

**OPERATIONS MODERNIZATION STRATEGIES AND SERVICE  
DELIVERY AMONG NON-COMMERCIAL  
STATE OWNED ENTITIES IN KENYA**

**NORBERT OUMA ONDENG**

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## DECLARATION

I declare that this research project is my original work and has not been submitted in any other university. No part of this project may be reproduced without the prior permission of the author and/or The University of Nairobi authority.

Signature .....

Date .....

**Ondenge N. O**

**D61/87942/2016**

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

Signature .....

Date .....

**Dr. Magutu P.O**

**Supervisor,**

**School of Business,**

**Department of Business Administration,**

**University of Nairobi.**

## **DEDICATION**

This research project is a special dedication to my parents Mr Joshua Ondenge & Mrs Anastacia Ondenge who sacrificed their all to ensure that I get good education against all odds.

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## ACRONYMS

<b>BPR</b>	Business Process Re-engineering
<b>BPM</b>	Business Process Management
<b>BSC</b>	Balanced Score Card
<b>CSOE</b>	Commercial State Owned Entities
<b>ISC</b>	Inspectorate of State Corporations
<b>ISO</b>	International Standards Organization
<b>NCSOE</b>	Non- Commercial State Owned Entity
<b>OMS</b>	Operations Modernization strategy
<b>PC</b>	Performance Contracting
<b>RATER</b>	Reliability, Assurance, Tangibility, Empathy and Responsiveness

## **ABSTRACT**

Operations Modernization is key to the improvement of service delivery to a firm. Modernization strategies need to be put in place by firms to steer the firms into achieving excellence in service delivery. Service delivery entails speedy, cost effective and efficient way to ensure customer satisfaction. Use of effective operations modernization strategies by a firm enables the firm to be more efficient at delivering its services. Non-commercial state owned entities offer public services to Kenyan citizens. These entities are state funded and most of the services they offer are monopolistic in nature. The entities therefore tend to be less efficient in service delivery as they lack motivation to be competitive. Lack of the main competitive objectives of a firm do not apply to them: that is, profitability and threat from competitors. In order to achieve excellence in service delivery, the firms need to adopt strategies on operations modernization. The study will begin by understanding the concept of operations management, modernization strategies, service delivery, and non-commercial state owned entities in Kenya. Then examine how service delivery in non-commercial state owned entities are impacted. Review of literature of previous work done on the subject, collect and analyse data in order to draw a conclusion.

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Study

Globally the operations modernization element of a firms is effectively the part of the day to day activities that changes the contribution to an association into the yield that gives extra an incentive to the end client than the entirety of the contributions to the framework. Associations that have concentrated on the improvement of the activities modernization are the ones that have possessed the capacity to indicate long haul development and accomplishment inside the commercial centre. Imperatively, in these circumstances, achievement has not been managed by a specific development, instead it is their ability to continuously satisfy their customers; this defines their level of service delivery (Kimson & Rupert, 2015).

Organizations long-term success is determined by the operations modernization strategies conceptualized. Operation management development means looking at better and innovative methods of providing superior value to the companies' clients. Value might have several meaning. Managers should align the operation management with companies overall strategies. Globalization coupled with the fast changing technology has fashioned a hyper-competitive firm's environment that require company leadership to continuously seek the latest and ground-breaking ways to beat the competition. To effectively execute this strategies, managers have to undoubtedly appreciate the core competencies of their organizations and distribute the company's resources on improving and maintaining these competencies. Prosperous companies nowadays are those that build up strategies that bundle up goods and services in one offering or combine benefits, this bundle tend to meet and solve clients' problems instead of the company just promoting it goods (Johnstone *et al*, 2016).

Technological changes can be directly attributed to the factors necessitating operations modernization (Green, 2015). These changes have radically affected the major and fundamental framework in operation management: that of selecting amongst competing priorities. In the midst of technological change, managers do not have to make pure concessions between competing priorities as they did in the past. The key to developing successful operation strategies lies in the creation or additional value to the firm. There are four fundamental competing priorities namely: flexibility, service delivery, cost and quality. This priorities directly transform into attributes that explain the variety of processes that an organization can improve of it offering service delivery (Slack, 2006).

