

**FACTORS AFFECTING PERFORMANCE OF THE INTEGRATED
CUSTOMS MANAGEMENT SYSTEM PERFORMANCE AT THE PORT OF
MOMBASA**

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DECLARATION

This project is my original work and has not been presented for a post graduate diploma in any other academic or non-academic institution

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ACRONYMS AND ABBREVIATIONS

CFS	Container Freight Stations
iCMS	Integrated Customs Management System
ICT	Information and Communication Technology
KEBS	Kenya Bureau of Standards
KEPHIS	Kenya Plant Health Inspectorate Service
KPA	Kenya Ports Authority
KRA	Kenya Revenue Authority
US	United States

DEFINITION OF TERMS

Cost control	Cost control is the guidance and regulation by executive action of the costs of operating an undertaking (Tunji & Mojeed, 2013).
Infrastructure	Infrastructure is basic physical and organizational structures needed for the operation of the organization (Portugal-Perez & Wilson, 2012).
Human resource capacity	Human resources capacity refers to the knowledge, skills and attitudes in individuals and groups of people relevant in design, development, management and maintenance of institutional and operational infrastructures and processes that are locally meaningful (Yamoah, 2014).
Performance of iCMS	Performance of the iCMS refers to the success attained in terms of costs and time of clearance of trade goods at the port of Mombasa (Reiss, 2013).

ABSTRACT

The iCMS was introduced in order to improve the efficiency and effectiveness of border clearance process. It is meant to reduce delays involved in export and import clearance as evidenced in Europe and Latin American where port dwell time which is less than a week. This is in sharp contrast to the average dwell time at the port of Mombasa is 11 days. The iCMS is meant to ensure an efficient process of clearing cargo and hence reduce delays with overall aim of ensuring streamlined processes. The introduction of the iCMS is a major step undertaken by KRA to ensure efficient clearance process by customs. Despite the initiative being in place, delays are still being encountered. The general objective of the study was to determine the factors affecting performance of the iCMS at the port of Mombasa. The study specifically determined the effect of cost control, infrastructure and human resource capacity on performance of the iCMS project at the port of Mombasa. The study was founded on transaction cost theory, resource-based view theory and human capital theory. Descriptive cross-sectional survey research design was adopted by the researcher. This study targeted a total of 355 respondents, that is, 210 KRA customs officers, 100 KPA officers, 30 KEBS officers and 25 KEPHIS officers-at the port of Mombasa. The researcher sampled 189 respondents. The researcher used stratified sampling to select the respondents that participated in the study. The study used self-administered structured questionnaires to collect data. A pilot test enabled the determination of the reliability of the research questionnaire and ensure its validity. Content validity and face validity of research questionnaire was achieved through consultations with the supervisor. Reliability of the research questionnaire was tested using Cronbach's alpha coefficient. The researcher utilized both descriptive and inferential statistics for data analysis. The descriptive statistical tools included frequencies, percentages, means and standard deviations. Inferential analysis entailed correlation and multiple regression analysis. It was established that cost control, infrastructure and human resource capacity positively and significantly affect performance of the iCMS project at the port of Mombasa. It was determined that increasing cost control by 1 unit increases performance of the iCMS project at the port of Mombasa by 0.250 unit. The study established that enhancing infrastructure by 1 unit enhances performance of the iCMS project at the port of Mombasa by 0.319 unit. It was revealed that that increasing human resource capacity by 1 unit increases performance of the iCMS project at the port of Mombasa by 0.389 unit. The study concluded that cost control, infrastructure and human resource capacity positively affect performance of the iCMS project. It was recommended that cost control, infrastructure and human resource capacity should be enhanced in order to enhance performance of the iCMS project. This study is expected to benefit various stakeholders such as KRA and other state agencies, the government, policy makers and future researchers.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Organizations are nowadays inventing ways to minimize costs and wastage of resources (Tunji & Mojeed, 2013). Lucey (2000) contends that controlling cost entails ascertaining if the actual costs of business operations are as per the planned costs or there exist variances or deviations from the plan. Therefore, if there exist variances, there is need to ensure that the standard or planned costs are met or standards are revised. Each functional area in an organization must ensure that the costs are incurred as they had been budgeted for (Tunji & Mojeed, 2013).

Infrastructure of ports are divided into two: Basic and operational infrastructure. Basic port infrastructure is a maritime access channel, which refers to the physical capacity of the site to accommodate ship operations. Basic port are usually have a port entrance, sea locks, protective work (including breakwaters and shore protection) and can easily access to the port for inland transport. Basic port also has rail connection between the hinterland and the port (Laan, 2011). Operation port infrastructure is an inner port channels and tuning and port basins. The port infrastructure is the base for port operations to serve the vessel, cargo and passengers which pass through ports. The development of port infrastructures requires capital-intensive investments, a long lead-time and therefore long-term planning. This means that the design of port infrastructures should anticipate the needs of the Waterborne, logistics and transport sector (Munim & Schramm, 2018).

Human resource capacity refers to the employee's ability to undertake tasks as expected by the organization. This is usually as defined in the job description which lists the tasks and responsibilities each employee has to undertake in an organization. The levels of education as well as professional development activities or processes undertaken by the employees determine their human resource capacity. It is essential that the organization has adequate capacity if at all it is to attain its objectives (Yamoah, 2014). Employees who have been capacity-built through training perform tasks better and

make more informed reasonable decisions. Exposure of employees through training also enables them to see the need for changes which play a crucial role in changing the manner in which things are done and improving organizational performance. Once employees have been empowered through training, they acquire knowledge and skills which they can use to tackle tasks at higher levels of responsibility in the organization. Trained employees can also train others well while on the job hence reducing pressure on managers to train other employees (Yamoah, 2014).

Improved technological infrastructure as evidenced by use of electronic technology in trading is not the same in countries of Asia. Singapore, Japan and the Republic of Korea are currently the technological leaders and Thailand follows. Nations that are not developed and the developing countries which are landlocked are much behind as regards adoption of technology in customs clearance. The use of electronic systems is prevalent across nations in Asia and across the world (Lubeka, 2017).

In Bangladesh, the system automation has simplified customs import and export processes (Hossain, Deb & Al Amin, 2009). In Malaysia, the adoption of modern technological infrastructure has led to reduced inefficiency in documentation process and automation of international trade transactions at customs offices hence leading to reduced delays and faster customs clearance process.

Good technological infrastructure for customs in Mauritius has positive effects on performance. In Mauritius, it takes about 1 hour to be cleared by customs. The electronic customs systems are linked with other systems of other agencies involved in facilitating import and export trade hence leading to simultaneous approval of documentation and expedition of cargo clearance. The Egyptian Alexandria and Damietta ports fully operate online hence the customs clearance process is fast (Kenya Association of Manufacturers, 2009). In Nigeria, cost control positively affects performance (Tunji & Mojeed, 2013). In Ghana, Yamoah (2014) noted that there is a strong link between human resource capacity and performance.

