INTER-ORGANIZATIONAL COLLABORATIONS AND PERFORMANCE OF COURIER FIRMS IN NAIROBI CITY COUNTY, KENYA

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DECLARATION

This thesis is my original work and has not been presented for a degree in any other university. No part of this thesis should be reproduced without authority of the author or/and Kenyatta University.

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DEDICATION

This thesis is dedicated to my parents; Simon Marugu, Grace Wambui, husband Eng. K.N. Mbogori and my beloved son Nathan E. Mbogori Njuguna who have provided the constant support and foundation upon which all of my progress and success in life has been built.

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OPERATIONAL DEFINITION OF TERMS

Inter-organisation collaborations: Partnerships between two or more independent enterprises which manage one specific project to improve their competencies in the courier firms in Nairobi City County, Kenya.

Cost based collaborations: Refers to collaborations where the organisations reduce the technological costs, research and development costs, operational costs and the transaction costs arising from the collaborations.

Relational based collaborations: Refers to improved organizational efficiency as a result of synergistic relationships and networks.

Resource based collaborations: Refers to the sharing of common organizational resources such as knowledge sharing, financial resources, capabilities, skills, and technology sharing.

Courier firms: Organizations that provide postal, financial, distribution services, transportation of packages, bulk materials and documents among businesses and corporations in Nairobi City County, Kenya and beyond.

Courier service: A courier service is a company that offers special deliveries of packages, money, documents or information.

Organisational characteristics: This refers to the size of the firm, age, i.e. the number of years of operation.

Organisational competitiveness: This refers to an edge over competitors gained by offering greater superior products, superior innovation, superior skills, either by means of lower prices or by providing greater benefits and service that justify higher prices.

Organizational Performance: This refers to the evaluation of the overall operations and strategic achievements by the Courier firms in terms of efficiency, effectiveness, relevance and financial viability.

ABBREVIATIONS AND ACRONYMS

APA	American Psychological Association
API	Alliance portfolio
CBK	Central Bank of Kenya
CEO	Chief executive officer
GDP	Gross domestic product
IJV	International Joint Ventures
JV	Joint Ventures
KBICO	Knowledge based Inter-firm collaborations
KPMG	Klynveld Peat Marwick Goerdeler
M&A	Mergers and acquisitions
NACOSTI:	National Commission for Science, Technology and Innovation
NGO:	Non-Governmental Organization
POCK	Postal Corporation of Kenya
R&D	Research and development
ROA	Return on assets
ROI	Return on Investment
ROS	Return on Sales
SPSS	Statistical Package for Social Science

ABSTRACT

The Communications Authority of Kenya (2016) indicated a 14.3% drop in courier transactions from the year 2010 to 2015. Further, outgoing international transactions experienced a 20.6% decline. This downward trend has been attributed to development of communication technology and organisational competitiveness which has immensely affected the performance of the firms in this business portfolio. This has led most organisations to embrace certain corporate strategies and partnering with other organizations to strengthen their market positions and improve on performance. This study sought to investigate the effect of inter-organizational collaboration and performance of courier firms in Nairobi City County, Kenya. Specifically, the study sought to: determine the effect of resource-based collaborations on performance of firms courier firms in Nairobi City County; establish the effect of cost-based collaborations on performance of courier firms in Nairobi city county; determine the effect of relational-based collaborations on the performance of courier firms in Nairobi City County; assess the moderating effect of organizational characteristics on the relationship between inter-organizational collaborations and performance of Courier firms in Nairobi City County and finally assess the mediating effect of organizational competitiveness on the relationship between inter-organizational collaborations and performance of courier firms in Nairobi City County. The study was anchored on the Transaction Cost Theory, Resource Based View Theory and Resource Dependency Theory. The study adopted positivist philosophy that premises knowledge is based on facts and that no abstractions or subjective status of individuals is considered. To achieve the objectives, the study used both descriptive and explanatory research designs. The unit of analysis was 141 courier firms and the stratified sampling design was used to group the firms into strata using the licensing category. Secondly, using the Krejce and Morgan sampling table (1970) the researcher arrived at 103 organisations which were included in the study. In each firm 3 managers were picked who included the Finance Manager, Operations Manager and Customer Service Manager to arrive at 309 managers. The study used mainly Primary data which was collected using self-administered questionnaire. Quantitative data was analyzed using both descriptive and inferential statistics. Descriptive statistics was used to summarize data while inferential statistics applied multiple linear regression analysis to test hypothesized relationships. Content analysis was also used for qualitative data. Adjusted R^2 was used to measure the amount of variation in the dependent variable explained by the independent variables. An assessment of the underlying statistical assumptions was conducted by testing for normality, homoscedasticity, linearity, multi-collinearity and autocorrelation. The study findings were that resource based, cost based and relational based collaborations had a positive significant effect on the performance of Courier firms in Nairobi City County. Organizational characteristics were found to have a moderating effect on the relationship between inter-organizational collaborations and performance of Courier Firms in Nairobi City County, Kenya. The study recommended that firms should re-think on configuration of resources in assessment of any collaborations the firm intends to engage itself in order to enhance performance. Further, the study suggests that a similar study can be conducted in other industries to determine the causal links.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

In order for organizations to be successful and achieve superior performance, firms must continually anticipate, determine and deliver customer satisfaction to the target markets, keep abreast with the emerging market trends, monitor competitor activities and proactively adjust their products and service offering, reconfigure internal resources and operating routines more effectively and efficiently than competitors. Firms can achieve this by adopting collaborations which suggests that the long-term purpose of a firm is to satisfy customers' needs while maximizing firm profits (Kohli & Jaworski, 2006).

The primary goal of adopting effective collaborations and strategic alliances is improved organizational performance. The concept of inter-organizational collaborations has emerged as a central area concerning improving organization performance (Brudan, 2010). However, the 21st century environment presents a challenging context created by global competition, technological developments and complexity of the current economic context drive companies to meet market requirements and needs by devising quicker and profitable solutions (Brudan, 2010). As a consequence, firms should focus on exclusive resources, such as knowledge and capabilities.

This trend has caused some changes in the structure of companies to go beyond the traditional geographical, industrial and organizational boundaries. Moreover, periods of market uncertainty have suggested to take advantage from collaborations instead of facing limitations of self-sufficiency in order to access different sorts of intangible assets. This new phenomenon requires organizations to learn and manage future opportunities as well as be able to manage existing ones. They must find new sources of improving their performance and engage in new forms of competition. This requires a clear understanding of the nature of the competition, as well as the competitive dynamics, (Huvej, 2008). Companies that rely on inter-organizational collaborations are more profitable and perform better than vertically integrated counterparts (Tully, 2008). Collaborations help firms strengthen the competitive position by enhancing market power (Kogut, 2008), increasing efficiencies (Ahuja, 2000), accessing new or critical resources or capabilities (Rothaermel & Boeker, 2008), and entering new markets (Garcia-Canal, 2012).

1.1.1 Organizational Performance

Sink and Tuttle Model (1989) describe organization performance as a complex inter-relationship between effectiveness, efficiency, quality, productivity, quality of work life, innovation and profitability. Organizational performance relates to the manner in which financial resources available to organizations are used to achieve overall corporate objectives. It comprises the actual output or results of an organization as measured against its intended outputs (or goals and objectives). Daft (2000) asserts that

Organizational performance is the organization's to accomplish its goals effectively and efficiently using minima resources. Organizational performance encompasses three specific areas of firm outcomes: financial performance, product market performance and shareholders return (Richard, 2009). Measurement of performance gives an indication of organization's financial capability, relevance, efficiency and effectiveness. Kaplan and Norton (1996) Balanced Scored Card proposes performance measurement to include both financial and non-financial measures such as customer satisfaction and retention. Silverman (2008) and Marta (2008) recommend key performance indicators for non-profit organizations as well as CBOs to include efficiency, effectiveness, impact, influence and financial leverage. These indicators will be adopted in the current study.

Organizational performance continues to be a contentious phenomenon among organizational researchers (Barney, 2002). According to Javier (2008) performance in organizations can be viewed as organizational effectiveness, efficiency, financial viability and relevance (Javier, 2008). Effectiveness is concerned with the unique capabilities that organizations develop to assure achievement of their missions while efficiency is the cost per unit of output (Machuki & Aosa, 2011) while financial viability is a firm's ability to survive. It means that an organization's inflow of financial resources must be greater than the outflow.

A study by Wang and Chao (2008) used subjective measures of performance on collaborations and performance (Kumar, 2011). In the current study, the performance measurement in the courier sector will be primarily subjective comprising customer satisfaction, efficiency, effectiveness, relevance and financial viability. The study adopted subjective measure of relative performance as previous studies have shown the validity of subjective performance measures.

Different researchers have different thoughts and definition of organization performance. In most cases researchers use the term performance to express the range of measurements of transactional efficiency and input and output efficiency (Stannack, 2006). Performance is a contextual concept associated with the phenomenon being studied (Hofer, 2004). The concept of organizational performance is based upon the idea that an organization is the voluntary association of productive assets, including human, physical, and capital resources, for the purpose of achieving a shared purpose (Barney, 2002). Organizational performance means achievement of organizational goals and objectives.

Richard (2009) argues that organizational performance should be measured not only in terms of financial profitability, market share and return on investment, but should encompass both quantitative and qualitative parameters of measurement. This approach is supported by Lusthaus (2000) who categorizes organizational performance indicators in terms of effectiveness (ability of an organization to provide the best service within the most effective structure); efficiency (the degree to which an organization moves

towards attainment of its mission and realization of its goals); relevance (survival of an organization) and financial viability (an organization's ability to have more financial resources than its spending). Performance in non-profit sector is usually evaluated using logic models. Logic models are management tools widely used in the non - profit sector in programme suggests that the three paradigms of organizational perspectives; the rational, natural, and open systems perspective, account for much of the variances in measures of effectiveness.

Organizational efficiency is the optimal transformation (activities) of inputs into outputs. It focuses on rational use of resources at tactical level, meeting timelines and emphasizes least costs and maximum results (UNDP, 2010). Organizational efficiency is a ratio that reflects a comparison of outputs accomplished, to the costs incurred for accomplishing these goals. There are two aspects of efficiency. The first is the units of production or services that relate to the organizational purpose, and the second is how much it costs to produce those goods and services (Barker, 1995). Efficiency is generally measured as the ratio of outputs to inputs. This implies that to attain efficiency, an organization must ensure that maximum outputs are obtained from the resources it devotes to a program, operation or department (Tavenas, 1992). Conversely, efficiency is achieved when minimum level of resources is used to produce the target output or to achieve the objectives of a program, operation or department. Organizational relevance denotes its ability to meet the needs and gain the support of its priority stakeholders in the past, present and future. It is an organization's ability to innovate and create new and more effective situations as a result of insight and new

knowledge (Lusthaus, Adrien, Aderson, Carden & Montalvan, 2002). To perform well, an organization must also pay attention to its ability to generate the resources it requires. This means not only having the ability to pay its operational bills, but also having some excess of revenues over expenses (profit or surplus). This is also referred to as financial leverage or viability. Financial viability is the ability of an organization to raise the funds required to meet its functional requirements in the short, medium and long term (Lusthaus *et al*., 2002).

There are three dimensions to assessing the financial viability of an organization. The first relates to the ability of an organization to generate enough cash to pay its bills, and in the case of not-for-profit organizations, to be financially sustainable. Resources are generated through an organization's ability to create, supply and deliver products, services or programs useful to customers, clients or beneficiaries (Henke, 1992). The second dimension of assessing financial viability deals with the sources and types of revenues on which the organization bases its costs. Traditionally, in government agencies, the source of revenue is anticipated taxes. Poorer countries and government departments also rely on various donors to provide funds for their work. The concern addressed by this dimension is the reliability of the flow of funds. With not-for-profit organizations, diversity and reliability of the different funding sources is analyzed. Organizations that rely on a single funding source without a legal (contractual) or moral funding obligation encounter more difficulty than organizations with multiple, reliable funding sources (Lusthaus *et al*., 2002).

The third dimension defines an organization's ability to live within its allocation. This dimension focuses on the actual ability to manage a budgeting process, as well as the results of the process. Financial viability depends on good financial management practices. This is true for both private and public sector organizations. In a general sense, an organization is financially viable if it generates enough value (both internally and from external sources) to keep stakeholders committed to the organization's continued existence. In the case of many public and not-for-profit organizations, staying financially viable depends crucially on management's ability to maintain existing linkages or create new ones to ensure a continued flow of funds over time from diverse sources (Lusthaus *et al*., 2002). Whether in the private sector, where profits are a measure of financial health, or in public sectors that rely on funding or loans from government or development banks, financial viability is a key short- and long-term concern (Booth, 1996). Previous studies by David (2005) and Mahdani, Mohammed, Ali and Ismael (2012) used subjective measures of performance on collaboration and performance relationship (Kumar, 1998; Pelham, 1993).

In the current study, the courier organizations' performance measurement were primarily subjective measures which comprised of; effectiveness, efficiency, relevance and financial viability. The study used the subjective measure of relative performance as previous studies have shown the convergent validity of subjective and objective performance measures and subjective performance assessments have been found to less be problematic than more objective financial measures as the latter may be biased by the purpose for which they are produced (Zhoul, Brown, Dev & Agarwal, 2007).

1.1.2 Inter-Organizational Collaborations

Inter-organizational collaboration is an agreement between companies to establish cooperative partnerships that go beyond normal company to company relations, but fall short of becoming a real merger (Wheelan & Hungar, 2000). Gamble, Strickland and Thompson (2007) on the other hand depict inter-organization collaboration as a formal agreement between two or more separate companies in which there is strategically relevant collaboration of some sort, joint contribution of resources, shared risk, shared control and mutual dependence. Robinson (2011) argues that inter-organizational collaboration is an agreement between two or more companies in which they both contribute capabilities, resources or expertise to a joint undertaking, usually with an identity of its own, with each firm giving up overall control in return for the potential to participate in and benefit from the joint venture relationship.

The need for inter-organizational collaborations crops out of the global competition and complexity of the business environment. Collaboration and its inherent information exchange are critical factors of supply chain coordination (Gammelgaard & Larson, 2010), reverse logistics (Daugherty, 2010), and strategic alliances (Whipple, 2010). Collaboration is necessary across functional boundaries in a supply chain network for it to reach its maximum potential; firms must be willing to share resources, including technology, people, and information (Fawcett, 2010). In contingency planning, this would include sharing scenario information, best practices, and performance measures along with coordinating planning activities and other functions. Benefits emerge when organizations are willing to work together to understand each other's viewpoints and

share information and resources in order to achieve collective goals (Stank, 2011). The benefit of collaboration during any inter-organizational process is often improved effectiveness and efficiency of the process. Given that collaboration is shown to improve other supply chain processes, the current study expects collaboration in the courier sector to have an effect on organizational performance.

Collaboration is shown to not only enhance performance, but to also be related to many of the factors perceived to increase performance, such as relational capital (Kale, 2011). A cooperative attitude implies that the organization trusts its partners (Schoorman, 2008) and recognizes the value that such supply chain partners provide (Morgan & Hunt, 2012). This, in turn, may increase levels of inter-organizational collaboration. Relational capital has also been shown to be a positive factor in relationship commitment, which is an underlying factor of logistics efficiency, and generally beneficial to supply chain member relationships (Kent & Mentzer, 2011).

Collaborations also enhance customer satisfaction and loyalty as market oriented firms are well-positioned to anticipate customer needs and offer goods and services to satisfy those needs (Slater & Narver, 2005). Organizations' innovation consequences include factors such as the firm's ability to create and implement new ideas, new products and processes and new product performance (Kirca, 2005).Similarly, when organizations collaborate, they benefit from one another in areas such as marketing, distribution, production, research and development, and outsourcing. When companies form alliances, they are able to accomplish bigger projects quickly and profitably.

Previously, inter-organizational collaborations were construed by Barney (2002) in three forms which included; cost-related collaborations, resource-based collaborations and relational-based collaborations. Taking a similar view, this study adopted Barney's (2002) constructs in order to establish the influence of inter-organizational collaborations on organisations' performance. This approach helped to test the generalizability and help to test the constructs in different markets.

Resource-based inter-organizational collaborations (RBIOCs) by-pass the limitations of competition and organizational boundaries as all the tangible and intangible resources can be shared and combined. Resources, tangible and intangible, are strategically important not only for companies operating autonomously (Tiwana, 2000), but also for companies joining in networks or inter-organizational collaborations with customers, competitors, suppliers, subcontractors and partners (Ritter & Gemunden, 2003).

RBIOCs refer to those inter-enterprise relationships where each partner focuses on core competences, as well as on the accessibility to external capabilities (Mentzas, 2006). Within these inter-organizational structures, internal and external resources are combine and used collaboratively by two or a network of organizations becoming part of a value chain system (Andriessen, 2007) and has been considered as a productive factor capable to influence the performance of a productive system (Corvello & Migliarese, 2007). Moreover, RBIOCs affect the strategic initiatives of the involved companies by combining competences, sharing resources, distributing risks, and running from minor incremental improvements right through to radical innovation. In other words, these

collaborations offer the possibility of exploiting potential cognitive synergies and accessing resources wherever located within the network (Wilkinson & Young, 2002). Relational-based collaborations involve an interdependent relationship where different organizations work closely together to create mutually beneficial outcomes for all participants (Jap, 2001). Relational-based collaboration between organizations can result in benefits including joint knowledge creation, expertise sharing, and understanding of the other party's intentions and strategic approaches, networks and mutual trust among he organizations (Sinkovics & Roath, 2004). Relational-based collaborative processes are a known way for organizations to improve performance (Ramanathan, 2011). For instance, Fawcett (2008) developed a three-stage model for relational-based collaboration, stressing that organizations must focus on effective collaboration to increase organizational performance. Autry and Griffis (2008) examined the impact of social ties on performance and noted that relational-based collaboration is a critical attribute of supply chains (Whipple & Russell, 2007). Each of the studies concludes that relational based collaborations are necessary toward enhancing performance, whether financial, customer service, or planning.

Cost-based collaborations involve firms combining and coordinating their limited resources towards enabling innovation and R&D (Levinthal & March, 1993). This is usually done where the cost involved to do research or product development is too prohibitive for a single firm and hence requiring the collaborative efforts of two or more firms. Moreover, Park (2002) has indicated that a firm's propensity to enter exploration and exploitation alliances and networks is related to the resource endowments of the firm

and the cost involved in such explorations (Park, 2002). The importance of possession of or access to key resources in the network becomes obvious when firms aim to develop new products and business concepts. Radically new innovations or those for emergent customers or markets are exploratory, since they require new knowledge or departures from existing skills (March, 1991).

1.1.3 Organisational Characteristics

Organizational characteristics are factors that have an impact on the effectiveness of a firm's strategy (Thuo, 2011). These factors are within the realm of the firm's operations and are capable of determining the input and output of an organization. In essence, these elements are correlated with systems within the business, impact on business operations and ultimately determine a firm's overall performance (Irungu, 2007; Thuo, 2011). Zou and Stan (1998) describe organisational characteristics as a firm's demographic and managerial variables, which in turn comprise part of the organization's internal environment. In a firm specific context, a firm's capabilities and constraints greatly influence the choice of marketing strategy and ability to execute a chosen strategy (Aaker, 1988).

According to O'Sullivan, (2009), organizational characteristics such as the age of the firm, measured by the number of years the firm has been in operation, the size of the firm measured by the numbers of employees and the firms' ownership structure have been used. These characteristics can influence management decisions and the collaboration strategies adopted by a particular firm. Ogbuei and Longfellow (1994)

posit that management characteristics and attributes such as the manager's level of education and work experience may affect the level of firm performance. The most common and widely recognized firm characteristics that have been found to influence performance are firm size and the age of the firm. The size of the organization can influence the firm's performance and its overall productivity. Large firms have advantage over small firms as they have access to more human and financial resources, and commands superior reputation and image from customers. These attributes provides larger firms with an advantage of gaining superiority in the industry thus leading to sustained competitive advantage over their rivals (Jovanovic, 2010).

Age of the firm has been found to impact on an organization's performance and profitability. Older firms have established management systems, more formalized approaches to decision making and can perform better than younger firms due to liability of newness because of factor such as reputation and market experience (Ansoff, 1965). However, other firm characteristics such as industry sector concentration, entry barriers, growth, export intensity, capital intensity, market share, ownership structure and labour flexibility have also been found to have a positive impact on firm performance (Wang, 2005; Leitner & Guldenberg, 2010). For this study, firm size and the age of the firm were used as firm characteristics and they served as contingent factors or moderating variables on the relationship between Inter- organizational collaborations and organisational performance.

1.1.4 Organization Competitiveness

Companies gain and sustain competitive advantage due to the ability to renew, integrate and expand their existing competencies which enable the firm to transform resources into value offerings leading to sustain and increase firm's performance (Doole, 2006). Moreover, with the increasing competition, firms need enhanced abilities to identify, create and deliver superior customer value than the competitors, and to respond directly to customer requests and to provide the customer with a highly interactive, customized experience, organizations have a greater ability to establish today, nurture, and sustain long-term customer relationships than ever before (Rauch, 2009). Competencies could be the sources of competitive advantages for the organization since the desired level of performance cannot be achieved in the organization that has no attention to the competencies approach (Hill & Jones, 2001).

Competencies give the firm the ability to transform inputs into valued products, with high productivity and to respond directly to customer requests and to provide the customer with a highly quality products with acceptable prices (Fowler *et al,* 2000). Numerous researchers argue that people; this is intellectual capital, is the crucial resource that leads to strategic competitive advantage and those firms that want to succeed must make appropriate human resources investments to acquire and develop better skills and capabilities than their competitors (Youndt, Snell, Dean & Lepak, 1996). Porter (1987) observed that competition is at the core of the success or the failure of a firm. Porter argues that organisation's competitiveness exists through cost advantages, differentiation or focus. Cost advantages arise where the firm is able to

deliver the same benefits as competitors at a lower cost. Differentiation is where the firm delivers superior benefits that exceed those of competing products whereas focus advantage arises where the firm targets a small market segment which it can serve better than competitors. The study argues that the primary factors of competitive advantage are innovation, reputation and relationships.

Porter (1987) further argues that competitive advantage comes from the value that organizations create for their customers that exceed the cost of producing it. Organizations create value by performing a series of activities that he identified as a value chain. Value chain of a business consists of a collection of activities undertaken in the course of designing, producing, and marketing, delivering, and supporting its product or service. In addition to the firm's own value creating activities, it operates in a value system of vertical activities including those of upstream supplies and downstream channels members. To achieve a competitive advantage the firm must perform one or more value creating activities in a way that creates more overall value than do competitors. Superior value is created through lower costs or superior benefits to the consumer (Rauch, 2009).

A resource based view emphasizes that a firm utilizes its resources and capabilities to create a competitive advantage that ultimately results in superior value creation. The unique resources and capabilities together form distinctive competencies. These competencies enable innovation, efficiency, quality and customer responsiveness, all of which can be leveraged to create a cost advantage or a differentiation advantage.

1.1.5 Courier sector in Kenya

In the GATS services sectoral classification list, postal and courier services are listed as subsectors of communication services, a sector which also includes telecommunications and audio-visual services. In the UNCPC, these services are classified in a "post and telecommunications" sector, reflective of a long-standing but increasingly outdated tradition of postal and telecom services being offered by a single state monopoly. Courier services are normally supplied by privately owned companies who compete with one another and with state postal service providers (UNCPS, 2013).

