

**FACTORS AFFECTING IMPLEMENTATION OF INTEGRATED CUSTOMS
MANAGEMENT SYSTEMS IN CUSTOMS AND BORDER CONTROL
DEPARTMENT: A CASE OF KENYA.**

BY

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DECLARATION

I declare that this project is my original work and has not been presented for a degree in any other University.

Signature..... Date.....

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HDB335-C016-3136/2017

This research project has been submitted with my approval as the University supervisor.

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DEDICATION.

I dedicate this research project to my parents Mr & Mrs. Ilumba for their genuine support to me over my academic course and their motivation towards achieving greater heights in academics.

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I give lot of thanks to the Almighty God for helping me complete this research project successfully. I offer lot of gratitude to my supervisor, Mr. Abakuk Kasibo for the great advice and academic support that has made me manage to complete my research project. I also appreciate the entire staff of Kenya school of Revenue Authority for their support in one way or the other. Lastly, I congratulate my colleagues for their selfless support that helped me achieve this.

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LIST OF ABBREVIATIONS AND ACRONYMS.

MMS: Manifest management system.

KRA: Kenya revenue authority.

C&BC: Customs and boarder control.

KNBS: Kenya national bureau of statistics.

ICT: Information communication technology.

COSIS: Customs oil stock information systems.

RECTS: Regional electronic cargo tracking system.

ITMS: Integrated tax management system.

ACMS: Automated customs management system.

SWOT: Strength weaknesses opportunities and threats.

OSBP: One stop boarder point

ETR: Electronic tax register

DEFINITION OF TERMS

Customs Duties	are the taxes levied by a government on imported goods
Customs	is the official department that administers and collects the duties levied by a government on imported goods.
Distribution of tariffs	refers to fluctuations in the tax or duty to be paid on a particular class of imports or exports.
Enforcement instruments	are strategies or methods put in place to ensure that an existing law or legal obligation is adhered to
Staff Competence	is the general knowhow of the staff on how to perform a task

ABSTRACT

For the implementation of the integrated customs management systems to be successful, there needs to be good attention that is projected towards the employees, cost incurred during implementation process and management. Failure and the success of an organization are based on the measures put in place during the implementation process. Numerous organizations today face a lot of challenges that are mainly connected with how digital systems are implemented. Customs and Border Control department has strategic implementation plans that are underway, and it's for this reason was to why I investigated the factors that are affecting implementation strategy of the ICMS. The staff that is responsible for implementing the integrated customs management systems has the mandate of investigating the performance of the organization when implementing this automated system. This study is titled factors affecting the implementation of Integrated customs management systems in the Customs and Border Control department. This is a case study of customs and border control department of Kenya. The study investigated the management support, the staff body and the cost of implementing ICMS in the Customs and Border Control departments. There was the urge to try and investigate how systems such as RECTS and cargo scanners which are related to the integrated cargo tracking systems have been implemented in the C&BC department. This study employed study theories which included; System-based theory, Technological Determinism theory and Porter's generic business model for it to be successful. Questionnaires were used in collecting the primary data that was used in this study. The collected primary data was analyzed by the use of SPSS Software Version 23. The analyzed results were further presented by the use of the pie charts, bar charts and tables.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study.

Organizations require a good environment in order to perform well. The environment should be analyzed so that one can find out the conditions necessary for the existence of an organization. Organizations should align themselves with the principal environmental conditions which suit the organization. The external environment does affect the organization at large such that any change would affect the implementation process of the organization (Chen, Yang, et al, 2014). Analysis of the environment is very essential such that it helps in identifying the available opportunities which help in determining potential success or failure. Digital system implementation constitutes the conversion of the system action plans into visible and quantifiable outputs.

Customs and Border Control (C&BC) which is a department in the KRA has the responsibility of administering the customs duties, controlling and enforcing the cross-border trade and also regulating the flow in and out the flow of goods and services in the country. The C&BC department in recent past in line with its projects has instituted several stringent measures which try to offer more improved performance. One of the major achievements made so far, for example, the introduction of integrated customs management system that has aided in major advancements in the use of technology in the KRA department (Cooper, 2018)

Implementation of the integrated customs management system is one of the major challenges in the customs department. However, organizations that are able to survive long and are able to successfully implement different systems which are is essential in ensuring that there is an outstanding system performance in the organization. There are numerous challenges that an organization face which make it difficult in achieving different goals. In large firms, poor translation of concepts into action plans is the greatest setback in attaining the strategic objectives set in the organization. There is great importance for firms to understand the set strategies for the business as well as the procedure to be followed in attaining them. Several organizations, however, are unable to translate strategies into action plans that are achievable which will necessitate in achieving evaluation and implementation goals. It is important bring in together different managerial aspects in order to achieve a successful system implementation. New strategic plans require a combination of several different aspects. This is because the chances for failure of new projects are high, (Rufus, 2011).

1.1.1 Customs Modernization

Revised Kyoto Convention is the generally accepted reference point for the key principles of customs modernization (Honoham, 2003). The history of customs operation has evolved from long time aging back to six thousand years B.C and was based on common principle that trade can be conducted by two or more different people or nations. The Customs clearing process has evolved through the ages of roman empire, grafting to the early ages of ancient civilization to colonialism up to the technological age we are in today with the basic principle of collecting some taxes from the citizens so as to be administered locally and spent for the public good (Chamey & Alberta , 1983) In early human history, the customs body used the most rudimentary methods; some of these methods were so crude that they gave the

profession a bad name (UNCTAD, 2008) . Over a period of time, there has been a different perception pinned to the customs clearing systems recently has been linked to trade and facilitation so as to give a more noble look to the taxing activity (Ashok, 2011). Digital systems have been introduced so as to bring customs modernization of procedures.

1.1.2 Organizational performance.

The performance of any organization can be defined as the measure of overall productivity of an organization. Digital systems such as the ICMS help in improving the performance of an organization. It is measured against a given set of standards or compared with similar firms which are within the same industry. Performance is a result of hard work by management with an aim of achieving the organizational goals (Katzenbach & Douglas, 2015). Profitability is used in accessing how good a performance is. While accessing the performance of an organization, a judgement is made about whether that performance is acceptable based on a set of standards.

Some organizations are able to attain their goals more compared to others due to the high effort and resources that are directed towards the organization. Resources are important in determining the performance of an organization. It is very necessary to add more resource complements whenever the performance level seems to be reducing (Katzenbach & Douglas, 2015).

The success level of an organization can be valued using the performance evaluation which is the process through which employees and the managers work together to review the strategic objectives of the organization and the overall goals against a set of standards. Performance evaluation is a continuous process of assessing progress and setting objectives that ensure

that an organization is able to meet its overall goals and the strategic objectives policies (Al Rawashdeh, 2013).

1.1.3 Customs and Boarder Control Department

Customs and Border Control Department was founded in 1978 through a parliamentary Act and was previously referred to as Customs and Excise Department. The primary function of this department was to facilitate a legitimate trade in Kenya. The department had other roles which included collecting and accounting for both the VAT collected on imports and the import duty collected after taxing the goods moving into and out of the country. This department also collects other taxes such as; Import Declaration fee (IDF), Road Transit Toll, Petroleum Development Levy, Directorate of Civil Aviation Fees, Sugar Levy, KAA Concession Fees, Fees on Motor Vehicle permits, Road Maintenance Levy.

Customs department has four main strategic areas which are responsible for shaping the future of Kenya as a country. The four strategic areas include; Human Resource strategy, Revenue Collection Strategy, ICT Strategy and the Innovation Strategy (Kenya Revenue Authority website, 2015).

1.2 Statement of the Problem

Implementation of the integrated customs management systems has been one of the chocking problems in Customs and Control department of Kenya. Despite of the system promising to bring all more advantages, customs department however has failed in proper implementing this system as required so that it can perform to the required optimal standard. An economic survey of government customs department conducted by Allio (2009) in the Ohio state of US has proven that over the last three years, of the total number of customs departments that were under study 57% of them had experienced some difficulties in implementing the digital

systems hence becoming unsuccessful. In the year 2016, similar study was conducted in China and the results showed that 83% of the total Chinese corporations under study were unable to smoothly implement new automated systems. From that research, the remaining 17% showed the existence of a system implementation process that was consistent and successful (White paper of System Implementation of Chinese Corporations, 2016). Three factors that affected implementation process of the digital systems were identified and they included; technology, time and planning. Even after these factors were considered, the systems did not perform as required.

C&BC department has played a very big role in bringing in the integrated customs management systems that will perform clearing process with ease and reduce loss of revenue. During the introduction of the systems, C&BC departments has failed in identifying various factors that will affect the implementation process of the system (Kenya Revenue Authority website, 2015).

In 2009, during the global economic recession, most of the companies found themselves in a tough economic situation which was as a result of poor system implementation. Within a short period of time, the companies found out that there were missing margins very closely each financial quarter until now they are unable to formulate ways on how to generate growth opportunities that are better by modifying the automated system implementation process. Over the course of time, different departments have been able to identify some of the factors that affect system implementation but have also failed in identifying the major factors affecting system implementation process. The major factors have large effect on system performance and they overshadow the minor factors making system implementation

fail. A research done by (Bharadwaj Dunna, 2008) identified planning, co ordinating and monitoring as the factors that affect digital system implementation. The identified factors were not enough since the digital clearing system continue to fail in the clearing operation. These studies were conducted in order to identify the minor factors that affected system implementation process rather than identifying the major factors. This has prompted me to do a study that identified the major factors that affected implementation of integrated customs management systems in Customs and Boarder Control department.