### **1.1.1 Operations Modernization Strategies**

Operations modernization alludes to a change of how the firm leads its day by day tasks (Harry & Schroeder, 2015). Task modernization as the choices and activities which set the job, destinations and exercises of the running of a specific association as characterized by Slack *et al*, (2015). Operations modernization is the attempt to continuously improve the operations of an entity in the face of ever changing competitive environment. This requires operations modernization strategies; which are strategies set up in order to guarantee the task modernization prevails with regards to accomplishing it proposed objective. Mintzberg and Waters (2016) see tasks modernization as an example, inferring a consistency in vital choices and activities after some time. Slack and Lewis (2011) additionally characterize activities modernization strategies as a chain factors which encourage the procedure of transformation of an organizations contribution to yield.

Operations modernization strategies are worried about the diagram of vital activities and choice that decide the exercises capacities and targets in tasks (Slack et al., 2015). Activities modernization strategies have much of the time been explored inside business elements. (Dark and Cousins (2016) benefited an once-over demonstrating the associations between an organizations tasks and current management of non-commercial state owned entities. Now days the influence of operations modernization strategies has gone past the domain of task administrators to that of firms' strategies (Payne, 2015). It additionally takes a gander at all the level of the organizations and the structures that can accomplish the organizations and eventually the corporate key goal and subsequently limits to issues of individuals, assets, forms, and so on. Task strategies are a long haul plan setting out how lion's share of the association will be used for a higher possibility of arrangement of assets to the corporate strategies (Slack, 2016).

An appropriate operations modernization strategy is basic to an association not just as it will decide the degree to which its association system can be actualized, yet in addition as its tasks can be a wellspring of upper hand. It typically has a vertical relationship in the corporate chain of importance with firms' methodology. It may turn out in a best down or a base up process with respect to firms' technique. Additionally, it may be created in a reaction to advertise prerequisites or be founded on the abilities of its activities assets. (Slack & Lewis, 2016) saw that this offers ascend to four points of view on tasks methodology. Top down point of view is one in which the activities technique is gotten from top administration. Such is steady of the firms' strategy and is concerned with what the firms wants operations to realize (Davis, 2016).

### **1.1.2 Service Delivery**

Service has been defined as a product or activity that meets the users' needs. Service delivery consequently includes all aspects of the procedure that are required to make the service accessible to the client. Service delivery includes understanding of the customer's needs, the assistive innovation, and progressing assessment of the result (James, 2016). Service delivery is a fundamental capacity in the connection between non-business state possessed elements and open. In the course of recent years the acknowledgment that open are clients has turned out to be progressively critical to the way non-business state claimed elements think and act. It is in this manner needful for the state, and specifically, the non-business state claimed substances, to consider methods for bettering service delivery to the Kenyan nationals.

Public have a right to demand quality services from the service providers. Quality Service is that address their issues: quick, open, of the coveted frame and at humble expense, and all enveloped by well-disposed treatment. This applies especially to the non-commercial state-owned entities as a supplier of key public services. The fact that the non-commercial state owned entities is a monopolist in products and services they offer, and that such services are offered for the good of the citizens, gives the administration's association with its customers a twofold stacking, and in certainty orders additional exertion (Chukwuemeka et al., 2014). Great quality and reasonable service delivery is likewise a condition for the great picture of non-business state possessed substances. The importance of good service delivery for the picture that open have of the non-business state possessed elements isn't constantly esteemed reasonably. Service delivery isn't a secluded something, yet is a piece of a mind boggling connection between non-business states claimed elements, society and open.

Provision of quality service ought to surpass client's desire. Clients contrast the apparent service and the normal service and that if the apparent service is beneath desire; they lose enthusiasm with the supplier while the inverse makes dependability (Parasuraman, Zeithaml & Berry, 2015). Thus, they discovered five determinants of service quality by request of significance that is; unwavering quality, responsiveness, (readiness to encourage clients and provoke service confirmation), the capacity to pass on trust, sympathy and individualized regard for clients. Studies have discovered that all around oversight non-business state possessed elements have the accompanying practices; vital idea and best administration bolster, exclusive requirements of service delivery, service observing frameworks, fulfilling client's protests (Collins, 2015).