One of the important challenges to postal and courier services, both public and private, is competition from other communications services such as facsimile, electronic-mail, and data networks, particularly in the business-to-business market segment. At the same time, some market segments of these services are taking advantage of new communications technologies. For example, electronic data interchange (EDI) is already considered an essential tool for achieving fast and reliable service in the express mail industry. In another example, a major foreign express mail service supplier in Canada is planning a wireless radio network to enhance its service and improve distribution. In addition to this, new technologies stimulate growth in some market segments. For both public and private delivery of parcels, the growing popularity of home shopping offered over communications services, such as television and internet, contribute to predictions for steady growth. Relation to other services/sectors: Postal and courier services are

dependent on physical means of delivery, particularly air and road transport services. They are referred to as integrators because they combine land and air transport services with freight forwarding, customs broking and other information-intensive activities that enable them to provide efficient pick-up and delivery services. Some railway companies have established their own mail service and DHL has offered equity participation to two airline companies. Globally, the leading companies are DHL Worldwide Express (DHL), United Parcel Service (UPS), Federal Express (FedEx), and GD Express Worldwide. Many such couriers have established affiliates in foreign countries to capitalize on rapidly expanding global demand for express courier services (Hornby, 2009).

In Kenya, Postal Corporation of Kenya (PCK) is charged with offering the universal service and is protected in the distribution of letters and courier service by being granted the privilege of the market tariffs. However, other service providers are equally mandated to offer such services but only allowed to do so, provided they charge a minimum of five times the PCK rate. Apparently this demand does not seem to be enforced because mostly the other players in the market charge far less than what PCK offers. Sending a parcel by Matatu, Fargo Courier, G4S or BM Securicor is two times cheaper than sending by PCK (SBO Report, June 2008). CAK report (May, 2008) indicated that the volume of postal letters sent locally dropped by 32.2 per cent in the year ending June 2007 to 74 million compared to 109 million in a similar period in 2012. This could explain the fact that there is stiff competition in the sector or worse still the market is not regulated and the government needs to do so. Profile of Postal

Corporation of Kenya The Postal Corporation of Kenya (PCK) is regulated by the Communications Authority of Kenya (CAK). According to the Kenya Communications Act of 1998, CAK is mandated to license and regulate Postal and courier services throughout the country (Posta Profile, 2011) CAK grants licenses to operators, regulates the tariffs and fees for basic services, and maintains the overall order of the Postal and courier market. (CAK, 2008).

PCK is the official universal service provider for Kenya and is a member of the Universal Postal Union (UPU) which has a membership of 191 countries. According to the Union, PCK must provide consistent and affordable supply of basic quality Postal services. EMS Kenya – a brand name is a premium service offered by the Postal Corporation. The service is an international and domestic courier services for both documents and parcels. EMS Kenya is said to have service levels that meets international standards in speed, reliability, security, accessibility and at affordable prices (Institute for the Future, 2010).

1.2 Statement of the Problem

Courier firms in Kenya have been robbed of potential business opportunities due to the advancement of new technology, new demands by customers and intense competition leading to a decline in their performance. According to the Communications Authority of Kenya report (2015) Courier firms experienced a 14.3 percent drop in their transactions from the year 2010 to 2015. Further, the firms recorded a 20.6 percent decline in outgoing international transactions in the same period. This downward trend

has immensely affected the performance of the firms in this business portfolio. The decline is attributed to changes occurring from external sources through technological advances, social, political or economic pressures, or from internal organization challenges such as management response to a range of issues such as changing client needs, costs or a human resource or operational issues (CAK, 2015). Therefore it is imperative to investigate the extent to which performance has been affected by the mitigating strategies that have been adopted by these firms. Such mitigating strategies were collaborations which were intended to enhance firm operations the mentioned challenges most companies have entered into collaborations to enhance their operations, minimize operational costs, improve knowledge, tap on skills and improve their performance.

Previous studies such as Sampson (2007) investigated a sample of 463 R&D collaborations in the telecommunications industry in 34 countries on the impact of R&D collaborations on organisations 'performance. The study found that collaborations contribute more to firm innovation when technological diversity is moderate than when it is lower or higher. However organizational competitiveness is more critical in ensuring improvement in its performance rather than the level of technological diversity. Hence this forms part of the proposed enquiry.

Further, Wang and Lee (2014) assessed the effect of collaborations and costs on organisations' performance. The study used a sample of 1,561 small and medium enterprises in Australia. The study found that there is a direct effect of collaborative

networks on innovation costs performance of SMEs. The results also showed that integrated information system moderated the relationship. Further, firm characteristics such as size of the firm and size of competitors did not influence performance while expenditure on IT did. However organizational competitiveness is more critical in ensuring improvement in its performance rather than the innovation costs. In addition a similar study needs to be undertaken in Kenya to find the effect of inter-organisational collaborations and performance of Courier firms in Nairobi City County, Kenya. Hence this forms part of the proposed enquiry. While the study used moderating variables in the model, the mediating effect of competitiveness was not examined.

Based on the studies reviewed, there is consensus regarding the positive effect of collaborations on business performance. However, the results produce mixed outcomes in regard to the role played by the mediating variables used in the different studies. For instance, the study by Cao and Zhang (2011) noted that firm characteristics such as size and age had a significant moderating role on the relationship between inter-organizational collaborations and performance, while the study by Dangelico and Pontrandolfo (2013) established that none of the firms' characteristics (size of the firm, age of the firm, and ISO certification) had any significant moderating role on the relationship between environmental collaboration and performance. Moreover, local studies on inter-organizational collaborations have been conducted in various sectors including the health sector (Mwangi, Oluoch & Odhiambo-Otieno, 2015) and in state corporations (Nyangweso, 2011) but not in the courier sector. On the strength of the foregoing argument and the need to establish the role played by organizational

characteristics, when seeking competitive and profitable continuity, this study sought to establish the role of inter-organizational collaborations on the performance of Courier firms in Nairobi city county, Kenya which is an area previous studies have not focused on.

1.3 General Objective

The general objective of the study sought to investigate the effect of inter-organizational collaborations and performance of courier firms in Nairobi City County, Kenya.

1.3.1 Specific Objectives

i. To determine the effect of resource-based collaborations on performance of Courier firms Nairobi City County, Kenya.

ii. To establish the effect of cost-based collaborations on performance Courier firms Nairobi City County, Kenya.

iii. To determine the effect of relational-based collaborations on the performance of Courier firms Nairobi City County, Kenya.

iv. To assess the moderating effect of organizational characteristics on the relationship between inter-organizational collaborations and performance of Courier firms in Nairobi City County, Kenya.

v. To assess the mediating effect of organizational competitiveness on the relationship between inter-organizational collaborations and performance of Courier firms in Nairobi City County, Kenya.

1.4 Research Hypotheses

The following hypotheses guided the study:

H_{01}: There is no effect of resource-based collaborations on performance of Courier firms in Nairobi City County, Kenya

Ho_2: There is no effect of cost-based collaborations on performance of Courier firms in Nairobi City County, Kenya

Ho_3: There is no effect of relational-based collaborations on performance of Courier firms in Nairobi City County, Kenya

H_{04}: There is no moderating effect of organisational characteristics on the relationship between inter-organisational collaborations and performance of Courier firms in Nairobi City County, Kenya

Ho_5: There is no mediating effect of organisational competitiveness on the relationship between inter-organisational collaborations and performance of Courier firms in Nairobi City County, Kenya.

1.5 Significance of the study

The study adds to the existing knowledge and contributes to the body of empirical research on the inter-organizational collaborations and performance of courier firms in Nairobi City County and is of significance and interest to various stakeholders. This helps in broadening and deepening researchers understanding of inter-organizational collaborations and their importance in the corporate sector. To the scholars, the study not only explored the direct relationship between inter-organizational collaborations and performance in courier firms but also the moderating influence of organizational

characteristics. The research methods and findings applied in this study are anticipated to aid future researchers who would wish to carry out a related study. The study integrated inter-organizational collaborations, organisations characteristics, organisational competitiveness and how the above affect the performance of the organisations. Secondly the study helps in policy formulation and enable the government in the provision of an enabling environment that promote inter-organisational collaborations. The study provided managerial benefits in the sense that it will put into perspective the essence of evaluation of the key parameters before forming collaborations in the courier sector in Kenya.

Managers in the organizations are in a better position to understand the inter-organizational collaborations relevant in organizations in the courier firms in Kenya and be conversant with best solutions in regards to strategies adopted by the organization. Kenya's long term development agenda spelt out in the vision 2030, targets an annual growth rate of 10 per cent in the medium term with an investment rate of 30 per cent of which a significant proportion will be financed through domestic resources. Courier firms and organizations in other industries will find the results of this study intriguing as a source of information on the effect of inter-organizational collaborations on organizational performance and what needs to be done in order to remain competitive in the market.

1.6 Scope of the Study

The study examined inter-organizational collaborations, organizational characteristics, organizational competitiveness and performance of Courier firms in Nairobi City County, Kenya. The key players in the courier sector in Kenya are the Postal Corporation of Kenya, international courier companies, local courier companies, security service firms as well as well as up-country bus companies (Orunga, 2013). According to CCK (2014), the postal and courier services sector is worth more than Shs 7 billion with more than 200 courier firms. However, most of these firms are not registered as courier companies. The study focused on the 141 firms licensed and operating in the courier sector in Nairobi County. The study was conducted in January to September 2016 and related to collaborations and organizational performance over the period of five years (2011 - 2016).

1.7 Limitations of the Study

Few respondents targeted were reluctant in giving information fearing that the information the study sought would be used against them or portray a negative image about them or their organization. Respondents feared divulging some information for fear of competitors using it to counter them in the market; this was addressed by assuring them that the study was entirely for academic purpose only. The researcher handled the problem by presenting an introduction letter from the Kenyatta University which assured them that the information they divulged would be treated confidentially.

Another challenge that was faced while carrying out this study was use of self – reported data which easily triggered respondents' perception that the study was geared

towards investigation purposes. To allay the fears the researcher presented an introductory letter from the university to confirm that the data that was being requested was for academic purposes and would be treated with confidentiality.

1.8 Organisation of the Thesis

This thesis is comprised of five chapters. Chapter one introduces the study in the content and context. The research problem, objectives and hypotheses will also be discussed. This chapter also discusses the scope, limitation and the organization of the study. Chapter two discusses the theoretical and empirical literature review as well as the conceptual framework. Chapter three presents the research methodology. The chapter discusses the type of research design, research philosophy of the study, target population, the empirical model and operationalization of the research variables. The chapter also presents the sampling technique and sample size for the study, data collection methods, procedures and analysis and the ethical considerations. Chapter four comprises the findings of the study and discussion. Chapter five addresses summary, conclusions, the contribution of the study to knowledge and recommendations.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of selected conceptual and empirical literature covering the main variables of the study on inter-organizational collaborations. It is organized as follows: first, a review of the theoretical theories is made. Secondly, an empirical review is presented followed by an exposition of the knowledge gaps arising from the empirical review.

2.2 Theoretical Review

This study was anchored by the Resource dependency theory (RDT) while the Resource base view (RBV) and the Transaction Costs theory supplemented the main theory of the study.

2.2.1 Resource Dependence Theory

This theory was developed by Emerson (1963) and further progressed by Pfeffer and Salancik (1978), who proposed that control over critical resources by one organization can make other organisations dependent on it. Resource Dependence Theory assumes that even when operating in the same industry, firms are heterogeneous in terms of their resources and capabilities. In essence, the theory argues that organizations are often not self- sufficient for all the needed resources that can enable them remain competitive and improve their performance. Therefore they need to engage in exchanges with other organizations in one way or the other so as to gain necessary resources for survival. This usually makes a strategic alliances a viable form of inter-organizational structure

that can minimize uncertainties thus enhancing access to much needed resources (Gray & Yan, 1992). RDT characterizes the corporation as an open system, dependent on contingencies in the external environment (Pfeffer & Salancik, 1978). Pfeffer and Salancik (1978) posit that to understand the behaviour of an organization you must understand the context of that behaviour, that is, the ecology of the organization. For instance, AbouAssi (2013) used this theory to come up with an integrated theory that can be used to understand how non-governmental organisations (NGOs) respond to donor funding. Guo (2005) used this theory to examine collaborations among NGOs. Doherty (2015) also used this theory to examine the factors of successful collaboration in Oregon. Despite the contribution of resource dependence theory, several criticisms of this approach have been expressed in organizational studies. The lack of empirical studies to enable analysis of the combination of resources is one of the criticisms made by Peteraf (1993). Collis (1991) also criticizes the applicability of resource dependence theory in the field of cooperative strategies. He further emphasises that practical studies are only applied to multinational firms and not to small and medium-sized ones.

Grant (1991) and Priem and Butler (2001) also criticise this approach for the non-existence of integration of theoretical foundation, and for the limited effort in developing practical implications of this theory. This theory was relevant in this study as it was used to explain why inter-organisational collaborations create meaningful partnerships within and between organisations. Further, the theory elucidates why organisations engage in exchanges with other organizations in one way or the other so as to gain necessary resources for survival and achievement of better performance.

2.2.2 Transaction Cost Theory

The transaction cost theory was developed by Coase (1937) and it asserts why companies exist, why companies expand or source out activities to the external environment. The theory supposes that companies try to minimize the costs of exchanging resources with the environment, and that companies try to minimize the bureaucratic costs of exchanges within the company. Companies are therefore weighing the costs of exchanging resources with the environment, against the bureaucratic costs of performing activities in-house.

This theory was relevant to the study as it explained why inter-organisational collaboration occur in organisations. The transaction costs theory was applied to explain and justify collaboration efforts, with the purpose to minimize costs inefficiency and to determine the choice of collaboration modes or governance choices (Parker & Brey, 2016; Wolter & Veloso, 2008; Wratschko, 2009). Further, the choice of the collaboration form influences the potential opportunistic behavior of partners. Opportunistic behavior is described as "self-interest with guile" (Williamson, 1975) meaning that partners might behave according to their self-interest which is a major transaction costs as it harms the relationship (Das & Teng, 1996; Garcia-Canal, 1996). The risk of opportunistic behavior decrease if partners share joint ownership or an entity together, due to the commitment of resources to secure the investments made, which are not recoverable. Hence, it is claimed that equity alliances for instance, help to protect against opportunistic behavior (Pisano & Teece, 1989 & Parkhe, 1993, as cited in Das & Teng, 1996).

According to transaction cost economics, firms purposefully form joint ventures when the costs of writing and executing contracts are too high (because of a small number of bidders, asset specificity and hold up issues, a high degree of uncertainty, or significant incentives for partners to act opportunistically) and, at the same time, it is inefficient to internalize the production process (because the firm lacks such competences) (Williamson, 1975). Further, Nix and Zacharia (2014) noted that firms choose collaborations that minimise transaction costs. If internal collaborations reduce the transactions costs, then they will be preferred as opposed to external partnerships. The transaction cost theory has been used by a number of scholars especially in collaboration related studies. Rota, Reynolds and Zanasi (2014) used the theory to explain the contribution of collaboration and sustainable relationships to the life cycle analysis in agri-food supply chains.

In a study on foreign entry mode choice and firm performance in European Union firms, Brouthers (2013) found that firms whose mode choice could be predicted by the extended transaction cost model performed significantly better, on both financial and non-financial measures, than did firms whose mode choice could not be predicted by the extended transaction cost model. Jobin (2008) proposed a transaction cost economics framework to evaluate partnership performance. Hottenrott and Lopes-Bento (2014) in their study on the relationship between R&D partnerships and innovation performance noted that collaboration involves transaction costs in the form of coordination and monitoring efforts. Vieira, Yoshizaki and Ho (2015) also examined the effects of collaboration on logistical performance and transaction costs.

However, a recurring criticism of the transaction cost literature as it has been applied to inter-organizational collaboration is that it fails to acknowledge the role that non-transactional attributes play in influencing the choice of governance mode. In particular, relational capital is suggested to be an important determinant of where relational capital has been defined as encompassing mutual trust, respect, understanding and friendship between individuals in a business relationship (Thuy & Quang, 2005). The transaction costs theory was applied to explain and justify collaboration efforts in the organisations, with the purpose to minimize transactional and operational costs inefficiency and to determine the choice of collaboration modes or governance choices.

2.2.3 Organisational Learning Theory

This theory was first developed by Inkpen (1995) and focused on learning related to behavioural and cognitive change. The second perspective was developed by Larsson (1998) and focused on the idea that there is a dynamic relationship between the individual companies' inter-organisational learning strategies. Both learning models are useful as analytical frameworks in the empirical study. Organizational learning theory states that, in order to be competitive in a changing environment, organizations must change their goals and actions to reach those goals. In order for learning to occur, however, the firm must make a conscious decision to change actions in response to a change in circumstances, must consciously link action to outcome, and must remember the outcome.

Organizational learning has many similarities to psychology and cognitive research because the initial learning takes place at the individual level. The process of learning starts with the individual before it is transmitted to the group. The group then diffuses the knowledge to the organization and it is here that learning becomes organizational. However, with inter-organizational collaborations, this learning can be shared with the different collaborating organizations and hence assist them in building competencies (Cha, 2008).

Furthermore, empirical studies in this area have used this theory. For instance, Nielsen, Boer and Gertsen (2008) used this theory to examine the influence of learning in collaborative improvement and concluded that partnerships greatly improve the performance of firms. Doherty (2015), on the other hand, used the theory to examine the factors that determine successful collaboration. Organizational learning theory parallels models of individual learning grounded in cognitive and social psychology and defines learning as organizational change.

Researchers agree that an organization learns through the individual learning of its members (Schein, 1996). From a cognitive perspective, individual learning involves storing, retrieving, transforming, and applying information; such information processing relies on memory as "a storage device where everything we perceive and experience is filed away" (Kim, 1993). Memory is not simply a static storage device but changes as it accommodates new information. Memories exist in individuals, and when individuals have shared knowledge and experience, such as that

evolving from participation in an organization, they may also have shared memories. Collections of memories that guide responses and are interconnected around specific experiences are called mental models.

This theory was relevant for this study as it can be used to explain how organizations can share knowledge through their collaborations and hence make the knowledge to be available for all the organizations in the network. The knowledge emanating from the various collaborators is shared among the network partners and hence creating competitive advantage that can be used to improve organizational performance thus benefiting all collaborating organizations.

2.2.4 Resource Based View Theory

The proponent of the Resource Based View theory was Barney (1991).The theory asserts that enterprises are viewed as the combination of resources and capabilities. Competitive advantage is obtained through the accumulation of strategic assets and capabilities (Barney, 1991). RBV suggests that enterprises possess unique assets and capabilities, allowing them to control their competitive advantage within their market. Bharadwaj (2000) intimated that all successful enterprises have some unique resources and capabilities which are used effectively enabling the organizations to grow and create positions for them in the market. Similarly, Ciborra (2008) noted that, in dynamic environments, organizations should carefully select their capabilities and adopt infrastructure, processes and practices aimed at building and effectively combining their capabilities.

Concludingly, in the above text, the traditional RBV was outlined, showing the development to the related-oriented resource-based view (Wratschko, 2009). Today, alliances and networks are means in order to get access to valuable resources that would not be available otherwise. This unavailability occurs since some important strategic resources, are rare, hard to substitute and imperfectly imitable (Barney, 1991). Inter-organisational collaborations increases the mobility of resources and enables companies to pool and exchange resources. Further, it was shown that firms collaborating can gain a sustainable competitive advantage (Lavie, 2006). This is not only through the access of valuable resources, but also following the extended RBV, that a competitive advantage is embedded in the relationships and interfirm connection of firms (Duschek & Sydow, 2002; Dyer & Singh, 1998). Moreover, these inter-organisational collaborations are difficult to imitate by competitors, contributing to the sustainability of the competitive advantage and consequently enhancing organizational performance (Wratschko, 2009).

In a view to relate resource based view and inter-organizational collaborations, Bharadwaj (2000) viewed Inter-organizational collaborations as an important capability of the organization and used empirical methods to explore the relationship between ICT collaborations and enterprise performance. Moreover, in a study that tested a model describing the relationship between ICT collaborations and business performance, Sanders and Premus (2005) noted that ICT collaborations between organizations had a significant effect on business performance. Similarly, Ravichandran and Lertwongsatien (2005) believed that enterprises with high ICT collaborations with partners were able to

deliver information systems and services to the entire organization and hence making information systems as an enabler to improved business performance. This study applied the resource based view theory in seeking to explain how inter-organizational collaborations can be used as a resource in the organization that can enable the firm to enhance its performance. Inter-organization collaborations that enable the firm to share its resources with other partner organizations enable the organization to be able to face the challenges in the current complex and dynamic business environment (Patrakosol & Lee, 2009). The resource based view theory is hence applied in the study to depict inter-organizational collaborations as unique capabilities that are inimitable and hence helping the organization to attain competitive advantage and superior performance.

2.4 Empirical Review

This section provides a review of empirical studies in relation to the inter-organizational collaborations and organizational performance. Reviewed in the section are studies in relation to resource based, cost based and relational based collaborations. Moreover, the section presents a review of studies on organizational characteristics such as size and age of the firm and competitiveness.

2.4.1 Resource Based Collaborations and Performance

A study carried out by Faems, Looy and Debackere (2005) assessed a sample of 221 Belgian manufacturing firms on the effects of inter-organisational collaborations on innovation performance. The results showed that there was a positive relationship between inter-organisational collaboration and innovative performance of Belgian

manufacturing firms. The study also showed that the impact differed depending on the nature of partners involved suggesting a moderating role of the type of collaborative partnerships on the relationship between collaboration and performance. However, this study focused only one segment of performance while the current study focussed on different dimensions of performance such as effectiveness, efficiency, financial viability and relevance.

Sampson (2007) studied a sample of 463 R&D collaborations in the telecommunications industry in 34 countries the impact of R&D collaborations on firm performance. The study found that collaborations contribute more to firm innovation when technological diversity among the firms is moderate than when it is lower or higher. This shows that technological diversity moderated the relationship between innovation performance and collaborations. Further, the results showed that firm characteristics influenced innovation performance which suggests that they also moderated the relationship between collaborations and performance. This study also offers a gap in literature as it does not include competiveness in the model. This was a cross-country study which may not be applicable to a single country like Kenya. Further, the focus was on R&D collaborations and not on other types of collaborations.

As a result, the ability of a firm to make use of knowledge from its external environment plays a central role in competitiveness alongside innovation and the creation of proprietary firm knowledge (Matusik, 2000). Various scholars have therefore recognized that inter-organizational learning is critical to competitive success, noting that

organizations learn by collaborating with other firms as well as by observing and importing their practices for example Inkpen, 1998; Lubatkin, Florin, & Lane, 2001; March & Simon, 1958; Powell *et al*., 1996; Veugelers, 1997). Darr, Argote and Epples (2011) study, for example, provides strong empirical evidence for the significance of inter-organizational relationships to facilitate inter-organizational learning. It has also been demonstrated empirically that the number of collaborative relationships a firm is engaged in is positively related to its innovation output (Shan, Walker, & Kogut, 1994). In conclusion, inter-organizational learning seems to combine the best of both worlds: The benefit of accumulating knowledge without the cost of accumulating experience (Ingram, 2002).

A study by Merono, Acosta and Lopez (2008) on 310 Spanish firms investigated the impact of collaborative technologies on firm performance. The results showed that the use of collaborative technologies with an informational orientation contributes to increased organizational performance. Thus, informational orientation moderated the relationship between collaborative technologies and performance. The current study used descriptive and explanatory research design which is best suited for establishing the cause- effect relationships unlike exploratory design whose results can only regarded as preliminary hence cannot be relied upon.

Baba, Shichijo and Sedita (2009) assessed a sample of 455 firms in photo catalysis in Japan on the effects of university-industry (U-I) collaborations on the innovative performance of firms. The findings of the study showed that research collaborations

increases firms' R&D productivity. Further, the study found that firm characteristics (number of publications and number of corporate inventors) were significant in the relationship suggesting that organisational characteristics moderate the relationship between collaborations and performance. This study failed to include any mediating variable and therefore the inclusion of competitiveness as a mediating variable provides a new approach to the relationship and thus addresses a research gap. This study was also based on Japan and, therefore, cannot be generalised to Kenya. The study had focused on the collaborations between universities and industries while this study will focus on three types of collaborations.