1.3 Objective of the study.

The study was guided by two major objectives namely the general objective and the specific objectives

1.3.1 General objective

The main objective of the study was to determine the factors that affect the implementation of integrated customs management in C&BC department.

1.3.2 Specific objectives

The specific objectives of this study were;

- i. To investigate how the management support affects the implementation of the integrated customs management systems in C&BC department.
- ii. To investigate the effect of implementation cost on the implementation of the integrated customs management systems in C&BC department.
- iii. To investigate the effect of staff capability on implementation process of the integrated customs management systems in C&BC department.

1.4 Research questions

- i. Does the management support affect the implementation process of the integrated customs management systems in C&BC department?
- ii. Does implementation cost affect the implementation process of the integrated customs management systems in C&BC department?
- iii. Does the staff capability affect implementation process of the integrated customs management systems in C&BC department?

1.5 Significance of the study.

The research study was very significant to the C&BC department because it provided the best as well as alternative ways forward as far implementation and operation of the integrated customs management system is concerned. The recommendations and deductions made from this study facilitated the C&BC to be able to comprehend the necessity of the integrated customs management system in achieving growth. The study was very essential to the government as well as to the policymakers in deciding the best way the integrated customs management is to be implemented.

This study will aid the government in creating a very good and conducive environment that will inspire innovation in the country to greater heights. The government will bring in new policies that will suit new innovation and in turn bringing development in the country. The findings of this research study will help future researchers and scholars in doing research in the related fields. This study has however contributed knowledge to the existing bodies of knowledge and more specifically to the Customs and Border Control Department of KRA

which will in turn help in improving the performance of KRA as a department. The findings of the study gave an addition to the existing system implementation theories.

1.6 Scope of the study

The main purpose of this study was to research and identify various factors that affect implementation of the integrated customs management systems in Customs and Boarder Control department. Explicitly, this study established the specific factors affecting implementation of the integrated customs management systems in C&BC department. This study was conducted at the Customs and border control departments. The target population of this study was the employees working in C&BC department who include the commissioner general and the top directors, directors and several workers were also interviewed and it aided in gathering enough information that was required. The study was conducted in April in the year 2019.

1.7 Limitations of the study

1.7.1 Biasness

Biasness was a major problem encountered during the process of collecting data. The researcher did the pilot study weeks just before the actual day in which data was collected and formulated some questions that were used in the questionnaire so as to enhance validity and reliability of the responses in the data collection instrument which further led to reduced biasness.

1.7.2 Confidentiality

This issue of confidentiality was experienced during the time of data collection process. Some of the respondents were not confident when answering some of the questions the

researcher asked them. However, the researcher assured them of their complete anonymity in the study and stated clearly that the information collected was mainly for research purposes.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter has reviewed the empirical researches and theoretical frameworks from past relevant studies. This chapter explained the various constructs and theories that had been propounded with an aim to try and describe how the integrated customs management systems is implemented in the Customs and Boarder department. This chapter also contains the critique of the past studies, research gaps and the summary of this chapter.

2.2 Theoretical Review

This study was based on a theoretical basis that tried to explain further about this specific study. The theoretical basis includes; System-based theory, Technological determinism theory and Porter's generic business model. The aforementioned theories were further discussed in the context of the integrated customs management systems implementation within C&BC department.

2.2.1 System based theory

A system is characterized by a group of parts that interact to form a coherent whole. Systems have distinct boundary separating them from external elements and distinguishing between inputs, or factors that impact the system, and outputs, or effects and products of the system. Systems may also have feedback loops, which occur when outputs of a system return as inputs, forming a circuit. Changes in one component of a system will affect other components as well as the overall entity. This dynamic makes it possible to predict what might happen when a system experiences a known change.

(Yang, et al, 2014).

This theory still explains all the major phases that any system undergoes up to complementation. This theory also explains all the essential phases that need to be overlooked during the implementation process. All these phases are important since every member who attached to the system or uses the system gets the maximum profits combined with good experience in using the system (Bigler, 2011).

2.2.2 Technological Determinism theory

Technological determinism theory states that technology is a force or a social structure that brings out change. This theory brings changes in reporting line, organizational structure, norm, and also in other aspects that do include models of operation (Selwyn& Neil, 2012).

This theory operates under two main type of hypothesis and they include;

1. This theory believes that the technical base of every society is the most important condition that do affect all patterns of social existence.
2. This theory also believes that any change in technology is the only most important source of change in the society. Some critics stated that other than the issues in technology, there are other factors that have acted as the driving force and some of these factors included; economic pressures, general attitudes, class interests, education background and others (Chandler, 2010).

This theory has faced controversies based on the history of social sciences and in the organizational studies in particular. The people who ridiculed his theory argued that technology itself is socially determined or in that the impact that is caused by any

technology usually depend on how it is implemented which is in turn socially determined (Selwyn& Neil, 2012).

2.2.3 Porters Generic Business Model

This model states that in a business model that is within a larger industry, the main purpose of the competitive strategies entails locating a position where a firm can be able to defend itself from the five forces of competitive advantage. The five forces include the power possessed by; substitutes, buyers, suppliers, the rivalry brought in by substitute products and the threats of new entrants (Porter, 2010).

The five forces help in defining the structure of the industry and through this, a firm is able to determine its competitive strategy from analyzing this structure. Those four competitive strategies unveiled by porter do provide a good source of strategy basis for the long term in the business environment. The generic competitive strategies include; cost focus strategy, cost leadership strategy, differentiation focus strategy as well as the differentiation strategy. These generic digital systems can help the firm achieve profitable goals in the long term. The firm has to strategize on the best way to apply the different digital systems so that set goals can be achievable (Porter, 2010).

When a firm opts to apply differentiation as a key business strategy, the input efforts focus on offering unique products and services. By this, the customers become more loyal since the firm is unique and no other firm offers a similar product. Product differential strategy is where products and services are tailored towards one customer. Performance of the digital

systems helps in attracting a specific set of customers who have the knowledge and unique interests in the quality products and services, and are also ready to pay more so that they can acquire the products and services (Sohrab, et al, 2013).

Strategic plans need to be considered and according to Porter (2010), there are six issues that a firm need to consider so as to implement their digital systems. The six issues include; ensuring that the top executive is committed, ensure that there is clear communication of a tangible strategy, picking the best people in the industry who are capable of driving the important initiatives, cascading accountabilities, monitoring and tracking progress and also engagement in all levels of the organization. A firm need to align the six issues together with the organization's strategic objectives so as to achieve set goals (Sohrab, et al, 2013).

2.3 Conceptual Framework.

A conceptual framework usually sets the stage for the presentation of the particular research question that drives the investigation that is being reported based on the problem statement (McGaghie et al., 2011). The problem statement of a thesis usually presents the context and the and the issues that led the researcher to conduct this study.

Independent variables

Dependent variables

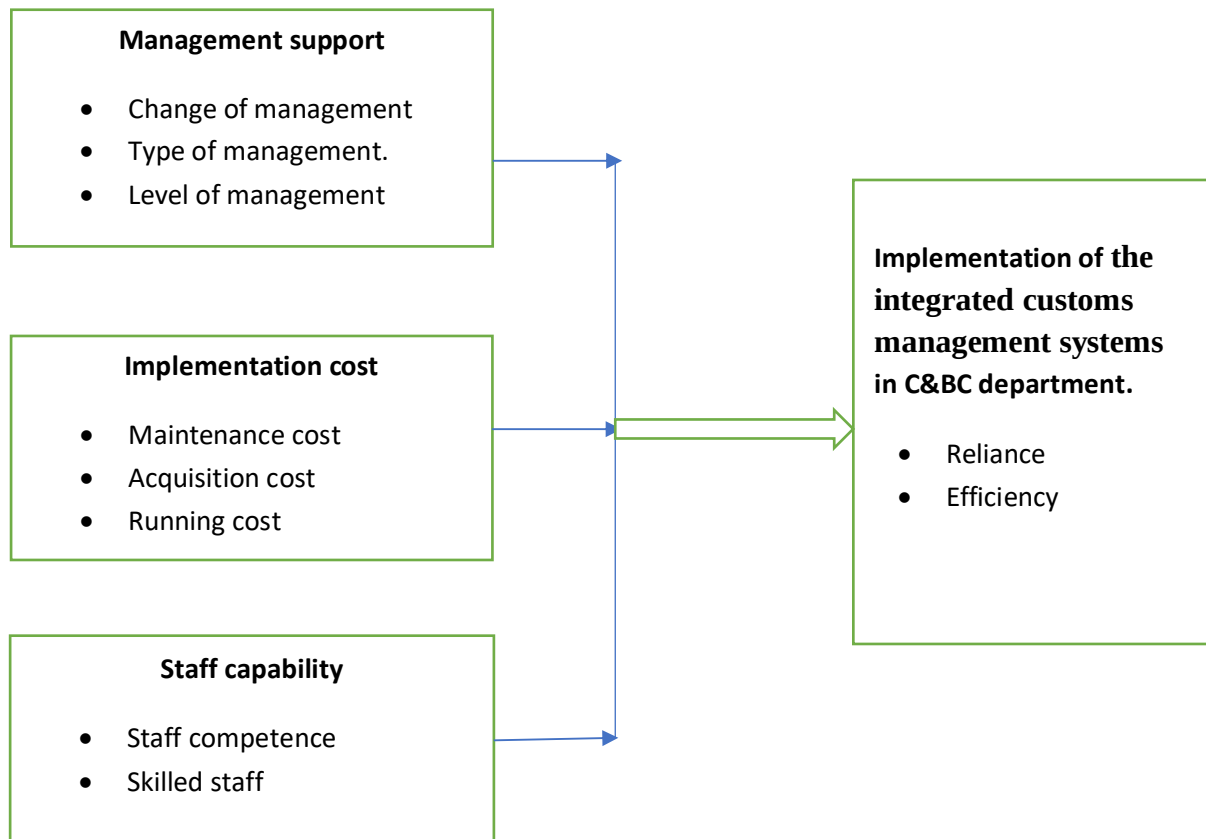


Figure 2.3: Conceptual framework

2.3.1 Management support

The management support has a large effect on the implementation process of the integrated customs management systems in the department. The management support requires to be changed if the implementation process of the digital clearing system within the organization is not done correctly as required. When a change is done, new management support should be deployed in the organization to ensure that are implementation of the digital systems in the organization is done effectively (Bigler, 2011).