Numerous native non-business state possessed elements is the most unmistakable, it is likewise the layer of government with which they have most contact in their regular day to day existence as supported by David (2015). The improvement of data innovation and media are having a verifiable effect on this relationship. They are allowing other government bodies to get closer to general society, yet the reality remains that in the individual methodology it is non-business state claimed elements that are nearer to the national.

### **1.1.3 Non-Commercial State Owned Entities in Kenya**

State corporations are body corporates established under Section 3 of State Corporations Act, Cap 446 laws of Kenya. There are two hundred and twenty state corporations in Kenya under different ministries (Inspectorate of State Corporations [ISC], 2018). The corporations are formed to perform various roles such as: financial, commercial/ manufacturing, regulatory, public universities, training and research, services, tertiary education and training and regional development authorities.

Commercial state corporations are those that are engaged in profit making ventures. They make products and services which are consumed by the citizens at a competitive fees just like the private entities. Most Commercial State corporations have employed modern operations modernization strategies in order to compete favourably with the private entities (Dickson, 2015). Non-commercial corporations do not have robust, competitive and modern operations modernization strategies. This is so because of the nature of goods and services they provide. They do not have to be competitive to stay in operation as profitability is not one of their key objectives. The services they offer are monopolistic in nature. However, some non-commercial corporations are coming up with self-sustainability programs to help modernize their operations and to augment funding from the state. For example, University of Nairobi core mandate is higher learning, but it has created a commercial entity called University of Nairobi Enterprise Services Limited (UNES).

## **1.2 Research Problem**

Operation modernization strategies and service delivery refer to the ways and means of arrangement of social or open merchandise that will advance financial prosperity of the residents. Open services offered by non-business state possessed substances are various and may incorporate the arrangement of open utilities, security, monetary advancement ventures, and the requirement of the law et cetera. The delivery of open merchandise and enterprises by non-business state claimed elements root is gone for moving the way of life of the masses to the following level. Most non-commercial state owned entities are usually faced with a lot of inefficiency in service delivery. Most of their operations are state funded, and therefore, do not dependent on their profitability for survival. Their focus is on delivery of certain essential services to the public and not sustainability (Angahar, 2016).

Various studies on operations modernization strategies on service delivery of county governments have been conducted locally. Some include; Wamae, (2014) who studied role of procurement function in enhancing service delivery in non-commercial state owned entities. She found that there is a significant positive relationship between the Technology, Staff competency, Stakeholder influence and Government policy with service delivery in non-commercial state owned entities. Mugambi and Theuri (2015) studied challenges experienced by reverted governments in Kenya in spending plan arrangements. The examination found that the arranging procedure was not enough done and should have been enhanced tasks in order to issue a substantial stage for setting up the financial plan.

Lack of competitiveness among non-commercial state owned entities in Kenya usually leads to poor quality of service delivery. The citizens then do not get value for their money as asserted by (Kimani, 2016). Another example is of Kenya Revenue Authority (KRA). KRA has put in place several initiatives to realize operations modernization. The first initiative was Revenue Administration Reform and Modernisation Programme (RARMP). RARMP realized several achievements, such as; increase in revenue collection to break a trillion mark while keeping collection cost below 2%; online customer self-service; and opening up of support centres country wide. Other initiatives include setting up of business transformation leadership office and automation of various business processes as stated by Green (2015).

Muriu (2016) completed an investigation on the nature and impact of non-business state possessed elements interest on decentralized service delivery in Kenya. He found that the non-business state claimed elements cooperation through has had negligible effect on the decentralized service delivery in nearby specialists. He likewise found that the

choice of tasks had been restricted to a couple of assets and consequently the general impact even where completely applied could just have a little effect. Another study by Odalonu, (2014) on operations modernization strategies to improve service delivery in local authorities also failed to clearly point out the specific operational intervention area that affects service delivery. They have all failed to address the tactful operations modernization strategies that can enhance service delivery. Finally a study by Henry (2016) on operations modernization strategies and its importance to performance of public firms in Kenya was unsuccessful to give the relationship between operations modernization strategies and its major contributions of performance in public firms and suggested that more studies should be carried out to come up with solutions to those problems.