There has been increasing need for customs authorities to facilitate trade while at the same time ensuring that trades and other cross-border transactions conform to the rules

and regulations set by KRA. The available resources should be utilized efficiently to meet objectives of increased revenue collection, prevention of trade that is illegal and providing customs services that satisfy customers (Kenya Revenue Authority [KRA], 2019). KRA implemented the iCMS to ensure that services are delivered fast, accurately, securely and transparently. Hence, the systems put in place are expected to empower customs services. The implementation of iCMS has resulted in a new KRA customs systems that are interlinked to other systems to facilitate delivery of customs services all at one point. Thus KPA, KEBS and KEPHIS systems are interlinked with KRA systems to facilitate the sharing of information necessary to expedite the customs clearance process (KRA, 2019). All customs business processes are implemented as modules/ modules in one system to support efficient clearance of cargo. The modules include; manifest, licensing, clearance, bonds, valuation, border processes, tariffs, gates, exemption, CFS module and risk management (KRA, 2019).

The Kenya Revenue Authority (KRA) has implemented the new iCMS. KRA expected time taken to clear cargo to reduce by 60% and hence reduce port congestion and fasten the distribution of products to the points at which they are demanded. The ability of iCMS to track goods in transit is meant to prevent cargo theft and diversions along the way as they result in tremendous losses for business people (KRA, 2019).

Despite the initiatives implemented by customs to facilitate trade, trade facilitation in Kenya remains a challenge. The Sub-Saharan Africa ports experience cargo stays at the ports for up to 14 days on average which is much slow when compared to cargo stay at Asian, European and Latin American large ports which does not exceed 7 days. At Mombasa port, cargo dwells the port for 11 days on average (Raballand, Refas, Beuran & Isik, 2012).

1.2 Statement of the Problem

The iCMS was introduced in order to improve the efficiency and effectiveness of border clearance process. It is meant to reduce delays involved in export and import clearance as evidenced in Europe and Latin American where port dwell time which is less than a week. This is in sharp contrast to the average dwell time at the port of Mombasa is 11 days (Milimu, 2015). The iCMS was introduced in order to improve the

efficiency and effectiveness of border clearance process. It is meant to reduce delays involved in export and import clearance as evidenced in Europe and Latin American where port dwell time which is less than a week. This is in sharp contrast to the average dwell time at the port of Mombasa is 11 days. The iCMS is meant to ensure an efficient process of clearing cargo and hence reduce delays with overall aim of ensuring streamlined processes. The introduction of the iCMS is a major step undertaken by KRA to ensure efficient clearance process by customs (KRA, 2019). Despite the initiative being in place, delays are still being encountered. This leads to reduced speed of trade and extra costs for traders who are involved in import and export trade. There will also be reduced volume of trade across East Africa as other countries also rely on the port of Mombasa for transportation of goods to and from abroad.

Munim and Schramm (2018) studied infrastructure, logistics and trade across the seas and their effects on the growth of the economy. Lubeka (2017) examined the effects that system computerization has on performance in KRA customs. A review of relevant literature revealed that no study has been conducted at the port of Mombasa to examine the effect of cost control, infrastructure and human resource capacity on performance of the iCMS project at the port of Mombasa. Therefore, this study examined the factors affecting performance of the iCMS project at the port of Mombasa.

1.3 Objectives of the Study

The study was guided by the following objectives;

1.3.1 General Objective

The general objective of the study was to examine the factors affecting performance of the iCMS project at the port of Mombasa.

1.3.2 Specific Objectives

- i. To assess the effect of cost control on performance of the iCMS project at the port of Mombasa.
- ii. To establish the effect of infrastructure on performance of the iCMS project at the port of Mombasa.

iii. To examine the effect of human resource capacity on performance of the iCMS project at the port of Mombasa.

1.4 Research Questions

i. What is the effect of cost control on performance of the iCMS project at the port of Mombasa?

ii. What is the effect of infrastructure on performance of iCMS project at the port of Mombasa?

iii. What is the effect of human resource capacity on performance of the iCMS project at the port of Mombasa?

1.5 Justification of the Study

To Kenya Revenue Author, this study will provide relevant information that will be critical in guiding the implementation of the iCMS which is key in enhancing the revenue collection. The study will also be partner government agencies involved in border clearance such as Kenya Ports Authority (KPA), Kenya Bureau of Standards (KEBS) and Kenya Plant Health Inspectorate Service (KEPHIS) it will shed light on the effects of joint adoption of automated systems for clearance. Moreover, the policy makers and government will get crucial information that will help in setting the strategies that can be put in place to ensure efficiency of revenue collection at the border points which is very crucial in building the economy. Lastly, Kenya School of Revenue Administration, future researchers and academicians will benefit from this research as it will contribute to new knowledge which can be disseminated to pertinent stakeholder and the study will also propel research in future.

1.6 Scope of the Study

The study was carried at the port of Mombasa. The study respondents were KRA customs, KEBS, KEPHIS and KPA officers. These respondents were expected to provide pertinent information as regards the study topic as they are involved in using the iCMS at the port of Mombasa. The study was carried out within 6 months.

1.7 Limitations

This study encountered one major limitation. At times respondents were mostly busy when the data was being collected. The researcher handed over questionnaires to the respondents and for those who could not answer immediately, the researcher allowed them to answer them when not busy and agreed on the dates for collection of questionnaires.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents theoretical and empirical literature review, the conceptual framework, critique of existing literature relevant to the study, summary of reviewed literature and research gaps.

2.2 Theoretical Review

This section presents the theories that guided the study. The theories are; transaction cost theory, resource-based view (RBV) theory and human capital theory. The relevance of the theories to the study objectives is explained.

2.2.1 Transaction Cost Theory

The theory of transaction cost was developed by Williamson (1994). It addresses the issue of occurrence of activities in the firm and the market. The theory argues that the costs of transactions determines whether activities would be done internally in the firm or in the market. It contends that transactions involve transferring a good or service across boundaries and when costs of transactions are high it is recommended that transactions be internalized within the firm (Ghoshal & Moran, 1996). It is preferable to purchase goods and services from the market in case the costs of transactions are low. Uncertainties, frequencies and specificity of assets or the degree of incurrence of expenses specific to transaction. The theory assumes that people make rational decisions with limits and are opportunistic (Williamson, 1996; Jones, 1998).

Whether organizations undertake transactions internally or externally depends on the ability to perform the activities better than outside parties. The capability of firm and transaction costs determine internalization of activities (Madhok, 2002). Applying transactions cost theory to the study, it is implied that the costs of project activities as well as resource acquisition transactions determines project implementation. If transaction costs are high, this will affect the project budget for implementation process and hence affect project execution. This theory therefore explains the effect of cost control on performance of the iCMS project at the port of Mombasa.