The type of management also has a large effect on the implementation process of the integrated customs management systems since when any change done, the implementation process of the system might not be effective as required. This is because new management

might not be able to catch up with where the other management support left the implementation process.

2.3.2 Implementation cost

This entails the amount of money that is incurred when implementing the ICMS systems. This process of implementation does require a lot of funds that need to be channeled towards that project. Good technology ought to be used in the implementation process and by this it means that money is needed so that all the implementation process can be carried out (Yang, et al, 2014).

The cost incurred in the implementation process of the integrated customs management systems might affect implementation process of the systems since if the funds are not enough, the systems will be implemented poorly and since according to the state of economy in the country, the department might lack enough money to fund the implementation process of the integrated customs management systems (Yang, et al, 2014).

2.3.3 Staff capability

Prior to the introduction of a new system in any organization or department, the staff need to have a better training on the system. Understanding of the integrated customs management systems is important to the staff since they will be able to implement the systems effectively. However, the department lacks the skilled personnel who understand how the systems work.

The department has failed to train the staff on how to operate this system and in most of the case they do it after they have introduced the systems in the department which affects the

implementation process since the staff need to be trained just before the system is introduced as to gain knowledge in operating the system (Armstrong, 2012).

2.4 Empirical Literature

This section involved the past studies done in relation of how new digital systems are implemented. Explicitly, empirical studies on the management support, cost incurred and staff who work within C&BC department.

2.4.1 Management body in Customs and Boarder Control department

The management support plays a key role during the implementation process of systems. Management acts as an oversight body where they overlook and ensure that integrated customs management systems are implemented in the best way possible. Many projects been developed in America fail due to lack of good management to control different activities (Bigler, 2011). This study concluded that management is very essential in the success of any system implementation project.

When the management fails, there is need to change that management to ensure that everything is in order. Digital system should be formulated in such a way that the management can be able to implement it accordingly (Freedman, 2013). The top rank management should be much competent compared to its subordinates. Top management controls the lower management and through this whatever the lower management body does reflects what the upper management is doing.

2.4.2 Cost incurred during the Implementation process

Implementation of the integrated customs management systems requires good amount of money so that they can be implemented effectively. By this, it means that that cost has to be incurred in the implementation process that will be sufficient for the whole process to be successful. Organizations do face difficulties when implementing digital systems and this makes the implementation process of the integrated customs management systems to be unsuccessful making the system's output to be minimal and not as required (Jean, 2010).

A study was conducted by (Yang, et al, 2014) to determine if cost affected the process of implementation of integrated customs management systems. It was revealed that cost affected implementation process of the digital systems. Whenever insufficient funds were directed towards the implementation process of systems, the systems were not implemented as required and this did affect the process since things like sufficient technology was not deployed and the staffs were not trained accordingly. Before implementing any system, an organization has to make a budget that will tell the amount of money that will be sufficient for the implementation process. Adequate budget will help in proper implementation of ICMS since all funds required and resources will be available during the implementation process (Ibourk, 2014).

2.4.3 Staff capability

The staffs do play a major role in helping the organization achieve its goals. The competence of the staff comes from the training that they receive which is concerned with the operation of systems for the provision of learning, training opportunities and development so as to improve the individual, organizational and team performance (Kraiger & Aguinis, 2009).

It is a type of growth that do arise from the clear vision about the potential and ability of the people and still it operates within the business framework. A series of targeted interventions need to made so into each group in order to be able to change the behavior of the staff. These may include; peer reviews, training sessions, workshops and joint planning and implementation (Aguinis et al,2009).

Competency concept is used in defining the whole of individual skills, abilities behavior and knowledge that is oriented to actual performance in a specific working environment. Abilities explain the different dimensions of behavior desirable to any company in order to achieve a high performance (Armstrong, 2012). The interventions made ought to improve the competence of the staff and must be related to the organization's day by day and continue over a significant period of time in order to make the organization to be successful. A study that helped in identifying different factors that affected the process of implementing different digital systems was done. The competency of the staffs was one of the key factors that did affect implementation of digital systems (Mwangi, 2016).

Another study done proved that staff competencies do affect implementation of different digital systems directly. This was based on how the staffs had knowledge on how to use technology. The staff ought to be trained better for them to understand how to operate new devices in the organization that required skilled man power to operate. New skills had to be instilled into the staff through training. Funds need to be directed to training the staff for them to have all the required skill to run the organization (Ibrahim, 2014).

2.5 Critique of existing literature

A study that was conducted by the management board in 2009. This study found out that during the implementation process of different digital systems, the process has lost an approximate of 37% of its value caused by unqualifies staff. Draft (2015) in his study was able to conclude that the greatest problems that are facing implementation in the current times include a world that is changing hence there is a need of a breed of leaders who are willing and ready for a change. They have to adopt new ideas that will help them in putting some special concentration on embracing teamwork, social skills, purring integrity at the forefront and professionalism. Research has shown that employees who are innovative, as well as productive, are the ones who are well motivated (Viedge et al., 2013). However, the adopted ideas were not sufficient to help in solving the problems faced during the implementation process.

A research was conducted on South African organizations, looking at the perceived importance of proper implementation of digital systems, proved that implementation of the systems superseded the process of system formulation hence giving a conclusion that being able to implement a digital system is important (Fourie, 2009). In 2011, Lawrie and Cobbold carried out a research on 200 companies and this indicated that 80% of these companies, directors alluded to having systems that were fit for their organizations and 14% believed that their firms were able to implement their systems in the best manner. As per the report, 33 directors reported to having achieved notable success despite 97 percent of them have agreed to have a digital system implementation vision.

For a CEO to achieve good results, he/she needs to understand the fact that proper implementation of digital system is what gets you the success that you want (Zagotta and Robinson, 2012).

2.6 Summary of literature

This chapter analyzed the theoretical literature review deeply where they aided in conducting this research. The theory's mentioned includes; Complexity theory, Technological Determinism theory and Porter's competitive strategies which are well explained in the chapter. The preceding theories are farther discussed in the context the factors that affected implementation of digital clearing systems in C&BC department. A conceptual framework has also been presented in this chapter in a diagram which has clearly been stated. The literature review was also presented to show how this study is related to other studies. The literature review was then ridiculed and the possible research gaps established. Finally, in this chapter, a summary of research gaps was presented where the possible gaps were identified.

2.7 Research Gaps.

A lot has been learned about the different factors that do affect the implementation process of Customs automated systems. Not only in Kenya C&BC department, even at the global scene studies have shown that many organizations have adopted digital clearing systems, but those who implement the digital systems correctly are few. It was approximated that 90% of digital clearing systems were implemented by firms operating in the USA as well as Europe (Bigler, 2011). Those digital clearing systems are not implemented in a timely manner nor do they achieve the set standards.

Similar research was done and concluded that seven out of the ten CEOs failed in meeting the company's expectation due to poor state of implementing digital systems but not due to poor system development (Colvin and Charon, 2011).

The existing studies reviewed in this research provide a useful starting point for accessing factors affecting ICMS implementation. However, no studies have examined different factors that affect implementation process of ICMS, but the studies generally examine the factors that affect implementation of automated systems. In Kenya there are no similar scholarly studies that can be referenced since the ICMS has never been implemented before in the country. Finding similar studies dealing with ICMS has been cumbersome but since the system falls under the category of digital systems hence studies done based on digital systems were carried out. At the time of implementing SIMBA 2005 which is a digital system, some factors did affect its implementation process. However, the studies done did not show that management capability and staff competence did affect the implementation process of digital systems in various departments. From this, it is evident that there is an evident research gap on this topic (Kenya Revenue Authority website, 2015). The study will focus on these questions, among others, to provide beneficial literature on this subject, as well as bridge the research gap on this topic. In so doing, the study will also serve as a point of reference for other experts who might show interest in this subject.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Different methods that were deployed in this research study will be explained in this chapter. This chapter will explain the research design used, the target population of the study, sampling methods, the validity and validity of the data collection instruments, the steps followed in the collection of data as well as the different tools that were used in the collection of this data.

3.2 Research Design

This study adopted a descriptive research design. A research design can be said to be a framework that describes different methods and procedures that can be used in the analysis and in the collection of data (Mugenda & Mugenda, 2013). A descriptive research design was the most preferred research design because it helped in explaining the different characteristics of the target population of this study. By using this research design, the researcher was able to carry out the research process with ease.

3.3 Target population

Research population is defined as a collection of numerous individuals who share common characteristics (Bernard, 2017). A sample population can be explained as a group of items, objects, or people drawn from a large population purposely for doing measurement (Burns et al, 2014). The sample population is supposed to be a representation of the whole information so that the researcher can generalize the findings from the research sample to the whole population. The best sampling techniques were applied to collecting samples from the

population. The target population in this study was seven hundred working employees who were working in the Customs and Border department. The seven hundred employees were divided into three clusters consisted which consisted of top manager, middle level managers and general staff members in the department.

