in our firm and that of our suppliers	198	-1.266	.019	4.6600	.07728	.32589
Technology can add significant value to your business. Net profit Cost, and delivery performance	198	-1.136	-015	4.4600	.10232	.40652
Technology has strengthened the relationship between our firm and suppliers	198	-1.295	-0.061	4.7800	.09621	.37510

Source: Research Data (2022)

4.6 Multiple Regression Assumptions Test

Multiple regression assumptions were run prior to conducting a regression model. The assumptions of regression run were; normality and linearity, homoscedasticity and multicollinearity.

4.6.1 Testing for Assumption of Normality

Normality of variables was tested for the quantitative variables of the questionnaire. Lack of a normal distribution in the variables is noted to degrade the solution arrived at (Tabachnick & Fidell, 2013). Two common statistics are used to measure normality are Skewness and Kurtosis. Skewness is a measure the symmetry of a given distribution, in which case, the mean of the distribution does not lie at the centre of the distribution. On the contrary, Kurtosis is a measure of how peaked a distribution is; literature reveals that a distribution is either Leptokurtic, in which case it is too peaked or platykurtic in which case it is too flat (Tabachnick & Fidell, 2013). Lack of normality may therefore occur if some of the variables elicit positive skewness while the others elicit negative skewness. Similarly, non-normality could be a result of leptokurtic and platykurtic distributions. Normality was therefore, examined in the effect of information technology on buyer-supplier relationship and on supplier performance. Response scores for items measuring these variables were first summed and then averaged to represent each of the variables. Normality was screened because it is reported to be an important early step that ought to be conducted in every multivariate analysis for which the goal is inference as in the present study (Tabachnick & Fidell, 2013). Under this test, values of Skewness and Kurtosis within the interval $[-2, +2]$ as suggested by Gravetter and Wallnau (2014) were considered to reflect normal distributions. Results shown in Table 4.14 show that, the distributions of responses to the information technology on buyer-supplier relationship and on supplier performance, was all normally distributed.

Table 4.14 Normality Test Scores

	Skewness		Kurtosis	
Variables	**Statistic**	**Std. Error**	**Statistic**	**Std. Error**
1. Trust	-.396	.235	-.626	.465
2. Commitment	-.256	.235	-.654	.465
3. Mutual goals	-.264	.235	-.859	.465
4. Supplier performance	-.108	.235	-.981	.465

***Source*:** Research Data (2022)

4.6.2 Testing of Linearity

Linearity is the assumption that a straight-line relationship exists between two variables (Tabachnick & Fidell, 2013). Testing for linearity was deemed necessary since linearity is an assumption of regression which must be satisfied. Pearson's correlation coefficients were used to test linearity. Results shown in Table 4.15 revealed that there were significance positive correlations between each of the information technology on buyer-supplier relationship and on supplier performance. Linearity requirement was therefore satisfied.

Table 4.15 Correlations

Variables	**Matrix**					
	1	**2**	**3**	**4**	**5**	**6**
1. Trust	1					
2. Commitment	.657**	1				
3. Mutual goals	.719**	.640**	1			
4. Supplier performance	.755**	.774**	.862**	.463**	.788**	1

Source: Research Data (2022)

4.6.3 Testing for Homoscedasticity

Levene's test of equality of error variances was used to homoscedasticity assumption.

The assumption test results are presented in Table 4.16

Table 4.16 Homoscedasticity Assumption

F	df1	df2	Sig.
2.723	**64**	**75**	**.292**

Source: Field Data (2022)

The study results in Table 4.16 indicated that the p-value in Levene's test was .292 which was above 0.05. Thus, the homoscedasticity assumption was made showing that data used had no heteroscedasticity.

4.6.4 Multicollinearity Test

In order to diagnose multicollinearity assumptions, the study used variance inflation factors and tolerance. Results are presented in table 4.17

Table 4.17 Multicollinearity Diagnostics

Variables	Tolerance	VIF
Trust	.618	1.621
Commitment	.592	1.692
Mutual goals	.612	1.763

Source: Field Data (2022)

As shown in Table 4.17 the study revealed that trust had tolerance value of 0.618 and variance inflation factor value of 1.621. Commitment had tolerance value of 0.592 and variance inflation factor value of 1.692. Mutual goal had tolerance value of 0.612 and variance inflation factor value of 1.763. This implied that all the VIF values were below the threshold value of 10 and tolerance value were above threshold value of 0.1 indicating that multicollinearity was not an issue in the present study.

4.7 Inferential Analysis

Inferential analysis used in this section was correlation and multiple regression models.Correlation and multiple regression analysis showed the relationship between independent variables and the dependent variable.

4.7.1 Correlation Analysis

Correlation analysis was done to achieve the direction and strength of the correlation between the study variables. The findings are presented in Table 4.18

Table 4.18: Correlation between information technology variables and supplier performance

		1sp	2tr	3cm	4mg	5it
Supplier performance		1				
Trust	Pearson Correlation	.378**	1			
	Sig. (2-tailed)	.000				
Commitment	Pearson Correlation	.552**	.346**	1		
	Sig. (2-tailed)	.000	.000			
Mutual Goals	Pearson Correlation	.518**	.397**	.413**	1	
	Sig. (2-tailed)	.000	.000	.000		
Information Technology	Pearson Correlation	.642**	.502**	.584**	.487**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
Supplier performance	Pearson Correlation	.643	.507	.563	.437	
	Sig. (2-tailed)					

**. Correlation is significant at the 0.000 level (2-tailed). N=100

Source: Research Data (2022)

The Table 4.18 showed that trust (r =.378, p<.000) commitment (r=.552, p< .000) and mutual goals (r=.518, p< .000) were significantly and positively correlated to supplier performance (r= .643, p<.000); Information technology (r=642, p<.000) indicated a significantly strong positive correlation to all predictor, independent variable and dependent variable. However, when observing the correlation coefficient between independent variables alone, the results shows that all the independent variables are positive moderately correlated. The highest correlation is 0.552 (mutual goals) and the lowest is 0.346 (commitment). Because all the inter-correlations between independent

variables are not strongly correlated (<.7), then the issue of multicollinearity is not a problem in the regression stage of the analysis.