2.2.2 Resource Based View Theory

The origins of the RBV go back to Penrose (1959), who suggested that the resources possessed, deployed and used by the organization determine its competitive performance. The resource-based view argues that firms possess resources, a subset of which enables them to achieve competitive advantage, and a further subset which leads to superior long-term performance (Barney, 1991). Assets can serve as inputs to a process, or as the outputs of a process. Assets can be either tangible (e.g., information systems hardware, network infrastructure) or intangible (e.g., software patents, strong vendor relationships). In contrast, capabilities transform inputs into outputs of greater worth. Capabilities can include skills, such as technical or managerial ability, or processes, such as systems development or integration (Wade & Hulland, 2004).

Together, assets and capabilities define the set of resources available to the firm. Assets are defined as anything tangible or intangible the firm can use in its processes for creating, producing, and/or offering its products (goods or services) to a market, whereas capabilities are repeatable patterns of actions in the use of assets to create, produce, and/or offer products to a market (Sanchez, Heene & Thomas, 1996). The infrastructure in place is a great resource to help facilitate the ICMS performance at the port of Mombasa. The infrastructure is an asset and a capability that will enable operations at the Mombasa port to be expedited. Therefore, the resource based view theory explains the effect of infrastructure on performance of the integrated customs management information system project at the port of Mombasa.

2.2.3 Human Capital Theory

Human capital theory was developed by Becker (1964). The theory argues that by educating or training workers, they become more knowledgeable and acquire useful skills that will enable them to perform better (Becker, 1964). The theory explains that an educated population in a nation is an important asset that will boost productivity. It is implied that by investing in people through educating and training them, gains will be reaped as they become more productive (Yamoah, 2014). In countries that are developed, more educated and better trained workers are paid more as the level of training one has received determines the performance at work (Mincer, 1974; Dennison, 1998).

Human capital refers to the various skills and worker characteristics that determine performance at work. Therefore, this includes the time one has spent in school, quality of training and work attitude among others. The experience one has is also human capital. These worker characteristics explain differences in pay and productivity among employees (Dennison, 1998; Yamoah, 2014). It is implied that the employees of an organization should possess the relevant knowledge and skills to perform well. The culture of the employees in line with organizational culture is also critical as it determines the way activities are conducted to ensure success. This theory therefore explains the effect of human resource capacity on performance of the integrated customs management information system project at the port of Mombasa.

2.3 Conceptual Framework

The conceptual framework describes phenomena under study by graphically depicting the relationship between study variables (Mugenda & Mugenda, 2013). The independent variables were cost control, infrastructure and human resource capacity. The dependent variable was performance of the iCMS project at the port of Mombasa as outlined in Figure 2.1.

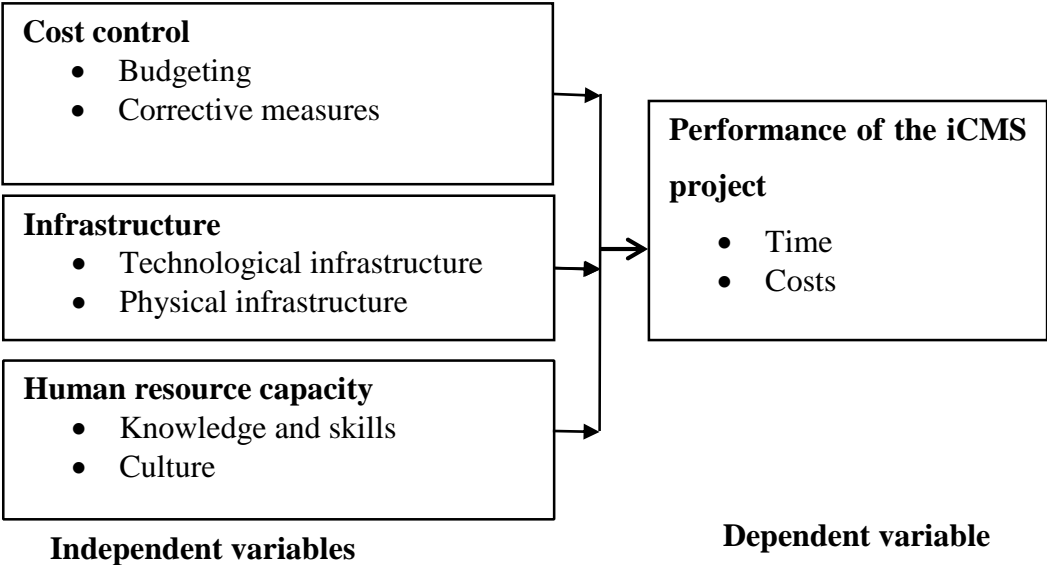


Figure 2.1: Conceptual Framework

2.4 Review of Variables

This section provides a review of the variables of the study namely; cost control, infrastructure, human resource capacity and implementation of the iCMS project at the port of Mombasa.

2.4.1 Cost Control

Cost control is important as it has direct effect on performance in an organization. Cost control ensures no wastage in carrying out organizational operations at various levels. The kind of workers the organization has determines the effectiveness of cost control as the human resources are critical in achieving the goals of the organization (Tunji & Mojeed, 2013). Controlling cost does not mean reducing cost; rather cost control should be done with regard to the quality of services expected to be offered. The implication of cost control is that standard costs are set which determine the basis of cost review and necessary corrective measures to ensure operations are conducted optimally (Tunji & Mojeed, 2013).

Sikka (2003) argues that controlling cost entails a number of steps. First, standards or targets are set. Secondly, the actual costs are determined. Once that is done, the next step is to make a comparison between the cost incurred vis-a-vis the standard costs. Once the comparison has been done, it is critical to examine the probable reasons why there were deviations from the standards set. Lastly, remedial actions are taken to eliminate the deviations. In order to ensure that the services of the organization remain competitive, cost control is necessary. Management can be able to focus on critical areas to control cost in order to ensure improved performance. Once inefficiencies are eliminated through cost control, the working environment becomes conducive (Tunji & Mojeed, 2013).

2.4.2 Infrastructure

IT infrastructure refers to the components of services provided by information technology department in any organization. This basically refers to the information system in place which entails hardware, software, live ware, procedures and a telecommunication network (Van der Veen & Van Bon, 2007). Hardware are all the physical tangible components of a computer system and can be categorized into input,

processing, output, storage and communication devices. Software refers to the programs that run the hardware and include system software, application software and utility programs. Live ware refers to the specialists that operate the computers. Procedures are the instructions that are followed while using computers. A telecommunication network refers to the network that connects the computers to each other and even to the internet (Van der Veen & Van Bon, 2007). Many technologies such as cloud computing can be applied by an organization (Laan, 2011).