Table 3.1 Target population

Category	Target population
Senior managers	50
Middle level managers	120
General staff members	530
Total	700

3.4 Sample size and sampling technique

Sampling is the process of choosing a number of individuals from within a given population and making forecasts based on statistical inferences (Best & Kahn, 2016). Sampling is a technique that is used to collect representatives who seem to be suitable from a defined population to determine the characteristics of the whole population (Ott & Longnecker, 2015). Sampling is very essential because it will help in securing a representative of the whole population that will be able to offer the required information.

Stratified random sampling was used in obtaining the sample population from the target population of 700 workers. The goal of this method was to achieve desired representation from the entire population without bias (Mugenda & Mugenda, 2003). Ten percent of the target population was ideal since data collection process was very easy. The top managers, middle level managers and the general staff were the main strata during sampling.

Table 3.2: Sample size

Category	Target population	Sample size	Sample population
Senior managers	50	10%	5
Middle level managers	120	10%	12
General staff members	530	10%	53
Total	700		70

3.5 Data Collection Instruments

In this study, primary data was collected through questionnaires and secondary data was collected from relevant documents that were used in this study. Primary data was collected by the use of the questionnaires. Questionnaires help in reducing bias since the researcher is able to obtain firsthand information and read the emotions of the respondent (Flick, 2018). It is very easy and cheap to collect data using questionnaires. There were three divisions in the questionnaires. The divisions include; Section a, Section B and Section C.

The first section which was A provided the, section B contained measures based on digital system implementation and section C contained the performance of digital clearing Custom and Border Control Department.

The secondary data that was used in the study was retrieved from useful written materials. Secondary data can be said to be a reliable source of data due to its authenticity and also gives detailed information (Kantis et al, 2012). The rate of revenue increase in KRA department since 2013 was used as the basis of examining the performance of the department.

3.6 Data collection procedure

The questionnaires were administered to individuals in the customs department's areas in Nairobi county and Mombasa county. The activity took approximately three weeks to be complete.

3.6.1 Validity of the Instruments

Validity is a process that is concerned in measuring if the questionnaire content is able to measure what is supposed to be measured (Denscombe, 2014). The validity of the content in the research instruments was ensured through expert judgement that was provided by my supervisor. After the judgement was done, it was proven that the questionnaires were able to offer the best results needed in the study.

3.7 Pilot testing

A pilot study can be defined as a small study that helps in designing a further confirmatory study (Mackey & Gass, 2015). Pilot test was conducted in two weeks before the actual day of collecting data. The subjects that were participating in the pilot study were not included in

the final study in order to avoid survey fatigue (Mackey & Gass, 2015). Fifteen questionnaires were administered and this constituted 10% of the sample. Thirteen questionnaires were returned duly completed and this gave a response rate of 86.67%.

The pilot results yielded the results shown in the table below;

Table 3.7: Pilot study results

Variable	Cronbach's Alpha coefficient
Management support	0.836
Implementation cost	0.829
Staff capability	0.831

Since the computed alpha coefficient was greater than 0.80, then this was considered as an acceptable level of internal reliability (Bryman, 2008). This pilot study was important because it identified that some questionnaires were ambiguous. The questionnaires were later designed into a more appropriate way before going to the field of work.

3.7.1 Reliability tests

So as to ensure that the instruments were reliable, Cronbach's alpha was used in this case so as to test internal reliability of each and every variable in this study. The values of Cronbach's alpha range between 0 to 1. The computed alpha coefficient of each variable in the study was greater than 0.80 and this this was considered an acceptable level of internal reliability (Bryman, 2008).

After the collection of data was done, it was later coded and then entered. Editing of the data was done before the data was put into the SPSS. In the demographic information some values were found to be missing but those values were insignificant and they could not affect the reliability of the study.

3.8 Data Analysis and Presentation

The set questionnaires were checked for errors and completeness and were deemed suitable in data collection. Analysis of data can be explained as a procedure that entails; inspecting, cleansing, transforming and modeling data with an aim of discovering any useful information, informing conclusions and supporting decision making (Panneerselvam, 2014). The collected data was prepared so as to code, edit, handle blank responses, categorizing and keying into Statistical Package for Social Sciences (SPSS) computer software version 23 for analysis. The collected data was presented tables, graphs and the charts. Analysis of Variance (ANOVA) was conducted to determine how significant the model was.

The comparison of the significance of the F statistic was established.

Implementation of digital clearing system was regressed against three independent variables (Management capability, implementation cost and staff support).

This model was expressed as;

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

Where;

Y = Implementation of integrated customs management systems in C&BC
department.

X₁ = Management capability

X_2 = Implementation cost

X_3 = Staff support

ε = error term

α = constant

β = coefficient of independent variables

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

The results of the study based on the formulated objectives and research questions will be presented in this chapter. The chapter analyzes the variables involved in this study and estimated the conceptual model that is described in chapter two. In the first two sections, data analysis and data description are presented which is then followed by estimation and interpretation of the model.

4.2 Response rate

The data analysis of this study was based on fifty questionnaires (Fully answered and returned) out of the 70 questionnaires that were distributed. This accounted for 71.4% response rate and was considered ideal for analysis to proceed (Denscombe, 2014). This information was presented in table 4.2.

Table 4.2.1: Response rate

Respondents	Frequency	Percentage
Responded	50	71.4
Not responded	20	28.6
Total	70	100

4.3 Summary of Respondent's Demographic Information

4.3.1 General information

There was a random selection of the respondents from the whole group, hence they had diverse demographic characteristics. The data was presented in the table below;

Table 4.3.1 Summary of Respondents' Demographic Data

Demographic Variables	Frequency	Percent
Gender		
Male	32	64
Female	18	36
Total	50	100
Marital status		
Married	38	76
Single	12	24
Total	50	100
Age		
18 to 29 years	9	18
30 to 39 years	13	26
40 to 49 years	20	40
50 years and above	8	16
Total	50	100

As shown in the above table 4.3.1, the number of men respondents 32 (64%) was more than that of the female respondents 18 (36%). The number of married respondents was more than a half 38 (76%) which was more than the number of unmarried respondents 12 (24%). According to the age of the respondents, those who were between 18 to 29 years were 9

(18%) while those who were between 30 to 39 years were 13 (26%) of the sample, those between 40 to 49 years made up the large portion and they were 40% and those respondents who were 50 years and above made up the least portion of the sample.

4.3.2 Distribution in regards to the department that an employee works in.

The results in regards to the department that an employee works in revealed that 5 (10%) of the respondents came from the customer care unit, 3 (6%) came from the customs entry unit, 21 (42%) came from the IT department, 8 (16%) came from the manifest office unit and 13 (26%) came from the management unit. This finding reveals that majority of the respondents were from the IT department followed by the management unit.

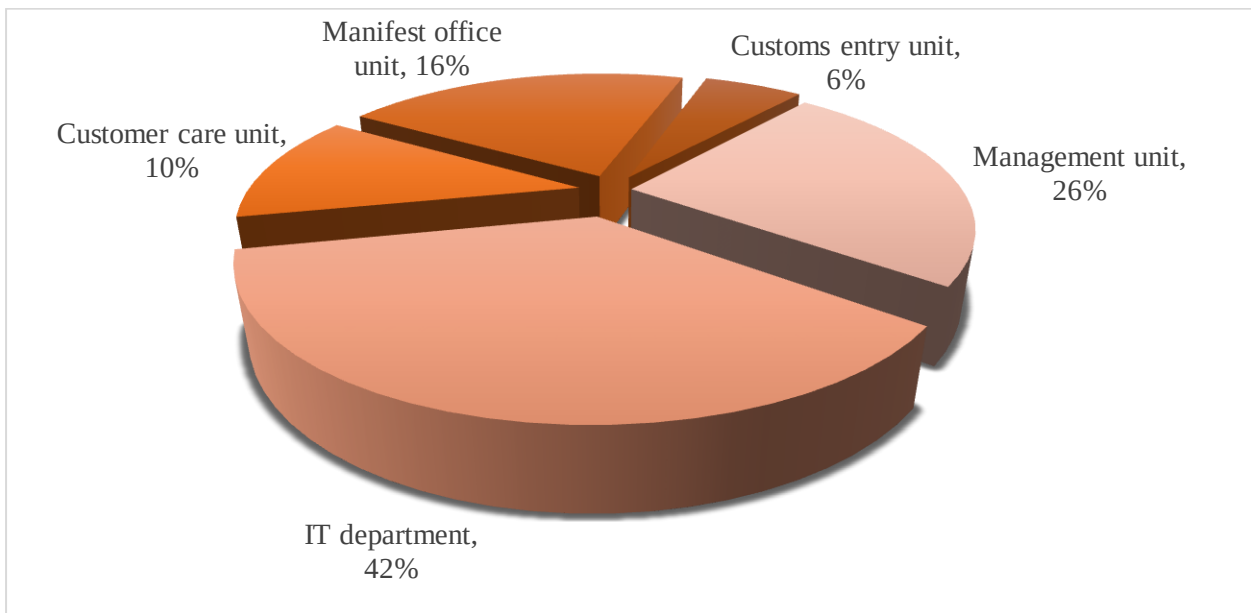


Figure 4.3.2: Demographic information based on working department.

