

**FACTORS INFLUENCING THE EFFICIENCY OF CLEARING AND
FORWARDING FIRMS IN KENYA: CASE STUDY OF INLAND
CONTAINER DEPOT NAIROBI**

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DECLARATION

I declare that this project proposal is my original work and has not been presented by any person to any examining body

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DEDICATION

To My Family: Jackson Muiruri, Irene Muiruri and James Muiruri for their selfless support throughout my studying process, May the Lord mightly Bless you.

ACKNOWLEDGMENT

I thank the Almighty God for the energy, health and enthusiasm to pursue the Postgraduate diploma in customs law and administration programme.

Secondly, I wish to acknowledge with gratitude the support and guidance I got from my Supervisor Mr. Timona for his valuable time, guidance and patience she accorded to me in the whole process.

Last but not least I also extend my gratitude to my family, for their sacrifice, encouragement and support they continues to offer me as I pursue the course and especially during those late hours may the Lord bless you abundantly.

ABSTRACT

The objective of this study was to establish the factors affecting the efficiency of clearing and forwarding agents in Kenya. Its specific objectives were to: determine the effect of infrastructure on the efficiency of clearing and forwarding agents in Kenya; establish the effect of staff competence on the efficiency of clearing and forwarding agents in Kenya; examine the effect of ICT on the efficiency of clearing and forwarding agents in Kenya. The study was founded on three theoretical foundations namely: agency theory; the theory of constraints and; Kano's theory of attractive quality. The research design used was descriptive survey. The sample size for this study was 146 firms. Data was collected with a structured questionnaire comprising of closed-ended questions. First data collected was, cleaned, sorted and collated. Data analysis was thereafter conducted using statistical package for social scientists (SPSS). Descriptive statistics was employed in organizing and summarizing the data while regression and correlation analysis were used to test the study hypotheses by establishing the relationships proposed in the study. From the regression analysis, the study found that Transport Infrastructure ($\beta_1=0.249$, $p=0.000$), Staff Competence ($\beta_1=0.285$, $p=0.000$) and Information & Communication Technology ($\beta_1=0.619$, $p=0.000$) have a positive and significant effect on Efficiency of Clearing & Forwarding Firms. The study concluded that Efficiency of Clearing & Forwarding Firms relies on the effectiveness of Transport Infrastructure, Staff Competence and Information & Communication Technology if its benefits is to be fully realized. From the findings, it is recommended that the government should ensure that there is proper transport infrastructure so as to enable C & F firms to be efficient in carrying out their clearing and forwarding activities with ease. Furthermore, C & F firms should have quality customer care services so as to respond to all emerging needs of customers. There should also be large scale adoption of ICT skills so as to enhance the efficiency of C & F companies operations. In addition, C & F firms should have progressive training so as to enhance the competence of their staff. This is vital since it can go on to enhance the efficiency of clearing and forwarding firms in Kenya.

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ABBREVIATIONS AND ACRONYM

C&F Agents/Firms -Clearing and Forwarding Agents

EAC- East African Community

KRA- Kenya Revenue Authority

SGR- Standard Gauge Railway

LAPSSET- Lamu Port- South Sudan- Ethiopia-Transport Corridor

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Clearing & Forwarding Agents acts like an intermediary between a shipper (person shipping or cargo owners) and other logistics providers on chain supply logistics. Clearing and forwarding agents have proved to be a vital part of chain supply logistics (Rai, 2010). To simply define clearing and forwarding companies / agents we can say that the clearing and forwarding agents companies are actually the third party logistics services providers handling and managing the operations of cargo shipment, or other words they are a party in facilitating an international supply chain logistics.

Clearing & Forwarding Agents performs various logistics services that may expound to shipping but mainly a Clearing & Forwarding Agents service may include creating an invoice for international shipping, making arrangements for the shipment pickup and cargo delivery reports, arranging and coordinating customs for attaching warehousing, thoroughly completing all the documentation work required for shipment, and finally confirming the delivery of shipment (Wood et al., 2002).. Clearing & Forwarding Agents have established relationship with shipping lines, sea, air and land transportation system including rail services, trucking, and shipping ocean liners.

1.2.1 Importance of the logistics industry in Global Perspective

Globalization of markets and production has created many opportunities to the business and the economies in both developed and developing countries. As the world spins into the first decade of the twenty-first century, dramatic and swift transformations are taking place in international trade: growing liberalization of trading systems; expansion of regional economic integrations;

excessive cross country purchases; and increasing connectedness with customers and marketing partners due to major advances in information, communication, and transportation technologies where by transport and delivery are key aspect of modern business (Keegan, 2002).

1.2.2 Importance of the logistics industry to the Kenyan Economy

According to the Kenyan Economic Survey 2013 transport and logistics has a direct effect on every sector of the economy as well as a great potential on promoting economic growth in Kenya. The logistics sector accounts for 5 to 10% of Gross Domestic Product (GDP) in Kenya (GoK, 2012). It is estimated that about five million jobs are involved in logistics in Kenya. Clearing and Forwarding agents are facilitators that help an organization to provide timely delivery of the raw materials, semi-finished goods and finished goods, whether externally or internally using different modes of transportation including air, land and sea(Ochido& Ochiri,2014).

In the modern business environment of just in time production and delivery, it has become even more important that traders are guaranteed fast, predictable and timely release of their goods. The traders are constantly concerned about the delay of clearing goods because it increases cost to their businesses. Delays in the release of goods are attributed to the complicated and non-transparent procedural requirements, bank transfer arrangements, documentary requirements and high cost of processing information. According to the World Bank (2005), administrative hurdles (for example, customs and tax procedures, clearances and cargo inspections) contribute to 75% of trade facilitation delays in African ports (World Bank, 2005). Custom clearing is one of the most significant parts of overseas transportation for both importers and exporters. A clearing agent acts on behalf of the importer or exporter. There are several reasons why one would

require hiring services of a reputable custom clearing and forwarding agent. Some of the major reasons include: perfect shipment service guarantees safety of all shipments; timely arrival of shipment to the desired destination; effective and efficient clearance of goods and the fact that it is mandatory to engage a clearing agent in the process of cargo clearance, they act as the link between Customs on one hand and the importer and the exporter on the other.

Just like in other businesses, Clearing and Forwarding agents are faced with increased competitive pressures that force them to concentrate not only on operational business processes, but also on an efficient and effective customer management. One of the ways to meet this challenge of rapid growth and expansion, according to Langley, Pals and Orrt (2005) is to focus on establishing, maintaining and developing relationships with customers. This is achieved through efficient service delivery.

Inefficient and ineffective customs practices have made people to seek for better services. This is also the reason that most people these days are interested in researching for the best of cargo shipment services (World Bank, 2005).

Unprofessional and bad practices in the logistics sector have generally involved individual agents (Dong, 2007). Mombasa port congestion was noted to be a challenge facing clearing and forwarding agents and is a phenomenon that affects a number of ports in Africa and the developing world. Causes of port congestion can range from inadequate port infrastructure, insufficient road and rail network and poorly integrated supply chain to low productivity level among others. At the port of Mombasa, congestion is not a new phenomenon. For the last five years or so, capacity constraint has been a major huddle in port operations. For example time release study (2005) indicates that there was an increase in customer complaints, and some customers had started to divert their goods such as cars to Dar es Salaam, also there was an

increase in theft, corruption and congestion. Imports, especially cars and containerised cargo have always surpassed yard holding capacity against a backdrop of poor cargo off take to the hinterland.

1.3 Statement of the Problem

The World Bank, in its annual business reports 2012, that ranks economies based on the ease of doing business, rated Kenya low at 133 among 183 economies in the world due to congestion of containers at the port waiting clearance (Jean, 2012).