Port physical infrastructure includes the transport system and the physical arrangement of facilities in the port such as the facilities used to handle cargo. Once the transport system is well set at the port, cargo dwell time reduces as there will be reduced congestion of trucks at the port. The kind of transport infrastructure also determines the tidiness of the port. When ports become efficient, transport-wise, the execution of transactions is expedited hence leading to improved trade across nations (Munim & Schramm, 2018; Portugal-Perez & Wilson, 2012). Yeo, Roe and Dinwoodie (2008) note that the physical infrastructure of the port is a great determinant of its competitiveness as it determines the service quality, accessibility and conditions at the port.

2.4.3 Human Resource Capacity

The employees are instrumental assets that influence the attainment of organizational objectives. If at all the performance of the project has to improve, then there is need to train and empower the workers so that they can build the project positively. Once appropriate knowledge and skills are acquired by employees, they become useful resources necessary to achieve the project vision and mission (Ohemeng, 2009). Therefore, if a project is to be successful, it must strive to capacity build its employees if it is to grow. The culture of employees and the reward system determine capacity of human resource. Employees can be trained on various aspects such as culture as well as technical job aspects in order to improve their capacity (Jagero & Komba, 2012).

Employees who have been trained generally perform better as they are conversant with what is expected of them and how to work towards attaining those expectations. Workers who are trained can also make better decisions. Such employees also are less

resistant to change as they become more exposed and progressive. They can also be promoted once they have requisite knowledge, skills and experience for various kinds of jobs in the organization as they are more informed (Devins, Johnson & Sutherland, 2012). Training other workers can also make work easier for management as the same persons can train their fellow colleagues (Yamoah, 2014).

2.4.4 Performance of the iCMS at the Port of Mombasa

The introduction of the iCMS was meant to ensure expeditious and effective process of customs clearance at the Mombasa port. Costs of clearance due to delayed processes at the port will be significantly reduced with the new system in place. This is because traders will be able to make their own declarations in the new system and the iCMS is interlinked with systems of relevant authorities at the port hence clearance process will be fast and well-coordinated. The new iCMS also has the ability to track cargo and hence cases of theft will be eliminated meaning reduced losses as a result of cargo being stolen or diverted. Time for clearance will also be reduced as repetitive bureaucratic processes of clearance will be eliminated. Lodging of customs clearance documentation is done electronically and this is a great step towards eliminating delays (KRA, 2019).

2.5 Empirical Review

Akeem (2017) examined the effect that controlling cost and techniques of reducing cost have on performance of organizations. The focus of the study was a critical evaluation of how controlling and reducing cost is done and also budgeting role. The researcher adopted descriptive design whereby questionnaires were delivered to 50 respondents. The researcher conducted regression analysis for hypothesis testing. It was noted that the effect of cost control on organizational performance is positive.

Tunji and Mojeed (2013) examined the impact that controlling cost as on Nigeria's manufacturing industry profitability on manufacturing industries' profitability using a case study of West African Portland Cement Plc. Cost control was viewed strategically. It was considered that the budget is the major tool for effectively controlling cost. It was noted that cost control positively affects profitability. Lubeka (2017) examined the effects that system computerization has on performance in KRA customs. It was noted

that computerization positively influences performance. The study basically examined security of cargo and time taken to clear cargo as well as administration of revenues and taxes.

Munim and Schramm (2018) studied infrastructure, logistics and trade across the seas and their effects on the growth of the economy. The study examined the effect of infrastructure at the ports, in 91 countries which are not landlord, on growth of the economy. The issue of quality of the infrastructure at the ports was a major subject of investigation. It was revealed that continuous improvement of port infrastructure quality leads to improved performance, increased trade and enhanced growth of the developing countries' economies; but the effect is weaker for richer countries.

2.6 Research Gaps

Tunji and Mojeed (2013) examined the impact that controlling cost as on Nigeria's manufacturing industry profitability on manufacturing industries' profitability using a case study of West African Portland Cement Plc. However, this study was not conducted in Kenya and did not examine the effect of cost control on performance of the integrated customs management information system project at the port of Mombasa. Munim and Schramm (2018) studied infrastructure, logistics and trade across the seas and their effects on the growth of the economy. The researcher considered 91 countries with seaports. However, this association weakens as the developing countries become richer. However, this study did not examine the effect of human resource capacity on performance of the integrated customs management information system project at the port of Mombasa. A review of relevant literature revealed that no study has been conducted at the port of Mombasa to examine the effect of project cost, project quality and project duration on implementation of the iCMS project at the port of Mombasa.

2.7 Summary

According to transaction cost theory, the costs of transactions determines whether activities would be done internally in the firm or in the market. It contends that transactions involve transferring a good or service across boundaries and when costs of transactions are high it is recommended that transactions be internalized within the

firm. It was noted that management can be able to focus on critical areas to control cost in order to ensure improved performance. It was established that once inefficiencies are eliminated through cost control, the working environment becomes conducive. It was also noted that cost control positively affects profitability.

According to the resource-based view theory, firms possess resources, a subset of which enables them to achieve competitive advantage, and a further subset which leads to superior long-term performance. It was determined that computerization positively influences performance. It was revealed that continuous improvement of port infrastructure quality leads to improved performance, increased trade and enhanced growth of the developing countries' economies; but the effect is weaker for richer countries.

Human capital theory argues that by educating or training workers, they become more knowledgeable and acquire useful skills that will enable them to perform better. The theory explains that an educated population in a nation is an important asset that will boost productivity. It was noted that Human capital entails the various skills and worker characteristics that determine performance at work. Therefore, this includes the time one has spent in school, quality of training and work attitude among others. The experience one has is also human capital. It was noted that these worker characteristics explain differences in pay and productivity among employees.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

The researcher outlines the research design, the target population, sample size and sampling techniques, the data collection instruments and procedures, the pilot test and data analysis approaches.

3.2 Research Design

The research design is the general plan of how you will go about answering your research questions. The researcher used descriptive cross-sectional survey research design in order to achieve study objectives (Saunders, Lewis & Thornhill, 2009). The object of descriptive research is to portray an accurate profile of persons, events or situations. It is necessary to have a clear picture of the phenomena on which you wish to collect data before you execute the process (Saunders et al., 2009).

3.3 Target Population

The target population is the entire set of elements for and/or from which research data is being collected for the purpose of generalization of findings. It is from the target population that the accessible and sample population is determined. Whether or not a sampling or census survey is conducted depends on accessibility of the target population and other constraints such as research funding (Mugenda & Mugenda, 2013). This study targeted a total of 210 KRA customs officers, 100 KPA officers, 30 KEBS officers and 25 KEPHIS officers at the port of Mombasa. The target population is shown in Table 3.1.

Table 3.1: Target Population

Organization	Number of employees
KRA customs officers	200
KPA officers	100
KEBS officers	30
KEPHIS officers	25
Total	355

3.4 Sampling Frame

The sampling frame is the source material or device from which a sample is drawn. It is a list of all those within a population who can be sampled, and may include individuals, households or institutions (Mugenda & Mugenda, 2013). In many practical situations the frame is a matter of choice to the survey planner, and sometimes a critical one. Some very worthwhile investigations are not undertaken at all because of the lack of an apparent frame; others, because of faulty frames, have ended in a disaster or in cloud of doubt (Ogula, 2010).