This implied that all the study variables were positively correlated to supplier performance. Trust contributes 37.8 % to increase in supplier performance. Commitment contributes 55.2 % to increase in supplier performance. Mutual goal contributes 64.2 % to increase in supplier performance.

Pearson correlation analysis was conducted to examine the relationship between the variables (Wong & Hiew, 2005; Jahangir & Begum, 2008). As cited in Wong and Hiew (2005), the correlation coefficient value (r) ranges from 0.10 to 0.29 is considered weak; from 0.30 to 0.49 is considered medium, and from 0.50 to 1.0 is considered strong. Field (2005) however, warns that correlation coefficient should not go beyond 0.8 to avoid multicollinearity. All the associated pairs of variables were significant at level 0.000.

4.7.2 Testing for moderating effect of information technology on the buyer-supplier relationships/ supplier performance

Information technology was used as a moderating variable in the study. The (table 4.19) indicate that the moderating on buyer-supplier relationship and supplier performance was statistically significant.

Table 4.19 Correlation Analysis for moderating effect of information technology on the buyer-supplier relationships/ supplier performance

		Moderating	T	C	MG
Moderating	Pearson Correlation Sig. (2-tailed)	1			
Trust	Pearson Correlation	.160**	1		
	Sig. (2-tailed)	.005			
Commitment	Pearson Correlation	.157**	.287**	1	
	Sig. (2-tailed)	.005	.000		
Mutual Goals	Pearson Correlation	.157**	.263**	.956**	1
	Sig. (2-tailed)	.005	.000	.000	

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

Source: Survey Data (2022)

It can be noted from the findings, that there were both positive and significant correlation between each pair of the variables. Trust was positively correlated with buyer supplier at a correlation coefficient (r) of .160, which was significant at 95% confidence interval ($p<.05$). Both Commitment and Mutual goals were also positively correlated with buyer supplier at correlation coefficients of .157, which were significant at 90% confidence interval ($p<.01$).

Table 4.20: ANOVA

Model	**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
Regression	.275	3	.092	4.381	.004
Residual	2.667	127	0.021		
Total	2.942	130			

Source: Research Data (2022)

ANOVA statistics of the processed data at 5% level of significance shows that the value of calculated F is 4.381 and the value of F critical at 5% level is 1.96 Since F calculatedis greater than the F critical (4.381>1.96), this shows that the overall model was significant.

4.7.3 Regression Analysis Results

Multiple regression analysis was used to test the hypotheses (H_{01}, H_{02}, *and* H_{03}). Multiple regression analysis is used to analyze the relationship between a single dependent variable and several and several independent variables (Hair et al., 2005). Multiple regression analysis was used because it is considered the most effective tool for identifying the relationship between a dependent variable and a number of independent variables when its underlying assumptions are satisfied. These assumptions are: linear relationships between the metric variables and dichotomous variables, normal distribution of each of the matric variables, reliability of measurement and homoscedastic relationship between the metric variables and dichotomous variables. Failure to satisfy these assumptions means that the results obtained may under-report the strength of the relationships between the variables (Osborne & Waters, 2002). The summary of multiple regression analysis results is presented in Table 4.21 below.

4.7.4 Model Summary

The correlation coefficient (R) and the coefficient of determination (R2) illustrated the extent to which the independent variable explained the variance in the dependent variable, while the coefficient of determination (R2) demonstrated the strength of the relationship between the dependent and independent variables. Table 4.21 presented regression model summary findings.

Table 4.21: Regression model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.882[a]	0.777	0.754	0.102

Source: Researcher (2022)

Table 4.19 shows a model summary of regression analysis between three independent variables: trust, commitment and mutual goals while dependent variable was supplier performance. The value of R was 0.882; the value of R square was 0.777 and the value of adjusted R square was 0.754. From the findings, 77.7% of changes in the performance of suppliers were attributed to the three independent variables in the study. Positivity and significance of all values of R shows that model summary is significant and therefore gives a logical support to the study model.

4.7.5 Model Fitness

Table 4.22 displays the findings of an analysis of variance performed to assess the model fitness.

Table 4.22 Results of Model Fitness

	Sum of Squares	df	Mean Square	F	Sig.
Regression	74.046	3	14.81	61.113	.000b
Residual	73.418	303	.242		
Total	147.462	309			

Source: Field Data (2022)

The study findings revealed that there was a statistical significance between the independent variables and the dependent variable ($F=62.113$; $p = 0.000 < 0.05$), as shown in Table 4.22. Since the multiple regression models fit the data well, this means that it was chosen. Trust, commitment and mutual goals all play a role in supplier performance.

4.7.6 Regression Coefficients

The study primary objective was to determine the study variables respective coefficients. The study findings are presented in Table 4.23

Table 4.23: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	*t*	*Sig.*
	B	***Std. Error***	***Beta***		
(Constant)	0.488	0.182		2.971	.0046
Trust	.146	.194	.207	2.836	.0041
Commitment	.376	.752	.152	1.216	.0031
Mutual goals	.104	.226	.160	3.641	.0043

Source: Survey Data (2022)

$Y= 0.488 +0.207 X_1+ 0.152 X_2+0.160 X_3$.....**equation 4.1**

Where; Y represents supplier performance which is the dependent variable,

X_1= Trust,

X_2= Commitment

X_3= Mutual goals

Table 4.23 presents the regression coefficient results, which revealed a positive and statistically significant relationship between trust and supplier performance (β1=.207, p=.001). The study findings revealed there was a statistically significant effect of commitment on supplier performance (β2=.152, p=.000). The study findings further revealed that mutual goal has a positive significant effect on supplier performance (β3=.160, p=.000. Thus, the total regression results indicate a positive and significant influence of trust, commitment and mutual goals and supplier performance.