Zacharia, Nix and Lusch (2009) carried out a study on a sample of 342 supply chain managers from multiple industries in USA to assess the effect of collaboration between buyers and suppliers on business performance. The results showed that higher levels of collaborations led to improved organisational performance and profitability. Further, independence of knowledge and supply chain partner insight was found to mediate the relationship while operational and relational outcomes moderated the relationship. Firm characteristics and competitiveness were not included in the model and, therefore, the present study offers a new insight into this relationship. The study had focused on buyer-supplier relationships while the present study will go beyond the scope and focus on organisational collaborations. In addition, the exploratory survey used a questionnaire for data collection and it was anchored on Resource Based View Theory (RBV) only. The current study was anchored on several theories namely Transaction Cost Theory and Resource Dependence Theory.

Cao and Zhang (2011) assessed a sample of 59 US manufacturing firms on the impact of supply chain collaboration (SCC) on organizational performance. The results showed that supply chain collaborations improve firm performance by improving collaborative advantage. Collaborative advantage, therefore, mediated the relationship between SCC and firm performance of small firms and not the large firms. The results showed that firm size moderated the relationship between collaboration and performance. This study also focused on supply chain collaborations yet the present study focused on wider collaborations beyond the supply chains.

Wang and Gao (2011) carried out a study of 27 manufacturing firms in China on the effect of network architecture on firm performance. The results showed that the benefits from networks may evolve with network duration. The study further showed that industry moderated the relationship between network architecture and new product developments. The study used desriptive statistics in data analysis while this study included inferential statistics to test for the relationship between the dependent and independent variables . Further, other controls like firm size, network size and range were insignificant on performance. This offers a gap in literature for further examination with organisational characteristics in the model. The study focused on the network architecture which is a wider concept that the kind of inter-organisational collaboration covered in the present study.

Pippel (2012) assessed the impact of R&D collaborations networks on performance. The study was a meta-analysis of 47 articles from various refereed journals focusing on the topic. The meta-analysis revealed that knowledge-intensive interactions have a positive impact on the performance of firms. Since this was a meta-analysis, it does not provide a contextual gap in literature. However, the current study applied descriptive and inferential statistics for data analysis. In addition, Pippel (2012) study focused on R&D collaborations while the current study focused on resource, cost and relational collaborations.

Dangelico and Pontrandolfo (2013) assessed 122 Italian companies on the effect of environmental collaborations on firm performance. The results showed that market performance is influenced by capabilities to implement environmental actions with a focus on energy and pollution and to develop collaborations both with business and with non-business actors. The study further showed that none of the firms' characteristics (size of the firm, age of the firm, and ISO certification) influence performance. This study limited itself to environmental collaborations whereas the present study focuses on all other available inter-organisational collaborations.

2.4.2 Cost Based Collaborations and Performance

Wang and Lee (2014) investigated a sample of 1561 small and medium enterprises in Australia on the effect of collaborations and costs on organisations' performance. The study found that there is a direct effect of collaborative networks on innovation costs performance of SMEs. The results also showed that integrated information system

moderated the relationship. The researcher used logistical regression to determine the effects of collaborations and performance while the current study applied multiple linear regression model . Further, firm characteristics such as size of the firm and size of competitors did not influence performance while expenditure on IT did. This is a gap the present study seeks to bridge.

A study by Bjerke and Johansson (2014) investigated a sample of 636 firms in Sweden on the relationship between collaboration and innovation. The results showed that the probability to innovate and reduce operational costs is enhanced when firms collaborate. The study further revealed that firm characteristics such as size of the firm, education levels of owners and multinational nature of firms affected innovation. Further, the study was based on Sweden and cannot be entirely applicable to Kenya. The study also used innovation performance yet the present study intends to expand this performance definition beyond innovation.

A study by Wang, Dou, Zhu and Zhou (2015) assessed the effect of internal capabilities on collaboration and performance. The study used a sample of 235 manufacturing firms in China. The study found that firm capabilities such as innovation, information and relational positively affect external collaborations which in turn affect market and financial performance. The study also showed that market turbulence moderated the relationship between capabilities and collaborations. Further, the study was based on manufacturing firms in China which is a developed country whereas the current study focused on Courier firms in Kenya.

2.4.3 Relational Based Collaborations and Performance

Porter (1985) posited that cooperation can be one way of attaining sustained superior performance. Cooperation can be defined as the initiation and participation in collaborative arrangements with other players in a firm's environment. Cooperation usually aims at "relational rent" (Dyer & Singh, 1998): gaining access to customers, to complementary resources and capabilities from partners; learning and accumulating technical and organizational knowledge; and benefiting from scale and scope economies (Hamel, 2008). Moreover, a firm can gain competitive advantage through participation in the following collaborative arrangements: pooling resources with partners to enhance strengths; forming alliance with others to fight a third party; and joining multiple alliances to gain latitude (Contractor & Lorange, 2008). Although a firm could also achieve ownership-based or proficiency-based competitive advantages (Hamel, 2009), the immediate and direct outcome of a firm's cooperative manoeuvering is often access-based competitive advantage (Gulati, 1998). Gulati noted that the performance of alliances has received less attention than other areas because of some onerous research obstacles, which include measuring alliance performance and the logistical challenges of collecting the rich data necessary to assess these issues in greater detail. As a result, the area of alliances and their effect on performance remains one of the most exciting and under explored areas.

Furthermore, numerous studies have reported dramatically high failure rates of collaborations, several practitioners have sought to identify the magical formula for collaboration success (Bleeke & Ernst, 1991). Gulati (1998) noted that for inter-

organizational collaborations to be successful and have an effect on organizational performance, they should have flexibility in management of the alliance, building trust with partners, regular information exchange with the partners, constructive management of conflict, continuity of boundary personnel responsible for the interface between the firm and the alliance, and effectively managing partner expectations. The effect of collaborations on firm performance was assessed in the Japanese firms. Gulati (1998) reported the relative performance of individual alliances, but also tried to ascertain their effects on the performance of firms entering them. The study suggested that close vertical ties that are characterized by rich information exchange and long-term commitments can lead to greater cooperation and joint activities between the partners and higher levels of asset specific investments, all of which translate into concrete performance benefits for the firms forming such collaborations.

Similarly, Corsten and Felde (2005) studied the effects of supplier-organization network collaborations on performance. The study focused on 135 Swiss buyer-supplier relationships. The results showed that supplier collaboration had a positive and significant effect on the performance of firms. In this relationship, trust and dependence moderated the relationship between collaboration and performance. The study examined a direct link between collaboration and performance and used some moderating variables in the model. However, it did not include firm characteristics in the model and therefore offers a gap that the present study will address. This study was based on Swiss firms and may not therefore be applicable to Kenya. Further, the study was based on supplier collaborations yet the present study does not limit itself to only supplier relationships.

A study by Hagel (2004) on relational based collaborations showed that Portal Player's founders recognized commercial opportunity in the emerging MP3 product category. From the outset, the company was organized as a micro-multinational with its own operations based in both San Jose and Hyderabad. They focused on the opportunity to design an MP3 decoder and controller chip with rich firmware explicitly constructed to incorporate technology from a broad range of other companies, so Portal Player invested 38 significant efforts in building a global network of technology companies with complementary capabilities to support MP3 development. A study by Diana (2011) on Supplier Relationship Management on companies found out that Strategic supplier collaborations is a long-term relationship between the company and its suppliers and it is designed to leverage the strategic and operational capabilities of individual participating companies to help them achieve significant emphasized benefits (Li, Ragu &Subba, 2012). The study was anchored on competitive advantage theory while the current study was anchored on Resource Dependence Theory.

Zaheer and Bell (2005) find in their study of telecommunication firms which are embedded in an open network, which provides access to diverse information through structural holes, tend to perform better than firms that engage in a closed network. This is especially the case for firms whose competitive environment requires them to develop product innovations swiftly and respond quickly to changes in the market. In such a situation new information acquired through partners can be transformed into new products and services, which will enhance the focal firm´s performance.

Zaheer and Bell (2005) call the benefits of this process of enhancing internal competences through a superior network position as “network-enabled capabilities”. The study used exploratory research design while the current study used explanatory research design.

Capaldo (2007) in his study on inter-firm networks within Technology based American firms describes the strengths of strong ties -mutual knowledge, social contents (interpersonal relationships), and relational-specific investments- as being beneficial for the focal firm´s ability to innovate continually. In support of this Capaldo,(2007), in his study on strategic alliances of Swedish oil firms found that firms that work together strengthens their ties and describes a situation where these strengths not only encourages the participating organizations to deepen their collaboration by investing in relational-specific assets. The study was carried out in Technology based firms while the current study focused on Courier firms therefore fulfilling the contextual gap. In addition). In addition only descriptive statistics were used. No model was employed to test the significance and causality of the variables. The current study made use of an empirical model to examine the relationship between the variables.

Dyer and Nobeoka (2000) in their study of America Toyota suppliers contribute similar results. They suggest that strong ties are favorable when it comes to exploiting the diversity which resides in networks. Furthermore, strong ties are better suited to transfer tacit knowledge. The redundant ties make it easier to locate potentially valuable knowledge and enhance trust that facilitates the transfer of knowledge. This argument is

further supported by Tiwana (2008) who found that the costs of strong ties are that firms are very much inward focused, which limits their ability to create new knowledge (Dyer and Nobeoka, 2000). In order to appropriate above-mentioned benefits Kale *et. al.* (2002) recommend that firms invest in a dedicated collaboration function. Such a function can enhance the process of identifying the right partners, screen them more adequately, and even attract stronger and more compatible associates. Furthermore, they found out that it presents and positions the alliance better to customers, competitors, and investors. The study used exploratory research design while the current study used explanatory research design.

Previous research by Mitchell and Singh (2006) suggests that firms occupying central network positions with greater network ties have superior access to information and, thus, are more likely to increase the number of their collaborations in the future (Gulati, 1995a; Mitchell & Singh, 1996; Walker *et al.*, 1997). In addition they found out that when a firm is well positioned in networks, the firm has' access to more reliable information about potential partners because of trusted informants within the network who may have direct experience with the potential partner .An information-rich position within a network, therefore, provides a firm with additional information about the nature and degree of accessibility of the complementary resources of potential partners. They used a profit model and tobit regression model to determine the relationship between the variables while the current study applied multiple linear regression model.

2.4.4 Inter- Organizational Collaborations, Organization's Characteristics and Performance

A study by Wang and Gao (2011) on 270 manufacturing firms in China investigated the effect of network architecture on firm performance. The findings of the study were that firm size was significant as a control variable. This study offers several gaps. First, the study was based in China and, therefore, the results may not be applicable to Kenya. Secondly, the study focused on internal capabilities and collaborations whereas the present study focuses on inter-firm collaborations. Finally, the study did not include competitiveness as a dependent variable in the model and, therefore, the inclusion of the same in the present study offers a new insight into the relationship. The current study found that size of the firm was significant in performance of courier firms.

The results showed that the benefits from networks may evolve with network duration. The study further showed that industry moderated the relationship between network architecture and new product developments. Further, other controls like firm size, network size and range were insignificant on performance. As seen, competitiveness as a mediating variable was not part of the model. This offers a contextual gap in literature for further examination with organisational characteristics as mediating variables in the model. The study was also done in China and the results may not be entirely applicable to Kenya. The study focused on the network architecture which is a wider concept that the kind of inter-organisational collaboration covered in the present study.

One stream of collaboration portfolio configuration analysis aims at understanding how the size of a focal firm´s portfolio affects firm performance (Shan, Walker, and Kogut, 1994; Capaldo, 2007; Ahuja, 2000a; Deeds and Hill, 1996; Stuart, Hoang, & Hybels, 1999). Different findings and interpretations face each other. Whereas Shan, Walker, and Kogut (1994) find a positive correlation between collaboration portfolio size and firm performance, Lavie (2007) and Dyer, Singh, and Kale (2008) point out that not only value creation but rather its appropriation within a partnership is important. Stuart, Hoang, and Hybels (1999) argue that it is more important with whom a company allies than the sheer number of ties a firm maintains.

Shan, Walker, and Kogut (1994) find in their study of startups in the biotechnology industry, that the number of collaborations positively influences innovation output. They refer to (March and Simon, Shan, Walker, and Kogut, 1994) when they suggest that a start -up is able to focus intensely on research and product development when their partner firm takes responsibility for the commercialization process. This specialization leads to a higher likelihood of successful innovative efforts. This finding is supported by the falsification of their second hypothesis, which is that "a start-up's amount of innovative output explains the number of its relationships" (Shan, Walker, and Kogut, 1994). However, study concentrated on biotechnology industry and used exploratory research design which is a weak design. The current study focused on courier firms and applied explanatory design.

Hence, they prove that collaboration portfolio size positively influences innovative output, not vice versa. Further backing for the argument that collaborative portfolio size positively influences firm performance is given by Capaldo (2007). He argues that, when a focal firm increases its network size its bargaining power within each dyad increases. This is due to the decreasing vulnerability to external resources such as partners leaving the network or failing innovation attempts. The aforementioned studies are in congruency with the findings of the current study which found that the size and age of the firm had a significance on the inter-organisational collaborations and performance of courier firms in Nairobi City County, Kenya.

Wang and Lee (2014) examined the effect of collaborations and costs on firm performance. The study used a sample of 1,561 small and medium enterprises in Australia. The study found that there is a direct effect of collaborative networks on innovation costs performance of SMEs. The results also showed that integrated information system moderated the relationship. Further, firm characteristics such as size of the firm and size of competitors did not influence performance while expenditure on IT did. This study focused on Australia and, therefore, the results may not be applicable to Kenya. While the study used moderating variables in the model, the mediating effect of competitiveness was not examined.

Three organizational characteristics that were used as moderating variables and strongly determine the ability of the firm to deal with environmental threats and take advantage of opportunities are size, age and adoption of ICT. These variables have been applied as

independent and moderating variables in various studies. Mao (2002) noted that the application of these three variables as moderators in research studies is due to the difference that exists between small and large firms, new and experience firms and adopter and non-adopters of ICT.

In one such study that applied size as a moderating variable, Shuiyin, Miao and Pengju (2015) studied the effect of supply chain collaboration on business performance. The study used a sample of 240 enterprises in China. The results showed that supply chain collaboration positively affects business performance of small businesses. The results also showed that firm size moderated the relationship. This study was based on China and, therefore, may not be applicable to Kenya. Secondly, the study focused solely on supply chain collaborations hence limiting its scope. Lastly, the study did not include competitiveness as a variable in the model. These offer a gap in literature which the present study seeks to bridge.

Generally, small firms have a shortage of resources and skill specialization (Oi, 1983) and therefore may be less able to have further development of capabilities. Moreover, small firms are expected to benefit more from collaborations than large firms due to their limited access to resources and capabilities (Autry & Griffis, 2008). On the other hand, large firms tend to have more resources and more complex structures along functional, vertical and spatial dimensions (Agarwal, 1981). According to Pfeffer, (2010), large firms have more access to resources and capabilities for attaining competitive advantage and superior performance including more internal mobility (Hashimoto & Raisian,

2009), which enhances organizational growth of capability and experiences (Falvey, 1988). Since larger firms are much endowed with resources, it means that they are able to use their resources to attain superior performance without necessarily engaging in collaborations. However, collaborations are still expected to improve their competence but to a lower extent compared to small firms.

Organization's age measures the years that the organization has been in existence and hence depicts its experience in the market. Organization's age moderates the impact of inter-organizational relationships and performance (Calantone, Cavusgil, & Zhao, 2002) and learning and performance (Hitt *et al*., 1997). The efficient and effective supply of market information in older firms and the ability to collaborate with other firms is influenced by firm age (Sinkula, 1994). Innovative ideas can come from diverse areas, both internally and externally from firm suppliers, customers and others in the relationship chain. Younger firms are often at a disadvantage as it takes long time to build these relationships. Older firms are better experienced in choosing and employing information and also in building networks that prove to be important in collaborative partnerships (Lukas, Hult, & Ferrell, 1996).

Sorensen and Stuart (2000), posit that experience and organizational competencies provided by age help firms to develop their operations in more efficient way, especially the operations relating to innovation and collaborations. Therefore, the relationship between organizational collaborations and organizational performance and also between organizational learning and performance increases with firm age as they efficiently use

information collected from collaborating partners. Raw organizational management in some new firms can impede development of collaborations in those companies and hence reduce the relationship between collaborations and performance. Therefore, age can lead to improvement of the collaboration effects on performance (Damanpour & Schneider, 2006).

Another mediating variable applied in the current study is ICT. It is indisputable that ICT has an enormous effect on contemporary business. However, the relationship between ICT and the performance of supply chain (SC) networks is less straightforward. Some studies show that there is a positive relationship between them (Olson & Boyer, 2003), but other studies present less evidence (Da & Cagliano, 2006) or do not even find a relationship (Jeffers *et al*., 2008). In an attempt to better understand the relationship ICT, SC networks and performance and the underlying mechanisms, researchers have investigated the indirect effect of ICT on organizational performance through inter-organizational partnerships (Sanders & Premus, 2005). The findings produced mixed results.

A number of studies for instance, Kent and Mentzer (2003) show that ICT positively affects collaborations and improves organizational performance. For example, ICT can strengthen knowledge sharing among collaborating partners through more efficient knowledge sharing processes and can reduce cost of collaborative learning (Ward & Zhou, 2006). However, other studies by Sriram and Stump (2004), found no obvious relationship between ICT and performance. The author also notices that different

measurements and constructs were used to capture the central elements in the relationship. In other studies for instance Sanders & Premus, 2005; Zhang & Dhaliwal, 2009) measure ICT in rather aggregate terms, while others focus on specific technologies like EDI (Lai ,2008) or APS / ERP (Swafford , 2008). Similarly, it seems that collaborations among partners and organizational performance are measured in different ways.

Three subsequent stages in the employment of ICT are established: ICT investment, ICT usage and ICT capability. That distinction is inspired by the RBV on organizations (Barney, 1991), which is often used to investigate the link between organizational performance and resources or technologies (Bharadwaj, 2000). ICT can mediate the effect of collaborations on organizational performance as organizations that adopt ICT to a large extent are expected to be enabled to have more collaboration and hence have a positive effect on performance. This is because many collaborations (for example knowledge sharing, sharing of operational technology, sharing of operational intelligence) are expected to be ICT reliant. Those organizations that do not have high ICT adoption are expected to have little collaboration with partners. As such ICT is therefore expected to have significant moderating effect between collaboration and performance (Ward & Zhou, 2006).

2.4.5 Organizational Competitiveness and Performance

To survive and succeed, firms must innovatively produce. Intensified global competition and an emphasis on rapidly changing technologies have only reinforced

this long-held notion. To remain competitive, firms must develop and introduce new products or services to external markets (Cummings& Oldham, 1997). According to Zamora (2006) innovative companies must adjust their intrinsic and extrinsic functions to respond to the demands of the environment and thus maintain and improve business performance. Companies struggling to maintain an innovative advantage perceive and attract new opportunities that might grant them efficiency and effectiveness. The previous empirical studies of organizational competitiveness have shown that there is a positive and direct relationship between innovation and firm performance (Hult *et al*., 2004; Kleinschmidt, Cooper , Elko, 2000; Erdil *et al.,* 2004; Lin & Chen, 2007; Rubera and Kirca 2012). Regular product introductions can satisfy customer needs, generate profits, and enhance long term competitiveness as well as the firm's ability to differentiate itself from the competition (Zahra, 1996).

Previous studies have shown that there is a significant relationship between cost-based advantage and the performance of organisations. Firms that enjoy cost-based competitive advantage over their rivals, for example in terms of relatively lower manufacturing or production costs, lower cost of goods sold and lower-price products, have been shown to exhibit comparatively better performance (Gimenez & Ventura, 2002; Morgan et al., 2004). Furthermore, it has also been shown that there is a significant relationship between product-based advantage and performance of organisations. Firms that experience product-based competitive advantage over their rivals, for example in terms of better and/or higher product quality, packaging, design and style, have been shown to achieve relatively better performance (Gimenez &

Ventura, 2002; Morgan et al., 2004). Similarly, research has further illustrated that there is a significant relationship between service-based advantage and performance of organisations. Firms that benefit from service-based competitive advantage compared with their rivals, for example in terms of better and/or higher product flexibility, accessibility, delivery speed, reliability, product line breadth and technical support, have achieved comparatively better performance (Gimenez & Ventura, 2002; Morgan et al., 2004).

Papulova and Mokros (2007) manufacturing companies gain significant competitive advantage by implementing continual and on-going innovations and the managerial skills and knowledge are in the center of the process of innovations. Competencies leveraged directly satisfy existing customer needs or indirectly to develop a range of core products or core services. If the organization has abilities, which can be used to develop new product for the customer value and which other organizations do not have and at the same time which are difficult to imitate and are unable to substitute, then it can be said that the organization has distinctive competences that will ensure its sustainable competitive advantage (Papula & Papulova 2013).

Prasnikar and Kotnik (2006) on the analysis of data from polls on research and development (R&D) competencies in Slovenian firms from the manufacturing and service sectors from year 2002 found out that there are only 21% innovative companies. There is a positive bias for large companies, companies that are partially owned by foreigners and for export-oriented companies. R&D competencies have been stagnating

and are lower than in developed European countries. Nelson (2008) pointed that unique capabilities in research and development are particularly plausible sources of competitively important competence. Likewise Tabrizi and Eisenhardt (2009) confirmed that there are significant and persistent differences across firms in their ability to conduct research and to develop new products.

Past studies by Chauvin and Hirschey, (1993); Bae and Noh, (2001) have documented that a firm's R&D investment consistently and positively affects its market value). Corporate R&D collaborations also plays a vital role in a firm's focus on superior products,innovation and superior skills. (Bae & Noh, 2001). As firms and industries continue to evolve, R&D collaborations has increasingly become a critical element of firm success and survival (Jimenez and Sanz-Valle, 2011) and sustainable competitive advantage (Johannessen, 2008; Mumford & Licuanan, 2004). Taking 883 firms in the United States during 1957-1965 as sample and using Cobb-Douglas production function, Griliches (1980) found that R&D was positively correlated with operating performance. Then, Jaffe (1986), Hall (1993) and Klette (1996) used similar methods to study the same subject; they all supported the conclusions of Griliches (1980).Brockbank, Ulrich and James (2007) in their study identified five major competencies expected of collaborating organizations: strategic contribution, personal credibility, HR delivery, business knowledge and technology which enhances organizational performance. Therefore, it is imperative to investigate the role of organizational competitiveness in the relationship between inter-organizational collaborations and performance.

2.5 Summary of Literature and Research Gaps

Table 2.1 summarises the literature reviewed and brings out clearly the research gaps identified.

Table 2.1 Summary of Empirical Studies

Author (Year)	Main Objective	Key Findings	Knowledge Gaps	Focus of the Current Study
Corsten and Felde (2005)	Effects of supplier collaboration on performance	Supplier collaboration has a positive effect on performance. Trust and dependence moderated the relationship.	The study only focused on the direct effect of the value chain and not the key determinants of successful collaboration.	The study focused on a wider scope of collaborations not just supplier collaborations as the key determinants of performance
Cao and Zhang (2011)	To establish the impact of supply chain collaboration (SCC) on firm performance	Supply chain collaborations improve firm performance by improving collaborative advantage.	The study focussed only on supply chain collaborations but not specifically on relational, cost or resource based collaborations The study used exploratory design	The current study focused on how three inter-organizational collaborations (relational, cost and resource based) affect organizational performance. The study used explanatory design
Faems, van Looy and Debackere (2005)	Effect of inter-organisational collaboration on innovation performance	There is a positive relationship between inter-organisational collaboration and innovative performance. The impact differs depending on the nature of partners involved.	This study did not, however, include organisational characteristics or competitive advantage in the model No theory basis anchoring the study	The study focused on organisational characteristics as the moderating variable and organisations' performance as the dependent variable The study used RD,RBV and TC theories
Sampson (2007)	Impact of R&D alliances on firm performance	R&D Collaborations contribute more to firm innovation when technological diversity is moderate. Firm characteristics also moderated the relationship.	The study only focused on Research and development collaborations only.	The focus of this study was resource, cost and relational collaborations.