4.3.3 Distribution of the Respondents based on the level of education.

So as to be able to determine how competent the workers are, the researcher sort to find out the level of education for the workers working in that department. The data was represented in the pie chart as shown below;

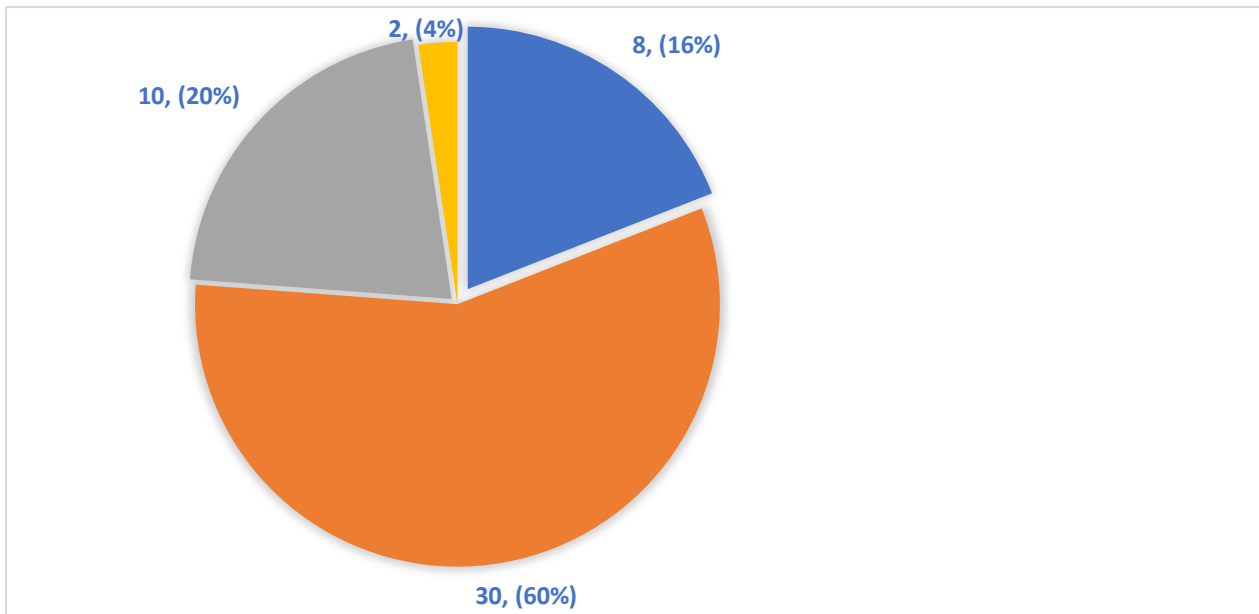


Figure 4.3.3: The level of education of the respondents.

From the information in the figure above it shows that the respondents who had a college level of education (60%) were the majority in this study, this was followed by university level of education (20%). Respondents who were of secondary level of education (16%) then followed. Respondents who were of post graduate level were the least with 4%.

4.4 Variable specific analysis

This section represents the descriptive results where the factors affecting the implementation of Integrated Customs Management Systems in the C&BC Department were measured.

4.4.1 Implementation of integrated customs management systems in C&BC Department

4.4.1.1 Do you think that Implementation of integrated customs management systems is important to C&BC department?

A questionnaire was raised to the respondents where they were asked if the implementation process of the integrated customs management system was important to the department. The question had three options where every respondent would choose from. 30 (60%) of the respondents said yes that the implementation process of the ICMS was important to the department, 12 (24%) of them did not see if the implementation process of the ICMS was much important to them while the remaining 8 (16%) of the respondents were not sure on the matter.

Table 4.4.1.1

	Yes	No	Not sure	Total
Number	30	12	8	50
Percentage	60	24	16	100

4.4.1.2 Who do you think affects the implementation process of the integrated customs management systems in C&BC department mostly?

The respondents were asked who they thought has played a big part in the implementation process of the ICMS system. The questionnaire had five options where each respondent chooses from. The first choice was only senior management in the IT department. 17 (34%) respondents said that the senior management in the IT department indeed did affect the implementation process of the ICMS in the department. 11 (22%) of the respondents said that

that the senior managers in all the customs departments did affect the implementation process of the ICMS in the department. 10 (20%) of the respondents said answered that senior managers and the middle level managers did affect the implementation process of the integrated customs management system in the department. 12 (24%) of the respondents said that all level employees which comprised of top managers, middle level managers, the support staff and stakeholders did affect the implementation process of the ICMS system in the department. Among the 12 respondents, 4 of them specified the senior managers, 3 specified that the middle level managers did affect the implementation process, 3 specified that the support staff did affect the implementation process of the system and 2 of them said that the stakeholders did affect the implementation process of the ICMS the most.

Table 4.4.1.2

Levels	Number	Percentage
Only senior management in IT department	17	34
managers in all departments	11	22
Senior managers and Middle-level managers	10	20
All levels (senior managers, Middle-level managers and Support staff Others stakeholders)	12	24
Total	50	100

4.4.1.3 What is the level of agreement with the following statements that relates implementation process of the integrated customs management systems in C&BC department

Linkert scale was used to measure the level of agreement of the above statement. Questions were asked in the questionnaire regarding this statement and each respondent answered the way that he/she felt above the question. A scale of 1-5 was used to measure the level of agreement. The respondents were asked if they thought that the customs department need to properly implement the ICMS. 2 (4%) of the respondents were in strong disagreement on this matter, 1 (2%) of the respondents did not agree this matter, 5 (10%) of the respondents were neutral meaning they did not know if the Customs department required to properly implement the ICMS, 28 (56%) of the respondents agreed that the department needed to properly implement the ICMS and the remaining 14 (28%) of the respondents strongly agreed that the Customs department required to properly implement the ICMS. This above was represented in the table below.

Table 4.4.1.3.1

Statement	Opinion	Total	percentage
Customs department require proper implementation process of integrated customs management system	Strongly agree	14	28
	Agree	28	56
	Neutral	5	10
	Disagree	1	2
	Strongly disagree	2	4

The respondents were also asked in the questionnaire about their opinion based in the matter if the C&BC department required a pre-test before they start to implement the ICMS system. 30 (60%) of the respondents strongly agreed that a pretest was important and need to be done, 8 (16%) of the respondents agreed on the matter, 7 (14%) of the respondents were neutral on the matter, 2 (4%) of the respondents disagreed on the matter and the remaining 3 (6%) were in strong disagreement on the matter since they did not see any relevance of a pre-test. This information was represented in the table below.

Table 4.4.1.3.2

Statement	Opinion	Total	percentage
C&BC department need a prior test before implementing the integrated customs management system	Strongly agree	30	60
	Agree	8	16
	Neutral	7	14
	Disagree	2	4
	Strongly disagree	3	6

The respondents were also asked in the questionnaires if they thought that the C&BC Department required to implement the ICMS system possible. 24 (48%) of the respondents were in strong agreement, 11 (22%) of the respondents were in agreement that the department had to implement the best ICMS systems, 8 (16%) of the respondents were neutral, 4 (8%) of the respondents disagreed on this matter while the remaining 3 (6%) of the respondents were in

strong disagreement on the above matter. The results of this data were represented in the table below.

Table 4.4.1.3.3

Statement	Opinion	Total	percentage
The customs department needs to implement the best integrated customs management systems	Strongly agree	24	48
	Agree	11	22
	Neutral	8	16
	Disagree	4	8
	Strongly disagree	3	6

4.4.2 Management support.

4.4.2.1 Does the management support affects the implementation process of the integrated customs management systems in C&BC department

The respondents were asked through the questionnaire if they thought that the management support did indeed affect the implementation process of the ICMS. Three choices were given where the respondents were to choose either yes, no or not sure. 33 (66%) of the respondents said yes that indeed the management support did affect the implementation process of the ICMS system. 15 (30%) of the respondents said no that the management support did not have any effect in the implementation process of the ICMS. The remaining 2 (4%) respondents were not sure if

the management support did or did not affect the implementation process of the ICMS. This information was represented in the table below.

Table 4.4.2.1

Opinion	Number	Percentage
yes	33	66
No	15	30
Not sure	2	4
Total	50	100

4.4.2.2 What is the level of agreement with the following statements that relates to effects of management support on implementation process of the Integrated Customs Management.

This questionnaire used the Linkert's scale to measure the level of agreement from the respondents. The respondents were asked through the questionnaire if the type of management really affected the implementation process of the ICMS. 22 (44%) of the respondents strongly agreed with that statement, 9 (18%) of the respondents agreed with that statement, 6 (12%) of the respondents were neutral of that matter, 7 (14%) of the respondents disagreed with the statement while 6 (12%) of the respondents strongly disagreed with that statement. This information was represented in the table below.

Table 4.4.2.2.1

Statement	Opinion	Total	percentage
Do you think that that the type of management support affects the implementation process of the ICMS	Strongly agree	22	44
	Agree	9	18
	Neutral	6	12
	Disagree	7	14
	Strongly disagree	6	12

The respondents were asked if they thought that a change in management affected the implementation process of the ICMS. The respondents responded according to how each and every one viewed that matter. 27 (54%) of the respondents strongly agreed on the matter, 12 (24%) of the respondents agreed on the matter, 5 (10%) were neutral on the matter, 5 (10%) of the respondents disagreed that a change in management will affect the implementation process of the ICMS while the remaining 2 (4%) of the respondents strongly disagreed that a change in management would affect the implementation process of the ICMS.

This information was represented in the table below.

Table 4.4.2.2.2

Statement	Opinion	Total	percentage
Do you think that that the change in management support affects the implementation process of the ICMS	Strongly agree	27	54
	Agree	12	24
	Neutral	5	10
	Disagree	5	10
	Strongly disagree	2	4

The respondents were asked on their regarding to whether the level of management did affect the implementation process of the ICMS system. 21 (42%) of the respondents strongly agreed, 13 (26%) of the respondents agreed on this matter, 8 (16%) of the respondents were neutral regarding this matter, 5 (10%) disagreed with the matter and the remaining 3 (6%) of the respondents strongly disagreed with the matter. This information was represented in the table below.