4.8 Hierarchical Moderated Regression Analysis

Hierarchical moderated regression analysis was conducted for each independent variable to identify the unique moderating influence of information technology on supplier performance.

4.8.1 Model Summary

Model summary shows the variations in R2 from model 1 to model 5 as presented in Table 4.24

Table 4.24 Multiple Regression Model Summary Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change R	statistics F	df1 Change	df2	Sig. F Change
1	.709	.501	.494	.49228	.501.	61.110	3	303	.000
2	.719	.516	.508	.48548	.015	9.546	1	302	.002
3	.726	.526	.516	.48134	.010	6.223	1	301	.013
4	.735	.541	.529	.47512	.014	8.930	1	300	.003
5	.741	.549	.535	.47170	.008	5.367	1	299	.021

Source: Field Data (2023)

The values of R2 were used to show the proportion of variation in the dependent variable explained by the model in Table 4.24. The R2 value was statistically significant at $p<0.001$ and indicating that the explanatory power of the independent variables was 0.501. This suggests that 50.1% of the variation in supplier performance was explained by the three independent variables (trust, commitment and mutual goals). Further, Table 4.24 gave the findings of the R2 change. The R2 change from model 1 to model 2 was 0.015 which changed from 0.501 to 0.516 and statistically significant ($p<0.05$). The results showed that by including information technology, the number of observable variables could be increased by 1.5%, hence enhancing the model's predictive power in predicting supplier performance. The R2 change from model 2 to model 3 was 0.010 which changed from 0.516 to 0.526 and statistically significant ($p<0.05$). As a result, statistically information technology moderated effect of trust on supplier performance. The R2 change from model 3 to model 4 was 0.014 which changed from 0.526 to 0.540 and statistically significant ($p<0.05$). This implied that information technology moderated the effect of trust and commitment on supplier

performance by 1.4%. The R2 change from model 4 to model 5 was 0.008 which changed from 0.541 to 0.549 and statistically significant (p<0.001). As a result, information technology moderates the effect of trust, commitment, and mutual goals on supplier performances by 0.8%.

4.8.2 Multiple Regression Model Fitness

The regression model's ability to predict the independent variable was tested using an ANOVA for statistical significance as shown in Table 4.25.

Table 4.25 Test Results for Goodness of Fit

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	74.046	3	14.81	61.113	.000[b]
	Residual	73.418	303	.242		
	Total	147.462	309			
2	Regression	76.294	4	12.712	53.952	.000[c]
	Residual	71.179	302	.236		
	Total	147.462	309			
3	Regression	77.736	5	11.105	47.922	.000[d]
	Residual	69.738	301	.232		
	Total	147.462	309			
4	Regression	79.752	6	9.969	44.160	.000[e]
	Residual	67.723	300	.226		
	Total	147.462	309			

Source: Field Data (2022)

Table 4.25 provided the F test revealing the significance of the fitted regression model. An F statistic in model 1 produced the value of 61.113 implying that the independent variables were predicators of the depend variables able (F=61.113; p< 0.001). As a result of the good fit, trust, commitment, and mutual goals had an effect on supplier performance when the regression was fitted. F-value of model 2 was 53.

952. Model2 F-test got an F-value of 53.951, which corresponds to an R 2 of 0.516 and an R 2 change of 0.015. This meant that even after moderation, there was still a good fit of the model (F=53.952; p< 0.05). As a result, statistically information technology moderates the effect of trust on supplier performance F-test for model 3 has an F-value of 47.922 which is associated with an R2 of. 0.526 and R2 change of 0.010. This meant that after moderation by information technology it showed a good predictor of supplier performance and the total model was statistically significant (P-value 0.05) and good predictors of supplier performance. Model 4 F-test got an F-value of 44.160, which corresponds to an R 2 of 0.540 and an R 2 change of 0.014. This meant that moderation of trust, commitment and mutual goal by information technology showed a good predictor of supplier performance. This meant that when information technology was moderated on trust, commitment and mutual goals revealed good predictors of supplier performance and that the overall model was significant as it was less than p- value 0.05 (P< 0.05). F-test for model 5 had an F-value of 44.160 which is associated with an R^2 of 0.549 and R^2 change of 0.008. This implied that after moderation of trust, commitment and mutual goal separately the total model was statistically significant (P-value 0.05) and good predictors of supplier performance were found when information technology was considered.

4.8.3 Multiple Regression Coefficients

The regression of coefficients results is presented in Table 4.26

Table 4.26 Test Results for Regression Analysis Coefficients with Moderation

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1. (Constant)	.488	.182		2.971	.0046
Trust	.152	.194	.207	2.836	.0041
Commitment	.424	.752	.152	1.216	.0031
Mutual goals	.192	.226	.160	3.641	.0043
2. (Constant)	.190	.210		.902	.368
Trust	.217	.045	.246	4.826	.000
Commitment	.185	.044	.221	4.205	.000
Mutual goals	.156	.046	.183	3.410	.001
M*IT	.103	.033	.128	3.090	.002
3.(Constant)	.842	.334		2.518	.012
Trust	.174	.048	.198	3.662	.000
Commitment	.167	.044	.199	3.779	.000
Mutual goals	.168	.046	.197	3.684	.000
M* IT	-.145	.105	-.180	-1.380	.168
M*Trust	-.325	.130	.329	2.494	.013
4. (Constant)	1.181	.349		3.385	.001
Trust	.137	.049	.155	2.810	.005
Commitment	.361	.078	.430	4.618	.000
Mutual goals	.158	.045	.186	3.507	.001
IT	.111	.134	.137	.824	.411
M* Trust	.537	.147	.543	3.655	.000
M* Commitment	-1.318	.441	-.584	-2.989	.003
5. (Constant)	1.038	.352		2.949	.003
Trust	.146	.048	.166	3.020	.003
Commitment	.376	.078	.449	4.832	.000
Mutual goals	.104	.051	.122	2.051	.041
IT	.103	.133	.142	.856	.392
M* Trust	.502	.147	.508	3.430	.001
M* Commitment	-1.476	.444	-.656	-3.340	.001
M* mutual goal	.525	.228	.157	2.317	.021

Source: Field Data (2022)

Table 4.26 showed that trust had a positive and significant effect on supplier performance (β_1=0.146, $p<0.05$) based on regression coefficients from model 1.