Author (Year)	Main Objective	Key Findings	Knowledge Gaps	Focus of the Current Study
Merono-Cerdan, Soto-Acosta and Lopez-Nicolas (2008)	The impact of collaborative technologies on firm performance	The use of collaborative technologies with an informational orientation contributes to increased organizational performance	The study also limited itself to technological collaborations.	The present study sought to include cost, relational and resource based inter-organisational collaborations.
Baba, Shichijo and Sedita (2009)	Effects of university-industry collaborations on the innovative performance of firms	Research collaborations increases firms' R&D productivity.	The study limited itself to organisations' characteristics as a mediating variable.	The study included age of the firm, its size and the extent of ICT adoption as moderating variables. Competitiveness be applied as a part of the mediating
Zacharia, Nix and Lusch (2009)	Effect of collaboration between buyers and suppliers on business performance	Higher levels of collaborations led to improved organisational performance and profitability. Independence of knowledge and supply chain partner insight was found to mediate the relationship while operational and relational outcomes moderated the relationship.	The study focused on buyer-supplier relationships and levels of collaborations.	The focus of the study went beyond the buyer-supplier scope and focus on organisational collaborations.
Cao and Zhang (2011)	Impact of supply chain collaboration on firm performance	Supply chain collaborations improve firm performance by improving collaborative advantage. Collaborative advantage mediated the relationship between SCC and FP of small firms. Firm size moderated the relationship	The study focused on supply chain collaborations	The study focusses on wider collaborations beyond the supply chains.

Author (Year)	Main Objective	Key Findings	Knowledge Gaps	Focus of the Current Study
Wang and Gao (2011)	Effect of network architecture on firm performance	Industry moderated the relationship between network architecture and new product developments. Other controls like firm size, network size and range were insignificant on performance.	The study focussed on industry as the moderating variable between network architecture and new products developments.	This study focussed on size and age as moderating variables which were not part of the model
Dangelico and Pontrandolfo (2013)	Effect of environmental collaborations on firm performance	Market performance is influenced by capabilities to implement environmental actions with a focus on energy and pollution and to develop collaborations both with business and with non-business actors. None of the firms' characteristics (size of the firm, age of the firm, and ISO certification) influence performance.	This study limited itself to environmental collaborations whereas the present study focuses on all other available inter-organisational collaborations (cost, relational and resource based)	The study focussed on all other available inter-organisational collaborations
Pippel (2012)	Impact of R&D collaboration networks on performance	Knowledge-intensive interactions have a positive impact on the performance of firms.	The study focussed on knowledge based collaborations.	The study laid focus on resource, cost and relational collaborations.
Wang and Lee (2014)	The effect of collaborative networks on firm performance	There is a direct effect of collaborative networks on innovation performance of SMEs. Integrated information system moderated the relationship. Firm characteristics such as size of the firm and size of competitors did not influence performance while expenditure on IT did.	The study is a direct effect of collaborative networks on innovation performance of SMEs	The focus of the study was on organisations' performance and will not limit itself to innovation performance. While the study used moderating variables in the model, the effect on performance and competitive advantage was not examined.

Author (Year)	Main Objective	Key Findings	Knowledge Gaps	Focus of the Current Study
Bjerke and Johansson (2014)	Relationship between collaboration and innovation	The probability to innovate is enhanced when firms collaborate. Firm characteristics such as size of the firm, education levels of owners and multinational nature of firms affected innovation.	The study limited itself to innovation.	The study focussed on resources, costs and relational collaborations. The study addressed the impact of collaborations on organisations' competitiveness.
Wang, Dou, Zhu and Zhou (2015)	Effect of internal capabilities on collaboration and performance	Firm capabilities (innovation, information, relational) positively affect external collaborations which in turn affect market and financial performance. Market turbulence moderated the relationship between capabilities and collaborations. Firm size was insignificant.	The study limited itself to firm capabilities. Market turbulence moderated the relationship between capabilities and collaborations.	The focus of the study included organizations' characteristics as the moderating variable.
Shuiyin, Miao and Pengju (2015)	The effect of supply chain collaboration on business performance	Supply chain collaboration positively affects business performance of small businesses. Firm size moderated the relationship.	The study limited itself to the performance of small businesses.	The study focused on all sizes of organizations not just the small ones.

Source: (Author, 2017)

2.6 Conceptual Framework

In this study, the dependent variable is the performance of organisations in the courier sector in Kenya while the independent variables are inter-organizational collaborations. Organizational characteristics moderate the relationship between the inter-organizational collaborations and performance of courier firms in Nairobi City County, Kenya. Figure 2.1 presents the conceptual framework.

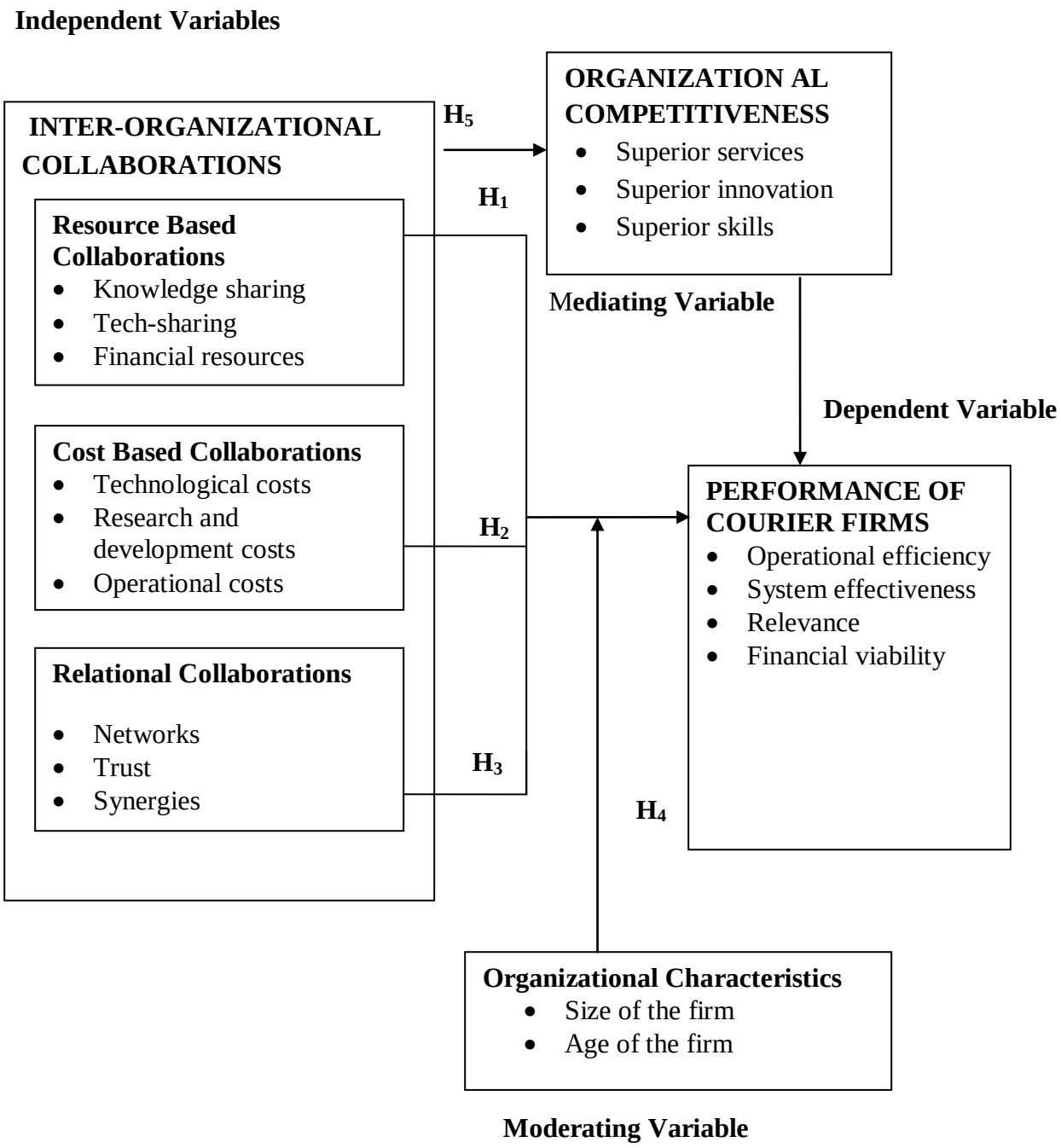

Figure 2.1: Conceptual Framework
Source: Author (2017)

Based on the conceptual framework and reviewed literature, the dependent variable was organizational performance measured non- financially through financial viability, effectiveness, efficiency and relevance.

The independent variables corresponding to were measured using three constants, namely resource, cost and relational based collaborations. Resource based which was measured through financial resources, knowledge sharing and technological sharing, Cost based collaborations were measured using technological costs, research and development costs and operational costs. Relational based was measured through networks, mutual trust and synergy. Organizational characteristics were supposed to moderate the relationship between inter-organization collaborations and organizational performance and included size and age of the firm. The mediating variable was organizational competitiveness which as measured using superior services, superior innovation and superior skills.

Therefore, the study proposed the following hypothesis:

H_{01}: There is no effect of resource-based collaborations on performance of Courier firms in Nairobi City County, Kenya

Ho_2: There is no effect of cost-based collaborations on performance of Courier firms in Nairobi City County, Kenya

Ho_3: There is no effect of relational-based collaborations on performance of Courier firms in Nairobi City County, Kenya

H_{04}: There is no moderating effect of organisational characteristics on the relationship between inter-organisational collaborations and performance of Courier firms in Nairobi City County, Kenya

Based on the fourth hypothesis, the study sought to determine the moderating effect on the relationship between inter-organisational collaborations and performance of Courier firms in Nairobi City County, Kenya. To achieve this objective, sub-hypothesis 4(i) and 4(ii) were derived from hypothesis four.

$H_{04(i)}$:Age of the firm has no moderating effect on the relationship between inter-organisational collaborations and performance of Courier firms in Nairobi City County, Kenya

$H_{04(ii)}$: Size of the firm has no moderating effect on the relationship between inter-organisational collaborations and performance of Courier firms in Nairobi City County, Kenya

Ho_5: There is no mediating effect of organisational competitiveness on the relationship between inter-organisational collaborations and performance of Courier firms in Nairobi City County, Kenya.

CHAPTER THREE
RESEARCH METHOLOGY

3.1 Introduction

The methodology presents a description of how the study was approached. It presents the plan of the research philosophy, the research design, population of the study, sampling design, data collection instruments, validity and reliability, data analysis, diagnostic tests and operationalization of study variables.

3.2 Research Philosophy

This study was approached from a positivist philosophy point of view. The positivism school of thought is based on the philosophy that only one reality exists though it can only be known imperfectly due to human limitations and researchers can only discover this reality within the realm of probability (Reichardt & Ralli, 1994). This school also holds that the researcher and the subjects were independent; didn't influence each other or outcome. This study was anchored in the positivism paradigm because it sought to objectively establish facts by empirically establishing relationships among variables. In addition, it is based on the theory from which hypothesis are drawn. The hypotheses were tested, accepted or rejected leading to what could lead to further research.

Research philosophy relates to the development of knowledge. The nature of knowledge contains important assumptions in which researchers view the world (Saunders *et al*, 2007). Knowledge is a set of beliefs about specific segment of reality or phenomenon (Mugenda & Mugenda, 2003). This leads to what is reality

(ontology) and how knowledge about reality can be availed (epistemology). Ontology deals with different views about reality and hence it influences the way knowledge is constructed. Epistemology is the study of theories of knowledge. Epistemology helps to understand what it means to know and how one comes to a state of knowledge and complete knowledge about a given phenomenon (Mugenda & Mugenda, 2003).

The two philosophical stances of epistemology are positivism and interpretivism. Positivism seeks facts of social phenomena with little regard for subjective status of individuals and adopts a stance that is objective in nature. The researcher is independent from that which is being researched (Nachmias & Nachmias, 2004). Positivists argue that there exists a single tangible reality and observable parts as concepts inferred from behavior (Mugenda & Mugenda, 2003). Interpretivists on the contrary, believe that reality and the individual who observes it cannot be separated (Cooper & Schindler, 2011).

3.3 Research Design

The study adopted both descriptive and explanatory research design. Explanatory research design is flexible design that allows the researcher to consider many different aspects of a problem, while descriptive survey is a method of collecting information by interviewing or administering a questionnaire to a sample of individual (Kothari, 2008). Such research design provides the researcher the opportunity to capture a population's characteristics and test the hypothesis quantitatively (Cooper & Schindler,

2006). This design was considered appropriate because of the purpose of the current study, scope, nature of the data to be collected and the type of analysis to be performed. Further, the researcher collected descriptive data to be accorded statistical analysis for hypotheses testing in order to come up with objective conclusions (Cooper & Schindler, 2006).Such survey has been used by in similar studies by Aosa, (1992), Ongeti, (2014),Machuki, (2011) & Murgor,(2014).

3.4 Empirical Model

There exist different models which could be used in analysing quantitative data; logit, probit, discriminant analysis and regression models. Logit, probit, and discriminant analysis are suitable where the dependent variable is binary (Field, 2009). Multiple Regression models was therefore preferred for this study as recommended by Muthen and Muthen (2007) because the dependent variable was continuous.

An empirical model was used to test the relationship between inter-organisational collaboration and performance of courier firms in Nairobi City County, Kenya. The study used stepwise multiple regression models that involved analysing moderating and mediating effects on the dependent variable. Regression analysis was adopted to estimate regression coefficient and determine the prediction level of the models, regression models for testing hypothesis was estimated in form of:

The regression models were as follows;

$$\mathbf{OP = \beta_0 + \beta_1 RB + \beta_2 CB + \beta_3 RL + \varepsilon} \quad \text{..... (3.1)}$$

Where:

OP = the dependent variable - Performance

β_0 = constant

β_1- β_3 = Beta Coefficients

RB = Resource based collaborations

CB = Cost based collaborations

RL = Relational based collaborations

ε = Error term

To facilitate the joint effect regression model, weighted averages for the three independent variables were computed using the following equation:

$$\mathbf{IC = \sum (W_1X_1+W_2X_2+W_3X_3) / 3.}$$

Where,

IC = Composite index for the independent variables of resource based, cost based and relational based collaborations.

W_1, W_2, W_3= The Relative Weight given to each Component in a particular Variable.

/ = Division

$$\mathbf{OP = \beta_0 + \beta_4 IC + \varepsilon} \quad \text{……………………………………………………..…}\mathbf{(3.2)}$$

Where

OP = Performance

IC= Composite index for resource based, cost based and relational based collaborations

β_0 = Constant

β_4 = Beta coefficient

To establish the influence of organizational characteristics as a moderating variable , two models; model 3.4 and 3.5 were used . Whisman and Mc Clleland (2005) argue that where there is an overall effect to be moderated, the test would involve determining whether the coefficient for the interaction term is statistically significant. Model 3.4 is stated as:

$OP = \beta_0+\beta_4 IC+\beta_5 OC+ \varepsilon$……..……..……(3.3)

Where:

IC = Composite index for resource based, cost based and resource based collaborations.

OC = Organizational characteristics

β_0= constant

β_5= Beta coefficient

ε = Error term

If organizational characteristics is significant when introduced into model 3.4 then, this satisfies the first explanatory condition where OC should be significant (Whisman & Mc Clleland, 2005). Finally model 3.5 was estimated to give the direction and effect of the moderator on the independent variables and its total effect on the dependent variable.

$OP = \beta_0+\beta_4 IC + \beta_5 OC + \beta_6 IC*OC + \varepsilon$……(3.4)

Where

OP = Performance

IC =. Composite index for resource based, cost based and resource based collaborations.

OC = Organizational characteristics

OC*IC = Organizational characteristics **x** Inter-organizational collaborations

β_6= Beta Coefficient

ε = Error term

Table 3.1 summarizes the eligibility and analytical criteria on moderation

Table 3.1: Moderation Decision – Making Criteria

Model 3.4	**Model 3.5**	**Total effect**	**Conclusion**
B_4 not significant ($p > 0.05$)		-	No overall effect to moderate
B_4 is significant ($p < 0.05$)	B_4 not significant ($p > 0.05$)	-	Moderating variable is an explanatory variable
B_4 is significant ($p < 0.05$	B_4 is significant ($p < 0.05$)	β_3	Moderating variable has a moderating effect

Source: (Whisman & Mc Cllelland, 2005)

To establish the effect of each independent variable on the dependent variable stepwise multiple regression were conducted. This examined the relationship between a set of independent variables on the dependent variable, after controlling for the effect of some other independent variable of the dependent variable.

Moderation was tested using the following regression equation;

$OP= \beta_0 +\beta_1 IC+ \beta_2 OC+\beta_3 IC*OC + \varepsilon$…….. (3.5)

The moderator effects are indicated by the interaction of IC and OC in explaining OP. The path $\beta_{1-}\beta_3$ measures the effect of IC-OC, when OC equals zero. The moderation decision criteria is summarized on the Table 3.1 below:

Mediation was tested using a four step approach as suggested by Baron and Kenny (1986) whereby several regression analyses are conducted and significance of the coefficients is examined at each step. Baron and Kenny (1986) is the most appropriate

choice over Mackinnon and Fairchild (2009) since the former takes into consideration for both linear and non- linear effects of the variables.

Step 1: A regression analysis with IC predicting OP

$OP = \beta_0 + \beta_1 RB + \beta_2 CB + \beta_3 RLB + \varepsilon$…….. (3.1)

Step 2: A regression analysis with IC predicting OCC

$M = \beta_0 + \beta_1 RB + \beta_2 CB + \beta_3 RLB + \varepsilon$…… (3.2)

Step 3: A regression analysis with OC predicting OP

$OP = \beta_0 + \beta_1 OC + \varepsilon$ …… (3.3)

Step 4: A regression analysis with IC and OCC predicting OP

$OP = \beta_0 + \beta_1 RB + \beta_2 CB + \beta_3 RL + \beta_4 OCC + \varepsilon$…….(3.4)

Where;

OP = organisational performance

RB = resource-based collaborations

CB= Cost-based collaborations

RL= Relational- based collaborations

IC= Inter organisational collaborations

β_0= intercept

$\beta_1 - \beta_4$= Regression coefficients

OC=Organizational Characteristics

OCC= Organizational Competitiveness

ε= Error term

The purpose of steps 1-3 was to establish that zero-order relationships among variables exist. If one or more of these relationships are non-significant, the conclusion is that mediation is not possible or likely. If there are significant relationships from steps 1 through 3, one proceeds to step 4 where mediation is supported if the effect of OCC remains significant after controlling for IC. If IC is not significant when OCC is controlled, there is full mediation and if both IC and OC significantly predict OP, there is partial mediation.

Table 3.2 Mediation Decision

	OUTCOME	**CONCLUSION**
1	β_1 significant in model 3.4	Complete Mediation
	β_1 significant in model 3.5	
	β_1 significant in model 3.6	
	β_1 insignificant and β_2 significant model 3.7	
2	β_1 significant in model 3.4	Partial Mediation
	β_1 significant in model 3.5	
	β_1 significant in model 3.6	
	β_1 significant and β_2 significant model 3.7	
3	β_1 significant in model 3.4	No Mediation
	β_1 significant in model 3.5	
	β_1 significant in model 3.6	
	β_1 insignificant and β_2 insignificant model 3.7	

Source: Baron and Kenny, (1986)

3.5 Target Population

The study population was 141 courier firms as at January 30th 2015(GoK, 2015). All firms offering postal service are legally subject to licencing considerations (CCK Annual Reports, 2007/2008).The Public Postal Licensee (PCK), all courier firms

and delivering firms which include transporters, freight and forwarding companies that handle documents and parcels all fall under the definitions given in the CCK Act of 1998. The number of licensed operators increased to 141 following the licensing of 14 new operators mainly in the intra-country and intra-city categories during the year (CAK Annual Reports, 2014/2015).According to the Krejcie & Morgan 1970 sampling table, this gives 103 companies.

3.6 Sampling Procedure

This study adopted a multi stage sampling design. Firstly, using the stratified sampling procedure the firms were grouped into strata using the licensing category. Secondly, using the Krejce and Morgan sampling table (1970) attached in the appendix, 103 organisations were purposively included in the study. This comprised of 309 managers namely Finance manager, Operations Manager and Customer relationship managers in each organization.

Table 3.3 Sampling Distribution Table

License category	No. of courier firms	Sample frame	Sample size (firms*3)	Percentage
International	14'	10	30	9.7
Regional	11	8	24	8
Public	1	0.7	2.1	0.7
International-inbound	13	9.5	29	9.3
Intra-country	88	64	192	62
Intra-city	14	10.2	31	10
Total	**141**	**103**	**309**	**100%**

Source: Communication Authority of Kenya (2017)

3.7 Data Collection

The study used primary data which was largely qualitative, quantitative and descriptive in nature. The questionnaire were designed to solicit data on inter organizational collaborations, organizational characteristics, organizational competitiveness and organizational performance. Gall and Borg, (1996) points out that, questionnaires are appropriate for studies since they collect information that is not directly observable as they inquire about feelings, motivations, attitudes, accomplishments as well as experiences of individuals. They further observed that questionnaires have the added advantage of being less costly and consuming less time as instruments of data collection. Respondents were presented with descriptive statements in a rating scale on which they were required to rate the extent to which they perceived a particular statement as descriptive of the situation in the organizations. The questionnaires were administered through drop and pick method and respondents targeted will be the operations managers, finance managers and customer relationship managers in the firms.

3.8 Operationalization and measurement of Study Variables

This section deals with the Operationalization of study variables, along with other components of the conceptual framework. The independent variable was the inter-organisational collaborations Courier firms in Nairobi City County, Kenya. The dependent variables are: effectiveness, efficiency, financial viability and relevance as indicated in Table 3.4. The independent variable was operationalized by resource-based collaborations, cost-based collaborations and relational-based collaborations. The organisational characteristics were the moderating variables while the organisation's competitiveness was the mediating variable.

Table 3.4 Operationalization and Measurement of Variables

Variable	Indicators	Operationalization	Measurement Scale
Organizational Performance	• Operational Efficiency • System Effectiveness • Relevance • Financial Viability	• Timely delivery in the organisation • Quality administrative systems in place • Optimal use of resources • Ability of organisation to raise funds	5 – Point Likert Scale
Resource based collaborations	• Knowledge sharing • Technology sharing • Human resources • Financial resources	• Shared knowledge among collaborators • Skills shared among collaborators • Financial resources shared among collaborators	5 – Point Likert Scale
Cost based collaborations	• Technological costs • Research and development costs • Operational costs	• Lowering operational costs • Reducing research and development costs • Lowering marketing costs	5 – Point Likert Scale
Relational based collaborations	• Networks • Trust • Synergies	• Expansion of networks • Create mutual relationships • Benefits from created networks	5 – Point Likert Scale
Organizational characteristics	• Size of the firm • Age of the firm	• Number of employees • Number of collaborations • Number of years of organisation existence	5 – Point Likert Scale
Organizational competitiveness	• Superior services • Superior innovation • Superior skills	• Quality services • Quality service at affordable cost • Easy market access compared to competitors	5 – Point Likert Scale

Source: Researcher (2017)

3.9 Data Source and Collection Instruments

The study mainly used primary data which was collected using a self- administered structured questionnaire which was administered to the three levels of management since they were involved in the formulation of strategies and implementation. The questionnaire was divided into seven parts to obtain information covering various aspects of the study. Section 1 covered demographic characteristics of the respondents. Section 2 covers resource based inter-organisational collaborations, Section 3 covered cost based collaborations, and Section 4 covered relational based collaborations. Section 5 covered organisations' characteristics, Section 6 covered organisational competitiveness and section 7 covered organisational performance.