Table 4.4.2.2.3

Statement	Opinion	Total	percentage
Do you think that that the level of management support affects the implementation process of the ICMS	Strongly agree	21	42
	Agree	13	26
	Neutral	8	16
	Disagree	5	10
	Strongly disagree	3	6

4.4.2.3 Do you think that the C&BC department should change the current management support during the implementation process of Integrated Customs Management Systems?

The respondents were asked if they thought that the Customs and Border Control Department should change their current management so that they can be able to effectively implement the ICMS. The respondents filled in this questionnaire according to how each and everyone felt. Majority of the respondents who were 35 in number said yes, 14 of the respondents said no and one respondent was not sure on what to answer based on changing of the management. Each respondent stated his/her reason why they thought if the management should be changed so as to be able to implement the ICMS system effectively. This information was presented in the table shown below.

Table 4.4.2.2.3

Opinion	Number	Percentage
yes	35	70
No	14	28
Not sure	1	2
Total	50	100

4.4.3 Cost of Implementation

4.4.3.1 Do you think cost affects the implementation process of the integrated customs management systems in C&BC department?

The respondents were asked through the questionnaire if they thought that the amount of money used in the implementation process did affect the implementation process of the ICMS. There were three answers that were supposed to be answered in this questionnaire. The choices to be selected were yes, no or not sure. 42 (84%) of the respondents said yes that cost of implementation did affect the implementation process of the system. 6 (12%) of the respondents said no that cost did not affect the implementation process of the system while the remaining 2 (4%) were not sure on what to answer regarding this matter. This information was presented in the table shown below.

Table 4.4.3.1

Opinion	Number	Percentage
yes	42	84
No	6	12
Not sure	2	4
Total	50	100

4.4.3.2 What is the level of agreement with the following statements that relates to effects of cost on implementation process of the Integrated Customs Management Systems in C&BC

This questionnaire used the Linkert's scale to measure the level of agreement of the respondents. This was important because I was able to carry out my findings appropriately. The statements in this questionnaire were used to measure what indeed did affect the implementation process of the ICMS. The respondents were asked if the source of capital to be used in the implementation process did affect the implementation process of the ICMS. The respondents were able to give their views appropriately regarding this matter where 16 (32%) of the respondents strongly agreed with this statement, 10 (20%) agreed with the statement, 5 (10%) were neutral on this matter, 9 (18%) disagreed with that statement and the remaining 10 (20%) respondents strongly disagreed with that statement. This information was represented using a table shown below.

Table 4.4.3.2.1

Statement	Opinion	Total	percentage
Does the source of capital to be used in the implementation process did affect the implementation process of the ICMS	Strongly agree	16	32
	Agree	10	20
	Neutral	5	10
	Disagree	9	18
	Strongly disagree	10	20

The respondents were asked in the questionnaire if the amount of capital cost did affect the implementation cost of the ICMS. The respondents answered this question according to the way each felt about this matter. 19 (38%) of the respondents strongly agreed with this matter, 13 (26%) of the respondents agreed with this statement, 4 (16%) of the respondents were neutral on this matter, 9 (18%) of the respondents disagreed with the matter and the remaining 5 (10%) respondents strongly disagreed this matter. This information was represented in the table shown below.

Table 4.4.3.2.2

Statement	Opinion	Total	percentage
Does the amount of capital to be used in the implementation process did affect the implementation process of the ICMS	Strongly agree	19	38
	Agree	13	26
	Neutral	4	8
	Disagree	9	18
	Strongly disagree	5	10

The respondents were asked in the questionnaire if the availability of capital did affect the implementation process of the ICMS system. The feedback that I got was that, 15 (30%) of the respondents strongly agreed with the matter, 11 (22%) of the respondents agreed that the availability of capital did affect the implementation process if the ICMS, 8 (16%) of the respondents were neutral on the matter, 10 (20%) of the respondents disagreed while 6 (12%) of the respondents strongly disagreed with the matter that availability of capital in the department did affect the implementation process of the ICMS. This information was represented in the table below.

Table 4.4.3.2.3

Statement	Opinion	Total	percentage
Does the availability of capital affect the implementation process of the ICMS	Strongly agree	15	30
	Agree	11	22
	Neutral	8	16
	Disagree	10	20
	Strongly disagree	6	12

4.4.4 Staff Capability

4.4.4.1 Do you think staff capability affects the implementation process of the integrated customs management systems in C&BC department?

The respondents were asked if they thought that the staff capability did affect the implementation process of the ICMS. There were three choices where the respondents were required to fill in. The three choices comprised of yes, no and not sure. 38 (76%) of the respondents said yes that the staff capability did affect the implementation process of the system, 7 (14%) of the respondents said no that the staff capability did not affect the implementation process while 5 (10%) of the respondents were not sure on what to answer. This information was represented in the table below.

Table 4.4.4.1

Opinion	Number	Percentage
yes	42	84
No	6	12
Not sure	2	4
Total	50	100

4.4.4.2 What is the level of agreement with the following statements that relates to effects of staff on implementation process of the Integrated Customs Management Systems in C&BC department.

The respondents were asked their views regarding the effect that the staff had on implementation process of the ICMS. They were asked if the staff competence did affect the implementation process of the ICMS. Linkert's scale was used to measure the level of agreement of the respondents. 18 (36%) respondents strongly agreed, 12 (24%) agreed with this statement, 8 (16%) of the respondents were neutral on the matter, 9 (18%) of the respondents disagreed with the statement while 3 (6%) of the respondents strongly disagreed with the statement. This information was represented in the table below.

Table 4.4.4.2.1

Statement	Opinion	Total	percentage
Competence of the staff affects the implementation process of Integrated Customs Management Systems in C&BC department	Strongly agree	18	36
	Agree	12	24
	Neutral	8	16
	Disagree	9	18
	Strongly disagree	3	6

The respondents were asked via the questionnaire if the staff skills did affect the implementation process of the ICMS. The respondents answered this question well according to how each and every one thought. 23 (46%) of the respondents strongly agreed, 14 (28%) of the respondents agreed, 5 (10%) of the respondents were neutral on the matter, 6 (12%) of the respondents disagreed while the remaining 2 (4%) strongly disagreed. This information was represented in the table shown below.

Table 4.4.4.2.2

Statement	Opinion	Total	percentage
Skills of the staff affects the implementation process of Integrated Customs Management Systems in C&BC department	Strongly agree	23	46
	Agree	14	28
	Neutral	5	10
	Disagree	6	12
	Strongly disagree	2	4

The respondents were also asked if the availability of the staff did affect the implementation process of the ICMS. The answers that I got from the respondents were as follows, 20 (40%) of the respondents strongly agreed that availability of staff did affect the implementation process, 15 (30%) of the staff agreed, 4 (8%) respondents were neutral on the matter and they did not know what to answer, 5 (10%) of the respondents disagreed while the remaining 6 (12%) of the respondents strongly disagreed with the questionnaire. Those respondents who agreed and strongly agreed that availability of the staff did affect the implementation process of the ICMS system happened to be the majority. This information was represented in the table shown below.

Table 4.4.4.2.3

Statement	Opinion	Total	percentage
Availability of the staff affects the implementation process of Integrated Customs Management Systems in C&BC department	Strongly agree	20	40
	Agree	15	30
	Neutral	4	8
	disagree	5	10
	Strongly disagree	6	12

The respondents were also asked in the questionnaire if they supported that the C&BC Department should employ more qualified staff so that they can be able to carry out the implementation process efficiently. The respondents had three choices from where they choose from and the choices comprised of yes, no and not sure. 41 (84%) of the respondents said yes, 7 (14%) of the respondents said no and the remaining 2 (4%) of the respondents were not sure on what to answer. The respondents went further to explain their reason as to why they choose that particular answer. The data collected from the questionnaire was represented in the table below that showed all the response that was given by the respondents pertaining this question.

Table 4.4.4.3

Opinion	Number	Percentage
yes	41	82
No	7	14
Not sure	2	4
Total	50	100

4.5 Inferential statistical analysis

Inferential statistics was conducted so as to be able to generate the correlation analysis and the model of fitness.

A multiple linear regression analysis was done to find out the linear relationship between the dependent variable and independent variables. The dependent variable (Y) was Implementation of the integrated customs management systems in C&BC department. There were three independent variable which were Management capability (X_1), Implementation cost (X_2) and Staff support (X_3). This model would describe the linear relationship between the variables. The model was expressed as follows;

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

ε = error term, α = constant and β = coefficient of independent variables.

A. Descriptive statistics

The descriptive statistics of the various variables used in this model are shown in the table below;

Table 4.5.1: Descriptive Statistics for Dependent and Independent Variables

Variable	Mean	Std Dev	N
Implementation of the ICMS	14.8038	3.6278	50
Management support	11.2283	3.0041	50
Implementation cost	21.0276	4.5612	50
Staff capability	9.7150	2.8201	50

The table 4.5.1 shows the standard deviation and the means of the independent and dependent variables of the model.

B. Correlation between the variables of the model

The Pearson correlation coefficients showing the correlations among the independent variables and between the dependent and independent variables are shown in Table

Table 4.5.2: Correlations among Variables in the Regression Model

		1	2	3	4
1	Implementation of the ICMS	1.00			
2	Management support	0.0471	1.00		
3	Implementation cost	0.0412	0.069	1.00	
4	Staff capability	0.0344	0.027	0.019	1.00

*sig < 0.05

Table 4.5.2 shows the correlations among the variables in the model. There is significant correlation between the management support ($r = 0.0471$, $P < 0.05$), Implementation cost ($r = 0.0412$, $P < 0.05$) and staff capability ($r = 0.0344$, $P < 0.05$).