Traders reported that it took more than two weeks to clear their containers. The lack of port capacity also resulted in a queue of vessels waiting to dock at the harbour. Some vessels switched to Dar es Salaam from Mombasa as their scheduled stop because of congestion. The delays are partly as a result of the inability of port customers to use the new systems introduced in the operation of the port (time release study, 2005). There is a public complaint that time release taken from arrival to removal of goods from customs control is significantly long as there are delays at all stages of clearance process which involves Customs, cargo handlers, intervening operations and the Clearing and Forwarding Agents. Therefore, this study examines the factors affecting the efficiency of clearing and forwarding agents in Kenya.

Despite the efforts that have been undertaken by the government of Kenya which include privatization of most of the activities involving clearing and forwarding at the port as well as adoption of the public-private partnership in port operations to ensure effective delivery of service, there are still challenges that hinder efficient and effective clearing and forwarding.

1.4. Objectives of the Study

1.4.1. General Objective

The general objective of the study was to establish the factors influencing the efficiency of clearing and forwarding agents in Kenya.

1.4.2. Specific Objectives of the Study

- i) To determine the influencing of infrastructure on the efficiency of clearing and forwarding agents in Kenya
- ii) The establish the influencing of staff competence on the efficiency of clearing and forwarding agents in Kenya
- iii) To find out the influencing of ICT on the efficiency of clearing and forwarding agents in Kenya

1.5 Research Questions

The research questions were as follows:

- i. What is the effect of Infrastructure on the efficiency of clearing and forwarding agents in Kenya?
- ii. How does Staff competence influence the efficiency of clearing and forwarding agents in Kenya?
- iii. What is the influence of ICT on the efficiency of clearing and forwarding agents in Kenya?

1.6 Significance of the Study

To the Clearing and Forwarding Agents, the findings of this study would be useful in helping to determine the factors that affect the efficiency of the clearing and forwarding practice and analyse how they can overcome them. To the researcher; the researcher would obtain deep

knowledge on the factors that affect the efficiency of the clearing and forwarding agents in the process of cargo clearance. Also the findings of the study could be useful in building up ground work for further research on the same area or other related fields. To the policy makers; the study may help in making policy pertaining to port operations so as to help on timely clearance of cargo for national development.

Analysing and assessing logistics and supply chain practices will help discern important issues such as emerging trends and areas of concern (Srivastava, 2006), which will help in taking remedial measures.

1.7 Scope of the Study

Since a research paper of this kind cannot cover all aspects related to factors influencing clearing and forwarding at all time and space, its scope ought to be pointed out. The study confined itself to the factors that affect clearing and forwarding agents at the port of Mombasa. The Mombasa port has been purposely chosen as the area of study because it is one of the major entry/exit point for goods coming into and out of Kenya and the partner states. Further the limitations of the study included time constraints.

1.8 Limitation of the Study

The limitation of the study was high cost of doing research and paper work. The study was also limited to Nairobi as these were the resources and capacity available for the study at hand. The Clearing and Forwarding world is growing hence other regions may be studied.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This study was on factors affecting the efficiency of clearing and forwarding firms in Kenya. This chapter reviewed the work that has been done by other scholars. This was presented in terms of introduction, theoretical review and critical review.

2.2 Theoretical Review

2.2.1 Agency Theory

An agency, in general terms, is the relationship between two parties, where one is a principal and the other is an agent who represents the principal in transactions with a third party. Agency relationships occur when the principal hire the agent to perform a service on the principals' behalf. Principals commonly delegate decision-making authority to the agents. Agency problems can arise because of inefficiencies and incomplete information. In finance, two important agency relationships are those between stockholders and managers, and stockholders and creditors. The principal– agent problem or agency dilemma concerns the difficulties in motivating one party (the "agent"), to act in the best interests of another (the "principal") rather than in his or her own interests. Common examples of this relationship include corporate management (agent) and shareholders (principal), or politicians (agent) and voters (principal). For another example, consider a dental patient (the principal) wondering whether his dentist (the agent) is recommending expensive treatment because it is truly necessary for the patient's dental health, or because it will generate income for the dentist. In fact the problem potentially arises in almost any context where one party is being paid by another to do something, whether in formal employment or a negotiated deal such as paying for household jobs or car repairs.

Organizational change is an empirical observation in an organizational entity of variations in shape, quality or state over time after the deliberate introduction of new ways of thinking, acting and operating (Mbogo, 2003). In recent dialogue concerning organizational change, there has been broad consensus that increasing environmental instability and uncertainty are forcing companies to change continuously. Efficient service is critical for medium and long term successful performance of the clearing and forwarding firms.

2.2.2 The Theory of Constraints

The theory of constraints (TOC) is a management philosophy that has been effectively applied to manufacturing processes and procedures to improve organizational effectiveness. Three TOC paradigms that have evolved over the last twenty-five years: logistics, global performance measures, and thinking processes (Blackstone, 2001; Draman 1995). More recently, Boyd and Gupta (2004) have referred to these three paradigms as decision making, performance measurement systems, and organizational mind-set, respectively. The TOC principles and ideas can be used to improve and implement change in any system, be it strategic planning for a firm or for one's personal life (Blackstone, 2001).

The five step focusing process has been applied to processes and procedures within services. It has been used to improve service times (Olson, 1998), information flows (Coman & Ronen, 1994; Feather and Cross, 1988; Jolley & Patrick, 1990), and in reengineering of administrative functions (Spencer & Wathen, 1994). The focusing steps have been used to improve sales (Hodgdon, 1998), and logistics functions with the military (Underwood, 1994). It has been used in medical settings (Roybal et al., 1999).

Most services will have limited amounts of "traditional" inventory (Cook et al., 1999; Motwani et al., 1996b; Motwani and Vogelsang, 1996); the service is often produced at the time of sale

and cannot be carried in inventory. TOC's global performance measures are based on throughput, inventory, and operational expense. Just because inventory is often a smaller fraction of assets for services, these global performance measures can still be utilized (Bramorski et al., 1997; Motwani et al., 1996a; Walker and Cox, 1998; Hinneburg, et al., 1996; Simons and Moore, 1992a and 1992b; Underwood, 1994).

The use of the TOC thinking processes can be used in services just as effectively as in manufacturing (Angst et al., 1996; Austin, 1998; Coman& Ronen 1994; Covington, 1998; Dettmer, 1997; Roadman, et. al., 1996; Tanner & Honeycutt, 1996). Services need a guidingmanagement philosophy that will focus on process improvement. It may be the TOC thinking processes and problem-solving techniques that provide the most benefit to services.

2.2.3 Kano's theory of attractive quality

Kano's model is commonly used in the product/service development process to investigate the impact of the effectiveness of various quality attributes on customers' satisfaction (Xu et al., 2008). In practice, the model allows the identification of five categories (Must-be, One dimensional, Attractive, Indifferent, Reverse) of product/service quality elements with respect to the relationship between their effectiveness and customer satisfaction. Kano's method for the classification of the quality elements is based on a customer questionnaire which contains a set of functional/dysfunctional question pairs for each product/service quality element. The final classification of a product/service quality element is obtained through a statistical analysis of the survey results of all respondents (Berger et al., 1993). Classifying customer needs into Kano's categories allows the management to focus efforts where customers will notice their effect the most. An effective quality strategy should guarantee to fulfil all Must-be needs, to be competitive

with market leaders on the One-dimensional needs, to differentiate by including some Attractive element

Change programs and projects have to make sense from the very beginning. This is when the actual idea of change comes into place. The feeling that a change is right for a company and the necessary sense of urgency to secure its realization will only occur if it is clear that the change has been tailored to the company and its particular business situation (Bruch and Ghoshal, 2003). Change is only possible when it is contextualized against the backdrop of a company's particular past and presents (Pettigrew, 1987). Change processes are only successful if they fit a company's current culture. Traditions, norms and shared values within a company must be included in the deliberations regarding the selection of a change program (Heracleous, 2001). Certain change processes cannot be executed in more bureaucratic cultures, while other types of processes simply are not compatible with team-oriented or innovative/ dynamic organizations (Bruch and Ghoshal, 2004b). In addition, the basic process of designing the program for a particular change should also account for a company's energy. Different types of change programs will be effective with companies characterized by comfortable inertia than for companies with other types of energy, such as change tiredness, high productive energy or resignative inertia (Bruch and Ghoshal, 2003).