3.9.1 Validity Test of Research Instruments

In the current study pilot questionnaires were administered to ten organizations which were not be included in the target sample. Their feedback was used to improve the questionnaires and compute the reliability coefficient. Content validity provides adequate coverage of investigation questions guiding the study (Cooper & Schindler, 2004) .They examined the questionnaire individually and provide the feedback to the researcher. Construct validity is the extent to which a set of measured items actually reflect the theoretical latent construct the items are designed to measure (Cooper & Schindler, 2004; Hair, 2006).

Construct validity was also evaluated. This is the extent to which a set of measured items actually reflect the theoretical latent construct the items are designed to measure (Cooper & Schindler, 2011). Construct validity was ensured by including in the questionnaire all those variables that were derived from the literature. Construct validity provides adequate coverage of investigation questions guiding the study (Alan & Emma, 2015). The research instrument for this study was viewed by the supervisors and other experts in this area of specialization. They examined the questionnaire individually and provided the feedback to the researcher. The main feedback was that the questionnaire was long and based on this view the researcher shortened it. Validity was measured using the methodology proposed by Crocker (1986) which calculated validity coefficients that identify what percentage of variance in the criterion variable in accounted for by the testing measure, or predicator variable. The calculation of both reliability and validity was done using the results of the pilot study.

3.9.2 Reliability Tests

Reliability estimates the consistency of your measurement, or more simply the degree to which an instrument measure the same way each time it is used in under the same conditions with the same subjects. Internal consistency estimates reliability by grouping questions in a questionnaire that measure the same concept (Ranjit, 2005). The reliability of instruments of collecting data in this study used tested using Cronbach's alpha reliability coefficient. The study adopted Wunnely (1998) and George and Malley (2003) reliability test which indicates that alpha should be greater than or equal to 0.70 for an item to be used.

The internal consistency of the research instrument was assessed using Cronbach's alpha coefficient which is commonly sued when there are multiple rating scale questions in a survey/questionnaire that form a scale. The internal consistency Cronbach's Alpha (a) ranges from 0 to 1 and it is a reliability coefficient that reflects how well the measurements items positively correlate to one another. A pre-test of the instrument was conducted to test whether the respondent experienced difficulties in understanding times, to test whether they are indication on how the data collecting instrument would perform in the field. In line with Nunnaly (1978) recommendation, only constructs with cut off of 0.7 and greater were considered for further analysis in the study. To enhance the reliability of the survey instrument for this study, a pilot study was conducted on ten organizations who were not used in the final study then Cronbach's Alpha co-efficient was calculated to establish internal consistency of the instrument. In the current study pilot questionnaires were administered through personal interviews to ten organizations which were not be included in the target sample. Their feedback was used to improve the questionnaires and compute the reliability coefficient.

Table 3.5: Reliability Test

Variables	**No of items**	**Cronbach's alpha**	**Comment**
Organizational Performance	19	0.789	Reliable
Resource based	12	0.845	Reliable
Cost based	6	0.747	Reliable
Relational based	7	0.821	Reliable
Organizational characteristics	17	0.789	Reliable
Organizational competitiveness	11	0.855	Reliable
Overall	72	0.807	Reliable

Source: Pilot Data (2017)

Results in Table 3.5 indicate that all the variables attained the acceptable and recommended level of alpha 0.7. This, therefore, implies that the set of items in the questionnaire are positively correlated to one another (Sekaran, 2003). The reliability of the instrument stands at approximately 95 per cent as recommended by George and Malley (2003). The study, therefore, used a cut-off point coefficient of 0.7 and above as a strong measure of reliability.

3.10 Data Collection Procedures

The researcher obtained authorization to conduct research from Kenyatta university graduate school and NACOSTI. Questionnaires were administered by trained research assistants to gather data. The questionnaire was administered using a drop and pick method and was collected after three weeks. The choice of drop and pick method was used because the technique was believed would minimise non-coverage error. Drop and pick method would also reduce sample bias without compromising the response rates. The technique was also beneficial because it enabled the researcher to gain experiential insights that could not be possible with other methods of survey (Steele, 2001)

3.11 Data Analysis

3.11.1 Data analysis Methods

Data was analyzed both quantitatively and qualitatively as described below:

3.11.2 Quantitative Analysis

After questionnaires were collected from the field, data cleaning was done to correct any errors that might have occurred during data collection and data was then coded, in readiness for analysis. Quantitative data was analyzed using descriptive and inferential statistics. Descriptive statistics was used to describe the data by percentages, frequencies, means, and standard deviations while inferential statistics was carried out using multiple and step by step regression models. Based on the objectives, this study made use of multiple regression analysis which helped to generate a weighted estimation equation that could be used to predict values (Cooper & Schindler, 2011).

Pearson's product moment correlation (r) was derived to show the nature and strength of the relationship. The coefficient of determination (R^2) was used to measure the amount of variation in the dependent variable explained by the independent variable. This was followed by the determination of standardization beta (β) coefficient which indicated the direction (+ or -) and the magnitude of the influence as well as compare the relative contribution of each independent variable on organizational performance (Hair, 2011).

The research hypotheses were also tested at 95 per cent level of confidence to determine whether the influence by independent variables was significant or not. If the p-value was less than five percent the null hypothesis failed to be accepted and the alternate hypothesis failed to be rejected. In addition, if the P-value was greater than 5 percent the null hypothesis failed to be rejected and the alternate hypothesis failed to be accepted. Once the strength of the predictors was determined, the variables that

determined the model best were used in the step by step method to run the multiple regressions to determine the predictors that best predict the dependent variable. Field (2013) recommended that it is important to carry out several diagnostic tests to check the underlying assumptions of regression analysis. Normality, Linearity, Multicollinearity, Heteroscedasticity, Sample adequacy and Sphericity tests were carried as follows:

a) Normality test

Normality was tested by use of Shapiro-Wilk test whereby if P-value was greater or equal to 0.05 the data was normal (Jackson, 2010) and if the p- value is less than or equal to 0.05 then the distribution was not normally distributed and would be rejected on a significance level of 5 percent. A P value > 0.05 would imply that the variable was sufficiently normally distributed on a significance level of 5 per cent and was fit for further statistical analysis and would not result in inflated statistics and underestimated standard errors (Hair, 2011).

b) Linearity Test

The linear relationship between organizational performance and each of the hypothesized explanatory variables was tested using Pearson's correlation coefficient as proposed by Yount (2006). Correlation coefficient shows the strength as well as the direction of the linear relationship; a negative correlation would indicate an inverse re

relationship where an increase in one variable cause a decrease in the other, whereas a positive correlation would indicate a direct influence, where an increase in one variable cause an increase in the other variable (Field,2009).

c) Multi-collinearity Test

To establish the possibility of a collinearity problem of the predictor variables having some explanatory power over each other, Multi-collinearity was tested. Field (2013) suggests Variance Inflation Factor (VIF) ≥ 10 indicate the presence of multicollinearity. Multi-collinearity creates a problem for multiple regressions models, given that as collinearity goes up, the standard error of coefficients also rises, making them less reliable.

d) Heteroscedasticity Test

Heteroscedasticity was tested using Breush-Pagan test as recommended by Warner (2008). This tested the null hypothesis that the error term had constant variance versus the alternative, that the error term variances was not constant, that is, they were a multiplicative function of one or more variables. P value ≤ 0.05 would imply there was heteroscedasticity (no constant variance in the error term) and would lead to rejection of null hypothesis at 5 percent level of significance. Large chi-square would indicate heteroscedasticity meaning the error term is not constant.

e) Sampling Adequacy Test

Sample adequacy test was conducted using Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. KMO is an index used to examine and justify the appropriateness of the application of Factor Analysis. Values between 0.5-1.00 indicate that a factor is significant (Magd, 2008). Hutcheson and Sofroniou (1999) also suggest values between 0.7 and 0.8 as good for factor analysis. The test statistics summarized in Table 4.14 indicated that all he KMO statistics were greater than 0.5 therefore the results justify that the sample is adequate analysis and it represents the study population.

f) Bartlett's Test of Sphericity

The strength of the relationship among variables was measured using Bartlett's Test of Sphericity. This tested the null hypothesis that there was no internal consistency (inter-correlation) against the alternative that the items used in the structured questionnaire to measure the various variables were internally consistent. Failure to reject the null hypothesis means that the principal components that measures a particular domain have to be found through factor analysis Field (2013).

Tables were used to summarize, organize and present the data collected and analyzed. The results and discussions are presented in chapter four followed by conclusions and recommendations in chapter five. Table 3.6 presented a summary of data analysis techniques**.** Data was analysed using descriptive statistics, regression, multi-variate regression and correlation analysis. Descriptive statistics (mean and measures of dispersion) and inferential statistics (correlation, analysis of variance and stepwise

multiple regression analysis) were used to obtain a general understanding of the respondents' demographic information. Multiple regression were used to determine whether a group of variables together predict a given dependent variable. Pearson correlation coefficient was used to establish the relationship between inter-organizational collaborations, organizational characteristics, organizational competitiveness and performance (Cohen *et al,* 2003).

3.12 Statistical Approach for Testing Hypothesis of the Study

Table 3.6 indicates the summary of model that were used in data analysis and to determine the significance of the model in each dependent variable.

Table 3.6: Summary of Analytical Model

Objectives	Hypothesis	Statistical approach	Research Question	Interpretation
Determine the influence of resource-based collaborations on performance of courier firms in Nairobi City county, Kenya.	Ho_1: There is no influence of resource-based collaborations on performance of courier firms in Nairobi city county, Kenya.	$OP = \beta_0 + \beta_1 RB + \beta_2 CB + \beta_3 RLB + \varepsilon$	Section 2	R^2 F-value t-Value Level of significance = 0.05 $P \leq 0.05$ reject null hypotheses
Establish the extent to which cost-based collaborations affects performance of courier firms in Nairobi city county, Kenya.	H_{02}: there is no effect of cost-based collaborations on performance of courier firms Nairobi city county, Kenya		Section 3	R^2 F-value t-Value Level of significance = 0.05 $P \leq 0.05$ reject null hypotheses
Determine the effect of relational-based collaborations on the performance of courier firms in Nairobi city county, Kenya.	H_{03}: there is no effect of relational-based collaborations on performance of courier firms in Nairobi city county, Kenya.		Section 4	R^2 F-value t-Value Level of significance = 0.05 $P \leq 0.05$ reject null hypotheses
To assess the moderating effect of organizational characteristics on the relationship between inter-organizational collaborations and performance of Courier firms in Nairobi city county, Kenya.	H_{04} there is no moderating effect of organisational characteristics on the relationship between inter-organisational collaborations and performance of courier firms in Nairobi city county, Kenya.	$OP = \beta_0 + \beta_1 IC + \beta_2 OC + \beta_3 IC*OC + \varepsilon$	Section 5	R^2 F-value t-Value Level of significance = 0.05 $P \leq 0.05$ reject null hypotheses
To assess the mediating effects of organizational competitiveness on the relationship between inter-organizational collaborations and performance of Courier firms in Nairobi city county, Kenya.	H_{05} there is no mediating effect of organisational Competitiveness on the relationship between inter-organisational collaborations and performance of courier firms in Nairobi city county, Kenya.	$OP = \beta_0 + \beta_1 RB + \beta_2 CB + \beta_3 RL + \beta_4 OCC + \varepsilon$	Section 6	R^2 F-value t-Value Level of significance = 0.05 $P \leq 0.05$ reject null hypotheses

Source: Author (2017)

3.12.2 Qualitative analysis

Content analysis was used to analyze the open-ended questions where the researcher grouped common themes together and drew inferences from the findings (Glesne, 1998). Cooper and Schindler (2008) note that through the use of structured questions in the questionnaire, content analysis helps to bring issues to the fore that would not have otherwise been captured.

3.13 Ethical Issues

The researcher undertook various steps to ensure that the study adhered to research ethical standards. Informed consent to undertake the study was obtained from the relevant authority and respondents. The respondents were assured that there would be no gain or loss for failing to participate in the research. The issue of confidentiality was addressed by assuring respondents that the information they provide would be specifically for research only. The respondents were not forced to fill the questionnaire if they were not willing.

The participants were also informed that the information they provided was not to be used in any way to harm them or be exploited for commercial and selfish personal gain, but was only meant for academic purposes. Full disclosure, fair treatment and privacy were also practiced. Participants were asked to verbally consent to participate in the research, for which participation was voluntary and the potential respondents were not identified by name.

Confidentiality of the information obtained from the respondents was guaranteed by restricting access to information that revealed names, telephone numbers, address or other identifying features. Data files that made it easy to reconstruct the profiles or identification of individual respondents were carefully controlled.

CHAPTER FOUR
EMPIRICAL RESULTS AND INTERPRETATION

4.1 Introduction

This chapter presents the findings and discussion of the study and is organized into two main sections. The first section presents the study results arrived at using descriptive statistics. The second section presents results in form of inferential statistics used to test the study hypotheses.

4.2 Response Rate

The study sought to engage a total of 309 managers of Courier firms within Nairobi City County, Kenya. According to Wimmer and Dominick (2006), a response rate of between 21 percent and 70 percent is acceptable for self-administered questionnaires**.** Questionnaires were self-administered to the respective managers. The response rate is presented in Table 4.1.

Table 4.1: Response Rate

	Frequency	**per cent**
Response Rate		
Filled and returned	270	87.3
Non returned	39	12.7
Total	**309**	**100**

Source: Survey Data 2017

Table 4.1 indicates that the study successfully engaged 87.3 per cent of the expected respondents while the unsuccessful response rate of 12.7 per cent comprised mainly of non-returned questionnaires. Therefore, the study used the responses from the 270

successful responses to conduct analysis. According to theory and standard practices in statistics a response rate of more than 21 per cent ensures accuracy and minimizes bias (Mugenda & Mugenda, 2003).

Table 4.2: Courier Firm Characteristics

Age of the Organization (Years)	**Frequency**	**Percent**
Less than or equal to two	2	0.74
3-6	70	25.93
7-10	82	30.37
11-14	34	12.59
Greater than or equal to 15	82	30.37
Total	**270**	**100**
Number of Employees	**Frequency**	**Percent**
Less than or equal to 14	2	0.74
15-30	65	24.07
31-45	80	29.63
46-60	42	15.56
Over 60	81	30.00
Total	**270**	**100**
Number of Partners	**Frequency**	**Percent**
Two and Below	19	7.04
3-6	100	37.04
7-10	81	30.00
11 and above	70	25.92
Total	**270**	**100**
Nature of Collaborations	**Frequency**	**Percent**
Resource Based Collaboration	67	24.81
Cost Based Collaboration	157	58.15
Relational Based Collaboration	46	17.04
Total	**270**	**100**
Ownership Structure	**Frequency**	**Percent**
Public Entity	10	3.70
Private Entity	260	96.30
Total	**270**	**100**

Source: Survey Data 2017

The characteristics presented in Table 4.2 indicate that more than 70 per cent of the managers were drawn from firms that were greater than or seven years old. Therefore, a majority of the respondents were drawn from experienced firms. This improves the reliability of the responses in terms of consonance with the industry practices. This is in line with Sorensen and Stuart (2000), who posit that experience and organizational competencies provided by age help firms to develop their operations in more efficient way, especially the operations relating to innovation and collaborations. Therefore, the relationship between organizational collaborations and organizational performance and also between organizational learning and performance increases with firm age as they efficiently use information collected from collaborating partners. Raw organizational management in some new firms can impede development of collaborations in those companies and hence reduce the relationship between collaborations and performance. Therefore, age can lead to improvement of the collaboration effects on performance (Damanpour & Schneider, 2006).

Table 4.2 indicated that approximately 75 per cent of the manager were drawn from firms with 31 or more employees. A majority of the respondents were drawn from relatively large couriers. This is expected and in line with the study population that largely comprise of large courier firms. For instance, in 2015 the Communications Authority of Kenya documented that there 141 licensed courier firms of which 107 were large.

As indicated in Table 4.2 the respondents were almost evenly distributed in terms of the number of partnerships. Fifty six per cent of the respondents were drawn from courier firms with seven or more partnerships whereas 44 percent were drawn from courier firms with less than seven partnerships. This is representative of the population under study that has 85 out of 141 firms with more than seven partnerships. Therefore, the sample mimics the population in terms of partnerships, thereby guaranteeing reliability of the study findings. The organization characteristics summarized in Table 4.2 show that more than half of the respondents were drawn from courier firms with cost based collaborations which indicates that majority of the partnerships among courier firms in Kenya are driven by a cost reduction motive. Further, table 4.2 indicates that respondents from privately incorporated courier firms were approximately 96 per cent whereas those from publicly incorporated courier firms approximately 4 per cent. Hence a majority of the respondents were drawn from privately incorporated courier firms. Therefore, although the study focused on both public and private courier firms the generalization of the study is more inclined to private firms than public firms.

Descriptive Statistics

This section presents the adjacency and spread of responses of independent variables, mediating variable as well as the dependent variable as used in the study based on the domains in the questionnaire. The dispersion and adjacency of the responses in each domain are inferred using the mean and the standard deviation of the responses.

4.2.1 Resource based collaborations

Inter organizational collaborations were measured using three dimensions namely; resource based collaborations, cost based collaborations and relational based collaborations. The descriptive statistics for each dimension are shown in Table 4.3, 4.4 and 4.5.

Table 4.3 Resource Based Collaborations

Descriptions and characteristics	Mean	Std Deviation	standard error
The financial resources shared among the organizations helps to improve performance of your organization	4.27	0.86	0.052
The partnership enhances the entry to new product/market domains	4.27	0.86	0.045
The technology shared among the organizations helps to improve performance of your organization	4.22	0.91	0.055
The partnership assists your organization to enter or maintain the option to enter evolving industries whose product offering may emerge as either substitutes for, or complements to, the organization's service offerings	4.13	0.67	0.041
The partnership assists in differentiation or add value to the services	4.1	0.93	0.057
The research and development shared helps the organizations to improve on performance of your organization	4.07	0.87	0.053
To lower risks in the face of large outlays required and uncertainties	4.05	0.94	0.057
To skills shared among the partners enhances performance of your organization skills from collaborating partners	4.01	0.85	0.052
To pool resources in the light of large outlays required	3.93	1.02	0.062
The partnership assists to circumvent barriers to entering international markets posed by legal, regulatory and/or political factors	3.89	0.9	0.055
The partnership broadens present service lines	3.69	1.23	0.075
The knowledge shared among the firms helps to improve performance of your organization	3.56	1	0.061
Aggregate Mean Score	**4.02**	**0.911**	**0.056**

Source: Survey Data 2017

The financial resources shared among the organizations helps to improve performance of your organization (M=4.27,SD=0.86), the partnership enhances the entry of new market domains (M=4.27,SD=0.86),the technology shared among the organization helps to improve performance in your organization (M=4.22,SD=0.91), the partnership assists your organization to enter or maintain the option to enter evolving industries whose product offering may emerge as either substituted for, or complements to the organizations offering the service (M=4.13,SD=0.67), the partnership assists in differentiation or value addition to the services offered (M=4.1,SD=0.93),the research and development shared helps the organization to improve performance of your organization (M=4.07,SD=0.87), partnerships lower the risks in the face of large outlays required and uncertainties (M=4.05,SD=0.94), skills shared among partners enhances performance of your organization's skills from collaborating partners (M=4.01,SD=0.85), to pool resources in the light of large outlays required (M=3.93,SD=1.02), the partnerships assist to circumvent barriers to entry into international markets posed by legal, regulatory and political factors (M=3.89,SD=0.9), partnerships broadens the present service lines (M=3.69,SD=1.23) and knowledge shared among the firms helps to improve performance (M=3.56,SD=1).

The aggregate mean score for resource based collaborations is 4.02 with a standard deviation of 0.91. The aggregate score is approximately equal to 4 on the five point Likert scale adopted by the study. This implies that the respondents agreed to a large extent that resource based collaborations have affected the performance of their organisations. This implies that the respondents' responses closely clustered around the

aggregate score of 4. The fact that respondents' responses cluster around 'a large extent' implies a significant relationship between resource based collaborations and organizational performance**.** The findings are in line with Darr, Argote and Epples (2011) study, for example, provides strong empirical evidence for the significance of inter-organizational relationships to facilitate inter-organizational learning and knowledge. It has also been demonstrated empirically that the number of collaborative relationships a firm is engaged in is positively related to its innovation output (Shan, Walker, & Kogut, 1994). In conclusion, inter-organizational learning seems to combine the best of both worlds: The benefit of accumulating knowledge without the cost of accumulating experience (Ingram, 2002).

This is supported by a study by Wang, Dou, Zhu and Zhou (2015) who assessed the effect of financial capabilities on collaboration and performance. The study found that firm capabilities such as financial resources, innovation and information positively affect external collaborations which in turn affect organizational performance.

Table 4.4: Cost Based Collaborations

Descriptions and characteristics	Mean	Std Deviation	standard error
Our organization collaborates with others to reduce technological costs	4.32	0.78	0.048
To lower costs of access to international markets	4.18	0.88	0.054
Our organization collaborates with others to reduce research and development costs	4.13	0.74	0.045
To lower marketing costs	4.07	0.76	0.046
To lower operational costs	3.86	0.83	0.051
To circumvent barriers to entering international markets posed by legal, regulatory and/or political factors	3.77	0.84	0.051
Aggregate Mean Scores	**4.06**	**0.805**	**0.50**

Source: Survey Data 2017

The summarized responses in Table 4.4 indicate that the organizations collaborate with others to reduce technological costs (M=4.32,SD=0.78), to lower costs to international markets (M=4.18,SD=0.88), to reduce research and development costs (M=4.13,SD=0.74), to lower marketing costs (M=4.07,SD=0.760), to lower operational costs (M=3.86,SD=0.83) and to lower costs of entering international markets (M=3.77,SD=0.84). The average mean score for cost based collaborations is 4.06 with a corresponding standard deviation of 0.805. The mean of these responses rounds off to a score of 4 on the five point Likert scale adopted by the study. This implies that the respondents agreed to a large extent that cost based collaborations have affected the performance of their organisations. Therefore, the standard deviation is comparatively small. This implies that the respondents' responses closely clustered around the aggregate score of 4. The fact that respondents' responses cluster around 'a large extent' implies that the study expect a significant relationship between cost based

collaborations and organizational performance. The findings seem to agree with the assertion by Bjerke and Johansson (2014) on the relationship between innovative collaboration and organizational performance. The results showed that the probability to innovate and reduce operational costs is enhanced when organizations collaborate.

The findings are in line with a study by (Gimenez & Ventura, 2002) who found that there is a significant relationship between cost-based advantage and the performance of organisations. Firms that enjoy cost-based competitive advantage over their rivals, for example in terms of relatively lower manufacturing or production costs, lower cost of goods sold and lower-price products, have been shown to exhibit comparatively better performance.