C. Summary of the regression model

The reported p-value was less than the conventional probability of 0.05 significance level as presented by the ANOVA statistics on the table 4.5.3 which indicated that the model was statistically significant. These results implied that the independent variables were good predictors of the factors that are affecting Implementation of the integrated customs management systems in C&BC department.

Table 4.5.3: Analysis of Variance.

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	7.255	7	1.0364	0.048	0.05
Residual	6.264	42	0.1491		
Total	13.716	49			

Table 4.5.4: Fitness of the regression model table.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	β	Std. Error	Beta		
(Constant)	6.6	0.142		1.432	0.03
Management support	0.745	0.183	0.75	2.158	0.01
Implementation cost	0.512	0.140	0.54	1.211	0.00
Staff capability	0.395	0.109	0.38	1.173	0.02

The predictive model derived from the analysis was;

$$\gamma = 6.6 + 0.745X_1 + 0.512X_2 + 0.395X_3 + e$$

This means that; A unit change in the management support; the level of Implementation process of Integrated Customs Management systems will change by 0.745 units.

A study conducted on factors that did affect the implementation of RECTS, this study found out that management was indeed a factor that affected its implementation. In that study, found that for a unit change in management support, the level of implementation process of RECTS system changed by 0.843 units (Kimani, 2017). This study was in some way related to this study since both are electronic systems which are working under similar conditions.

For a unit change in the implementation cost of the system, level of Implementation process of Integrated Customs Management systems will change by 0.512 units. A study was conducted in Japan in order to determine various factors that affected the implementation of automated customer declaration system. This study did identify that management was the major factor that affected its implementation. This study further concluded that for a unit change in the implementation the implementation of automated customer declaration system did however change by 0.471 units which was almost related to this study (Bharadwaj Dunna, 2008).

For a unit change in the capability of the staff, level of Implementation process of Integrated Customs Management systems will change by 0.395 units. These results were supported by results gathered from a related study that was very relevant to this study. A study was conducted in Canada to identify factors that affected the implementation Pre-arrival Review System (PARS) which is cargo tracking system. This study however identified staff capability to be the major factors that affected the implementation of Pre-arrival Review System in the country. That study concluded that for a unit change in staff capability level, the implementation process of Pre-arrival Review System changed by 0.295 units (Hatch & Dyer, 2004).

From this study results, Management support has the largest impact on the Implementation process of Integrated Customs Management systems which is then followed by cost of

implementation and later the staff capability which is seen to have the least impact on the Implementation process of Integrated Customs Management systems.

This data is supported by coefficient of determination also known as the R square of 84.2%. By this, it means that management support, implementation cost and staff competence variables explained 84.2% of the total variations in the dependent variable which is the implementation of ICMS.

Table 4.5.5: Model Summary

Model	R	R Square	Adjusted R square	Std. Error of the estimate
1	.918 ^a	.842	.836	.0125

a; predictors; (Constant), management support, implementation cost, staff capability.

As per the findings in this study, the R squared for the relationship between the three independent objectives (management support, implementation cost and staff capability) and the independent variable which is the implementation of ICMs was 0.842. Other factors that affect the implementation process of the ICMs accounts for 15.8% of all total variations in the implementation of the ICMs. The findings took note that because a high R-squared (coefficient of determination) was more critical in the analysis, the calculated R-squares for this ordinary least squares (OLS) regression were satisfying for this research reflecting a sufficient validity in the study. The researcher interpreted that the effect of this particular data set was a true reflection

that management support, implementation cost and staff capability had large effect on the implementation process of the ICMS in the C&BC department.

4.6 Discussion of the findings

This section indicates the discussion of the results of various tests carried out on the study. The results of each of the questions in this study are discussed.

4.6.1 How Management support affect the implementation of ICMS

The first study variable in this study sought to determine how Management support affect the implementation of ICMS. The findings of this study were statistically significant at a p-value of 0.01 which was in deed less than 0.05. this also indicates that a unit change in the management support, the level of Implementation process of Integrated Customs Management systems changed by 0.745 units. The findings are in line with a related study that was conducted by Chen (2014) in China who noted that management support played a vital role in the implementation process of cargo systems. The findings of this study were also in line with those of Floyd (2014) who identified management support as the major factor that affected the implementation of digital systems in the health sector.

4.6.2 How Implementation cost affect the implementation of ICMS

The second objective of this study was to find out how Implementation cost affected the implementation of ICMS. From the findings its was found out that implementation cost was statistically significant in this study with a p-value of 0.00 which was less than 0.05. this indicated that a unit change in the implementation cost of the system, level of Implementation process of Integrated Customs Management systems changed by 0.512 units. These findings were in line with those of Ashok (2017) who found out implementation cost was a crucial factor

in the implementation of oil mining system in Nigeria. That study revealed that the implementation cost needs to be catered for in order to ensure a successful implementation process of the oil mining systems.

4.6.3 How staff capability affects the implementation of ICMS

The third variable evaluated in this study was the staff capability. This variable was evaluated to check how staff capability affects the implementation of ICMS. From the findings, we found out that staff capability was statistically significant with a p-value of 0.02 which was less than 0.05. the findings also indicated that for a unit change in the capability of the staff, level of Implementation process of Integrated Customs Management systems changed by 0.395 units. This was in line with a study that sought to identify the effect of staff capability on the implementation of digital clearing systems in Uganda. In that study, staff capability was the independent variable that needed to be evaluated. The findings found out that staff capability directly affected the implementation process of the digital clearing system in the country (Sohrab et al, 2013).

CHAPTER FIVE

SUMMARY CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

Summary of the study, its conclusion and the recommendations will be presented in this study. The main aim of this particular study was to identify the major different factors that affected the implementation of ICMS.

5.2 Summary of Findings

5.2.1 Management support.

One major objectives of this study were to try and establish the effect of management support in the implementation of digital systems. In this case, majority of the respondents 33 (66%) indicated that the management support affected implementation process, 15 (30%) of the respondents disagreed that management did affect implementation process of the ICMS systems. The remaining seven respondents who made up the 2 (4%) were not sure on what to answer regarding the management matter. A research was also done on the effect that change in management will have on the implementation process of digital clearing system. 27 (54%) of the respondents strongly agreed, 12 (24%) of the respondents agreed, 5 (10%) of the respondents were neutral on the matter, 5 (10%) of the respondents disagreed while the remaining 2 (4%) of the respondents disagreed strongly. A research was also done on the effect that the type of management will have on the implementation process. 32 (64%) of the respondents said that the type of management under control will affect the implementation of digital clearing system at large while 12 (24%) said that the type of management does not affect the implementation process and the remaining 6 (12%) were not sure on what to answer. The research also found out

that the level of management support did affect the implementation process since 22 (44%) of the respondents strongly agreed with that statement, 9 (18%) of the respondents agreed with that statement, 6 (12%) of the respondents were neutral of that matter, 7 (14%) of the respondents disagreed with the statement while 6 (12%) of the respondents strongly disagreed that the level of management did not affect the implementation process of the ICMS. The findings were further supported by the regression analysis that indicated that the management support was the most significant variable that affected the implementation process of digital clearing systems at 0.02 with a beta coefficient of 0.745.

These findings were supported earlier by (Evan, 2013) who established that management support does play a major part in implementation of ICMS systems within the organization. Further findings in line with the management support was by (Douglas, 2015) who said that the management plays as an oversight body within an organization and by this, they oversee all the operations been conducted in the organization. Since implementation is an activity that occurs within an organization, the management body must inspect and ensure that the implementation process of different systems within the organization are implemented correctly.

On the management aspect, the study revealed that the C&BC department's management support did not oversee the implementation of the ICMS systems in the organization. This led to poor implementation process of the ICMS systems in the organization. So as to solve this, the department had to find measures which will ensure that the management support performs its mandate to the fullest.

5.2.2 Implementation cost.

The study sought to establish how implementation cost did affect the implementation of ICMS. The collected data proved that 6 (12%) of the respondents said no, 42 (84%) of the respondents said yes and the remaining respondents who were 2 (4%) were not sure on what to answer. The information collected proved that 16 (32%) of the respondents strongly agreed with this statement, 10 (20%) agreed with the statement, 5 (10%) were neutral on this matter, 9 (18%) disagreed with that statement and the remaining 10 (20%) respondents strongly disagreed. Implementation cost happened to be the second most significant factor that had effect on the implementation of ICMS at 0.01 with a beta coefficient of 0.512.

These findings are also supported by Chen & Yang (2014) who researched about the IT capability and the influence it had on the performance of the organization. Further findings that revealed that a reliable source of capital was important in the implementation process of any digital clearing systems was done by Hammadi & Ohlman (2014) who talked about the different factors that a current business has to overlook to ensure its success. Cost of implementation was the major factor hence organizations should evaluate the implementation cost when implementing various digital systems.

With regard to implementation cost, the findings revealed that the C&BC department has not directed enough capital that is to be used when implementing the ICMS systems. There is high technical failure of the systems that is related to cost that was used during implementation.