World Bank (2013) asserts that many problems facing non-commercial state corporations are; inadequate financial resource allocation, lengthy procurement procedures, fragmented institutional frameworks and inefficient regulatory framework and poor maintenance and rehabilitation of existing infrastructure. This could result in complacency by the staff and poor work ethic culture. There is also a widespread tendency not to invest in modern technology to improve service delivery. State corporations are prone to political interference. Such could include poor allocation of funds to carry out modernization reforms. Modern and robust operations modernization strategies are required to turn around or improve the efficiency of such non-commercial state owned entities. The modernization strategies employed by non-commercial state owned entities can only be speculated. The study therefore aims to fill the gap by establishing the modernization strategies commonly used by NCSOE in Kenya by answering the following question; what operations modernization strategies are

employed by the NCSOE in Kenya? And what is the relationship between the operations modernization strategies and service delivery among NCSOE in Kenya.

### **1.3 Research Objective**

The objectives of the study will be:

- i. To determine the Operations modernization Strategies used by Non-Commercial state owned entities in Kenya; and
- ii. To establish the relationship between the Operations modernization Strategies and Service delivery in Kenya

### **1.4 Value of the Study**

This findings will increase knowledge and understanding of the operations modernization strategies to be formulated for efficient and effective service delivery in non-commercial state owned entities. This will provides a basis for; improve interventions to address the deficiency to efficient service delivery, improve the effectiveness of the linkages between research, policy and practice and the support required from all factors to ensure effective service delivery.

The study will be useful to the government in identifying the most effective operations modernization strategies to put in place in order to improve the service delivery of non-commercial state corporations. The study will inform the stakeholders on other alternative incentives to profitability that can be employed in order to motivate the non-commercial state corporations to be competitive. Exploring Operations modernization from a vital perspective ought to subsequently upgrade the scholastic writing with profitable bits of knowledge and furthermore help pioneers in getting a handle on the ongoing advancements and fundamental vital building-squares of the operations modernization that need to be implemented.

Thus, the goal in this paper is to consolidate the research that focuses on the service delivery improvement of corporations in the perspective of non-commercial state corporations. The aim will be to: audit and merge the present group of learning with respect to corporate-level activities modernization strategies to comprehend its birthplaces, additionally pivot the examination of the present organizations tasks on a procedure and look at it from a vital administration perspective by investigating the substance, and in addition the procedure, with the aim of improving service delivery. Although the approach is narrowed to non-commercial state corporation perspective, the study will allow better comprehension of the impact of operations modernization in other not for profit organizations.

# **CHAPTER TWO**

## **LITERATURE REVIEW**

### **2.1 Introduction**

Operations modernization strategies are important to an organizations quality of service delivery as it determines how the organization optimally puts into use its resources. This chapter will review the theoretical literature on operations modernization strategies and service delivery. It will also look at the work of empirical reviewers on the same subject.

### **2.2 Theoretical Review**

#### **2.2.1 The trade-off concept and the sand cone model**

This is one of the oldest model in the field of operations strategy. This model was founded by Skinner in 1969. The approach of this model on the basis of specialization. The fundamental argument in the model is that firms may not excel in all the five competencies of operations; cost, quality, speed, dependability and flexibility. That a firm would select only some of competencies to build competitive advantage on. Trade off would therefore occur for the competencies not focused on. That a firm will rely on the market analysis (customers' needs) as a basis to the competencies to focus on. Skinner argued that operations cannot "be all things for all people". Organizations need to identify a single operations goal and set it as competitive priority. It is against these goals that operations decisions and actions would be made. Operations can become a formidable competitive weapon for organizations that allow this function to play a full strategic role as argued by Skinner (1985).