The management must systematically make decisions that will ensure that the change will be implemented successfully and have a permanent impact. Acceptance, attention, effective change agents as well as momentum and sustainability are all key in this regard (Davenport and Beck, 2000) and (Kotler, 1996). Without these factors, change processes will not be put in motion,

make headway only with great difficulty or have a fleeting or even negligible impact (Weiek, 2000).

2.3 Conceptual Framework

"Miles and Huberman (1994) defined a conceptual framework as a visual or written product, one that “explains, either graphically or in narrative form, the main things to be studied—the key factors, concepts, or variables—and the presumed relationships among them” (p. 18).¹ Here, I use the term in a broader sense, to refer to the actual ideas and beliefs that you hold about the phenomena studied, whether these are written down or not; this may also be called the “theoretical framework” or “idea context” for the study. A valuable guide to developing a conceptual framework and using this throughout the research process, with detailed analyses of four actual studies, is Ravitch and Riggan, Reason & Rigor: How Conceptual Frameworks Guide Research (2011).

Independent Variables

Dependent Variable

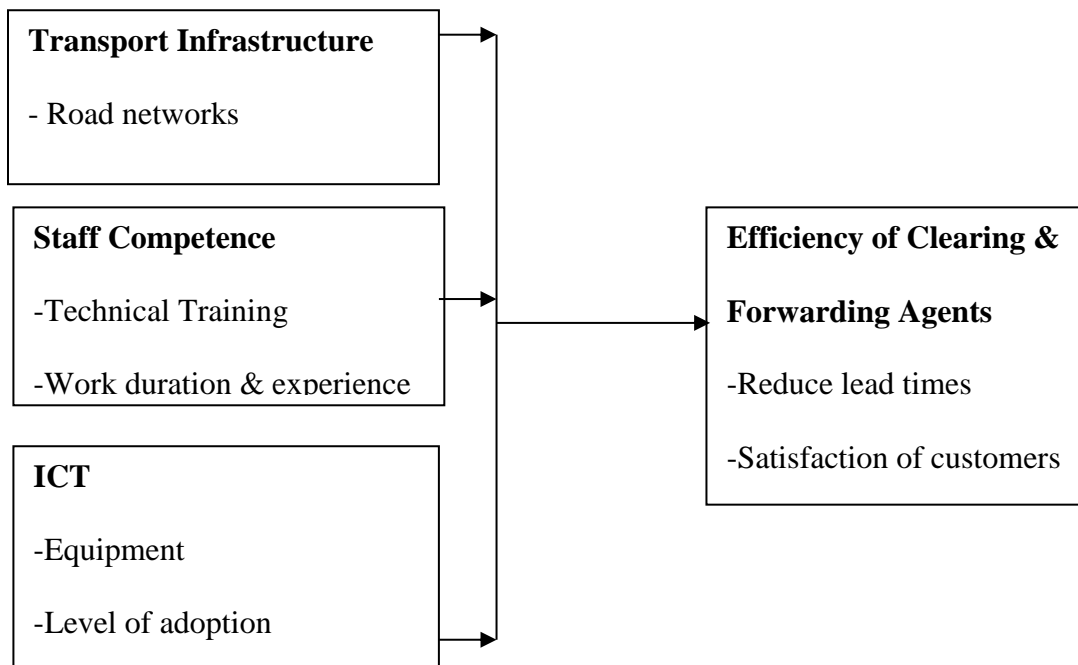


Figure 2.1 Conceptual Framework

2.4. Empirical Review

2.4.1 Transport Infrastructure

The quality of the infrastructure on the Northern Corridor is well documented (World Bank, 2003). The main concerns for the infrastructure can be summarized as the following: The road network which transports 80% of the goods is generally not in good condition. Maintenance of some of the sections has been very poor. Especially the section between Mombasa and Nairobi is in a critical condition and it handles traffic of 400 to 600 trucks a day and; not having enough resources for maintenance.

Rushton, Croucher and Baker, P. (2010) define Transport as “the activity that facilitates physical movement of goods as well as individuals from one place to another. It supports trade and industry in carrying raw materials to the place of production and distributing finished products for consumption”. Stakeholder’s workshop, (2012) reported that Conditions of the Road at Miritini in whose vicinity most CFSs are located. Since April 2011, the road has deteriorated so much that the truck turnaround times for a journey of less than 10 km can take as long as 6 hours which means that truck efficiency and movement of CFS-nominated cargo is severely compromised. This has not made it better even after the Standard Gauge Railway (SGR) as trucks have to transport cargo from Miritini to different CFS in Mombasa.

From the Meeting on the Northern corridor trade and transport logistics chain stakeholders consultative forum (2011) the Port and KRA reserve the right to nominate various CFS for container clearance, importers have faced delays exceeding 10 days waiting for cargo to move from the Port to CFS. The Kenya National Highways Authority reports that it expects World Bank Support to fix the road.

KPA's management report 2011/2012, *said* that they have been building their capacity to handle increased volumes of cargo but they are let down by poor infrastructure.

According to Bowersox, Closs and Stank (2010), activities related to providing customer service requires performing order receipt and processing, deploying inventories, storage and handling and outbound transportation with a channel of distribution. poor transportation causes delays in delivery as the vehicles consumes more time than the required just to deliver items, goods from one place to the required locations. Transport services should be efficient to cope up with organizations activities and services. According to KPA's Annual Report (2010) The port of Mombasa is the gateway for surface transport along the Northern corridor region, with an estimated 900 transport vehicles (trucks) exiting each day, on average. Road transport is accompanied by several operational difficulties including weighbridges, police escorts, and road blocks which constitute non-tariff barriers and contribute to delays.

2.4.2 Information and Communication Technology (ICT)

The emerging requirements for freight transportation lead the logistic sector to focus on the implementation of integrated information systems to improve the provided services (Caris et al., 2008). Therefore, it is imperative to develop and integrate new security solutions related to customs operations. It is widely recognized that the application of Information and Communication Technology (ICT) in logistics has been promoted as a means to enhance logistics competitiveness (Feng and Yuan, 2006), (Giannopoulos, 2004) and ICT is considered a primary "enabling tool" for the safe and efficient freight transportation systems (Giannopoulos, 2004).

Recently, practitioners and researchers are attracted by the key problem of using effectively and efficiently the latest developments of ICT tools for freight transportation management (Giannopoulos 2004, Ramstedt and Woxenius 2006, Verbraeck and Versteegt 2001, Xu and Hancock 2004). In particular, the modern ICT tools help to produce, manipulate, store, communicate, and disseminate information. Moreover, ICT makes possible to know the state of the system in real time and therefore to manage and change online paths, vehicle flows, orders and deliveries.

In order to operate such choices, there is a need of suitable decision modules based on detailed models that can track the state changes of the various system components and determine performance indices typical of the tactical and real time management, such as utilization, traffic indices and delivery delays.

The researcher aims to address the problem of improving the efficiency of a logistic system that involves maritime and road transportation from the point of view of the processes, and, in particular, the customs clearance operations.

2.4.3 Staff Competence

According to Arnold et al. (2011), the level of competence of C&F agents in the EAC varies dramatically. In general, large firms with foreign ownership and international scope employ the majority of the trained C&F agents. Although this is partly due to the fact that large firms are better able to compensate highly trained agents, it also is due to the roles that different firms play as well as the requirements of their clients; large firms tend to handle complex transactions for international companies. Most agents working for small C&F firms have only on-the-job experience, and while this is sufficient for simple transactions, they lack knowledge of modern trade practices such as incoterms, rules of origin, documentary requirements for bilateral trade

agreements, procedures for temporary admission, warehousing and inventory management, intermodal transport, bonded operations, technical and SPS standards, and supply chain software.