Commitment had a positive and significant effect on supplier performance (β_2=0.376, p<0.05). Mutual goal had a positive and significant effect on supplier performance (β_3=0.104,p<0.05). A regression analysis was used in model two to test if information technology has a moderating effect on the relationship between trust, commitment and mutual goals and supplier performance. The p- value which was less than 0.05 indicated that the coefficient of information technology was significant. Information technology had a moderating effect on the relationship between trust, commitment and mutual goals and supplier performance, because the coefficient was significant. In model three a regression analysis revealed that information technology had a negative moderating effect on the relationship between trust and supplier performance (p= -.325<0.05). In model four, a regression analysis revealed that information technology had a positive and significant moderating effect on the relationship between trust and supplier performance (p.137p<0.05). However, information technology had a negative and significant moderating effect on the relationship between commitment and supplier performance (p-1.318<0.05). Regression analysis in model five showed that information technology had a positive and significant moderating effect on the relationship between trust and supplier performance (β= 0.502; p<0.05). Information technology has a negative and significant moderating effect on the relationship between commitment and supplier performance (β=-1.476; p<0.05). Information technology has a positive and significant moderating effect on the relationship between Mutual goals and supplier performance(β= 0.525; p<0.05).

The optimal model was;

$$\mathbf{Y=1.038 + 0.146X_1 + 0.376X_2 + 0.104X_3 + 0.172Z + 0.502Z*X_1 + -1.476Z*X_2 + 0.525Z*}$$

4.9 Hypotheses Test Results

The research hypotheses were assessed using the significance level of the coefficients from the regression model derived in Table 4.21. The goal of the study was to see if the hypothesis could be tested without rejecting or rejecting the relationship between the independent and dependent variables. The following research hypotheses were tested in the study:

4.9.1 Hypothesis testing of the Effect of Trust on the supplier Performance

Hypothesis H_{01} stated that trust has no significant effect on the supplier performance of supermarkets in Uasin Gishu County. Results revealed that trust has a positive and significant effect on the supplier performance of supermarkets in Uasin Gishu County (β_1=0.146, $p<0.05$) hence rejecting the null hypothesis H_{01}.

4.9.2 Hypothesis Testing of the Effect of Commitment on the Supplier Performance

Hypothesis H_{02} stated that commitment has no significant effect on the supplier performance of supermarkets in Uasin Gishu County. Results revealed that commitment has a positive and significant effect on the supplier performance of supermarkets in Uasin Gishu County (β_1=0.376, $p<0.05$) hence rejecting the null hypothesis H_{02}.

4.9.3 Hypothesis Testing of the Effect of Mutual Goal on the Supplier Performance

Hypothesis H_{03} stated that mutual goal has no significant effect on the supplier performance of supermarkets in Uasin Gishu County. Results revealed that mutual goals has a positive and significant effect on the supplier performance of supermarkets

in Uasin Gishu County (β_1= 0.104, p<0.05) hence rejecting the null hypothesis $H_{03.}$ Hypothesis testing of the effect of mutual goal on the supplier performance

4.9.4 Hypothesis Testing of Information Technology on the Relationship between Trust and Supplier Performance

Hypothesis H_{04a} stated that Information Technology has no significant moderating effect on the relationship between trust and supplier performance supermarkets in Uasin Gishu County. Results revealed that Information technology has a positive and significant moderating effect on the relationship between trust and supplier performance supermarkets in Uasin Gishu County (β_{4a}=0.502; p<0.05). The null hypothesis H_{04a} was rejected based on the findings, implying that Information technology moderates the relationship between trust and supplier performance of supermarkets in Uasin Gishu County.

4.9.5 Hypothesis Testing of Information Technology on the Relationship between Commitment and Supplier Performance

Hypothesis H_{04b} stated that Information Technology has no significant moderating effect on the relationship between commitment and supplier performance of supermarkets in Uasin Gishu County. Results revealed that Information technology has a negative and significant moderating effect on the relationship between commitment and supplier performance of supermarkets in Uasin Gishu County (β_{4a}= -1.476; p<0.05). The null hypothesis H_{04b} was rejected based on the findings, implying that Information technology moderates the relationship between trust and supplier performance of supermarkets in Uasin Gishu County.

4.9.6 Hypothesis Testing of Information Technology on the Relationship between Mutual goal and Supplier Performance

Hypothesis H_{04c} stated that Information Technology has no significant moderating effect on the relationship between mutual goal and supplier performance of supermarkets in Uasin Gishu County. Results revealed that Information Technology has a negative and significant moderating effect on the relationship between mutual goal and supplier performance of supermarkets in Uasin Gishu County (β_{4a}= 525; $p<0.05$). The null hypothesis H_{04c} was rejected based on the findings, implying that Information technology moderates the relationship between trust and supplier performance of supermarkets in Uasin Gishu County.