Table 4.5: Relational Based Collaborations

Descriptions and characteristics	**Mean**	**Std Deviation**	**Std Error**
The collaborating organizations expertise sharing platform	4.16	0.93	0.057
The collaborating organizations joint knowledge sharing	4.04	0.99	0.060
The collaborating organizations mutual relationship through the networks	4.01	0.91	0.055
The collaborating organizations benefits realized through the networks	3.99	1.16	0.071
The organization collaborating with others to expand the networks	3.96	0.88	0.054
The collaborating organizations created trust	3.95	1.02	0.062
The collaborating organization mutual relationship with others	3.79	0.94	0.057
Aggregate Mean Score	**3.99**	**0.98**	**0.062**

Source: Survey Data 2017

As shown in Table 4.5 the respondents indicated that their organization performance is affected to a large extent by expertise sharing platform (M=4.16, SD=0.93), joint knowledge sharing (M=4.04, SD=0.99) and mutual relationships through networks (M=4.01, SD=0.91). In addition the performance is affected by benefits realized through the networks (M=3.99, SD=1.16), ability to expand the networks (M=3.96, SD=0.88), existing trust among organizations, existing trust among organizations (M=3.95, SD=1.02) and existing mutual relationship (M=3.79, SD=0.94).

The average mean score for relational based collaborations domain is 3.99 and average standard deviation of 0.98. The average scores round off to a score of 4 on the five-point Likert scale adopted by the study. This implies that the respondents agreed to a large extent that relational based collaborations have affected the performance of their organisations. The standard deviations for the responses is less than one, and may therefore be considered to be comparatively small. This implies that the respondents' responses closely crowded around the aggregate score of 4. The fact that respondents' responses cluster around 'a large extent' implies that we expect a significant relationship between relational based collaborations and organizational performance. The findings are in line with a study by Corsten and Felde (2005) on the effects of supplier-organization network collaborations on performance. The results showed that supplier collaboration had a positive and significant effect on supplier-buyer networks and performance of firms. Therefore, it is imperative that courier firms embrace relational based collaborations so as to foster mutual relationships and networks which affect the overall performance of their organizations.

4.2.2 Organizational Competitiveness

Organizational competitiveness was measured using 10 items on a five point Likert scale ranging from 1(not at all) to 5 (a very large extent). The descriptive statistics for this domain are presented in Table 4.6.

Table 4.6: Organizational Competitiveness

Descriptions and characteristics	Mean	Std Deviation	Std Error
Seller groups have superior products in the industry.	4.24	0.85	0.052
Established collaborating organizations have used substantial resources to prevent new entrants	4.2	0.79	0.048
Substitute products limit the profitability	4.11	0.86	0.052
We have a competitive advantage over the others in the industry	4.11	0.86	0.052
All organizations in the industry are aware of the competition from substitutes	4.07	0.88	0.054
There are a small number of buyers who form a large proportion of the sale in the industry.	4.03	0.78	0.048
New entrants spend heavily to build up brand names and to overcome brand loyalties	4.02	0.9	0.055
We have more market access than the others in the industry	3.95	1.01	0.062
The industry makes products for which there are a large number of substitutes	3.93	1.09	0.066
There is a lot of new entrants in the industry.	3.9	1.11	0.068
The industry's products serve functions which may be easily served by many other products	3.89	0.99	0.060
Organizations in the industry compete intensely to hold and/or increase market share.	3.88	1.22	0.074
Retaliation towards new entrants is and has been strong	3.77	1.23	0.075
The buyers are quality- and detail-oriented.	3.69	1.26	0.077
Competitive moves incite retaliation and counter moves	3.68	1.42	0.089
Price competition is highly intense	3.65	1.25	0.076
The buyers care more about price than quality	3.59	1.14	0.070
The industry is emerging	3.56	1.1	0.070
Aggregate Mean Score	**3.9**	**1.04**	**0.067**

Source: Survey Data 2017

As shown in table 4.6 the respondents indicated that organizational competitiveness was largely affected by powerful buyer groups in the industry (M=4.24,SD=0.85), established organizations used substantial resources to prevent new entrants (M=4.2,SD=0.79), substitute products limit profitability (M=4.11,SD=0.86), all organizations in the industry are aware of the competition from substitutes (M=4.07,SD=0.88), small number of buyers who form a large proportion of the sale in the industry (M=4.03,SD=0.78), new entrants spend heavily to build up brand names and overcome brand loyalties (M=4.02,SD=0.9), having more market access than others in the industry (M=3.95,SD=1.01), new entrants in the market (M=3.9,SD=1.11), organizations in the industry compete intensely to increase market share (M=3.88,SD=1.22), retaliation towards new entrants is strong (M=3.77,SD=1.23), competitive moves incite retaliation and counter moves (M=3.68,SD=1.42), price competition is highly intense (M=3.65,SD=1.25) and finally emerging industry (M=3.56,SD=1.1). The aggregate mean score was 3.9 with a corresponding standard deviation of 1.04. The aggregate score approximates to a score of 4 on the five point likert scale adopted by the study.

The aggregate score approximates to a score of 4 on the five point Likert scale adopted by the study. This implies that on average the respondents agreed to a large extent with the statements in the organizational domain as regards their organizations competitiveness. The standard deviation is 1.04, this value is higher compared to those of the inter-organizational collaboration domain. Seller groups are powerful in the industry had the highest mean score of 4.24 and a standard deviation of 0.85. Therefore,

the responses in the organizational competitiveness domain were more spread than those in the inter-organizational collaborations domain. This conforms to the study's expectations and the population under study. The courier companies differ significantly in terms of competitiveness, and therefore, the higher standard deviation.

Badaracco (2001) and Hamel (2010), in contrast, both pointed out that the desire to acquire and absorb new types of firm-specific knowledge is a primary driving force behind many alliances. In support of that, Hagedoorn (1993) claims that the goals of most strategic interfirm technology cooperation have been to monitor the evolution of technologies, to gain access to new and complementary knowledge and technologies, and to reduce or share uncertainty in and costs of R&D, to capture partners tacit knowledge of technology in concrete innovation projects as well as to speed up innovation or learning processes and shorten the product life cycle, and to achieve internationalization, globalization, entry to foreign markets, and expansion of the product range. This is in line with studies by Chauvin and Hirschey, (2009); Bae and Noh,(2011) which found that a firm's collaborations consistently and positively affects its market value and competitiveness. Corporate R&D collaborations also plays a vital role in a firm's focus on superior products, superior innovation and superior skills.

4.2.3 Organizational Performance

This domain comprised of four domains namely effectiveness, efficiency, relevance and financial viability. The descriptive statistics for each domain are shown in Tables 4.7, 4.8, 4.9 and 4.10 respectively.

Table 4.7: Effectiveness as a measure of Organizational Performance

Descriptions and characteristics	Mean	Std Deviation	Std Error
Organization has facilitated a substantial number of collaborations to sustain effectiveness	4.27	0.84	0.051
Organization has enabled substantial number of collaborators for effectiveness	4.14	0.79	0.048
Organization has created a high level of collaborations for effectiveness	3.88	0.94	0.057
Aggregate Mean score	**4.10**	**0.86**	**0.052**

Source: Survey Data 2017

As shown in table 4.7 the respondents indicated that organizational effectiveness was largely affected by organization has facilitated a substantial number of collaborations to sustain effectiveness (M=4.27,SD=0.84), organization has enabled substantial number of collaborators for effectiveness(M=4.14,SD=0.79), organizations have created a high level of collaborations for effectiveness(M=3.88,SD=0.94).

The aggregate mean score for effectiveness is 4.10 with a standard deviation of 0.86. The aggregate score approximates to a score of 4 on the five point Likert scale adopted by the study. This implies that on average the respondents agreed to a large extent with the statements rating their organisation's current performance in terms of effectiveness of their collaboration. The standard deviation is less than one implying that the respondents' responses closely clustered around the aggregate score of 4.

Table 4.8: Efficiency as a measure of Organizational performance

Descriptions and characteristics	Mean	Std Deviation	Std Error
The organization delivers its services promptly without any delay.	4.14	0.76	0.046
High quality administrative systems are in place (financial, human resources, strategy) to support efficient service delivery.	4.07	0.94	0.057
The organization compares progress and achievement made in the organization from time to time.	4.00	0.8	0.049
Collaborations are evaluated on the basis of the cost.	3.93	0.82	0.050
The organizations make optimal use of its financial resources and systems.	3.90	0.92	0.056
Human resources are used by the organization to the best of their ability.	3.67	0.91	0.055
Aggregate Mean score	**3.95**	**0.86**	**0.052**

Source: Survey Data 2017

Table 4.8 indicates that the highest score was; organization delivers its services promptly without any delay with (Mean = 4.14 ,SD = 0.76),high quality administrative systems are in place(M=4.07, SD=0.94), the organization compares progress and achievement made in the organization from time to time(M=4.00,SD=0.8), collaborations are evaluated on the basis of cost(M=3.93,SD=0.92) and human resources are used by the organization to the best of their ability(M=3.67,SD=0.91). The aggregate score for efficiency domain is 3.95 with a standard deviation of 0.86. The aggregate score approximates to a score of 4 on the five point Likert scale adopted by the study. This implies that on average the respondents agreed to a large extent with the statements rating their organisation's current performance in terms of efficiency. The standard deviation is less than one implying that the respondents' responses closely clustered around the aggregate score of 4.

Table 4.9: Relevance as a measure of organizational performance

Descriptions and characteristics	Mean	Std Deviation	Std Error
Collaborations carried out by the organization are regularly reviewed to reflect changing capacities.	4.23	0.78	0.048
The organization regularly reviews the environment to adapt its collaboration strategy.	4.09	0.74	0.045
Organizations' assessments are conducted regularly	4.08	1.03	0.063
Services offered by the organization are constantly reviewed to reflect changing client needs.	3.83	1	0.061
Collaborations run by the organization are regularly reviewed to reflect changing environment.	3.55	1.05	0.064
Aggregate Mean score	**3.96**	**0.92**	**0.056**

Source: Survey Data 2017

As shown in table 4.9, respondents indicated that collaborations carried out by the organization are regularly reviewed to reflect changing capacities (M=4.23,SD=0.78), organizations regularly reviews the environment to adapt its collaboration strategy (M=4.09,SD=0.74), organizations' assessments are conducted regularly (M=4.08,SD=1.03), services offered by the organization are constantly reviewed to reflect changing clients' needs (M=3.83,SD=1) and collaborations run by the organization are regularly reviewed to reflect changing environment (M=3.55,SD=1.05). The descriptive statistics in Table 4.9 show that the aggregate score for relevance domain is 3.96 with a standard deviation of 0.92. The aggregate score approximates to a score of 4 on the five point Likert scale adopted by the study. This implies that on average the respondents agreed to a large extent with the statements rating their organisation's current performance in terms of relevance.

Table 4.10: Financial Viability as a measure of Organization's performance

Descriptions and characteristics	Mean	Std Deviation	Std Error
The organization has relevant sources to generate revenues to meet its costs	4.26	0.82	0.050
The organization ability to generate enough cash to pay its bills	4.19	0.74	0.045
The Organizations relies on different funding sources to remain financially sustainable	4.19	0.74	0.045
The organization monitors finance, capital assets and depreciation on a regular basis.	4.08	0.99	0.060
The organization has the ability to raise funds required to meet its functional requirements	3.90	0.82	0.050
Aggregate Mean score	**4.10**	**0.82**	**0.050**

Source: Survey data 2017

The organization has relevant sources to generate revenues to meet its costs had the highest mean of (M=4.26,SD= 0.82), organization's ability to generate enough cash to pay bills (M=4.19,SD=0.74),organizations rely on different funding sources to remain financially sustainability (M=4.09,SD=0.74), the organization monitors finances, capital assets and depreciation on regular basis (M=3.90,SD=0.82) and finally the organization has the ability to raise funds required to meet its' functional requirements (M=3.90,SD=0.82).

The summary statistics illustrated in Table 4.10 show that the aggregate score for financial viability domain is 4.10 with a standard deviation of 0.82. The aggregate score approximates to a score of 4 on the five point Likert scale adopted by the study

implying that on average the respondents agreed to a large extent with the statements rating their organisation's current performance in terms of financial viability. The standard deviation is less than one implying that the respondents' responses closely clustered around the aggregate score of 4.

4.3 Pre Estimation Diagnostics Tests

To conduct hypothesis tests and achieve the study objectives ordinary least squares (OLS) were used to estimate regression models. To use OLS a number of assumptions such as normality, linearity, internal consistency and sampling adequacy were tested. These assumptions were tested on both the dependent and independent variables and the results presented in Tables 4.11, 4.12, 4.13 and 4.14.

4.3.1 Normality test

To test whether the variables were normally distributed Shapiro-Wilk test for normality was used as recommended by Field (2013). P value > 0.05 would imply that the variable is sufficiently normally distributed on a significance level of 5 per cent and is fit for further statistical analysis and does not result in inflated statistics and underestimated standard errors (Magd, 2008). The test has a null hypothesis that the data is normally distributed. The test statistics for normality of each variable are shown in Table 4.11.

Table 4.11: Normality Test

Variable	Symbol	Test statistic	
		Z statistic	P value
Organizational Performance	OP	1.021	0.1535
Resource Based collaborations	RB	0.998	0.1591
Cost based collaborations	CB	-0.459	0.6769
Relational Based Collaborations	RL	1.085	0.1342
Organizational Characteristics	OC	0.873	0.5127
Inter organizational Collaborations	IC	1.237	0.0964
Organizational Competitiveness	OCC	1.042	0.1316

Source: Survey Data 2017

The test statistics shown in Table 4.11 show that the p values for all the variables were greater than 0.05. Therefore, the null hypothesis assumed by the Shapiro Wilk normality test that the variables are normally distributed could not be rejected at either five percent cent level of significance. Therefore, the normality requirement for the application of OLS and test of significance can be used for analysis.

4.3.2 Test for Linearity

To test whether the variables were linearly related, correlation analysis was used. The test had a null hypothesis of no linear association. Table 4.12 shows the test statistics for linear associations between the variables. The reference variable was organizational performance.

Table 4.12: Linearity Test

Reference Variable: Organizational Performance	Symbol	Test statistics	
		Correlation Coefficient	P value
Resource Based collaborations	RB	0.6546***	0.0000
Cost based collaborations	CB	0.7322***	0.0000
Relational Based Collaborations	RL	0.4953***	0.0000
Organizational Characteristics	OC	0.2406***	0.0000
Inter organizational Collaborations	IC	0.7366***	0.0000
Organizational Competitiveness	OCC	0.5432***	0.0000

Source: Survey Data 2017

Results presented in Table 4.12 show that p-values for the correlation coefficients are less than 0.05. Therefore, all the explanatory variables have significant positive correlation coefficients. That is the variables and performance move in the same direction implying a linear relationship. The significant and positive correlation implies that the coefficients of the independent variables in the regression models will be positive. In addition, the significance of the coefficients implies that linear specification could be the correct specifications of the model as recommended by Field (2013).

4.3.3 Bartlett's Test of Internal consistency

The internal consistency of the items used in the structured questionnaire was measured using Bartlett's test of sphericity. The test has a null hypothesis of no internal consistency (no internal intercorrelation). Failure to reject the null hypothesis means that the principal components that measure a particular domain have to be conducted. However, rejection of the null means that all the items are internally consistent and their composites can be used to measure the variable in question. The test statistics are shown in Table 4.13.

Table 4.13: Bartlett's Test

Variable	Symbol	Degrees of freedom	Test statistic	
			Chi Square	P value
Organizational Performance	OP	171	1914.488***	0.0000
Resource Based collaboration	RB	66	634.962***	0.0000
Cost based Collaborations	CB	15	180.138***	0.0000
Relational Based Collaborations	RL	21	201.849***	0.0000
Organizational competitiveness	OCC	136	1789.243***	0.0000

Source: Survey Data 2017

The test statistics in Table 4.13 indicate that the Bartlett's test of sphericity test statistics have p-values less than 0.05. Therefore, the null hypothesis the variables in question are not inter-correlated is rejected at five per cent level of significance. This implies that there is internal consistency between the items in each dimension in the structured questionnaire. Therefore, simple means for Likert items from each dimension of the structured questionnaire could be used as composites for each variable without the use of factor analysis as recommended by Muthen & Muthen (2007).

4.3.4 Test of Sampling Adequacy

Sample adequacy test was conducted using Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. KMO is an index used to examine and justify the appropriateness of the application of Factor Analysis. Values between 0.5-1.00 indicate that a factor is significant (Magd, 2008). Hutcheson and Sofroniou (1999) also suggest values between 0.7 and 0.8 as good for factor analysis. The KMO test statistics are reported in Table 4.14.

Table 4.14: KMO Test

Variable	Symbol	Test Statistic
		KMO Tests Statistics
Organizational Performance	OP	0.867
Resource Based Collaboration	RB	0.652
Cost Based Collaboration	CB	0.640
Relational Collaboration	RL	0.673
Organizational Competitiveness	OCC	0.844

Source: Survey Data 2017

The test statistics summarized in Table 4.14 show that all the KMO test statistics were greater than 0.5. Therefore, the observations in the 270 responses used by the study were adequate and representative of the study population. Therefore, findings from the study can be generalized on the entire population of courier firms operating in Nairobi City County, Kenya.

4.3.5 Confirmatory Factor Analysis

Shenoy and Madan (1994) note that, not all variable factors are statistically important in a research. Factor analysis acts as a measure of the substantive importance of a given variable to the factor and it is used to identify and remove hidden constructs or variable items that do not meet the objectives of the study and which may not be apparent from direct analysis (Ledesma & Valero-Mora, 2007; David et al., 2010). Communalities were used to indicate the substantive importance of variable factors where a loading value of 0.7 is believed to be satisfactory but due to the seemingly difficulties of meeting the 0.7 criterion a loading of up to 0.4 level is acceptable (Rahim & Magna, 2005; Stevens, 2002) . The results are as shown in Appendices viii.

4.4 Inferential Statistics

This section presented the multiple linear regression analysis as per the specific study objectives. Post estimation diagnostics are first discussed before test of hypothesis.

To test hypothesis one through the model 3.1 was estimated and the results reported in Table 4.15.

Table 4.15: Effect of Inter Organizational Collaborations on Organizational Performance

Post Estimation Diagnostics			
	Test Statistic	**P-value**	
Adjusted R-squared	0.5974		
R-squared	0.6020		
F-statistic (3, 261)	131.58	0.000****	
Breusch-Pagan Test (Heteroskedasticity)	0.00	0.9570***	
Ramsey Specification test	0.00	0.9999***	
Mean VIF	1.76		
Regression results			
	Coefficients	**t-statistic**	**P-value**
Resource Based Collaboration	0.262***	4.34	0.0000
Cost based Collaboration	0.522***	9.72	0.0000
Relational based Collaboration	0.107***	3.02	0.0030
Constant	0.221	1.20	0.2310
Key ** significant at 5 percent			
*** significant at 1 percent			

Source: Survey Data 2017

Organizational Performance= 0.221+0.262RB+0.522CB+0.107RL+ **ε**
Where:

OP=Organizational performance

RB=Resource based collaborations

CB=Cost based collaborations

RL=Relational based collaborations

ε= error term

The post estimation tests presented in Table 4.15 show that the adjusted R-squared is 59.74 per cent implying that inter organizational collaborations explain 59.74 per cent of the variations in the organizational performance while 40.26 per cent are explained by the error term. The F statistic is 131.58 with a p-value of 0.0000. This means that the independent variables are jointly significant in explaining variations in organizational performance. The Breusch Pagan statistic is 0.00 with a P-value of 0.9570 implying that the null hypothesis of homoscedasticity (constant variance) for model 3.1 is not rejected at five per cent level of significance. Therefore, the t statistics and p-values can consistently be used to test the significance of coefficients in the model in 3.1. The Ramsey Specification test has a test statistic of 0.00 with a p-value of 0.9999. Therefore, the null hypothesis that the model has no omitted variables could not be rejected at either five per cent level of significance. This means that the model is not miss-specified. The mean VIF is less than 5 at 1.76. Therefore, the level of multi-collinearity in model 3.1 can be tolerated and does not influence the validity of the findings. All the three dimensions of inter-organizational collaborations were positively related to performance and the regression analysis indicated that an increase in each of them would result in an increase in organizational performance.

The findings are in agreement with the assertion by Bjerke and Johansson (2014) .The organizations to innovate and reduce operational costs, improve networks and trust when firms collaborate and consequently organizational performance is enhanced. The study further revealed that firm characteristics such as size of the firm, education levels of owners and multinational nature of firms affected innovation.

4.4.1 Hypothesis One

The first objective of the study sought to determine the effect of resource-based collaborations on performance of Courier firms Nairobi City County, Kenya. To this end a null hypothesis, H_{01}, that there is no significant effect of resource-based collaborations on performance of Courier firms in Nairobi City County, Kenya Null hypothesis one was tested. The hypothesis was derived as:

H_{01}: There is no effect of resource-based collaborations on performance of Courier firms in Nairobi City County, Kenya

The results reported in Table 4.15 show that the standard coefficient of resource based collaboration 0.262, t= 4.34 p-value = 0.000. Since the p-value < 0.05 the study rejected the null hypothesis at five per cent level of significance. Hence resource based collaboration has a positive effect on organizational performance of Courier firms in Nairobi City County, Kenya. This is as inferred in the descriptive statistics where a positive significant effect was implied by the positive correlation between resource based collaborations and organizational performance. This implies that a one unit change in the level of resource based collaboration leads to 0.262 units change in organizational performance. This implies that resource based collaborations positively influence the performance of courier firms. The results are similar to Faems, Looy and Debackere (2005) who asserted that inter-organizational collaborations positively affect innovation and performance among Belgian manufacturing firms.

Therefore, courier firms should intensify resource based collaborations so as to improve the overall operational efficiency and effectiveness. In addition, the appropriability of innovation can be improved on significantly as companies can benefit from each other's technological advances without infringing on patents or intellectual property rights, and henceforth improving the technological innovation. This aspect will improve the learning between the two companies tremendously, as the courier firms will benefit from each other's technical knowledge as well as improve its own customer services.

4.4.2 Hypothesis Two

The second objective sought to establish the effect of cost-based collaborations on performance Courier firms Nairobi City County, Kenya. The null hypothesis tested was stated as:

Ho_2: There is no effect of cost-based collaborations on performance of Courier firms in Nairobi City County, Kenya.

Table 4.15 shows that the standard coefficient of cost based collaborations 0.522 t= 9.72, p-value = 0.000<0.05. Since the p-value is less than 0.05 the study rejects null hypothesis at 5 per cent level of significance. This implies that that cost based collaborations have significant effect on organizational performance of Courier firms in Nairobi City County, Kenya. This means that other things being equal and with a unit change in the score for cost based collaborations, the performance score increases by 0.522 units.

This implies that cost based collaborations have a positive effect on organizations' performance. This compares well with an empirical review by Bjerke and Johansson (2014) who found out that the probability to innovate and reduce operational costs is enhanced when firms collaborate. In conclusion, courier firms should intensify cost based collaborations so as to benefit from reduced technological, operational and research and development costs and consequently enhance their overall performance.

4.4.3 Hypothesis Three

The third objective sought to determine the effect of relational-based collaborations on the performance of Courier firms Nairobi City County, Kenya. The null hypothesis was stated as follows:

Ho_3: There is no effect of relational-based collaborations on performance of Courier firms in Nairobi City County, Kenya.

The results presented in Table 4.15 shows that the standard coefficient of relational based collaboration is 0.107 with a corresponding t = 3.02, p-value =0.0030<0.05. Therefore, at five per cent level of significance the study rejects the null hypothesis. This implies that other things being equal and with a one unit change in the score of relational based collaborations, organizational performance changes by 0.107. This implies that there is a positive effect of relational based collaborations on the performance of organizations. This is corroborated by Corsten and Felde (2005) study which showed that supplier collaboration had a positive and significant effect on the performance when they collaborate.

In addition, the findings are in line with previous research by Mitchell and Singh (2006) suggests that firms occupying central network positions with greater network ties have superior access to information and, thus, are more likely to increase the number of their collaborations in the future In conclusion, Courier firms should explicitly enter into relational based collaborations so that they can benefit from inter-organizational trust, social capital networks embedded in multiplex exchanges and social interactions within the organizations.