Due to the many unskilled C&F agents in the East African logistics system, officials have recognized that rigorous training and certification for C&F agents is essential, and demand for higher levels of training from freight forwarding associations is growing. Training and education will help to mitigate many of the errors and inefficiencies that currently exist in the system, and knowledge of best practices can also help to reduce the level of the corruption in the system. An additional benefit of increased training is that small C&F firms that employ trained and skilled agents will be better able to expand the types of services they can offer into more complex and higher value added services for larger international firms. For these reasons, training programs are currently being implemented on the national and regional levels to improve the quality and skill level of C&F agents, with the possibility of further programs to follow (Arnold & Mathenge, 2011).

Arnold et al. (2011) noted that, at the regional level, the customs administrations in East Africa have partnered with national freight forwarding associations to create an organization called the Federation of East African Freight Forwarders Associations (FEAFFA). This organization's goal is to put together a comprehensive regional training program in order to enhance the skills of C&F agents. Since the program's inception, over 1,000 individuals have been trained and qualified as C&F agents, and the program aims eventually to train two agents per C&F firm.

Another training program that has not yet been implemented in the EAC but will also help to train C&F agents is the International Federation of Freight Forwarders Association (FIATA)

Diploma in Freight Logistics. Although there is sufficient demand for the training program, the key challenge in starting the program has been a lack of funding and technical resources such as appropriate syllabi, modules, materials, and trainers. Once begun, however, the program is expected to be self-sustaining. The diploma will focus specifically on the areas of terrorism, security and piracy, corporate governance, and the transport of dangerous goods. In addition, the diploma will include seminars on the EAC Common Market, the operation of one-stop border posts, regional customs transit guarantees, and the similar trade facilitation topics. Also under consideration is the development of an accreditation system for the diploma that would increase the legitimacy and transparency of the diploma but would also require significant financial and technical support to create (Arnold et al., 2011). However, they have not covered the Kenyan Clearing and Forwarding Industry adequately to ascertain the level of competency of the clearing agents in relation to their performance.

2.4.5 Efficiency of Clearing and Forwarding Agents

Having reviewed Transport Infrastructure, Staff Competence and ICT, these have been found to be the core drivers of efficiency of Clearing and forwarding Agents. The quality of the infrastructure on the Northern Corridor is well documented (World Bank, 2003). The main concerns for the infrastructure can be summarized as the following: The road network which transports 80% of the goods is generally not in good condition. Maintenance of some of the sections has been very poor.

Stakeholder's workshop, (2012) reported that Conditions of the Road at Miritini in whose vicinity most CFSs are located. Since April 2011, the road has deteriorated so much that the truck turnaround times for a journey of less than 10 km can take as long as 6 hours which means that truck efficiency and movement of CFS-nominated cargo is severely compromised.

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It is widely recognized that the application of Information and Communication Technology (ICT) in logistics has been promoted as a means to enhance logistics competitiveness (Feng and Yuan, 2006). In particular, the modern ICT tools help to produce, manipulate, store, communicate, and disseminate information. Moreover, ICT makes possible to know the state of the system in real time and therefore to manage and change online paths, vehicle flows, orders and deliveries.

According to Arnold et al. (2011), the level of competence of C&F agents in the EAC varies dramatically. In general, large firms with foreign ownership and international scope employ the majority of the trained C&F agents. Most agents working for small C&F firms have only on-the-job experience, and while this is sufficient for simple transactions, they lack knowledge of modern trade practices such as incoterms, rules of origin, documentary requirements for bilateral trade agreements, procedures for temporary admission, warehousing and inventory management, intermodal transport, bonded operations, technical and SPS standards, and supply chain software. A training program that has not yet been implemented in the EAC but will also help to train C&F agents is the International Federation of Freight Forwarders Association (FIATA) Diploma in Freight Logistics. Also under consideration is the development of an accreditation system for the diploma that would increase the legitimacy and transparency of the diploma but would also require significant financial and technical support to create (Arnold et al., 2011). However, they have not covered the Kenyan Clearing and Forwarding Industry adequately to ascertain the level of competency of the clearing agents in relation to their performance.

2.5 Summary of Literature Review

This chapter has reviewed some of the basic and fundamental variables of efficiency of clearing and forwarding agents in Kenya. These are Transport Infrastructure, Staff competence and ICT.

The theories have been interlinked with the conceptual framework to further explain and make clear the importance of these variables. The research gaps have also been covered to demonstrate the need for this study.

2.6 Research Gap

Though many studies have been carried out on the factors influencing the efficiency of C&F firms in Kenya, few studies have focused on Kenya. The vast majority of studies focus on Western and other African countries. In addition, most of the available studies do not focus on all the factors under investigation in this current study. As such, the findings obtained may not apply to this current study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Introduction

This chapter discusses the research design, target population, data collection instruments, data analysis methods and sampling techniques, reliability and validity of research instruments to be used when carrying out the research study and data analysis and presentation. Furthermore, the methods used in data analysis were presented.

3.2. Research Design

The research design used was descriptive survey because the intention is to portray accurate profile of factors that affect clearing and forwarding agents in Kenya. A descriptive survey approach was appropriate for individual researcher as it gave an opportunity to deduce information collected from the field. Survey design enabled the researcher to collect large amount of data from a sizable population. Moreover survey was adopted because the study intends to include more than one clearing and forwarding agent, also, the use of survey design helped to ensure external validity of results hence it was easy to generalize the findings. Kothari (2004) notes that descriptive design is concerned with describing, recording, analysing and reporting conditions that exist or existed. Engel (2009) argues that descriptive methods are widely used to obtain data useful in evaluating present practices and in providing basis for decision-making.

3.3 Population

A research population is generally a large collection of individuals or objects that is the main focus of a scientific query. It is for the benefit of the population that researches are done.

However, due to the large sizes of populations, researchers often cannot test every individual in the population because it is too expensive and time-consuming.

3.3.1 Target Population

Burns and Grove (2003) and Mugenda and Mugenda (2003) describe population as all the elements that meet the criteria for inclusion in a study. Population is therefore the entire group of individuals, events or objects having a common observable characteristic. The population for this research consisted of 488 clearing and forwarding firms based in Nairobi out of the licensed in Kenya.

3.4. Sampling Frame

A sampling frame is a list or database from which a sample can be used. In market research terms, a sampling frame is a database of potential respondents that can be drawn from to invite to take part in a given research project. This could be sample for quantitative and/or qualitative research including, but not limited to, qualitative telephone interviews, CATI, online surveys and focus groups.

A sampling frame generally includes the respondents' names and appropriate contact details (so that they can be contacted to take part in the research), but may also include other significant known information that may be drawn upon in the analysis stage of the research such as age, location or duration of work.

Table 3.1: Sampling procedure

Category	Population size	Sample Size	Percentage
Clearing and forwarding agents	488	146	30
Total	488	146	30

3.5. Sampling Design

According to Polit and Beck (2003), a sample is a proportion of population to be researched while Kothari (2004) defines a sample as the selected respondent representing the population. The sampling design used by the researcher was simple random sampling which will be appropriate in coming up with a sample for the study. This method ensured that the conclusion drawn from the study could be generalized to the entire population. The target sample size for this study was 146 firms. The target sample was 30% of the population of clearing and forwarding firms and since this is a descriptive study, according to Mugenda and Mugenda (2003) and Gay (1981) 10% -30% of the accessible population is considered as adequate sample for descriptive studies.

3.6. Research Instruments

The researcher used primary sources of data. The data was collected by use of a structured questionnaire comprising closed-ended questions. Questionnaires were chosen because they are easy to administer and obtain information from large populations within short periods of time.

3.7. Data Collection Procedures

The researcher distributed the questionnaires to the respondents. Data was collected using questionnaires as the main data collection tool. A span of one week was given to the respondents

to give them ample time for the filling of questionnaires. The completed instruments were verified and collected from the respondents for them to be analysed and presented.