Table 4.27: Summary of the results of regression analysis

Hypothesis	Interpretation	β-value	P- Value	Decision rule
H_{O1}: Trust has no significant effect on supplier performance in supermarkets in Uasin Gishu County.	If p-value is less than 0.05 reject null hypothesis. If p-value is greater than 0.05 fail to reject null hypothesis	**β_1< 0.146**	**p=0.000<0.05**	Rejected the null hypothesis
H_{02}: Commitment has no significant effect on supplier performance in supermarkets in Uasin Gishu County.	If p-value is less than 0.05 reject null hypothesis. If p-value is greater than 0.05 fail to reject null hypothesis	**β_2< 0.376**	**p=0.000<0.05**	Rejected the null hypothesis
H_{o3}: Mutual goals have no significant effect on supplier performance in supermarkets in Uasin Gishu County.	If p-value is less than 0.05 reject null hypothesis. If p-value is greater than 0.05 fail to reject null hypothesis	**β_3< 0.104**	**p=0.000<0.05**	Rejected the null hypothesis
H_{04}a: Information Technology has no moderating effect on the relationship between trust and supplier performance in supermarkets in Uasin Gishu County.	If p-value is less than 0.05 reject null hypothesis. If p-value is greater than 0.05 fail to reject null hypothesis	**β_{4a}< 0.502**	**p=0.000<0.05**	Rejected the null hypothesis
H_{04}b: Information Technology has no moderating effect on the relationship between commitment and supplier performance in supermarkets in Uasin Gishu County.	If p-value is less than 0.05 reject null hypothesis. If p-value is greater than 0.05 fail to reject null hypothesis	**β_{4b}<- 1.476**	**p=0.000<0.05**	Rejected the null hypothesis
H_{04}c: Information Technology has no moderating the relationship between Mutual goals and supplier performance in supermarkets in Uasin Gishu County.	If p-value is less than 0.05 reject null hypothesis. If p-value is greater than 0.05 fail to reject null hypothesis	**β_{4c}< 0.525**	**p=0.000<0.05**	Rejected the null hypothesis

***Source*:** Research Data (2022)

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter illustrates the summary of the results of the study, conclusions and recommendations. It also gives suggestions for further research areas.

5.2 Summary of the Findings

The objectives of this study were to ascertain the effect buyer-supplier relationship traits, information technology and supplier performance among supermarkets in Uasin Gishu County. The findings of the investigation are summarized in this section.

5.2.1 Supplier Performance

Study findings from supplier performance reveal that the most of the respondents pointed that in general, buyer-supplier relationships have helped in improving performance in our firm. The study revealed further that the use of information technology has increased the level of confidence with our suppliers. On top of the above findings, poor performance of suppliers leads to poor buyer supplier relationships. Furthermore, it was noted from the study that majority agreed that with non-existence of information technology between the supplier and the buyer leads to failure of buyer supplier relationships. Finally, most of the respondent's performance level has increased with the use of information technology between our firm and our suppliers.

5.2.2 Trust and supplier performance

The first specific objective of the study was to establish the effect of trust on supplier performance in supermarkets in Uasin Gishu County. From the findings, most of respondents agreed that there is a high level of trust between our firm and that of our

suppliers. Further, trust in buyer-supplier relationships results in better firm performance for our firm, Lack of trust between buyers and suppliers leads to failure of buyer -supplier relationships. It was noted that trust has strengthen the relationship between our firm and that of our suppliers. Also, trust level has increased with the use of information technology between our firm and our suppliers. Finally, most agreed that through trust we have maintained long term relationship in our firm and that our suppliers.

The study findings further revealed that trust was strongly positively and statistically significant correlated to business performance. Results revealed that trust has a positive and significant effect on the supplier performance of supermarkets in Uasin Gishu County (β_1=0.146, $p<0.05$) hence rejecting the null hypothesis. Information technology had an enhancing moderating effect on the relationship between trust and supplier performance (R^2 change =0.010).

5.2.3 Commitment and supplier Performance

The second specific objective of the study sought to establish the effect of commitment on supplier performance in supermarkets in Uasin Gishu County. The findings of the study revealed that the respondents agreed that there is a high level of commitment between our firm and that of our suppliers. Also, Commitment in buyer-supplier relationships results in better firm performance for our firm. Further, the respondents agreed that with lack of commitment causes failure of buyer-supplier relationships. The respondents agreed that commitment has strengthen the relationship between our firm and that of our suppliers, commitment levels has increased with the use of information technology between our firm and our suppliers. Finally, it was noted that the respondent agreed that through commitment we have maintained long term relationship in our firm and that our suppliers.

Findings revealed that commitment has a positive and significant effect on the supplier performance of supermarkets in uasin gishu county (β_2=0.552, p<0.05). The null hypothesis H_{02} was rejected, indicating that commitment had a significant effect on supplier performance. The Information technology had an enhancing moderating effect on the relationship between commitment and supplier performance (R^2 change=0.014).

5.2.4 Mutual goal and Supplier Performance

The final objective of the study was to establish the effect of mutual goal on supplier performance in supermarkets in Uasin Gishu County. The study showed that most of respondents pointed out effectively that mutual goal in buyer-supplier relationship has resulted in better performance for our firm. Also, the respondents agreed that low levels of mutual goals between the supplier and the buyer leads to failure or poor buyer supplier relationships. Further, the respondents agreed that mutual goal has strengthened the relationship between our firm and that of our suppliers. The study nonetheless showed that the participants agreed that mutual goal has increased with the use of information technology between our firm and our suppliers. Finally, the majority of the respondents agreed that through mutual goals we have maintained long term relationship in our firm and that our suppliers. The study findings revealed that mutual goal was positive and strongly correlated with supplier performance (r=0.518, p<0.01). Mutual goal has a positive and significant effect on supplier performance of supermarkets. The study finding further revealed that information technology had an enhancing moderating effect on the relationship between mutual goal and supplier performance (R^2 change =0.008).