3.5 Sample Size and Sampling Technique

Sampling is a process used in statistical analysis in which a predetermined number of observations are taken from a larger population. Sampling is a statistical procedure that is concerned with the selection of the individual observation; it helps us to make statistical inferences about the population (Mugenda & Mugenda, 2013). The researcher adopted the formula developed by Yamane (1967) to calculate the size of the study sample. At 95% level of confidence, where significance level is 5%, the Yamane (1967) formula that was used to determine the size of the sample is shown in Equation 3.1 and Equation 3.2.

$$n = \frac{N}{1+N(e^2)} \dots \dots \dots \text{Equation 3.1}$$

$$n = \frac{355}{1+355(0.05^2)} = 188.0795 = 189 \dots \dots \dots \text{Equation 3.2}$$

Accordingly, the researcher sampled 189 respondents. The researcher used stratified random sampling to select the respondents that participated in the study (Kumar, 2011). The number of respondents for each stratum is shown in Table 3.2.

Table 3.2: The Sample Size for Each Stratum

Strata	Target population	Size of the Sample
KRA customs officers	200	106.48=107
KPA officers	100	53.24=53
KEBS officers	30	15.97=16
KEPHIS officers	25	13.31=13
Total	355	189

3.6 Data Collection Instruments

The study used self-administered structured questionnaires to collect primary data. Questionnaires can be used for descriptive research, such as that undertaken using attitude and opinion questionnaires and questionnaires of organizational practices, will enable you to identify and describe the variability in different phenomena. Questionnaires, if worded correctly, normally require less skill and sensitivity to administer than semi-structured or in-depth interviews (Khan, 2014).

3.7 Data Collection Procedure

The researcher first sought permission from the Kenya school of revenue administration which will then give a letter of introduction. The pilot study was then conducted. Afterwards, permission from the department of customs studies in the Kenya school of revenue administration at KRA for data collection was sought. The researcher and research assistants personally delivered the questionnaires to the respondents as they are easily accessible. Collection of filled questionnaires was done immediately or at times convenient to the respondents (Mugenda & Mugenda, 2013).

3.8 Pilot Testing

Pilot testing means finding out if your survey will work in the real world by trying it out first on a few people. The purpose is to make sure that everyone in the sample not only understands the questions, but understands them in the same way. This way, too, the researcher can see if any questions make respondents feel uncomfortable. The researcher will also be able to find out how long it takes to complete the survey in real time (Khan, 2014). The pilot study should involve 10% of the study population after

sampling (Connelly, 2008; Cooper & Schindler, 2011). The pilot study involved 17 respondents at the Moi International Airport in Mombasa.

3.8.1 Validity Test

Validity is concerned with whether the measures of a given concept actually represent that concept. It answers the question on whether the researcher is collecting data on the intended variables or not. Face validity and content validity of the questionnaire was ensured by consulting the supervisor for expert advice (Mugenda & Mugenda, 2013). Face validity refers to the extent to which the questionnaire provides data intended to answer the research questions. Content validity is the extent to which the measurement instrument captures the scope of a given concept adequately (Sreevidya & Sunitha, 2011).

3.8.2 Reliability Test

The researcher also ensured that the research questionnaire is internally consistent using the Cronbach's alpha coefficient which should be at least 0.7 for a reliable research questionnaire (Sreevidya & Sunitha, 2011). A reliable questionnaire is gives consistent results when given to respondents, such that responses should be highly correlated on the same variable (Khan, 2014).

3.9 Data Analysis

The researcher employed both inferential and descriptive statistics. Descriptive statistics involves summarizing and organizing the data so they can be easily understood. Descriptive analysis involved frequencies, percentages, means and standard deviations (Ogula, 2010). Inferential analysis is used to make generalizations about the population from the sample at given levels of confidence and examine relationships/associations between variables (Saunders et al., 2009). Multiple regression analysis and Pearson product moment correlation were the inferential statistical tools that were used. The results of statistical analysis were presented in tables and graphs.

The multiple regression model that was be adopted is depicted in Equation 3.3.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon \dots \dots \dots \text{Equation 3.3}$$

Where;

Y represents performance of the integrated customs management information system (iCMS) project

β_0 represents the y-intercept

β_1, β_2 and β_3 represent coefficients of cost control, infrastructure and human resource capacity respectively

X_1, X_2 and X_3 represent cost control, infrastructure and human resource capacity respectively

ε represent error term

CHAPTER FOUR

RESEARCH FINDINGS AND ANALYSIS

4.1 Introduction

This chapter presents the response rate, background information of respondents, results of descriptive statistics and inferential statistical results.

4.2 Response Rate

Out of all the 189 questionnaires that were given to respondents, 145 questionnaires were duly filled and returned. 44 (23.3%) of the questionnaires were not returned. Therefore, the response rate was 76.7% which is over the 70% threshold stipulated by Kothari and Garg (2014) for excellent response rates. The results are revealed in Table 4.1.

Table 4.1: Response Rate

	Frequency	Percent
Questionnaires duly filled and returned	145	76.7
Questionnaires not returned	44	23.3
Total	189	100.0

4.3 Pilot Results

During piloting, the researcher sought to measure, data collection instrument reliability with the use of SPSS Cronbach alpha, the researcher was able to determine the instruments internal consistency as shown in Table 4.2

Table 4.2: Reliability of the Research Questionnaire

Constructs	Cronbach's Alpha	Test Items
Human resource capacity	0.874	4
Cost control	0.829	4
Infrastructure	0.765	4
Performance of iCMS project	0.751	4

The results indicate that human resource capacity had the highest Cronbach's alpha coefficient (0.874). Cost control had the second highest Cronbach's alpha coefficient (0.846). Infrastructure had the second lowest Cronbach's alpha coefficient (0.765) while performance of the iCMS project had the lowest Cronbach's alpha coefficient (0.751). This implies that the research questionnaire was reliable as all the variables had Cronbach's alpha coefficients higher than 0.7.

4.4 Demographic Analysis

The researcher sought demographic information from the respondents. These are the gender, age, the organization worked in, period of time worked in the organization, and highest educational levels.

4.4.1 Distribution of Respondents by Gender

The study examined the respondents' distribution in line with gender as revealed in Table 4.3.

Table 4.3: Organization

	Frequency	Percent
Male	93	64.1
Female	52	35.9
Total	145	100.0

The findings indicate that 93 (64.1%) respondents were male. 52 (35.9%) respondents were female.

4.4.2 Distribution of Respondents by Age

The age of respondents was also examined. The results are shown in Table 4.4.