3.8. Validity and Reliability

According to Mugenda and Mugenda (2003), validity is the accuracy and meaningfulness of inferences, which are based on the research results. Validity is therefore the degree to which the results obtained from the analysis of the collected data represent the actual phenomenon under study. The items were tested and improved according to the supervisor's advice and suggestions. Reliability is the consistency of a set of measurement items (Cronbach, 1951). Reliability is the consistency of measurement, or the degree to which an instrument measures the same way each time it is used under the same conditions with the same subjects. In short, it is the repeatability of measurement. The reliability of the instrument was ensured through pilot testing and pre-testing.

3.9. Data Analysis and Presentation

The data was collected from the field for the purpose of the study was coded, edited and summarised for completeness and accuracy of information. The data collected was recorded and entered in the computer using descriptive statistics. Pearson Correlation and multiple regression analysis was undertaken to assess if there was significant relationship between the study independent variables (Transport Infrastructure, Staff Competence, Customer Care &, ICT) and the dependent variable (efficiency clearing and forwarding Agents).

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

In this chapter, the analysis of the data collected is presented. The study investigated factors affecting the efficiency of clearing and forwarding firms in Kenya. This was through a case study of Nairobi County. The findings are presented in line with the study objectives namely to: determine the effect of infrastructure on the efficiency of clearing and forwarding agents in Kenya; establish the effect of staff competence on the efficiency of clearing and forwarding agents in Kenya; examine the effect of ICT on the efficiency of clearing and forwarding agents in Kenya on the efficiency of the clearing and forwarding agents in Kenya.

4.1.1 Response Rate

Out of the 146 respondents targeted only 141 responded. This made the response rate 96.5%. This was considered sufficient for analysis.

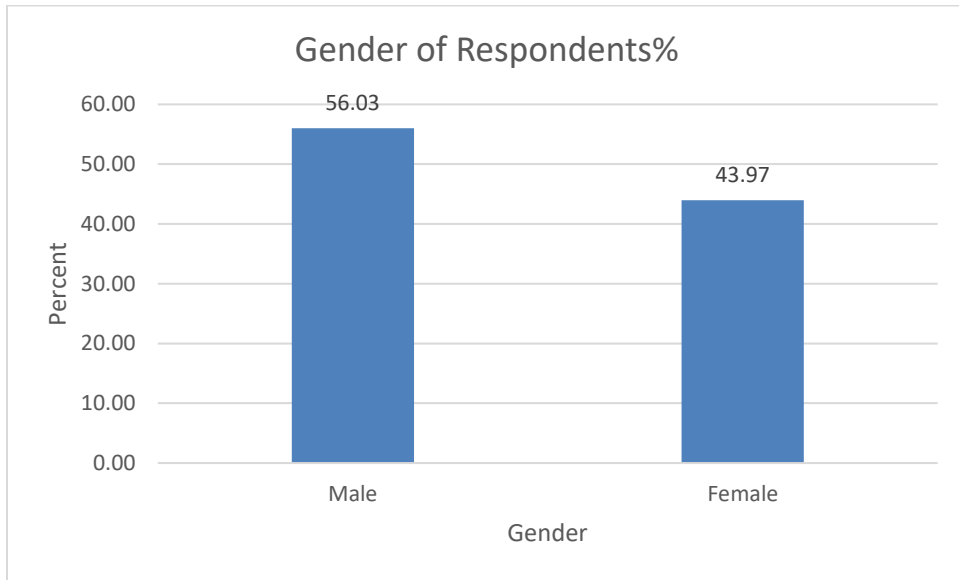
4.2 The Demographic Characteristics of Respondents

The demographic characteristics of respondents were sought. These included: Gender, age; duration working for a clearing and forwarding firm and; level of education.

4.2.1 Gender of Respondents

The study investigated the sex of the respondents. The majority of them were male (56.03%). The rest were female (43.97%). Although the findings show that the majority of the people working in clearing and forwarding were male, either gender was represented in the study. This could thus avert gender bias in the responses given. Figure 4.1 below shows the distribution of the respondents by gender.

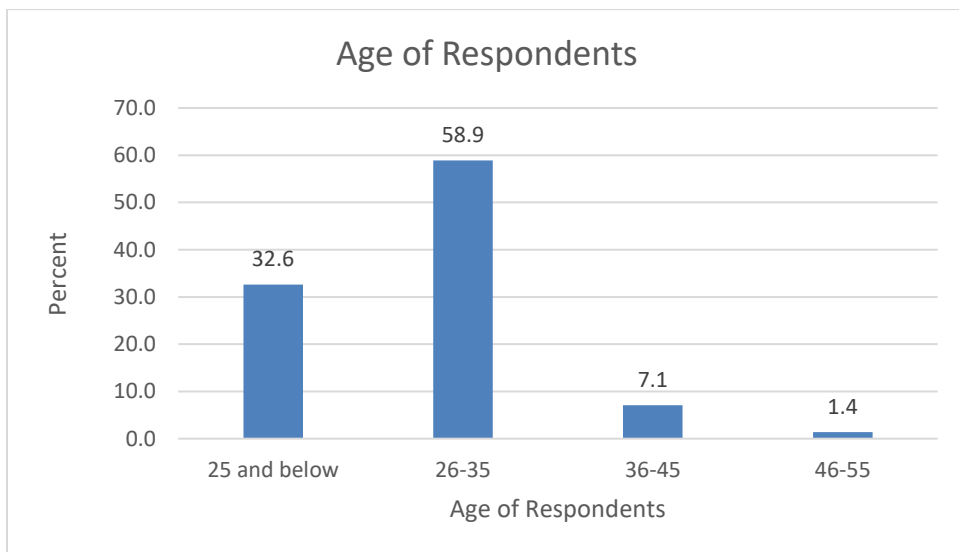
Figure 4.1: Gender



4.2.2 Age of Respondents

The study investigated the age of the respondents. The majority were aged 26 to 35 years (58.9%). These were followed by those aged 25 and below years (32.6%), 36 to 45 years (7.1%) and 46-55years (1.4%) respectively. Figure 4.2 below shows the distribution of the respondents by age.

Figure 4.2 Age of Respondents



4.2.3 Years of Work Experience in the Clearing and Forwarding

The study investigated the duration the respondents had worked for clearing and forwarding companies. The majority of the respondents had worked for 16 to 25 years (34.8%), less than 5 years (20.6%) and 6 to 15 years (19.9%) respectively. These least were those who had worked for more than 35 years (12.8%) and 26-35 years (12.1%). It can be deduced that the respondents had worked for clearing and forwarding firms long enough to understand the subject under investigation. Figure 4.3 below shows the distribution of the respondents by years of work experience.

Figure 4.3 Years of Work Experience

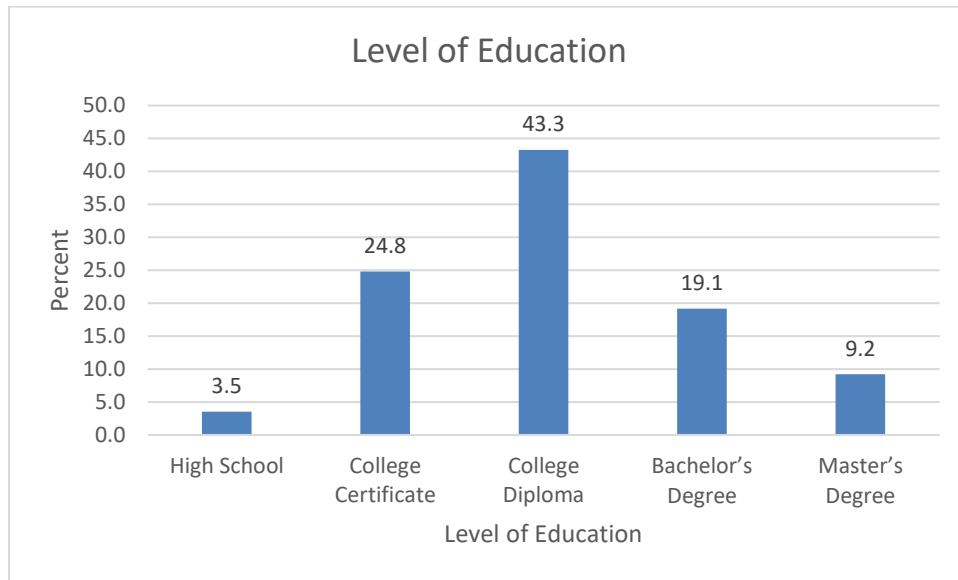


4.2.4 Level of Education

The study investigated the level of education of the respondents. The findings obtained show that most of the respondents had college diplomas (43.3%), college certificates (24.8%) and bachelor's degrees (19.1%). Master's degree and high school certificate holders were (9.2%) and (3.5%) respectively. This shows that the respondents had sufficient academic qualification to

contribute to the subject under investigation. Figure 4.4 below shows the distribution of the respondents by level of education.