5.2.5 Moderating effect of information technology on relationship between trust, commitment, mutual goal and supplier performance

The study findings revealed that information technology had a positive and significant moderating effect on the relationship between trust and supplier performance (β=0.502; $p<0.05$). The information technology had a negative and significant moderating effect on the relationship between commitment and supplier performance (β=-1.476; $p<0.05$). Also, information technology had a positive and statistically significant moderating effect on the relationship between mutual goal and supplier performance (p= 0.525, $p<0.05$).

5.3 Conclusions of the Study

Based on the study, the following conclusions were made: -

The study has confirmed that buyer supplier relationships traits are very significant in enhancing the performance of supermarkets. All supermarkets should be advised to embrace the concept so that they can be able to reap the benefits of developing buyer – supplier relationships. By maintaining good relationships with their suppliers, supermarkets ensure that they perform well; they also help the suppliers themselves to perform well and also achieve their goals. The study proposes the need for investigating on appropriate ways to increase formalization of information technology adoption in order to enhance adoption of modern technologies to boost performance. This will enable firms to understand the benefits of information technology.The study therefore recommends that there is need for supermarkets to have a long-term partnership with the major suppliers and aim at giving maximum attention to the relationship with suppliers so as to maintain it and enhance competitive advantage which will lead to improved supplier performance.

From the study, policymakers and practitioners use research in various ways, including instrumental, conceptual, decision making, imposed, and process uses. The main contribution of this research is knowledge-increasing: it presents new findings, expand the research to new areas, make existing theories and methods more detailed, accurate or more appropriate for some context, for example, through learning resource-based View (RBV) is a strategic management theory that is widely used in project management, it examines how resources can drive competitive advantage. Competitive advantage is the ability to create more value than rivals, and therefore generate higher returns on investment. Also RBV approach helps us understand how firms achieve and sustain competitive advantage through resource building as well as leveraging the existing resources. A firm is a bundle of resources and routines that influence growth. One basic underlying core principle of a strategy resource based view is that it's easier to exploit market opportunities or beat competitors by using existing resources wisely, this is assumed to be easier than developing or acquiring new skills or capabilities.

All stakeholders in any organization set up should embrace the use of information technology; IT is the cornerstone of most business operations, providing the infrastructure that supports a great deal of both front-end and back-end processes. Without IT to manage a business systems and computer network information, any unexpected breakdown or failure could bring all daily business activity to a halt. Information technology also allows businesses to adopt innovative processes that can increase productivity and improve customer experience. Without access to the latest technologies and tools, a business runs the risk of falling behind competitors, making it essential for organizations of all sizes to implement strong IT systems in order to stay ahead of the curve.

Trust encourages individuals to take risks and explore new ideas. When people trust their contributions will be valued and respected, they are more willing to step out of their comfort zones, experiment, and innovate. Trust mitigates the fear of failure and creates an environment conducive to learning and growth.

There are several reasons why work commitment is important. One of the most important reasons is it allows an organization to meet its goals and stick to its vision, without a motivated workforce, an organization could lose all that they have earned over the years, be it respect or its market position.

Working toward common goals helps create an overall sense of purpose and meaning within a team. Furthermore, it ensures everyone is on the same page. A company's synergy is crucial to its growth and ability to collaborate. In the long run, internal synergy supports an organization run smoothly and sustaining itself.

5.4 Limitations of the Study

The study encountered several limitations, including most of the respondents were not willing to disclose information, and also rejection by respondents on the grounds they were too busy to fill the questionnaires, disclosure was an issue and this was attributed to the conservative stance of some supermarket owners and managers fear of addressing some failures of the small and medium enterprises. The study was limited to using questionnaires to collect the data/information. However, this was supplemented with ensuring the questions in the questionnaires captured all content of the research objective.

5.5 Recommendations for Further Research

The current study determined the moderating effects of information technology on the relationship between buyer-supplier and on supplier performance in supermarkets in

Uasin Gishu County and it only focused on three buyer-supplier relationship variables which are; trust, commitment and mutual goal and their effect on supplier performance.

The study recommends the supermarkets owners to focus on buyer supplier relationship traits, which include trust, commitment and mutual goal in order to improve supplier performance in their firms. This will ensure uniform operations in the industry by informing the formulation of policies by concerned stakeholders.

The study recommends policy makers to formulate policies of information technology as well as buyer supplier relationships to ensure that the environment in which the supermarkets operates favorable for sustainable performance. The bottom-up policy on supermarket should be implemented. This will create jobs, drive innovation, and boost local economies. By supporting supermarkets, both local and national governments can help to create a more inclusive and prosperous society.

Future studies may consider the effect of buyer–supplier relationships; which are transactional, collaborative and strategic alli- ance relationships on supplier performance. Also, studies may consider on interactions levels which include traditional relationships, operational, project-based partnership and evolved on how they affect the supplier performance.

The study recommends further research on the same topic but in other supermarkets in other Counties. This will help to establish whether the same result effects will be found when the research is done on different supermarkets other than Uasin Gishu County.

This will assist in providing concrete facts upon which reliable conclusions can be made. It is also recommended that this study be replicated in different business sectors within other regions.

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APPENDICES

Appendix I: Letter from Moi University

MOI UNIVERSITY
POSTGRADUATE OFFICE
SCHOOL OF BUSINESS AND ECONOMICS

Tel: 0790940508
0771336914
0736138770
Fax No: (053) 43047
Telex No. MOIVARSITY 35047

P.O. Box 3900
Eldoret.
Kenya

RE: MU/SBE/PGR/ACD/21B **DATE:** 28th March, 2022

TO WHOM IT MAY CONCERN:

RE: TITUS CHERONO – SBE/MLS/07/16

The above named is a bonafide student of Moi University School of Business and Economics, undertaking **Master of Science in Logistics & Supplies Management** degree; specializing in **Logistics & Supplies.**

He has successfully completed the coursework, defended his proposal, and is proceeding to the field to collect data for his research titled: ***"Buyer-Supplier Relationship Traits, Information Technology and Supplier Performance among Supermarkets in UasinGishu County, Kenya".***

Any assistance accorded to him will be highly appreciated.