4.4.4 Hypothesis Four

The third objective sought to assess the moderating effect of organizational characteristics on the relationship between inter-organizational collaborations and performance of Courier firms in Nairobi City County, Kenya. The null hypothesis was stated as follows:

Ho_4: There is no moderating effect of organisational characteristics on the relationship between inter-organisational collaborations and performance of Courier firms in Nairobi City County, Kenya.

Multiple regression analysis was used to achieve this objective as put forward by (Mackinnon et al., 2007). Two linear regression models were estimated. The first linear regression model was model 3.2, introducing organizational characteristics as a variable. The estimates are reported in Table 4.16.

Table 4.16: Regression Results for Model 3.2

Post Estimation Diagnostics			
	Test Statistic	**P-value**	
Adjusted R-squared	0.5335		
R-squared	0.5370		
F-statistic (2, 263)	152.54	0.000****	
Breusch-Pagan Test (Heteroskedasticity)	0.15	0.6976***	
Ramsey Specification test	0.80	0.4940***	
Mean VIF	1.09		
Regression results			
	Coefficients	**t-statistic**	**P-value**
Inter organizational Collaborations	0.739***	16.50	0.000
Organizational Characteristics	0.017	0.72	0.470
Constant	0.744***	4.10	0.000
Key ** significant at 5 percent			
*** significant at 1 percent			

Source: Survey Data 2017

Organizational performance= 0.744+ 0.739IC+ 0.017OC…… (3.6)

The post estimation tests in Table 4.16 indicate that the inter-organizational collaborations explained 53.35 per cent of variations in performance in Courier firms while 46.65 per cent are explained by the error term. The F statistic is 152.54 with a p-value of 0.000 implying that the variables are jointly significant in explaining variations in organizational performance. The tests homoscedasticity, multicollinearity and miss-specification show that the residuals are homoskedastic, the level of co-movements in independent variables can be tolerated and model is appropriately specified. This means that the results in Table 4.16 can reliably be interpreted. The coefficient of interest is that of organizational characteristics. The co-efficient is 0.017 with a t statistic of 0.72 and a p-value of 0.470. Therefore, the coefficient is not significantly different from zero

at 5 per cent level of significance. This means that organizational characteristics are not an explanatory variable to organizational performance. The second linear multiple regression model involved introduction of organizational characteristics as a moderator. The findings are reported in Table 4.17.

Table 4.17: Regression Results for Model 3.3

Post Estimation Diagnostics			
	Test Statistic	**P-value**	
Adjusted R-squared	0.5626		
R-squared	0.5676		
F-statistic (3, 261)	114.19	0.000****	
Breusch-Pagan Test (Heteroskedasticity)	0.05	0.8266***	
Ramsey Specification test	0.74	0.5317***	
Mean VIF	3.78		
Regression results			
	Coefficients	**t-statistic**	**P-value**
Inter organizational Collaborations	0.519***	7.71	0.0000
Organizational Characteristics	-0.302***	-3.87	0.0000
Organizational characteristics*IC	0.078***	4.28	0.0000
Constant	1.651***	5.98	0.0000
Key ** significant at 5 percent			
*** significant at 1 percent			

Source: Survey Data 2017

Organizational performance= 1.651+ 0.519IC- 0.302 OC+ 0.078IC* OC……. (3.3)

The results reported Table 4.17 show that the independent variables and their interaction explained 56.26 per cent of variations in organizational performance while 43.74 per cent are explained by the error term. The F statistic is 114.19 with a corresponding p-value of 0.000. This implies the independent are jointly significant in explaining variations in organizational performance of courier firm in Nairobi County,

Kenya. The post estimation diagnostics show that the model has no omitted variable, is homoskedastic and has tolerable level of multi-collinearity. Therefore, the findings reported in table 4.17 can reliably be interpreted. When the findings in table 4.16 and 4.17 are interpreted together considered, the coefficient of organizational characteristics in model 3.2 is insignificant while that of the interaction term in model 3.3 is 0.078 with a t statistic of 4.28 and a corresponding p-value of 0.0000. This means that the coefficient is significant at five per cent level of significance.

The sign of the coefficient of the interaction term is positive; therefore the null hypothesis that there is no moderating effect of organisational characteristics on the relationship between inter-organisational collaborations and performance of Courier firms in Nairobi City County, Kenya is rejected at five percent level of significance. Since the sign is positive, organizational characteristics moderate the relationship between inter organizational collaborations with organizational performance by enhancing it.

When the findings in table 4.18 and 4.19 are interpreted together considered, the coefficient of organizational characteristics in model 3.2 is insignificant while that of the interaction term in model 3.3 = 0.078, t = 4.28, p-value = 0.0000. This means that the coefficient is significant at five per cent level of significance. The sign of the coefficient of the interaction term is positive; therefore the null hypothesis that there is no moderating effect of organisational characteristics on the relationship between inter-organisational collaborations and performance of Courier firms in Nairobi City

County, Kenya is rejected at 5 per cent level of significance. Since the sign is positive organizational characteristics moderate the relationship between inter-organizational collaborations with organizational performance by enhancing it. This is in line with a study large firms with slack – the firms with greatest market power and capacity and with greatest technical, commercial, social, and organizational capital – dominated collaboration activity.

4.4.5 Hypothesis Five

This section tests the mediating effect of organisational competitiveness on the relationship between inter-organisational collaborations and performance of Courier firms in Nairobi City County, Kenya. The null hypothesis was stated as:

Ho_5: There is no mediating effect of organisational competitiveness on the relationship between inter-organisational collaborations and performance of Courier firms in Nairobi City County, Kenya.

Inter organizational collaborations (IC) a composite for the three inter organizational collaborations was created. Multiple regressions as put forward by Baron and Kenny (1986) were used to test the mediation effect. Three multiple regression models were used to test the mediation effect. The estimates are reported in Tables 4.18 through 4.21. As per the empirical model the first model was test the presence of significant relationship between inter-organizational collaborations an performance. That is the estimation of model 3.4. The results are reported in Table 4.18.

Table 4.18: Regression Results for Model 3.4

Post Estimation Diagnostics			
	Test Statistic	**P-value**	
Adjusted R-squared	0.5344		
R-squared	0.5361		
F-statistic (1, 264)	305.12	0.000****	
Breusch-Pagan Test (Heteroskedasticity)	0.29	0.5873***	
Ramsey Specification test	0.75	0.5238***	
Mean VIF	1.00		
Regression results			
	Coefficients	**t-statistic**	**P-value**
Inter organizational Collaborations	0.749***	17.47	0.000
Constant	0.780***	4.46	0.000
Key ** significant at 5 percent			
*** significant at 1 percent			

Source: Survey Data 2017

Organizational performance= 0.780+ 0.749IC…….. (3.4)

The estimates in Table 4.18 show that the inter-organizational collaborations explained 53.61 per cent of variations in organizational performance while the rest are explained by the residuals. In addition, the specification, homoscedasticity and multi-collinearity test statics shows that the residuals are homoscedastic and model has no missing variables. This means that the findings in Table 4.18 are valid and can be considered for interpretation. The coefficient of inter organizational collaborations is 0.749 with a t statistic of 17.47 and corresponding p- value of 0.000. Thus there is a positive significant relationship between inter-organizational collaborations and organizational performance.

The second regression model to be estimated was model 3.5 to show the relationship between mediator and the explanatory variable (inter-organizational collaborations). The OLS estimates are reported in Table 4.19.

Table 4.19: Regression Results for Model 3.5

Post Estimation Diagnostics			
	Test Statistic	**P-value**	
Adjusted R-squared	0.2001		
R-squared	0.2030		
F-statistic (1, 268)	68.27	0.000****	
Breusch-Pagan Test (Heteroskedasticity)	3.74	0.0532***	
Ramsey Specification test	2.40	0.0681***	
Mean VIF	1.00		
Regression results			
	Coefficients	**t-statistic**	**P-value**
Inter organizational Collaborations	0.987***	8.26	0.000
Constant	-0.448	-0.92	0.359
*** significant at 1 percent			

Source: Survey Data 2017

Organizational competitiveness= -0.0448+ 0.987IC……. (3.5)

Table 4.19 indicates that the inter- organizational collaboration explained 20.30 per cent of variations in organizational competitiveness. Further the post estimation tests show that the findings can be reliably interpreted. The coefficient of interest is that of inter organizational collaborations. The coefficient is 0.987 with a t statistic of 8.26 and a p-value of 0.000. Since the p-value is less than 0.05 the coefficient is significantly different from zero at 5 per cent. Therefore, the relationship between inter-organizational collaborations and organizational competitiveness is significant. The

third model to be estimated was model 3.6. The model was meant to establish whether there is a significant relationship between the perceived mediator (organizational competitiveness) and the dependent variable (organizational performance). The results are reported in Table 4.20.

Table 4.20: Regression Results for Model 3.6

Post Estimation Diagnostics			
	Test Statistic	**P-value**	
Adjusted R-squared	0.2924		
R-squared	0.2951		
F-statistic (1, 268)	110.52	0.000****	
Breusch-Pagan Test (Heteroskedasticity)	2.63	0.0732***	
Ramsey Specification test	1.84	0.1399***	
Mean VIF	1.00		
Regression results			
	Coefficients	**t-statistic**	**P-value**
Inter organizational Collaborations	0.254***	10.51	0.0000
Constant	2.913***	8.65	0.0000
Key	** significant at 5 percent		
	*** significant at 1 percent		

Source: Survey Data 2017

Organizational performance= 2.913+ 0.254 IC…… (3.6)

The estimates presented in Table 4.20 show the findings satisfy all the post estimation diagnostics on homoskedasticity, specification and multi-collinearity. This means that the findings can be interpreted the coefficient of concern is that of organizational competitiveness. The coefficient is 0.254 and has a t statistic of 10.51 with a corresponding p-value of 0.0000. Therefore, there is a positive significant relationship between process execution and university performance. To estimate the fourth model, model 3.7, a decision on whether the relationships presented in models 3.4 through 3.6

had to be made. The decision making criteria was that significant relationships for models 3.4, 3.5 and 3.6 create a case for mediation. Table 4.18, 4.19 and 4.20 show that the relationships in model 3.4, 3.5 and 3.6 are all significant. Therefore, there is a case for mediation in our present case leading to estimation of model 3.7. The results are reported in Table 4.21.

Table 4.21: Regression Results for Model 3.7

Post Estimation Diagnostics			
	Test Statistic	**P-value**	
Adjusted R-squared	0.5828		
R-squared	0.5929		
F-statistic (2, 263)	191.51	0.000****	
Breusch-Pagan Test (Heteroskedasticity)	0.41	0.5242***	
Ramsey Specification test	1.11	0.3453***	
Mean VIF	1.26		
Regression results			
	Coefficients	**t-statistic**	**P-value**
Inter organizational Collaborations	0.626***	13.87	0.0000
Organizational competitiveness	0.125***	6.06	0.0000
Constant	0.836***	5.08	0.0000
Key	** significant at 5 percent		
	*** significant at 1 percent		

Source: Survey Data 2017

Organizational performance= 0.836+ 0.626IC+ 0.125 OCC…… (3.7)

Tables 4.21 indicates that inter organizational collaborations and organizational competitiveness explained 58.28 per cent of variations in organizational performance while the rest are explained by the error term. Further the specification, homoscedasticity and multi-collinearity test statics shows that the residuals are homoscedastic, model is appropriately specified and the level of co-movements in the explanatory variables can be tolerated. Therefore, the results in table 4.21 can reliably

be interpreted. The coefficients of interest are those of the independent variable (inter organizational collaborations) and that of the mediator (organizational competitiveness). The coefficient of inter organizational collaborations is 0.626 with a t statistic of 13.87 and a p-value of 0.0000. Since the p-value is less than 0.05 then the coefficient is significantly different from zero at 5 per cent level of significance. The coefficient of the mediator is 0.125 with a t statistic of 6.06 and a corresponding p-value of 0.0000. Since the p-value is less than 0.05 the coefficient is significantly different from zero at five per cent level of significance. When these findings are considered together with those in model 3.4 through 3.6 the following scenario as summarized by table 4.22 arises.

Table 4.22: Mediation Outcome

	OUTCOME	**CONCLUSION**
	β_1 significant in model 3.4	Partial Mediation
	β_1 significant in model 3.5	
	β_1 significant in model 3.6	
	β_1 significant and β_2 significant model 3.7	

Source: Survey Data 2017

Table 4.22 shows that the mediation outcome leads to a conclusion of partial mediation. Thus the null hypothesis that there is no significant mediating effect of organisational competitiveness on the relationship between inter-organisational collaborations and performance of Courier firms in Nairobi City County, Kenya. This implies that organizational competitiveness partially mediates the relationship between inter organizational collaborations and organizational performance. This is in line with

Nelson (2008) who found that unique capabilities, products superior in research and development are particularly plausible sources of competitively important competence.

In addition Badaracco (2011) and Hamel (2012), in contrast, both pointed out that the desire to acquire and absorb new types of firm-specific knowledge is a primary driving force behind many collaborations. In support of that, Hagedoorn (2010) found that the goals of most strategic inter-organizational technology cooperation have been to monitor the evolution of technologies, to gain access to new and complementary knowledge and technologies, and to reduce or share uncertainty in and costs of R&D, to capture partners tacit knowledge of technology in concrete innovation projects as well as to speed up innovation or learning processes and shorten the product life cycle, and to achieve internationalization, globalization, entry to foreign markets, and expansion of the product range. Therefore, courier firms should explicitly collaborate so as to benefit from resources, knowledge, human capital and social capital so as to competitively produce superior products, have an edge on superior skills and innovation and consequently achieve superior performance.

Table 4.23: Summary of the Hypothesis Test Results

Hypothesis	R^2	Test Criteria	Test Results	Conclusion
H_{01}: There is no influence of resource-based collaborations on performance of courier firms in Nairobi city county, Kenya.	0.5974	Reject hypothesis if p-value> 0.05 Alternatively do not reject	P-value=0.0000<0.05 Regression coefficients significant	Reject H_{01}: Resource-based collaboration has a statistically significant effect on performance of courier firms in Nairobi City County, Kenya.
H_{02}: There is no effect of cost-based collaborations on performance of courier firms Nairobi City County, Kenya	0.262	Reject hypothesis if p-value> 0.05 Alternatively do not reject	P-value 0.0000<0.05 Regression coefficient significant	Reject H_{02}: Cost-based collaboration has a statistically significant effect on performance of courier firms Nairobi City County, Kenya
H_{03}: There is no effect of relational-based collaborations on performance of courier firms in Nairobi City County, Kenya.	0.522	Reject hypothesis if p-value> 0.05 Alternatively do not reject	P-value=0.000<0.05 Regression coefficient significant	Reject H_{03}: Relational-based collaboration has a statistically significant effect on performance of courier firms in Nairobi City County, Kenya.
H_{04}:There is no moderating effect of organisational characteristics on the relationship between inter-organisational collaborations and performance of courier firms in Nairobi City County, Kenya.	0.107	Reject hypothesis if p-value> 0.05 Alternatively do not reject	P-value 0.000<0.05 Regression coefficient significant	Reject H_{04}: Organisational characteristics has statistically significant effect on the relationship between inter-organisational collaborations and performance of courier firms in Nairobi city county, Kenya.

Hypothesis	R^2	Test Criteria	Test Results	Conclusion
H_{05}: There is no mediating effect of organisational Competitiveness on the relationship between inter-organisational collaborations and performance of courier firms in Nairobi city county, Kenya.		Reject hypothesis if p-value> 0.05 Alternatively do not reject	P-value 0.000<0.05 Regression coefficient significant	Reject H_{05}: Organisational Competitiveness has a statistically significant effect on the relationship between inter-organisational collaborations and performance of courier firms in Nairobi City County, Kenya.

Source: Survey Data (2017)

The table 4.23 reveals that the hypothesized relationship between variables were not supported by the study findings. The regression analysis results failed to accept null hypothesis $H_{01,}$ $H_{02,}$ H_{03} $H_{04,,}$ and H_{05} . Therefore Inter-organisational collaboration has a statistically significant relationship with performance of Courier firms in Nairobi City County, Kenya. This relationship is moderated by Organisational characteristics and mediated by organisational competitiveness.

4.5 Qualitative Data Analysis

Semi-structured questions were analyzed and presented into themes as presented in Table 4.23.

Table 4.24: Qualitative Data Analysis

Factor	Description
View on the initiatives taken by organization in embracing collaborations	Generally the respondents felt that the management strives to ensure that various strategies such as collaborations are implemented so as to drive forward he performance of the organization.
View of resource base collaborations	Most respondents felt that their leaders were supportive of resource based collaborations since it has proved to be beneficial in sharing of financial resources and knowledge sharing.
View of cost based collaborations	The respondents felt that the cost based collaborations were vital because the organization is able to lower operational, marketing, training and research and development costs.
View on whether relational based collaboration is vital	Most of the respondents were very strongly felt that relational based collaborations were important as they enhanced synergies between organizations and consequently affecting the performance of the organizations.

Source: Survey Data (2017)

Research findings in Table 4.23 posit that majority of the respondents were of the view that organizations in the courier sector have embraced inter-organizational collaborations to enhance organizational performance. The findings support the assertion by Wang Wang and Lee (2014) collaborations have a direct effect of collaborative networks, innovation and performance of organizations.

CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary, conclusion and recommendations of the study findings as stipulated in the research objectives. The chapter draws managerial implications and identifies policy recommendations reminiscent of the study findings, research limitations are elucidated and areas of further studies identified.

5.2 Summary

Development of communication technology and organizational competitiveness has led most organisations to embrace certain corporate strategies and partnering with other organizations. This trend has become increasingly prevalent with many organizations opting for inter-organisational collaborations in order to strengthen their market positions and improve on performance.

The general objective of this study was to establish the influence of inter-organizational collaborations and performance of courier firms in Nairobi City County, Kenya. Specifically, the study sought to: determine the influence of resource-based collaborations on performance of Courier firms in Nairobi City County. The study revealed that resource based collaborations influenced performance of Courier firms in Nairobi City County. The study further established that Courier firms effectively articulated and embraced resource based collaborations so as to improve knowledge sharing, financial resources sharing and technological sharing.

The second objective was to establish the extent to which cost-based collaborations affect performance of courier firms in Nairobi City County, Kenya. The inferential statistics indicated that cost based collaborations had a positive contribution to performance in the Courier firms therefore confirming the expectation of the research. The study established that courier firms that entered into cost based collaborations courier firms benefitted from reduced technological, operational and research and development costs and consequently enhanced their performance.

The third objective was to determine the effect of relational-based collaborations on the performance of courier firms in Nairobi City County. The inferential statistics indicated that relational based collaborations had a positive contribution to performance in the Courier firms therefore confirming the expectation of the research. It was established that Courier firms that explicitly entered into relational based collaborations benefitted from inter-organizational trust, social capital networks embedded in multiplex exchanges and social interactions within the organizations.

The fourth objective was to assess the moderating effect of organizational characteristics on the relationship between inter-organizational collaborations and performance of Courier firms in Nairobi City County, Kenya. It was observed that organizational characteristics significantly influenced performance of Courier firms and therefore moderated the study variables.

The fifth objective was to assess the mediating effect of organizational competitiveness on the relationship between inter-organizational collaborations and performance of courier firms in Nairobi City County. The inferential statistics revealed that there was partial mediation and therefore the organizational competitiveness was found to be significant.

5.3 Conclusion

The research used a descriptive and explanatory survey research design. Data was collected using a semi – structured questionnaire. The research tested five hypotheses using three simple linear regression models and two multiple regression models, the hypotheses were considered appropriate to address the problem of the study. Data was analyzed using descriptive and inferential analysis. This study hypothesized the existence of a significant relationship between inter-organizational collaborations and performance of courier firms, moderated by organizational characteristics and mediated by organizational competitiveness. The results confirm the existence of a statistically significant relationship between the three and by so doing, the study adds to existing literature by uncovering the moderating effect of organizational characteristics and mediating effect of organizational competitiveness on the relationship between inter-organizational collaborations and performance of courier firms in Nairobi City County, Kenya.

The results indicate that the relationship between inter-organizational collaborations and performance of courier firms in Nairobi City County, Kenya is significant and positive but that this relationship can be enhanced by building strong and multiple collaborations. The research findings indicated that the relationship between inter-organizational collaboration and performance is positive and statistically significant .Resource based, cost based and relational based collaborations were found to have a positive significant effect on performance of organizations in the courier sector. However organizational competiveness (mediating variable) was partially significant and had partial effect on performance of organizations in the courier sector. This implies that organizational competitiveness partially mediates the relationship between inter organizational collaborations and organizational performance.

Therefore the null hypothesis that there is no significant moderating effect of organisational characteristics on the relationship between inter-organisational collaborations and performance of Courier firms in Nairobi City County, Kenya is rejected at five percent level of significance. Since the sign is positive organizational characteristics moderate the relationship between inter organizational collaborations with organizational performance by enhancing it.

Based on the summary of the findings several conclusions may be made based on the study results. First, inter-organizational collaborations has a positive effect on performance of organizations of the courier sector in Nairobi City, County and this relationship can be mediated by various factors. As per the study findings, one of such

factors is the organizational competitiveness which positively affects the relationship. However the mediating influence is partial as the direct relationship of inter-organizational collaborations and performance of courier firms in Nairobi City County, Kenya.

The descriptive statistics findings presented show that there is a significant influence of inter-organizational collaborations and performance of organizations in the courier sector in Nairobi City County, Kenya. Further organizational characteristics moderates the relationship between organizational collaborations and organizational performance and also between organizational competitiveness and performance increases with firm age as they efficiently use information collected from collaborating partners.

The position deduced from this study was consistent with the findings of Zacharia *et. al* (2010) who identified that in the globalizing world, collaborations are helping organizations to fulfill customer demands, for growing and to become successful in the competitive corporate world. The competitive environment forces organizations to enter into inter-organizational collaborations to stay in competition and make their position. , a position also taken by Baba *et. al* (2009) who established that innovation is important and should be the key outcome of the collaborations so as to be efficient, gain market share, to become market leader and to be successful. Innovation strategies should be embraced in collaborations and they should be correctly implemented and aligned with the objectives of the organization.

Further, collaborations help to attain collective goals of all the collaborating partners and provide opportunities for partners to gain the resources, knowledge, and skills of their partners. To be successful and survive the competition in the market, most of the large and medium scale firms are adopting the concept on collaborations in the same industry in which they are working, some are making cross industry collaborations so as to build their reputation and improve performance. Therefore, it is concluded that to survive in the competitive market the firms should create portfolio of collaborations to get support and benefits from other firms and divide risks and costs. The study concludes that since resource based, cost based and relational based collaborations had a relationship with performance of organizations in the courier firms, organizations need to continually adopt collaborations that influence performance of organizations.

5.4 Contributions of the Study to Knowledge

This study aimed to establish the relationship between inter-organizational collaborations and performance of courier firms in Nairobi City County, Kenya. Previous researches in developed countries have established that there is significant relationship between inter-organizational collaborations and performance. Some researchers have found resource and cost to have a significant relationship on organizational performance. This study contributes to empirical literature by revealing inter-organizational collaborations have a relationship on organizational performance.

Secondly, the study adds to existing knowledge with the finding that the joint effect of inter-organizational collaborations had a higher influence on performance compared to individual components separately. Prior studies have focused on assessing the effects of individual components of inter-organizational collaborations on performance. Thirdly, the study contributes to empirical literature by revealing that resource, cost and relational collaborations have a relationship with performance. Further, this study reveals that organizational competiveness has a partial mediating effect on the relationship between inter-organizational collaborations and performance.