Figure 4.4 Level of Education



4.3 Descriptive Statistics

In this section, the descriptive statistics obtained for the study variables are presented.

4.3.1 Transport Infrastructure

The respondents were asked to show their level of agreement with a set of statements on the effect transport infrastructure on the efficiency of clearing and forwarding firms. The findings were captured in a scale of 1 to 5 where: 1= strongly disagree, 2= disagree, 3= Neutral, 4= Agree and 5= Strongly Agree. Based on the Likert Scale, 1 to 2.5 responses represented respondents who disagreed with the statements whereas 2.5 to 5 responses represented respondents who agreed with the statements. The mean of each response were obtained and interpretations made based on these means rounded up to the nearest whole number. Table 4.1 below shows the descriptive statistics of transport infrastructure.

Table 4.1 Descriptive Statistics-Transport Infrastructure

	N	Minimum	Maximum	Mean	Std. Deviation
There is high quality of infrastructure in Kenya	141	1	5	4.25	1.001
There is poor maintenance of some of the sections of the road between Mombasa and Nairobi	141	3	5	4.57	.589
There are no enough resources for maintenance	141	1	4	1.40	.737
Poor road networks increases the time taken to move cargo for short distances	141	2	5	4.36	.759
Road transport is affected by several operational difficulties including weighbridges, police escorts, and road blocks which constitute non-tariff barriers and contribute to delays	141	3	5	4.38	.555
MEAN				3.792	

Source: Research Data

From the findings on table 4.1, an average mean of 3.792 was recorded. These findings show that transport infrastructure is a great determinant of the efficiency of clearing and forwarding services in Nairobi and in Kenya as a whole. These findings agree with Bowersox et al (2010) who points out that poor transportation causes delays in delivery as the vehicles consumes more time than the required just to deliver items, goods from one place to the required locations. As such, it can be deduced that transport services should be efficient to cope up with organizations activities and services and that the efficiency of C&F firms is highly depended on transport infrastructure.

4.3.2 Staff Competence

The researcher presented a number of statements on the effect of staff competence on the efficiency of clearing and forwarding firms to the respondents. The findings were captured in a

scale of 1 to 5 where: 1= strongly disagree, 2= disagree, 3= Neutral, 4= Agree and 5= Strongly Agree. Based on the Likert Scale, 1 to 2.5 responses represented respondents who disagreed with the statements whereas 2.5 to 5 responses represented respondents who agreed with the statements. The mean of each response were obtained and interpretations made based on these means rounded up to the nearest whole number. Table 4.2 below shows the descriptive statistics of staff competence.

Table 4.2 Descriptive statistics – Staff Competence

	N	Minimum	Maximum	Mean	Std. Deviation
Large firms with foreign ownership and international scope employ the majority of the trained C&F agents	141	2	5	4.36	.759
Large firms tend to handle complex transactions for international companies and this pushes them to hire competent staff	141	3	5	4.38	.555
Most agents working for small C&F firms have only on-the-job experience and lack knowledge of modern trade practices	141	2	5	4.44	.578
Training and education help to mitigate many of the errors and inefficiencies that currently exist in the system	141	1	5	3.83	.845
The demand for the training of C&F staff is challenged by lack of funding and technical resources such as appropriate syllabi, modules, materials, and trainers	141	2	5	4.36	.759
MEAN				4.274	

Source: Research Data

With an average mean of 4.274, majority of the respondents agreed with the statements that suggest that staff competence plays a major role in enhancing the efficiency of clearing and forwarding firms in Kenya as pointed out by Arnold and Mathenge (2011).

4.3.3 Information and Communication Technology

The researcher presented a number of statements on the effect of ICT on the efficiency of clearing and forwarding firms to the respondents. The findings were captured in a scale of 1 to 5 where: 1= strongly disagree, 2= disagree, 3= Neutral, 4= Agree and 5= Strongly Agree. Based on the Likert Scale, 1 to 2.5 responses represented respondents who disagreed with the statements whereas 2.5 to 5 responses represented respondents who agreed with the statements. The mean of each response were obtained and interpretations made based on these means rounded up to the nearest whole number. Table 4.3 below shows the descriptive statistics of Information and Communication Technology.

Table 4.3 Descriptive Statistics-Information and Communication Technology

	N	Minimum	Maximum	Mean	Std. Deviation
Modern Information and Communication Technologies (ICT) affect the efficiency of C&F firms in Kenya	141	3	5	4.60	.572
Implementation of integrated information systems affects the performance of C&F services in Kenya	141	1	5	4.55	.712
Modern ICT tools enhance the ability of C&F firms to produce, manipulate, store, communicate, and disseminate information.	141	2	5	4.36	.759
ICT makes possible for C&F firms in Kenya to know the state of the system in real time and therefore to manage and change online paths, vehicle flows, orders and deliveries.	141	3	5	4.39	.545
ICT improves the efficiency of a logistic system (maritime and road transportation) including customs clearance operations.	141	3	5	4.43	.539
MEAN				4.466	

Source: Research Data

With an average mean of 4.466, it is evident that the vast majority of the respondents agreed to the statements that suggest the influence of information and communication technology (ICT) on the efficiency of C&F firms in Kenya. These findings agree with Giannopoulos (2004) who argue that ICT is considered a primary “enabling tool” for the safe and efficient freight transportation systems. As such, the level to which clearing and forwarding firms adopt ICT will affect their efficiency and vice versa.

4.3.5 Efficiency of Clearing and Forwarding Firms

Lastly, the researcher presented a number of statements on the efficiency of clearing and forwarding firms to the respondents. The findings were captured in a scale of 1 to 5 where: 1= strongly disagree, 2= disagree, 3= Neutral, 4= Agree and 5= Strongly Agree. Based on the Likert Scale, 1 to 2.5 responses represented respondents who disagreed with the statements whereas 2.5 to 5 responses represented respondents who agreed with the statements. The mean of each response were obtained and interpretations made based on these means rounded up to the nearest whole number. Table 4.4 below shows the descriptive statistics of efficiency of clearing and forwarding firms.

Table 4.4 Descriptive statistics- Efficiency of Clearing and Forwarding Firms

	N	Minimum	Maximum	Mean	Std. Deviation
Clearing & Forwarding firms are efficient in providing their services	141	1	5	4.24	1.006
Sometimes clearing & forwarding firms record loss of goods in transit	141	1	5	4.26	1.003
There are widespread delays of goods in transit among C&F firms	141	1	5	4.24	1.006
There is widespread dissatisfaction of some customers by the services of some C&F firms	141	3	5	4.57	.589

Sometimes our firm runs at financial loss due to challenges along the supply chain	141	1	5	3.83	.845
MEAN				4.228	

Source: Research Data

Herein, an average mean of 4.228 was obtained. The findings as revealed that majority of the respondents agreed with the statements that suggest the influence of transport infrastructure, staff competence and information and communication technology on the efficiency of clearing and forwarding firms.