Yours faithfully,

SCHOOL OF BUSINESS & ECONOMICS
MOI UNIVERSITY
P O Box 3900 ELDORET 30100

DR. RONALD BONUKE
POSTGRADUATE CHAIR, SB&E

/pn

Appendix II: NACOSTI Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **858452**

Date of Issue: **13/July/2022**

RESEARCH LICENSE

This is to Certify that Mr.. TITUS CHERONO of Moi University, has been licensed to conduct research in Uasin-Gishu on the topic: MODERATING EFFECT OF INFORMATION TECHNOLOGY ON BUYER-SUPPLIER RELATIONSHIP AND ON SUPPLIER PERFORMANCE IN SUPERMARKETS IN UASIN GISHU COUNTY, KENYA. for the period ending : 13/July/2023.

License No: **NACOSTI/P/22/18684**

858452

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

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Appendix III: Student Introduction Letter

Titus Cherono

Moi University

School of Business and Economics

P.O Box 3900-30100.

Dear Respondents,

REF: REQUEST TO FILL OUT THE ATTACHED QUESTIONNAIRE

I am a student pursuing Master of Science in Logistics & Supplies Management degree; specializing in Logistics & Supplies, at Moi University School of Business and Economics, and I am undertaking research on the topic of ***Buyer-Supplier Relationship Traits, Information Technology and Supplier Performance among Supermarkets in Uasin Gishu County, Kenya*** as partial fulfillment for the degree award. I kindly request for your assistance as I obtain information for the study.

The purpose of this letter is to request you to fill in attached questionnaire. I assure you that the information you give will be treated with confidence and that it will only be used for academic purposes.

I appreciated your assistance and cooperation.

Yours Sincerely,

Titus Cherono.

Appendix IV: Research Questionnaire

Kindly to what extent you agree on the following statements on the buyer-supplier relationships and on supplier performance in your firm or enterprise. The data collected will be for the academic purpose and information provided will be treated with a very high degree of confidentiality. You are kindly required to complete the questionnaire by putting a Tick (✓) on the column that best represents your level of agreement with the statement.

Section A: Background Information of the Respondents

1. What's your Gender? Male ( ) b) Female ( )

2. How long is your Supermarket being in operation?

1-5years ( ) 5-10years ( )

10-15years ( ) Over15years ( )

3. What is your position in this Supermarket?

a) Sole Proprietor ( ) b) Stores manager ( )

c) Purchasing manager ( )

4. How long have you been in this position?

a) Less than 5 years ( ) b) 5 to 10 years ( )

c) 11 to 15 years ( ) d) above 15 years ( )

Section B: Indicate your response to the items mentioned.

1. Trust

Please indicate the extent to which you agree or disagree with each of the following statements concerning Trust and buyer –supplier relationship. Tick (✓) the column that best represents your level of agreement with the statement.

Key 1- Strongly Disagree, 2- Disagree, 3- Neutral 4 – Agree,5 - Strongly Agree

No.	Statement	1	2	3	4	5
1	There is a high level of trust between our firm and that of our suppliers					
2	Trust in buyer-supplier relationships results in better firm performance for our firm					
3	Lack of trust between buyers and suppliers leads to failure of buyer -supplier relationships					
4	Trust has strengthened the relationship between our firm and that of our suppliers					
5	Trust levels has increased with the use of information technology between our firm and our suppliers					
6	Through trust we have maintained long term relationship in our firm and that our suppliers					

2. Commitment

Please indicate the extent to which you agree or disagree with each of the following statements concerning Commitment and buyer –supplier relationship. Tick (✓) the column that best represents your level of agreement with the statement.

Key 1- Strongly Disagree, 2- Disagree, 3- Neutral 4 – Agree,5 – Strongly Agree

No:	Statement	1	2	3	4	5
1	There is a high level of commitment between our firm and that of our suppliers					
2	Commitment in buyer-supplier relationships results in better firm performance for our firm					
3	Lack of commitment causes failure of buyer-supplier relationships					
4	Commitment has strengthened the relationship between our firm and that of our suppliers					
5	Commitment levels has increased with the use of information technology between our firm and our suppliers					
6	Through commitment we have maintained long term relationship in our firm and that our suppliers					

3. Mutual goals

Please indicate the extent to which you agree or disagree with each of the following statements concerning Mutual goal and buyer –supplier relationship. Tick (✓) the column that best represents your level of agreement with the statement.

Key 1- Strongly Disagree, 2- Disagree, 3- Neutral 4 – Agree, 5 - Strongly Agree

No	Statement	1	2	3	4	5
1	There exist mutual goals between our company and our suppliers					
2	Mutual goal in buyer-supplier relationships has resulted in better performance for our firm.					
3	Low levels of mutual goals between the supplier and the buyer leads to failure or poor buyer supplier relationships					
4	A mutual goal has strengthened the relationship between our firm and that of our suppliers.					
5	Mutual goals have increased with the use of information technology between our firm and our suppliers					
6	Through mutual goals we have maintained long term relationship in our firm and that our suppliers					

4. Performance

Please indicate the extent to which you agree or disagree with each of the following statements concerning Performance and buyer–supplier relationship. Tick (✓) the column that best represents your level of agreement with the statement.