5.2.3 Staff capability.

The study sought to investigate how the staff capability did affect the implementation of ICMS. A questionnaire asked if the respondents thought that the staff capability did affect the

implementation of ICMS. 38 (76%) of the respondents agreed that staff capability affected implementation of ICMS, 7 (14%) of the respondents said no that the staff capability did not affect the implementation process while 5 (10%) of the respondents were not sure on what to answer. Further research question was asked if they thought that the skilled staff were important for the implementation process of the Integrated Customs Management systems. 23 (46%) of the respondents strongly agreed, 14 (28%) of the respondents agreed, 5 (10%) of the respondents were neutral on the matter, 6 (12%) of the respondents disagreed while the remaining 2 (4%) strongly disagreed that staff skills did affect the implementation process. A question on availability of the customs staff was asked. 20 (40%) of the respondents strongly agreed that availability of staff did affect the implementation process, 15 (30%) of the staff agreed, 4 (8%) respondents were neutral on the matter and they did not know what to answer, 5 (10%) of the respondents disagreed while the remaining 6 (12%) of the respondents strongly disagreed that the availability of the staff did affect the implementation process of ICMS. This matched to the regression analysis summary that staff capability was the third most significant factor at 0.02 with a beta coefficient of 0.395.

These findings were in line with the findings and one related finding stated that Tanzania had lost some of its tax revenue due to the level of incompetence of its working staff. The staff in the country was not able to account for all the tax that was collected in the country hence leading to losses (Epaphra, 2015). Another study on staff capability was done and it identified that staff learning is important and the organization should train its staff to ensure that they are capable of carrying different operations within the organization that will help it be able to grow as required (Hatch & Dyer, 2004). On the staff capability aspect, the findings revealed that the C&BC department needs to train its staff so that they can be able to implement the digital system

efficiently. The staff needs to be trained how to operate the Integrated Customs Management system and by this, implementation process of the system will be very easy.

5.3 Conclusion

According to this study, I concluded that management support, cost of implementation and staff capability were the major factors that did affect the process of implementing the ICMS. This study also concludes that for C&BC department need to properly implement the ICMS systems, it must ensure that the management support know the capabilities of their staff and that proper technology is used in the implementation process. There must be fit between management, staff and the level of technology at the time of implementing the ICMS. During the implementation process, stakeholder involvement is a key factor in ensuring that all parties are in agreement regarding the implementation process.

In conclusion, it is viewed that proper implementation of ICMS is a critical factor in improving collection of customs duties, reducing revenue loss, saving time and reducing smuggling and dumping of goods. The C&BC department should ensure that the aforementioned factors are observed and by this, the department will benefit a lot from the Integrated Customs Management systems.

5.4 Recommendations

5.4.1 Recommendations on the management

The study recommends that the C&BC department should ensure that the management body is ensuring that all the clearing operations are carried out effectively. The department should also ensure that the responsible management unit has implemented the Integrated Customs Management systems as required. This should be ensured not only in the designated areas, but

also in all the different sections within the department that require Implementation of any new system. The management support should work restlessly in ensuring that the Integrated Customs Management systems is implemented accordingly so as to be able to complete with other countries in exporting or importing of goods. When the ICMS system is well implemented in the department, clearing time will be reduced and this will be more transparency this will attract more customers.

5.4.2 Cost recommendations

This study suggests that the C&BC department should identify the amount of cost that is required in implementing the Integrated Customs Management systems. The cost should be manageable such that all the implementation process of ICMS system are catered for. By this, the customs department will be able to implement Integrated Customs Management systems with ease. More funds need to be channeled towards the C&BC department of KRA because this is major department of the organization. This is important because different digital systems have had a positive impact to the customs department so if the department wants to leap more from the clearing process, the more funds need to be budgeted towards the implementation process of Integrated Customs Management systems. ICMS systems will help in saving time wasted when doing the manual clearing process since the Customs processes will be automated.

5.4.3 Recommendations on the staff capability

The study further recommends that the department need to train its staff on how to implement the Integrated Customs Management systems. More funds need to be channeled towards the training of the workers in the department. This will make the implementation process be very easy for the department when carrying out digitalization process within the department. The study also recommends that the department need to do a pre-test on the systems before they think of buying

and implementing any new digital system that will be used in the organization. Study further recommends that all the staff need to be involved in the future decision making in the organization that will help in achieving the organizational goals.

5.5 Suggestions for further study

The study investigated the factors that are affecting the implementation process of Integrated Customs Management systems in C&BC department. Further research recommends further investigations on:

1. Further studies on how other related systems need to be implemented in other government departments to ensure a successful implementation process.
2. Further study be conducted in other areas that I did not go to and find out other factors that affect implementation of integrated Customs Management systems in those particular areas.

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APPENDIX I
Survey Cover letter

Dear Participant:

My name is Derrick Matheka, I am a student in Kenya School of Revenue Administration. I am undertaking research in **FACTORS AFFECTING IMPLEMENTATION OF INTEGRATED CUSTOMS MANAGEMENT SYSTEMS IN CUSTOMS AND BORDER CONTROL DEPARTMENT OF KENYA**. I am humbly requesting you to contribute with your views and answer the asked questions.

One will be required to answer these questions in a period that is approximated to be twenty-five minutes. Answering the questionnaires will be risk free for every respondent and there will be no any kind compensation. You don't need to include your name when filling the questionnaires in order to ensure that there is privacy of data. This is voluntary for everyone who wishes to participate in this research.

The data collected will provide useful information regarding the perception of tax fairness and will be helpful to the policy maker in streamlining the customs digital clearing system. Completion and return of the questionnaire will indicate your willingness to participate in this study. If you require additional information or have questions, please contact me using the email listed below.

Thank you for helping me in my education endeavors.

Sincerely
Derrick Matheka

APPENDIX II: QUESTIONNAIRES

Section A: General Information

1. Gender

Male ☐ Female ☐

2. Marital Status

Married ☐ Single ☐ other (Please specify) ☐

3. Age group

18-29 Years ☐ 30-39 Years ☐ 40-49 Years ☐ 50 Years and above ☐

4. What is your highest level of education?

Primary ☐ Secondary ☐ College ☐ University (Undergraduate) ☐
University (Post-graduate) ☐

5. Which department do you work in?

IT department ☐ Management department ☐ Customs Entry department ☐
Manifest department ☐ Customer care department ☐

Section B: Implementation of the integrated customs management systems in C&BC department

1. Do you think that Implementation of integrated customs management systems is important to C&BC department? (Tick appropriately)

Yes [] No [] Not sure []

2. Who do you think affects the implementation process of the integrated customs management systems in C&BC department the most?

Only senior management in IT department ☐

Senior managers in all departments ☐

Senior managers and Middle-level managers ☐

All levels (senior managers, Middle-level managers and Support staff ☐

Others stakeholders) (please specify)

3. What is the level of agreement with the following statements that relates implementation process of the integrated customs management systems in C&BC department (**Use a scale of 1-5 where 1= Strongly agree; 2=Agree; 3=Neutral; 4= Disagree and 5=Strongly disagree.**)

Statements	5	4	3	2	1
Customs department require proper implementation process of integrated customs management system					
C&BC department need a prior test before implementing the integrated customs management system					
The customs department needs to implement the best integrated customs management systems					

Section C: Management support

1. In your own opinion, do you think management support affects the implementation process of the integrated customs management systems in C&BC department?

Yes ☐ No ☐ Not sure ☐

2. What is the level of agreement with the following statements that relates to effects of management support on implementation process of the Integrated Customs Management Systems in C&BC department (Use a scale of 1-5 where 1= Strongly agree; 2=Agree; 3=Neutral; 4= Disagree and 5=Strongly disagree.)

Statement	5	4	3	2	1
Type of management support affects the implementation process of Integrated Customs Management Systems in C&BC department					
Change in management affects the implementation process of Integrated Customs Management Systems in C&BC department					
The level of management support affects the implementation process of the Integrated Customs Management Systems in C&BC department					

3. In your opinion, do you think that the C&BC department should change the current management support during the implementation process of Integrated Customs Management Systems?

Yes ☐ No ☐ Not sure ☐

(Explain)

.....

Section D: Cost of Implementation

1. In your own opinion, do you think cost affects the implementation process of the integrated customs management systems in C&BC department?

Yes [] No [] Not sure []

2. What is the level of agreement with the following statements that relates to effects of cost on implementation process of the Integrated Customs Management Systems in C&BC department (Use a scale of 1-5 where 1= Strongly agree; 2=Agree; 3=Neutral; 4= Disagree and 5=Strongly disagree.)

Statement	5	4	3	2	1
Source of capital cost affects the implementation process of Integrated Customs Management Systems in C&BC department					
Amount of capital cost affects the implementation process of Integrated Customs Management Systems in C&BC department					
Availability capital affects the implementation process of the Integrated Customs Management Systems in C&BC department					

3. In your opinion, what do you think that the C&BC department should direct more funds to the relevant department during the implementation process of Integrated Customs Management Systems?

Yes [] No [] Not sure []

(Explain)

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.....

.....

Section E: Staff capability

1. In your own opinion, do you think staff capability affects the implementation process of the integrated customs management systems in C&BC department?

Yes [] No [] Not sure []

2. What is the level of agreement with the following statements that relates to effects of staff on implementation process of the Integrated Customs Management Systems in C&BC department **(Use a scale of 1-5 where 1= Strongly agree; 2=Agree; 3=Neutral; 4= Disagree and 5=Strongly disagree.)**

Statement	5	4	3	2	1
Competence of the staff affects the implementation process of Integrated Customs Management Systems in C&BC department					
Skills of the staff affects the implementation process of Integrated Customs Management Systems in C&BC department					
Availability of the staff affects the implementation process of the Integrated Customs Management Systems in C&BC department					

3. In your opinion, what do you think that the C&BC department should employ more qualified staff during the implementation process of Integrated Customs Management Systems?

Yes [] No [] Not sure []

(Explain)

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