Fourthly, the study supports the Resource Dependency Theory which is relevant to the study as it explains why inter-organisational collaboration occur in organisations. As an intermediate form of governance, strategic collaborations use transactional reciprocity to mitigate the defects leading to market failures and help organizations overcome transaction problems by internalizing information exchange into some form of governance structure. Collaborations overcome risks arising from opportunism, discourage the pursuit of sub goals through superior monitoring mechanisms, and create mutual incentives to reveal information and share technology.

Additionally the study supports the preposition of Transaction Cost Theory that collaborations can also circumvent many of the administrative costs of hierarchical forms, while maintaining market efficiencies that flow from scale and scope economies and operational flexibility further postulates that firms will choose collaborations that minimise transaction costs.

Finally the study supports the Resource Based View theory, which suggests that firms use strategic collaborations to locate the optimal resource configuration in which the value of their resources is maximized relative to other possible combinations. More specifically, the rationale for entering into collaborations is to aggregate, share, or exchange valuable resources with other firms that a firm is not able to create independently.

5.5 Recommendations for Policy Implication

Anchoring on the study findings, the researcher finds it imperative to make few policy recommendations and recommend areas for further research on the subject matter of inter-organizational collaborations and performance of Courier Firms in Nairobi City County, Kenya.

The study suggests several recommendations that have managerial, policy, practical and theoretical implications. These findings have a number of managerial implications, presented as per the study objectives. The findings have established that inter-organizational collaborations strategy could lead to improved performance of Courier Firms in Nairobi City County. Hence the top management should put in place systems that support collaboration initiatives and ensure that tasks to be performed should also be related to the strategy and that information flow through the process is continuous and efficient.

These findings have a number of managerial implications, presented as per the study objectives. The findings have established that increase in inter-organizational collaborations could lead to improved performance of Courier firms in Nairobi City County, Kenya. Inter-organizational collaborations were found to have a positive effect on the performance of organizations in the courier sector in Nairobi City County. Therefore the study implies that courier firms should have collaboration strategies incorporated in their broad corporate strategies.

The research found that managerial action can potentially shape networks so as to provide a favorable context for future action .In other words, although the social networks examined are passive manifestations of earlier or exogenous actions, managers are able to engage in strategic collaborations to secure key positions in their industry network, such as entering into strategic collaborations to ensure access to knowledge, key technologies and other resources. Many facets of organizational life such as bringing together people and their ideas and ongoing formal and informal conversations can be viewed as collective investment strategies for the institutional creation and maintenance of dense networks of social relationships. These findings have a number of managerial implications, presented as per the study objectives. The findings have established that inter-organizational collaborations could lead to improved performance of courier firms in Nairobi City County. The influence of resource based collaborations was also found to be positive and significant in organizational performance. Hence courier firms should adopt such collaborations that improve the performance in courier firms.

Similarly, cost based collaborations was found to significantly influence organizational performance. This study recommends that courier firms should embrace cost based collaborations in order to reduce technological cost, lower access to international markets, reduce research and development costs, lower marketing and operational costs. Strategic collaborations can also enable corporate restructuring aimed at a narrower business focus and higher investment return by helping firms divest of non-core business units or activities that are costly to retain

5.6 Suggestions for Further Research

The researcher recommends that a similar study be conducted in other corporations/industries and as far as the findings are concerned, possible enlargement of the sample to include other industries would be highly desirable. This study was a cross sectional survey. It is hoped that a longitudinal survey will provide a basis for more informed interpretations in future studies. It is worth noting that although longitudinal research is both time consuming and expensive, future studies would benefit from testing the current study's model through a longitudinal research design so as to determine the causal links more explicitly.

The study focused on inter-organizational collaborations and performance of Courier firms in Nairobi City County, Kenya. However, a low percentage of variation in performance is explained by collaborations. This indicates that there are other factors which influence performance. The introduction of one or more of these factors can provide a base for further research.

In addition, this study focused on inter-organizational collaborative method, yet the general outline of this research could be applied to other forms of strategic alliances. For example, this research could be extended to examine inter-organization alliances such as governmental research institutes, universities, and non-profit organizations. As a second suggestion, if biotech SMEs become to larger firms or multinational enterprises, they may use a merger and acquisition (M&A) method to exploit partners' technical capacity. Much could be learned from the formulation of M&A know-how construct and its antecedents and effects on firm performance in light of previous research.

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APPENDICES

Appendix I: Questionnaire Letter of Transmittal

Lydia Wanjiku Gachengo,
School of Business,
Kenyatta University,
P.O. Box 43844 – 00100,
Nairobi.

Dear Respondent,

RE: PHD RESEARCH THESIS DATA

I am a PHD student in Kenyatta University specializing in Strategic management. Am kindly requesting to be allowed to seek information on inter-organisational collaborations in the Courier Sector in Kenya. This study is being carried out in partial fulfilment of the course.

The information provided will STRICTLY be used for academic purposes and will be highly treated in confidence. No publication, if any shall be made without prior approval from the respondent(s). Under no instance will your name be mentioned in the report. Further CONFIDENTIALITY is guaranteed through coding of the findings.

Attached please find the research questionnaire that will be used to collect data for the research. Your assistance will be highly appreciated.

Yours truly

Lydia Gachengo
+254 722 804193
wanjiku_gachengo@yahoo.com

Appendix II: Questionnaire

SECTION 1: GENERAL INFORMATION

1. Name of the organization?.....

2. How many employees does your firm have?

a) Below 5 [ ]
b) 15-30 [ ]
c) 30-45 [ ]
d) 45-60 [ ]
e) Over 60 [ ]

3. Age of organization?

a) 2 years and below [ ]
b) 3 - 6 years [ ]
c) 7 - 10 years [ ]
d) 11 -14 years [ ]
e) Over 14 years [ ]

4. How many partners do you collaborate with?

a) 2 and below [ ]
b) 3 - 6 [ ]
c) 7 - 10 [ ]
d) Over 11 partner

5. What is the ownership of the firm?

Public entity [ ]
Private entity [ ]

6. The following are the descriptions of various forms of collaborations firms can enter into. Select one form of collaboration that best describes the kind of partnership between your organisation and other firms.

a) Resource based collaborations [ ]

b) Cost based collaborations [ ]

c) Relational based collaborations [ ]

SECTION 2: RESOURCE BASED COLLABORATIONS

2.1 There are a number of reasons that may compel firms to collaborate with others. To what extent do you think resource based collaborations have affected organisational performance? (Use the scale 1 = Not at all; 2= Small extent; 3= Moderate extent; 4= Large extent; 5 = Very large extent)

Descriptions and characteristics	**1**	**2**	**3**	**4**	**5**
The knowledge shared among the firms helps to improve performance of your organisation					
The technology shared among the organisations helps to improve performance of your organisation					
The financial resources shared among the organisations helps to improve performance of your organisation					
The research and development shared helps the organisations to improve on performance of your organisation					
To pool resources in the light of large outlays required					
To lower risks in the face of large outlays required and uncertainties					
To skills shared among the partners enhances performance of your organisation skills from collaborating partners					
The partnership assists to circumvent barriers to entering international markets posed by legal, regulatory and/or political factors					
The partnership broadens present service lines					
The partnership assists in differentiation or add value to the services					
The partnership enhances the entry to new product/market domains					
The partnership assists your organization to enter or maintain the option to enter evolving industries whose product offering may emerge as either substitutes for, or complements to, the organisations' service offerings					

What would be your recommendation for resource based collaboration to enhance your organization's performance?

……

……

…

SECTION 3: COST BASED COLLABORATIONS

To what extent do you think cost based collaborations have affected the performance of your organisation. (Use the scale 1 = Not at all; 2= Small extent; 3= Moderate extent; 4= Large extent; 5 = Very large extent)

Descriptions and characteristics	1	2	3	4	5
To lower operational costs					
To lower marketing costs					
Our organisation collaborates with others to reduce technological costs					
Our organisation collaborates with others to reduce research and development costs					
To lower costs of access to international markets					
To circumvent barriers to entering international markets posed by legal, regulatory and/or political factors					

What would be your recommendation for cost based collaboration to enhance your organization's performance?

……

……

……

……

SECTION 4: RELATIONAL BASED COLLABORATIONS

To what extent do you think relational based collaborations have affected the performance of your organisation **(Use the scale 1 = Not at all; 2= Small extent; 3= Moderate extent; 4= Large extent; 5 = Very large extent)**

Descriptions and characteristics	1	2	3	4	5
The organisation collaborates with others to expand the networks					
The collaborating organisations have mutual relationship through the networks					
The collaborating organisations have benefits realised through the networks					
The organisation collaborates with others based on mutual relationship					
The collaborating organisations have joint knowledge sharing					
The collaborating organisations have expertise sharing platform					
The collaborating organisations have created an element of trust					

What would be your recommendation for relational based collaboration to enhance your

organization's performance?

……

……

……

SECTION 5: ORGANIZATIONAL COMPETITIVENESS

1. To what extent do you agree with the following statements as regards the organizations competitiveness? **(Use the scale 1 = Not at all; 2= Small extent; 3= Moderate extent; 4= Large extent; 5 = Very large extent)**

Descriptions and characteristics	**1**	**2**	**3**	**4**	**5**
The industry is emerging					
Organizations in the industry compete intensely to hold and/or increase market share.					
Competitive moves incite retaliation and counter moves					
Price competition is highly intense					
The buyers care more about price than quality					
The buyers are quality- and detail-oriented.					
Buyers or buyer groups are powerful in the industry.					
There are a small number of buyers who form a large proportion of the sale in the industry.					
All organisations in the industry are aware of the competition from substitutes					
Substitute products limit the profitability					
The industry's products serve functions which may be easily served by many other products					
The industry makes products for which there are a large number of substitutes					
There is a lot of new entrants in the industry.					
Established organisations have used substantial resources to prevent new entrants					
Retaliation towards new entrants is and has been strong					
New entrants spend heavily to build up brand names and to overcome brand loyalties					
We have a competitive advantage over the others in the industry					
We have more market access than the others in the industry					

SECTION 6: ORGANIZATIONAL PERFORMANCE

How would you rate your organisation's current performance as compared to your competitors on the following dimensions (Use the scale 1 = very low, 2 low, 3 = moderate 4= Great 5 = very great

a) Effectiveness

Descriptions and characteristics		**1**	**2**	**3**	**4**	**5**
Organization has created a high level of collaborations for effectiveness						
Organization has enabled substantial number of collaborators for effectiveness						
Organization has facilitated a substantial number of collaborations to sustain effectiveness						

b) Efficiency

Descriptions and characteristics		**1**	**2**	**3**	**4**	**5**
Human resources are used by the organization to the best of their ability.						
The organizations make optimal use of its financial resources and systems.						
High quality administrative systems are in place (financial, human resources, strategy) to support efficient service delivery.						
The organization compares progress and achievement made in the organization from time to time.						
Collaborations are evaluated on the basis of the cost.						
The organization delivers its services promptly without any delay.						

c) Relevance

Descriptions and characteristics		**1**	**2**	**3**	**4**	**5**
Collaborations run by the organization are regularly reviewed to reflect changing environment.						
Collaborations carried out by the organization are regularly reviewed to reflect changing capacities.						
Organizations' assessments are conducted regularly						
Services offered by the organization are constantly reviewed to reflect changing client needs.						
The organization regularly reviews the environment to adapt its collaboration strategy.						

d) Financial Viability

Descriptions and characteristics		**1**	**2**	**3**	**4**	**5**
The organization has the ability to raise funds required to meet its functional requirements						
The organization ability to generate enough cash to pay its bills						
The organization has relevant sources to generate revenues to meet its costs						
The Organizations relies on different funding sources to remain financially sustainable						
The organization monitors finance, capital assets and depreciation on a regular basis.						

The general performance of an organization depends on a number of factors. Kindly list any other factors that contribute to performance of organizations

.....

.....

.....

Appendix III: LIST OF COURIER FIRMS

1. POSTAL CORPORATION OF KENYA
2. FIRST FLIGHT COURIER(AFRICA) LTD
3. TNT INTERNATIONAL EXPRESS LTD
4. UNION EXPRSS LIMITED
5. INDO AFRICAN INTERNATIONAL LTD
6. DHL WORLDWIDE EXPRESS LTD
7. FLASH INTERNATIONAL COURIER LTD
8. PLANET ONE COURIER
9. MEX LOGISTICS AFRICA LTD
10. PAN AFRICA EXPRESS
11. WORLD COURIER S.A LTD
12. ARAMEX KENYA LTD
13. FREIGHT IN TINE
14. GLOBAL FREIGHT
15. DELTA HANDLING SERVICES LTD
16. ADONAI LOGISTICS & FREIGHT SERVICES
17. SPEEDEX LOGISTICS LIMITED
18. TAIYO ENTERPRISES LTD
19. RAINBOW LOGISTICS
20. RAPAT FREIGHT(K) LIMITED
21. M&S COURIER LIMITED
22. MASTER PIECE COURIER SERVICE
23. RELIABLE COURIER & FREIGHT
24. RIOMA COURIER SERVICES LTD
25. G4S SECURITY SERVICES (K) LTD
26. KAMPALA COACH LIMITED
27. AXA COURIER LIMITED
28. BISHARO PARCEL SERVICES
29. GRANDE AFRIQUE LIMITED
30. NATION CARRIER DIVISION

31. EAST AFRICA COURIER LTD
32. URBAN CARGO NETWORK LTD
33. EASY COACH LIMITED
34. XPRESS IT COURIER
35. GUARDIAN LTD
36. AL-MICDAD PARCEL
37. RANDA COACH
38. CHANNIA TRANSPORT COMPANY LTD
39. LUXURY SHUTTLE TOUR & TRAVEL
40. MALINDI PARCEL SERVICES
41. MOLO GROUP SERVICES
42. MOLOLINE SERVICES LTD
43. NENO COURIER SERVICES LTD
44. PROSERVE COURIER LTD
45. VICKERS SECURITY SERVICES LTD
46. NANYUKI CAB COURIER SERVICES
47. GREAT RIFT EXPRESS SHUTTLE
48. SUPERSTAR PARCELS SERVICES LTD
49. DAIMA COURIER SERVICES
50. TIMELESS COURIER SERVICES
51. GILLYS SECURITY & INVESTIGATION
52. SAFEWAYS COURIER SERVICES
53. GARISSA COACH COURIER SERVICES
54. MASH EAST AFRICA LTD
55. NDASORA ENTERPRISES
56. TWO EMU KEI LUXURY COACH
57. BLUELINE SAFARIS SHUTTLE LTD
58. TAWAKAL PARCEL SERVICES
59. WESTERN EXPRESS COACH
60. 2N.K SACCO LTD
61. MUDOBA EXPRESS SERVICE LTD

62. RAHA EXPRESS LTD
63. RILEY SERVICES LTD
64. ROY PARCEL SERVICES LTD
65. SPINIX EXPRESS
66. AMBASSADOR COURIER SERVICES LTD
67. BLESSINGS PARCEL SERVICES
68. CHANIA COOL LIMITED
69. CHANIA TRAVELLERS SACCO LTD
70. COAST MAIL COMPANY
71. CROWN COURIER LTD
72. DATA RUSH SERVICES LTD
73. DOCUMENT EXPRESS COURIER LTD
74. ELDORET SHUTTLE SACCO SOCIETY LTD
75. MARDAV COURIER LTD
76. FAST FLIGHT EXPRESS LTD
77. FOUR N.T SACCCO & SOCIETY LTD
78. HATARI SECURITY GAURDS LTD
79. KINATWA SACCO LT
80. KUKENA SACCO LTD
81. MODERN COAST COURIER LTD
82. MTN INVESTMENTS CO.LTD
83. MURANG'A SHUTTLE LTD
84. N.T.L PARCEL SERVICES
85. NAEKANA ROUTE 134 SACCO LTD
86. NAIROBI MERU INVESTMENT CO. LTD
87. NAMUGA CO-OP SAVING & CREDIT SOCIETY
88. NECS SERVICES
89. NEW NAIROBI NAIVASHA UNITED SERVICES
90. NORTH RIFT LUXURY SHUTTLE
91. NUCLEAR INVESTMENTS LTD
92. NYAKATI INVESTORS SACCO SOCIETY LTD

93. NYENA SACCO SOCIETY
94. NYERI SHUTTLE LIMITED
95. PREMIUM TRAVELLERS LTD
96. PRESTIGE COURIER SERVICES LTD
97. FARGO COURIER LTD
98. THIKA ROAD TRANSPORTERS SACCO SOCIETY
99. SIMBA PARCEL SERVICES
100. ULTIMATE COURIER SERVICES LTD
101. SENDIT AFRICA LOGISTICS LTD
102. SHAROO ENTERPRISES LIMITED
103. MARK ONE EXPRESS LTD
104. KANGAROO SHUTTLE SERVICES LTD
105. SUPER COACH SAFARI SACCO LTD
106. KITALE SHUTTLE
107. WAYS & MEANS
108. CLASSIC PARCEL HANDLERS
109. KANGUNEX CO-OPERATIVE SACCO SOCIETY
110. SHEAR FORCE SECURITY & INVESTIGATION (K) LTD
111. PAGAMWA TULAGA LTD
112. SATIMA SACCO LTD
113. SPEED PARCELS KENYA LTD
114. MENANY SERVICES SACCO SOCIETY LIMITED
115. DREAMLINE COURIER LTD
116. TSS TRANSPORTERS LTD
117. MURANG'A SUPREME
118. EMUKI SACCO SOCIETY LTD
119. POWERMARK COMPANY LTD
120. IDEAL SUPPORT SERVICES
121. PARIE OD WADU COURIER
122. FORESIGHT VENTURES LTD
123. SOTER SECURITY SERVICE LTD

124. CLASSIC LUXURY SHUTTLE LTD
125. NAKARGO EXPRESS COURIER
126. OVERSEAS COURIER RESORT LIMITED
127. PRIME GROUP LTD
128. HENKAB COURIER SHUTTLE
129. MAIL MANAGERS LTD
130. JETCOURIER SERVICES
131. MARK FLASH COMPANY LTD
132. NETLINK BUSINESS SERVICES
133. PRONTO COURIER
134. FERDINAD FREIGHT & FOWARDERS
135. FLASHTIME DELIVERIES (EA) LTD
136. TWO FOUR SEVEN LTD
137. RELIANCE COURIER SERVICES LTD
138. INTEL BUSINESS SYSTEMS
139. METROPOLITAN-FAST COURIER
140. DAGKIN HIGH VALUE SERVICES
141. SUREFAIR COURIER SERVICES

Source: CAK (2017)

Appendix IV: SUBSTANTIVE REGISTRATION (PH.D)

KENYATTA UNIVERSITY
OFFICE OF THE REGISTRAR (ACADEMIC)
P.O. BOX 43844 - 00100 NAIROBI
TEL: 8703222/23
Email: admissions-pg@ku.ac.ke

Our Ref: D86/CTY/23389/2012 **Date:** 1st August, 2016

Gachengo Lydia Wanjiku
C/o Business Administration
Kenyatta University

Dear Ms. Gachengo

RE: SUBSTANTIVE REGISTRATION (PH.D)

Following the recommendation by the Dean, Graduate School, you are hereby granted substantive Ph.D. registration.

Please note that your registration number and all rules and regulations remain the same as per your admission letter.

Thank you.

J. LIKAM
FOR: REGISTRAR (ACADEMIC)

Cc: Dean School of Business
Dean, Graduate School
Chairman, Dept of Business Administration.

JL/rw

Appendix V: RESEARCH AUTHORIZATION

KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: kubps@yahoo.com
dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 8710901 Ext. 57530

Our Ref: D86/PT/CTY/23389/12 Date: 20th July, 2016

The Director General,
National Commission for Science, Technology & Innovation,
P.O. Box 30623-00100,
NAIROBI

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION FOR MS.GACHENGO LYDIA -REG. NO.D86/PT/CTY/23389/12

I write to introduce Ms. Gachengo who is a Postgraduate Student of this University. She is registered for a Ph.D. degree programme in the **Department of Business Administration in the School of Business.**

Ms. Gachengo intends to conduct research for Ph.D. thesis entitled, **"Inter-Organizational Collaborations and Performance of Courier Firms in Nairobi County, Kenya".**

Any assistance given will be highly appreciated.

Yours faithfully,

MRS. LUCY N. MBAABU
FOR: DEAN, GRADUATE SCHOOL

RM/cao

Appendix VI: NACOSTI RESEARCH PERMIT

THIS IS TO CERTIFY THAT:
MS. LYDIA WANJIKU GACHENGO
of KENYATTA UNIVERSITY, 43844-100
Nairobi,has been permitted to conduct
research in *Nairobi County*

on the topic: *INTER-ORGANIZATIONAL COLLABORATIONS AND PERFORMANCE OF COURIER FIRMS IN NAIROBI CITY COUNTY, KENYA*

for the period ending:
2nd August,2017

.....
Applicant's Signature

Permit No : NACOSTI/P/16/91449/12859
Date Of Issue : 2nd August,2016
Fee Recieved :ksh 2000

.....
Director General
National Commission for Science, Technology & Innovation

Appendix VIII: COMMUNALITIES FOR FACTOR ANALYSIS TEST

Statement	initial	extraction
Resource Based Collaborations		
The knowledge shared among the firms helps to improve our performance 1	1.000	.794
The technology shared among the organisations helps to improve performance of your organisation	1.000	.752
The financial resources shared among the organisations helps to improve performance of your organisation	1.000	.628
The research and development shared helps the organisations to improve on performance of your organisation	1.000 1.000	.566
The skills shared among the partners enhances performance of your organisation skills from collaborating partners	1.000 1.000	.570 .610
The partnership assists to circumvent barriers to entering international markets posed by legal, regulatory and/or political factors	1.000 1.000	.689 .712
The partnership enhances the entry to new product/market domains	1.000	.652
The partnership assists your organization to enter or maintain the option to enter evolving industries whose product offering may emerge as either substitutes for, or complements to, the organisations' service offerings	1.000	.562

Statement	initial	extraction
Cost Based Collaborations		
To lower operational costs	1.000	.468
To lower marketing costs	1.000	.759
To reduce operational costs	1.000	.664
To reduce research and development costs	1.000	.721
To reduce technological costs	1.000	.758
To lower costs of entry into international markets	1.000	.685

Statement	Initial	extraction
Relational Based Collaborations		
The organisation collaborates with others to expand the networks	1.000	.773
The collaborating organisations have mutual relationship through the networks	1.000	.861
The collaborating organisations have benefits realised through the networks	1.000	.736
The organisation collaborates with others based on mutual relationship	1.000	.782
The collaborating organisations have created an element of trust	1.000	.724

Performance attribute Statements	Initial	extraction
Organizational Competitiveness		
Organizations in the industry compete intensely to hold and/or increase market share.	1.000	.737
Price competition is highly intense	1.000	.654
The industry's products serve functions which may be easily served by many other products	1.000	.780
The industry makes products for which there are a large number of substitutes	1.000	.444
There is a lot of new entrants in the industry.	1.000	.410
Retaliation towards new entrants is and has been strong	1.000	.410
	1.000	.656

Statement Organizational Performance	Initial	extraction
Organization has created a high level of collaborations for effectiveness	1.000	.650
Organization has enabled substantial number of collaborators for effectiveness	1.000	.555
Organization has facilitated a substantial number of collaborations to sustain effectiveness	1.000	.629
The organizations make optimal use of its financial resources and systems.	1.000	.560
The organization delivers its services promptly without any delay.	1.000	.450
Collaborations run by the organization are regularly reviewed to reflect changing environment.	1.000	.472
Collaborations carried out by the organization are regularly reviewed to reflect changing capacities.	1.000	.460
Organizations' assessments are conducted regularly	1.000	.430
Services offered by the organization are constantly reviewed to reflect changing client needs.	1.000	.632
The organization regularly reviews the environment to adapt its collaboration strategy.	1.000	.480