Key 1- Strongly Disagree, 2- Disagree, 3- Neutral 4 – Agree, 5 - Strongly Agree

No	Statement	1	2	3	4	5
1	There exists clear understanding of each other's roles and responsibilities between our firm and our suppliers					
2	In general, buyer-supplier relationships have helped in improving performance in our firm					
3	The use information technology has increased the level of confidence with our suppliers					
4	Poor performance of suppliers leads to poor buyer supplier relationships					
5	Non-existence of information technology between the supplier and the buyer leads to failure of buyer supplier relationships					
6	Performance levels has increased with the use of information technology between our firm and our suppliers					

5. Information Technology

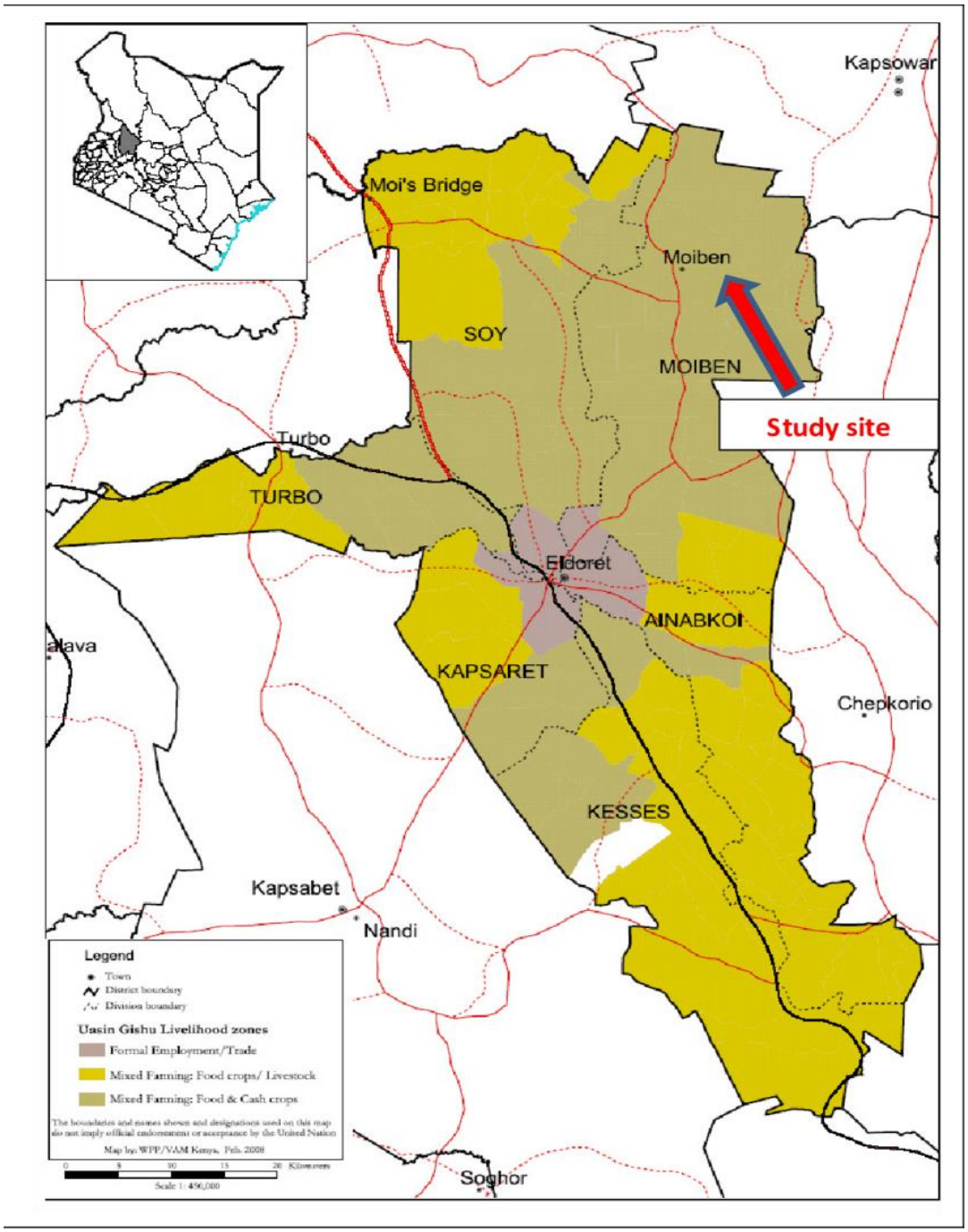
Please indicate the extent to which you agree or disagree with each of the following statements concerning information technology and buyer–supplier relationship. Tick (✓) the column that best represents your level of agreement with the statement.

Key 1- Strongly Disagree, 2- Disagree, 3- Neutral 4 – Agree, 5 - Strongly Agree

No	Statement	1	2	3	4	5
1	With use of information technology has Improved trust between our firm and that of our suppliers on suppliers					
2	Information has increased level of commitment between our firm and that of our suppliers on suppliers					
3	Through technology, we have both enjoyed the mutual goals with our suppliers					
4	Information Technology has increased on the performance in our firm and that of our suppliers					
5	Technology can add significant value to your business. Net profit, and delivery performance					
6	Technology has strengthened the relationship between our firm and suppliers					

Thank you for participating.

Appendix V: Map of Uasin Gishu County



Appendix VI: Plagiarism Certificate

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THESIS WRITING COURSE

PLAGIARISM AWARENESS CERTIFICATE

This certificate is awarded to

CHERONO TITUS

SBE/ELD/MLS/07/16

In recognition for passing the University's plagiarism

Awareness test for Thesis **entitled: BUYER-SUPPLIER RELATIONSHIP TRAIT, INFORMATION TECHNOLOGY AND SUPPLIER PERFORMANCE AMONG SUPERMARKETS IN UASIN GISHU COUNTY KENYA** with a similarity index of 16% and striving to maintain academic integrity.

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Awarded by

Prof. Anne Syomwene Kisilu
CERM-ESA Project Leader Date: 10/11/2023