Table 4.4: Age Bracket of Respondents

Age bracket	Frequency	Percent
30 to 40 years	92	63.4
20 to 30 years	32	22.1
40 to 50 years	21	14.5
Total	145	100.0

The findings indicate that 92 (63.4%) respondents were aged between 30 to 40 years. 32 (22.1%) respondents were aged between 20 to 30 years. 21 (14.5%) respondents were aged between 40 to 50 years.

4.4.3 Distribution of Respondents According to Organization

The researcher examined the distribution of respondents according to the organizations they work for. The results are shown in Table 4.5.

Table 4.5: Organization of Work

	Frequency	Percent
KRA	93	64.1
KPA	31	21.4
KEPHIS	12	8.3
KEBS	9	6.2
Total	145	100.0

The findings indicate that 93 (64.1%) respondents were KRA employees. 31 (21.4%) respondents were KPA employees. It was determined that 12 (8.3%) respondents were KEPHIS employees. 9 (6.2%) respondents were KEBS employees.

4.4.4 Distribution of Respondents by Period of Time Worked

The researcher ascertained the period of time respondents had worked in their organizations. Table 4.6 depicts the results of analysis.

Table 4.6: Period of Time Worked in the Organization

	Frequency	Percent
3 to 5 years	83	57.2
1 to 3 years	34	23.4
Over 5 years	28	19.3
Total	145	100.0

The findings indicate that 83 (57.2%) respondents had worked in their organizations for 3 to 5 years. 34 (23.4%) respondents had worked in their organizations for 1 to 3 years. 28 (19.3%) respondents had worked in their organizations for over 5 years.

4.4.5 Distribution of Respondents by Education Level

The study also examined distribution of respondents according to levels of education. The results are depicted in Table 4.7.

Table 4.7: Education Level of Respondents

	Frequency	Percent
Graduate	106	73.1
Post secondary	37	25.5
Post graduate	2	1.4
Total	145	100.0

The study found out that 106 (73.1%) respondents were graduates. 37 (25.5%) respondents had attained post secondary education. It was established that 2 (1.4%) respondents had attained post graduate education.

4.5 Descriptive Analysis

The study also analyzed the opinions of respondents was sought on cost control, infrastructure, human resource capacity and performance of the iCMS project at the port of Mombasa.

4.5.1 Cost Control

The researcher analyzed the opinions of the respondents on cost control. Table 4.8 depicts the results.

Table 4.8: Descriptive Statistics for Cost Control

Statements	Mean	STD
For any disparity between actual and target costs, appropriate corrective measures are undertaken	3.87	1.168
The costs of resources required for the iCMS are incurred as budgeted for	3.83	1.149
The differences between target and actual costs incurred is usually examined	3.72	.991
The operational costs of iCMS are within targets	3.52	1.094

The study found out that the respondents agreed that for any disparity between actual and target costs, appropriate corrective measures are undertaken (mean = 3.87; std dev = 1.168). It was generally agreed that the costs of resources required for the iCMS are incurred as budgeted for (mean = 3.83; std dev = 1.149). The respondents concurred that the differences between target and actual costs incurred is usually examined (mean = 3.72; std dev = 0.991). It was generally consented that the operational costs of iCMS are within targets (mean = 3.52; std dev = 1.094). These finding concurs with the finding of a study by Tunji and Mojeed (2013) and Akeem (2017) which noted that budgeting is a very important tool to control costs and ensure operational costs are manageable.

4.5.2 Infrastructure

This study also scrutinized the opinions of the respondents on infrastructure. Table 4.9 shows the results.

Table 4.9: Descriptive Statistics for Infrastructure

Statements	Mean	STD
The port equipment and facilities are adequate to sustain processes and activities at the port	3.77	1.171
The hardware required for running the iCMS is up to date	3.74	1.000
The working environment is generally conducive for employees	3.73	1.029
The requisite technical requirements for running the iCMS have been put in place by every stakeholder involved	3.70	1.061

It was noted that the respondents consented that the port equipment and facilities are adequate to sustain processes and activities at the port (mean = 3.77; std dev = 1.171). There was general agreement that the hardware required for running the iCMS is up to date (mean = 3.74; std dev = 1.000). It was agreed that the working environment is generally conducive for employees (mean = 3.73; std dev = 1.02). The respondents agreed that the requisite technical requirements for running the iCMS have been put in place by every stakeholder involved (mean = 3.70; std dev = 1.061). These findings concur with findings of a study by Munim and Schram (2018) which noted that quality of infrastructure is key for success and hence ports have to improve their infrastructures if they have to operate efficiently.

4.5.3 Human Resource Capacity

The opinions of respondents on human resource capacity were sought. Table 4.10 shows the results.

Table 4.10: Descriptive Statistics for Human Resource Capacity

Statements	Mean	STD
The personnel that handle the iCMS are competent with regard to knowledge required for running operations for agencies at the port	3.99	.990
Employees are equipped with adequate technical skills required to work with the iCMS	3.99	1.014
The employees are willing to work effectively	3.97	.912
The employees serve clients satisfactorily	3.85	1.082

It was determined that there was general agreement that the personnel that handle the iCMS are competent with regard to knowledge required for running operations for agencies at the port (mean = 3.99; std dev = 0.990). It was agreed that employees are equipped with adequate technical skills required to work with the iCMS (mean = 3.99; std dev = 1.014). The study found out that the respondents agreed that the employees are willing to work effectively (mean = 3.97; std dev = 0.912). It was noted that there was general concurrence that the employees serve clients satisfactorily (mean = 3.85; std dev = 1.082). These findings agree with the findings by Lubeka (2017) which noted that adopting technology among the employees is critical for organizational success

4.5.4 Performance of the iCMS Project at the Port of Mombasa

The researcher examined the views of respondents on performance of the iCMS project at the port of Mombasa. The results of analysis are shown in Table 4.11.

Table 4.11: Descriptive Statistics for Performance of the iCMS Project at the Port of Mombasa

Statements	Mean	STD
The indirect costs of clearance at the port of Mombasa have reduced	3.77	.919
The iCMS has ensured reduced delays in clearance of trade goods at the port	3.75	.924
The direct costs of clearance at the port of Mombasa have reduced	3.64	.895
The iCMS has ensured speedy clearance process	3.62	.859

The researcher found out that the respondents agreed that the indirect costs of clearance at the port of Mombasa have reduced (mean = 3.77; std dev = 0.919). It was noted that there was general agreement that the iCMS has ensured reduced delays in clearance of trade goods at the port (mean = 3.75; std dev = 0.924). It was concurred that the direct costs of clearance at the port of Mombasa have reduced (mean = 3.64; std dev = 0.895). It was agreed that the iCMS has ensured speedy clearance process (mean = 3.62; std dev = 0.859). These findings agree with findings of a study by Lubeka (2017) which noted that computerization leads to improvement in performance as evidenced by

security of cargo and time taken to clear cargo as well as administration of revenues and taxes.