4.4 Reliability

A pilot study was carried out to determine reliability of the questionnaires which was done through Cronbach’s Alpha which measured the internal consistency by establishing if certain item within a scale measures the same construct. The acceptable range for Cronbach Alpha test is 0.70 and above. Table 4.5 shows the results of Cronbach test.

Table 4.5:Reliability Statistics

Cronbach's Alpha	N of Items
.730	24

Source: Research Data

4.5 Correlation Analysis.

Table 4.7 presents the Pearson correlations for the relationships between the independent variables transport infrastructure, staff competence and information communication technology, and efficiency of clearing and forwarding firms which formed the dependent variable. From the findings, a positive and statistically significant correlation is observed between each pair of the independent variables and between the independent and the dependent variables. The strongest positive and significant correlation to efficiency of clearing and forwarding firms was established

between information communication technology ($r = .754$, $p=0.000$) followed by transport infrastructure ($r=.612$, $p=0.000$) and staff competence ($r=.602$, $p=0.000$).

The finding indicates a statistically significant linear dependence of the efficiency of clearing and forwarding firms on all the three independent variables. This implies that a unit worth of increase in any one of the three independent variables will have an effect on efficiency of clearing and forwarding firms based on the strength of the correlation coefficient. Table 4.6 shows the results of Correlation analysis.

Table 4.6 Correlation Analysis

Model	Correlations			Sig.
	Zero-order	Partial	Part	
Transport Infrastructure	.612	.364	.179	.000
Staff Competence	.602	.412	.207	.000
Information & Communication Technology	.754	.792	.594	.000

a. Dependent Variable: Efficiency of Clearing & Forwarding Firms

Source: Research findings, 2020

4.6 Regression Analysis

The study conducted multiple linear regression analysis to examine whether there is a relationship between transport infrastructure, staff competence and information communication technology and the efficiency of clearing and forwarding firms. The assumptions of the multiple regression analysis namely Linearity, Normality, Heteroscedasticity and Multicollinearity were tested to ensure that they were not violated. The linearity was tested using scatter graph plotted and line of best fit. The Shapiro-Wilk test was employed to test for normality. Heteroscedasticity was tested using scatter plot. Multicollinearity was tested using Variance Inflation Factor(VIF)

and tolerance values. The findings of these tests indicated that the assumptions of multiple regression analysis were not violated. Thereafter, multiple regression analysis was conducted.

4.6.1 Model Summary

The model summary in the table 4.2 was used to test whether there is significant variation between independent variables and dependent variables. It was also used to test the proportion variation of independent variables on dependent variable. Table 4.7 shows the results of model summary.

Table 4.7: Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.889 ^a	.790	.786	.13452

a. Predictors: (Constant), Information & Communication Technology, Staff Competence, Transport Infrastructure

Source: Research findings, 2019

From the findings on Table 4.7, R squared was 0.790 that was adjusted to 0.786 indicating that there existed a variation of 78.6% in the dependent variable due to change in independent variables. This implied that Information & Communication Technology, Staff Competence, Transport Infrastructure accounts for 78.6% of all changes in the Efficiency of Clearing & Forwarding Firms when holding other factors constant. Therefore, 21.4% of the changes in the Efficiency of Clearing & Forwarding Firms is explained by other factors.

4.6.2 Analysis of Variance

Table 4.8 shows the results of the analysis of variance.

Table 4.8: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.351	3	3.117	172.244	.000 ^b
	Residual	2.479	137	.018		
	Total	11.830	140			

a. Dependent Variable: Efficiency of Clearing & Forwarding Firms

b. Predictors: (Constant), Information & Communication Technology, Staff Competence, Transport Infrastructure

Source: Research findings, 2020

The ANOVA results in table 4.8 show F-calculated (F= 172.244, p=000) was greater than F-critical. This signifies that the model is statistically significant.

4.6.3 Coefficient Analysis

Table 4.9 shows the regression coefficients.

Table 4.9 Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	T	
1	(Constant)	.521	.171		3.049	.003
	Transport Infrastructure	.187	.041	.249	4.572	.000
	Staff Competence	.268	.051	.285	5.292	.000
	Information & Communication Technology	.301	.020	.619	15.189	.000

a. Dependent Variable: Efficiency of Clearing & Forwarding Firms

Source: Research findings, 2020

From the results on table 4.9, $\beta_0 = 0.521$ represented the constant which predicted value of Efficiency of Clearing & Forwarding Firms while Transport Infrastructure, Staff Competence and Information Communication Technology were constant at zero (0).

Regression results revealed that Transport Infrastructure has significance and positive influence on Efficiency of Clearing & Forwarding Firms ($\beta_1=0.249$, $p= 0.000$). The results imply that for any unit increase in Transport Infrastructure would lead to an increase in Efficiency of Clearing & Forwarding Firms by 0.249 units holding all other factor constant.

Regression results also revealed Staff Competence has significance and positive influence on Efficiency of Clearing & Forwarding Firms ($\beta_1=0.285$, $p= 0.000$). The results imply that for any unit increase in Staff Competence would lead to an increase in Efficiency of Clearing & Forwarding Firms by 0.285 units holding all other factor constant.

Further, the study revealed Information & Communication Technology has significance and positive influence on Efficiency of Clearing & Forwarding Firms ($\beta_1=0.619$, $p= 0.000$). The results imply that for any unit increase in Information & Communication Technology would lead to an increase in Efficiency of Clearing & Forwarding Firms by 0.619 units holding all other factor constant.

The regression model is as shown below:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

From the regression results, the optimal model of the study is as follows:

$$Y = 0.521 + 0.249X_1 + 0.285X_2 + 0.619X_3 + \varepsilon$$

Where

Y= Efficiency of Clearing & Forwarding Firms;

$\beta_0 = 0.521$ = intercept intercept term(constant) of the regression line.

$\beta_1 = 0.249$ = slope coefficient.

$\beta_2 = 0.285$ = slope coefficient.

$\beta_3 = 0.619$ = slope coefficient.

ϵ = Error Term

X1 = Transport Infrastructure;

X2 = Staff Competence;

X3 = Information & Communication Technology;

4.7 Discussion of the Findings

From the regression analysis, the study found out that the three independent variables that were studied explain a substantial 78.6% of the Efficiency of Clearing & Forwarding Firms as represented by Adjusted R squared (0.786). This implied that Information & Communication Technology, Staff Competence, Transport Infrastructure accounts for 78.6% of all changes in the Efficiency of Clearing & Forwarding Firms when holding other factors constant. Therefore, 21.4% of the changes in the Efficiency of Clearing & Forwarding Firms is explained by other factors.

The study established that the slope coefficient for Transport Infrastructure was ($\beta_1=0.249$, $p=0.000$), meaning that Transport Infrastructure positively and significantly influenced the Efficiency of Clearing & Forwarding Firms in Kenya. The study also established that the slope coefficient for Staff Competence was ($\beta_1=0.285$, $p=0.000$), meaning that Staff Competence positively and significantly influenced the Efficiency of Clearing & Forwarding Firms.

The study further revealed that the slope coefficient for Information & Communication Technology was ($\beta_1=0.619$, $p=0.000$), meaning that Information & Communication Technology positively and significantly influenced the Efficiency of Clearing & Forwarding Firms. These findings further correlate with other studies that establish that Information & Communication

Technology, Staff Competence and Transport Infrastructure are important factors in determining the Efficiency of Clearing & Forwarding Firms in Kenya.

CHAPTER FIVE

SUMMARY OF FINDINGS CONCLUSION AND RECOMMENDATIONS

5.0 Overview

This chapter presents a summary of key findings made by the study, conclusion drawn from the findings and recommendations proposed by the researcher. The conclusions and recommendations are focused on addressing the main objective of the study. This chapter also discusses suggested areas for future research.

5.1 Summary of findings

This section presents the key findings as considered under each objective in the study.