4.6 Correlation Analysis

The relationship between cost control, infrastructure, human resource capacity and performance of the iCMS project at the port of Mombasa was analyzed. Table 4.12 depicts the results.

Table 4.12: Correlation Analysis Results

Independent variables		Performance of the iCMS project	Hypothesis
Cost control	Pearson	.231	Null hypothesis not rejected (sig. > 0.05)
	Correlation		
	Sig. (2-tailed)	.005	
Infrastructure	Pearson	.377	Null hypothesis rejected (sig. < 0.05)
	Correlation		
	Sig. (2-tailed)	.000	
Human resource capacity	Pearson	.451	Null hypothesis rejected (sig. < 0.05)
	Correlation		
	Sig. (2-tailed)	.000	

The findings indicate that there is a positive significant relationship between cost control and performance of the iCMS project at the port of Mombasa ($r = 0.231$; $p < 0.05$). It means that that increased cost control is associated with significant increase in performance of the iCMS project at the port of Mombasa and vice-versa. These findings concur with the findings of Tunji and Mojeed (2013) and Akeem (2017) which noted that cost control has positive relationship with performance.

The study findings indicate that there is a positive and significant relationship between infrastructure and performance of the iCMS project at the port of Mombasa ($r = 0.377$; $p < 0.05$). It means that improving infrastructure is associated with improved performance of the iCMS project at the port of Mombasa and vice-versa. These

findings concur with findings a of a study by Munim and Schramm (2018) that improving quality of infrastructure at the port is associated with improved performance.

It was noted that there is a positive and significant relationship between human resource capacity and performance of the iCMS project at the port of Mombasa ($r = 0.451$; $p < 0.05$). It means that increased human resource capacity is associated with increased performance of the iCMS project at the port of Mombasa and vice-versa. The findings support the results by Lubeka (2017) which concurs that improving the skills of personnel in ICT is positively related with performance.

4.7 Regression Analysis

The researcher conducted multiple regression analysis to examine the effect of the independent variables on the dependent variable.

4.7.1 Multiple Regression Model Summary

The researcher also examined the combined effect of cost control, infrastructure and human resource capacity on performance of the iCMS project at the port of Mombasa. The results of analysis are shown in Table 4.13.

Table 4.13: Multiple Regression Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.666	.443	.431	.50135

- a. Predictors: (Constant), cost control, infrastructure, human resource capacity
- b. Dependent Variable: Performance of the iCMS project at the port of Mombasa

The study found out that there is a positive and strong relationship between cost control, infrastructure and human resource capacity and performance of the iCMS project at the port of Mombasa ($R = 0.666$). It was determined that 43.1% of the variation in performance of the iCMS project at the port of Mombasa can be explained by cost control, infrastructure and human resource capacity ($R^2_{adj} = 0.431$). These findings denote that implies that cost control, infrastructure and human resource capacity determine performance of the iCMS project at the port of Mombasa.

4.7.2 Analysis of Variance

The regression analysis of variance (ANOVA) was conducted to assess the fit of the model for the data. The results of analysis are shown in Table 4.14.

Table 4.14: Results of ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	28.207	3	9.402	37.407	.000
Residual	35.441	141	.251		
Total	63.648	144			

a. Predictors: (Constant), cost control, infrastructure, human resource capacity

b. Dependent Variable: Performance of the iCMS project at the port of Mombasa

The findings indicate that there is a statistically significant relationship between cost control, infrastructure and human resource capacity and performance of the iCMS project at the port of Mombasa ($F = 34.407$; $p < 0.05$). It is implied that the model was fit for the data.

4.7.3 Test of Statistical Significance of Regression Coefficients

The study also conducted the t-tests to examine the statistical significance of each independent variable's coefficient of regression. The pertinent results of analysis are shown in Table 4.15.

Table 4.15: Evaluating Individual Regression Coefficients

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	.035	.353		.099	.922
Cost control	.250	.047	.339	5.304	.000
Infrastructure	.319	.049	.410	6.444	.000
Human resource capacity	.389	.053	.466	7.387	.000

a. Dependent Variable: Performance of the iCMS project at the port of Mombasa

The study found out that cost control predicts performance of the iCMS project at the port of Mombasa ($t = 5.304$; $p > 0.05$). It was revealed that infrastructure significantly predicts performance of the iCMS project at the port of Mombasa ($t = 6.444$; $p < 0.05$). The study found out that human resource capacity significantly predicts performance of the iCMS project at the port of Mombasa ($t = 7.387$; $p < 0.05$). It was revealed that the predictor variables-cost control, infrastructure and human resource capacity-would be included in the multiple regression equation as they were statistically significant ($p < 0.05$).

It was noted that the constant was insignificant ($t = 0.099$; $p > 0.05$) implying that performance of the iCMS project at the port of Mombasa cannot be significantly explained without considering the combined effect of cost control, infrastructure and human resource capacity. Therefore, the constant would not be included in the final regression model (Lind, Marchal & Wathen, 2012). The multiple regression function in Equation 4.1 was used to explain the results of analysis.

$$Y = 0.250X_1 + 0.319X_2 + 0.389X_3 \dots\dots\dots \text{Equation 4.1}$$

The findings indicate that increasing cost control by 1 unit increases performance of the iCMS project at the port of Mombasa by 0.250 unit ($\beta_1 = 0.250$). These finding concurs with the finding of a study by Tunji and Mojeed (2013) and Akeem (2017) which noted that controlling cost positively affects performance. The study established that enhancing infrastructure by 1 unit enhances performance of the iCMS project at the port of Mombasa by 0.319 unit ($\beta_2 = 0.319$). These findings concur with findings of a study by Munim and Schramm (2018) that improving quality of infrastructure at the port has positive effect on performance. It was revealed that that increasing human resource capacity by 1 unit increases performance of the iCMS project at the port of Mombasa by 0.389 unit ($\beta_3 = 389$). The findings support the results by Lubeka (2017) which concurs that improving the skills of personnel in ICT has positive effect on performance.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of key research findings, the conclusions drawn from the findings, recommendations and areas for further research.

5.2 Summary

This section outlines the major findings of the research study

5.2.1 Effect of Cost Control on Performance of the iCMS Project at the Port

The study found out that the respondents agreed that for any disparity between actual and target costs, appropriate corrective measures are undertaken. It was generally agreed that the costs of resources required for the iCMS are incurred as budgeted for. The respondents concurred that the differences between target and actual costs incurred is usually examined. It was generally consented that the operational costs of iCMS are within targets. It was established that there is a positive significant relationship between cost control and performance of the iCMS project at the port of Mombasa. The study found out that cost control predicts performance of the iCMS project at the port of Mombasa. It was determined that increasing cost control by 1 unit increases performance of the iCMS project at the port of Mombasa by 0.250 unit.