5.1.1 Summary of Transport Infrastructure

The first objective of the study was to establish the effect of Transport Infrastructure on Efficiency of Clearing & Forwarding in Kenya. The Descriptive analysis indicated that transport infrastructure is a great determinant of the efficiency of clearing and forwarding services in Kenya. The multiple regression analysis also established that Transport Infrastructure positively and significantly influenced the Efficiency of Clearing & Forwarding Firms ($\beta_1=0.249$, $p=0.000$). These findings show that transport infrastructure is a great determinant of the efficiency of clearing and forwarding services in Nairobi and in Kenya as a whole. These findings agree with Bowersox et al (2010) who points out that poor transportation causes delays in delivery as the vehicles consumes more time than the required just to deliver items, goods from one place to the required locations. As such, it can be deduced that transport services should be efficient to cope up with organizations activities and services and that the efficiency of C&F firms is highly depended on transport infrastructure.

5.1.2 Summary of Staff Competence

The second objective of the study was to establish the effect of Staff Competence on Efficiency of Clearing & Forwarding in Kenya. The Descriptive statistical analysis indicated that Staff Competence is a great determinant of the efficiency of clearing and forwarding services in Kenya. The multiple regression analysis also established that Staff Competence positively and significantly influenced the Efficiency of Clearing & Forwarding Firms ($\beta_1=0.285$, $p= 0.000$). These findings show that Staff Competence is a great determinant of the efficiency of clearing and forwarding services in Nairobi and in Kenya as a whole. The findings also show that training and education help to mitigate many of the errors and inefficiencies that currently exist in the system and that; the demand for the training of C&F staff is challenged by lack of funding and technical resources such as appropriate syllabi, modules, materials, and trainers. From these findings, it can be deduced that staff competence plays a major role in enhancing the efficiency of clearing and forwarding firms in Kenya as pointed out by Arnold and Mathenge (2011).

5.1.3 Summary of Information & Communication Technology

The third objective of the study was to establish the effect of Information & Communication Technology on Efficiency of Clearing & Forwarding in Kenya. The Descriptive analysis indicated that Information & Communication Technology is a great determinant of the efficiency of clearing and forwarding services in Kenya. The multiple regression analysis also established that Information & Communication Technology positively and significantly influenced the Efficiency of Clearing & Forwarding Firms ($\beta_1=0.619$, $p= 0.000$). As such, the level to which clearing and forwarding firms adopt ICT will affect their efficiency and vice versa.

5.2 Conclusion

From the findings obtained, it can be concluded that infrastructure should be proper in order to enhance the operations of C&F firms and that the efficiency of C&F firms is highly dependent on transport infrastructure. In addition, the level to which clearing and forwarding firms adopt ICT affects their efficiency and vice versa. From these findings, it can be concluded that staff competence plays a major role in enhancing the efficiency of clearing and forwarding firms in Kenya.

5.3 Recommendations

5.3.1 Infrastructure

From the findings obtained, it is recommended that that the government should ensure that there is proper infrastructure so as to enable organizations to be efficient in carrying out their clearing and forwarding activities. Good roads and better infrastructure such as weigh bridges are likely to improve clearing and forwarding.

5.3.2 Information and Communication Technology (ICT)

There should also be large scale adoption of ICT skills so as to enhance the efficiency of C&F firms. In particular, the modern ICT tools help to produce, manipulate, store, communicate, and disseminate information. Moreover, ICT makes possible to know the state of the system in real time and therefore to manage and change online paths, vehicle flows, orders and deliveries.

5.3.3 Staff Competence

Furthermore, companies should have progressive training so as to enhance the competence of their staff. These measures will aid in enhancing the efficiency of clearing and forwarding firms in Kenya. Moreover international standards should be set for clearing and forwarding agents so as to better compete globally.

5.4 Recommendations for Further Research

Due to limited resources, Nairobi county was covered out of the forty-seven counties. Other counties should also be researched on to get a more comprehensive report. Other variables should be looked into as factors that affect clearing and forwarding agents.

As the Lamu Port and Southern Sudan-Ethiopian Transport Corridor (LAPSSET) is ongoing, once done it should be researched and critiqued as well to find out whether it is going to make a difference in the future.

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APPENDICES

APPENDIX I: QUESTIONNAIRE

This questionnaire seeks to investigate the factors affecting the efficiency of clearing and forwarding firms in Kenya, case study of Nairobi. Please answer the following questions as accurately as possible by ticking in the box [√] corresponding to whatever your choice is. Your response is confidential. It is for academic purposes only and will not be shared with anybody. Please do not write your name on the questionnaire.

A: Demographic Information

1. What is your Sex?
Male [] Female []
2. What is your age? Less than 25 years [] 26-35 years [] 36-45 years [] 46 – 55 years []
More than 55 years []
3. For how long have you worked for a clearing and forwarding firm?
Less than 5 years [] 6-15 years [] 16-25 years [] 26 – 35 years [] More than 35 years []
4. What is your highest academic qualification?
High School [] College Certificate [] College Diploma [] Bachelor’s Degree []
Master’s Degree [] PhD []

B: Transport Infrastructure

5. To what extent do you agree with the following statements? Rate in a scale of 1 to 5 where:
1= strongly disagree, 2= disagree, 3= Neutral, 4= Agree and 5= Strongly Agree

Attribute	Rating				
	1	2	3	4	5
(i) There is high quality of infrastructure in Kenya					
(ii) There is poor maintenance of some of the sections of the road between Mombasa and Nairobi					
(iii) There are no enough resources for maintenance					

(iv) Poor road networks increases the time taken to move cargo for short distances					
(v) Road transport is affected by several operational difficulties including weighbridges, police escorts, and road blocks which constitute non-tariff barriers and contribute to delays					

C: Staff Competence

6. To what extent do you agree with the following statements? Rate in a scale of 1 to 5 where: 1= strongly disagree, 2= disagree, 3= Neutral, 4= Agree and 5= Strongly Agree

Attribute	Rating				
	1	2	3	4	5
(i) Large firms with foreign ownership and international scope employ the majority of the trained C&F agents					
(ii) Large firms tend to handle complex transactions for international companies and this pushes them to hire competent staff					
(iii) Most agents working for small C&F firms have only on-the-job experience and lack knowledge of modern trade practices					
(iv) Training and education help to mitigate many of the errors and inefficiencies that currently exist in the system					
(v) The demand for the training of C&F staff is challenged by lack of funding and technical resources such as appropriate syllabi, modules, materials, and trainers					

Section D: Information & Communication Technology

7. To what extent do you agree with the following statements? Rate in a scale of 1 to 5 where: 1= strongly disagree, 2= disagree, 3= Neutral, 4= Agree and 5= Strongly Agree

Attribute	Rating				
	1	2	3	4	5
(i) Modern Information and Communication Technologies (ICT) affect the efficiency of C&F firms in Kenya					
(ii) Implementation of integrated information systems affects the					

performance of C&F services in Kenya					
(iii) Modern ICT tools enhance the ability of C&F firms to produce, manipulate, store, communicate, and disseminate information.					
(iv) ICT makes possible for C&F firms in Kenya to know the state of the system in real time and therefore to manage and change online paths, vehicle flows, orders and deliveries.					
(v) ICT improves the efficiency of a logistic system (maritime and road transportation) including customs clearance operations.					

Section E: Efficiency of Clearing & Forwarding Firms

7. To what extent do you agree with the following statements? Rate in a scale of 1 to 5 where: 1= strongly disagree, 2= disagree, 3= Neutral, 4= Agree and 5= Strongly Agree)

Attribute	Rating				
	1	2	3	4	5
(i) Clearing & Forwarding firms are efficient in providing their services					
(ii) Sometimes clearing & forwarding firms record loss of goods in transit					
(iii) There are widespread delays of goods in transit among C&F firms					
(iv) There is widespread dissatisfaction of some customers by the services of some C&F firms					
(v) Sometimes our firm runs at financial loss due to challenges along the supply chain					