5.2.2 Effect of Infrastructure on Performance of the iCMS Project at the Port

The study determined that the respondents consented that the port equipment and facilities are adequate to sustain processes and activities at the port. There was general agreement that the hardware required for running the iCMS is up to date. It was agreed that the working environment is generally conducive for employees. The respondents agreed that the requisite technical requirements for running the iCMS have been put in place by every stakeholder involved. It was found out that there is a positive and significant relationship between infrastructure and performance of the iCMS project at the port of Mombasa. It was revealed that infrastructure significantly predicts performance of the iCMS project at the port of Mombasa. The study established that

enhancing infrastructure by 1 unit enhances performance of the iCMS project at the port of Mombasa by 0.319 unit.

5.2.3 Effect of Human Resource Capacity on Performance of the iCMS Project

The researcher noted that there was general agreement that the personnel that handle the iCMS are competent with regard to knowledge required for running operations for agencies at the port. It was agreed that employees are equipped with adequate technical skills required to work with the iCMS. The study found out that the respondents agreed that the employees are willing to work effectively. It was noted that there was general concurrence that the employees serve clients satisfactorily. It was noted that there is a positive and significant relationship between human resource capacity and performance of the iCMS project at the port of Mombasa. The study found out that human resource capacity significantly predicts performance of the iCMS project at the port of Mombasa. It was revealed that that increasing human resource capacity by 1 unit increases performance of the iCMS project at the port of Mombasa by 0.389 unit.

5.2.4 Performance of the iCMS Project at the Port of Mombasa

It was noted that the respondents agreed that the indirect costs of clearance at the port of Mombasa have reduced. It was noted that there was general agreement that the iCMS has ensured reduced delays in clearance of trade goods at the port. It was concurred that the direct costs of clearance at the port of Mombasa have reduced. It was agreed that the iCMS has ensured speedy clearance process.

5.3 Conclusions

This study made a number of conclusions. This study makes a number of conclusions. Firstly, the study concludes that cost control has positive significant effect on performance of the iCMS project at the port of Mombasa. Secondly, the study concludes that infrastructure has positive significant effect on performance of the iCMS project at the port of Mombasa. Thirdly, it was concluded that human resource capacity has positive significant effect on performance of the iCMS project at the port of Mombasa.

5.4 Recommendations

This study makes the following recommendations in line with the results:

1. Firstly, this study recommends that KRA should control costs associated with implementation of the iCMS project at the port of Mombasa in order to ensure effective and efficient use of resources in management of the project and hence lead to improved performance. Any deviations from budget should be investigated so that appropriate corrective measures can be implemented.
2. Secondly, the study recommends that that KPA and KRA enhance port infrastructure to enhance performance of iCMS project at the Mombasa port. The requisite hardware should be sought for the system to work appropriately.
3. Thirdly, this study recommends that that KRA, KEPHIS, KPA and KEBS should enhance training for its employees to ensure that they fully understand the working of the iCMS. The training should focus on enhancing technical skills as well as working cues among the employees.

5.5 Areas for Further Research

This study recommends that scholars and researchers should focus the effect of cost control, infrastructure and human resource capacity on iCMS performance at other border points apart from the port of Mombasa. Moreover, the effect of other factors- other than cost control, infrastructure and human resource capacity-on iCMS performance should be examined. This is because cost control, infrastructure and human resource capacity accounted for 44.3% of the variation in performance of iCMS project implying that 65.7% could not be accounted for by the study model ($R^2 = 0.443$).

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APPENDICES

Appendix I: Introduction Letter



ISO 9001:2015 CERTIFIED

KRA/KESRA/MSA/106

25th August 2020

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

RE: REQUEST TO COLLECT RESEARCH DATA

This is to certify that the following is bona fide student of the Kenya School of Revenue Administration Mombasa Campus undertaking Post Graduate Diploma in Customs Administration.

Name	Admission Number
ABEID SALIM AWADHAN	HDB335-C016-0944/2017

The above mentioned student is in his final year of study at the school and currently conducting research on the **FACTORS AFFECTING PERFORMANCE OF THE INTERGRATED CUSTOMS MANAGEMENT SYSTEM PROJECT AT THE PORT OF MOMBASA**. The student is in the process of gathering data and thereafter, compile a report that will strictly be used for academic purposes only. The School would therefore like to seek your permission to allow him/her collect information that relates to his research from your organization.

Thank you in advance for your support and cooperation.

Yours sincerely,

Mumia B.J.
Associate Head of Research KESRA, Mombasa Campus



Tulipe Ushuru Tujitegeme!



Appendix II: Research Questionnaire

This questionnaire is intended to gather information for an academic study entitled “*factors affecting performance of the integrated customs management information system project at the port of Mombasa*”. Please provide responses to the questions appropriately.

Questionnaire Number

Section A: General information

Kindly put a tick (✓) against the correct choice.

1. What is your gender?
Male [] Female []
2. Kindly indicate your age bracket
Below 20 years [] 20-30 years []
30-40 years [] 40-50 years []
Over 50 years []
3. Kindly indicate the organization you work for
KRA [] KPA []
KEBS [] KEPHIS []
4. Kindly indicate the period of time you have worked in the organization
Less than 1 year [] 1 to 3 years []
3 to 5 years [] Over 5 years []
5. Kindly indicate your highest level of education attained
Primary [] Secondary [] Post secondary []
Graduate [] Post graduate []

INSTRUCTIONS FOR SECTION B, C, D AND E

Instructions: You are required to indicate the extent to which you agree or disagree with the statements in the tables provided using the following 5-point Likert scale: 1 = Strongly disagree; 2 = Disagree; 3= Neutral; 4 = Agree and 5 = Strongly Agree. Kindly put a tick (✓) against the correct choice.

Section B: Cost control

		1	2	3	4	5
1	The costs of resources required for the iCMS are incurred as budgeted for					
2	The operational costs of iCMS are within targets					
3	The differences between target and actual costs incurred is usually examined					
4	For any disparity between actual and target costs, appropriate corrective measures are undertaken					

Section C: Infrastructure

		1	2	3	4	5
1	The hardware required for running the iCMS is up to date					
2	The requisite technical requirements for running the iCMS have been put in place by every stakeholder involved					
3	The working environment is generally conducive for employees					
4	The port equipment and facilities are adequate to sustain processes and activities at the port					

Section D: Human resource capacity

		1	2	3	4	5
1	The personnel that handle the iCMS are competent with regard to knowledge required for running operations for agencies at the port					
2	Employees are equipped with adequate technical skills required to work with the iCMS					
3	The employees are willing to work effectively					
4	The employees serve clients satisfactorily					

Section E: Performance of the integrated customs management information system project at the port of Mombasa

		1	2	3	4	5
1	The iCMS has ensured reduced delays in clearance of trade goods at the port					
2	The iCMS has ensured speedy clearance process					
3	The direct costs of clearance at the port of Mombasa have reduced					
4	The indirect costs of clearance at the port of Mombasa have reduced					