This theory is applicable to operations modernization strategies and service delivery as it emphasizes the need for an organization to focus on those operations competencies that they can excel in and trade of those they cannot. At no time will the organization be able to excel in all the operations objectives. Focusing in all will lead to suboptimal performance. NCSOE needs to define what is key to the customers they serve, review their internal and external competencies and then develop strategies in line with such objectives. For example, most NCSOE are funded through taxpayers money, it could be the interest of the government that the service be offered at the least cost possible. It could also be the interest of the government that the service reaches people speedily; hence decentralize the service points like the case of Huduma centers. Trying to provide the least cost service and speedy provision of service may not be attained simultaneously. This may lead to poor performance in both. Organizations therefore need to put in place those strategies which will ensure the realization of the selected

### **2.2.2 Wheelwright and Hayes Four Stage Model**

This model was developed by Wheelwright and Hayes (1984). The model also recognizes that operations can be a source of competitive advantage to an organization. It further categorizes organizations based on their attitude towards operations strategies. Four stages have been identified whereby organizations strive to reach the fourth stage. The first stage is known as internally neutral stage. The organization at this stage, the operations of an organization is majorly internally facing and are reactionary there by not providing competitive advantage. The main focus of organizations in this stage is to ensure things do not go wrong.

The second stage is externally neutral; organizations in this stage try to put operations strategies just to make them be at par with peers in the industry. The aim is to make operations function to be as good as the competition. Organizations in this stage depend on benchmarking with the industry peers just to make sure the operations functions does not cause the organization to lag behind. Most NCSOE are caught up at this stage. This is because they lack such competitive goals such as profitability in order to outdo each other.

The third stage is referred to as internally supportive. Here the organizations has operations strategies in place and are aligned and derived from the business strategic objectives. The operations strategies are supportive of the business strategic objectives. Private entities and most Commercial State Owned Entities are at this stage. The organizations are well placed to achieve competitive advantage over other industry players. Last stage is the externally. Organizations at this stage use operational excellence to achieve their business objectives. Organizations at this stage are radically different as the level of competitive advantage they enjoy. Operations based strategies drive the business strategies at this stage. There is deliberate investment in operations modernization strategies and continuous improvement to make the organizations resources become source of competitive advantage.

The four stage theory explains the stages an organization need to progress through in order to become competitive in the industry. In the private sector where competition is stiffer many organizations tend to work very hard to attain the fourth stage. However, in public sector, the state owned entities are cushioned from some of the harsh environment through legislations hence are guaranteed of survival. They therefore put little effort to attain stage four.

### **2.3 Operations Modernization Strategies**

Modernization has been defined as not a type of change, but the response of a firm to changes around it (Halpern, 1966). In the same vein, the operations modernization strategies are firms' response to the environmental changes. Organizations do change after consider presentation of better approaches for considering, acting or working (Schalk, Campbell & Freese, 1998). Associations change to adjust to the earth Leana and Barry (2000) and to enhance their execution (Boeker, 1997).

Entities are faced with uncertainties in attainment of their objectives and this poses threat to their success as stated by Crown (2014). In attempt to encounter these threats, they ought to think of better ways of carrying out their operations. Over the recent years the nature and dynamics of operation management systems have changed drastically due to the advancement in technology. Entities have been forced to formulate strategies to adapt to the developing recurrence and size of changes in innovation and administrative strategies as argued by Lewis (2015).

Operations strategy refers to the arrangement of choices identified with objectives, assets and operational capacities of an association (Hayes, 2015). Through the operations modernization strategies, the firm is able to not only conduct its daily operations efficiently, but also to gain competitive advantage thus improving the profitability of the firm. Various operations modernization strategies have been identified by scholars such as quality products, efficient supply chains, inventory control and cost efficient practices. The studies done however have shown that the strategies differ from firm to firm (Bertrand & Fransoo, 2016).

One of the goals of operations modernization is to ensure a firm strives to provide goods/ services that have a distinguishing factor in market (Reilly, 2012). This is attained if the products/ services provided by the firm are completely different from what other firms are providing. The key factor for developing differentiation as an effective strategy method is identifying what exactly will make a particular firm's product unique from the rest, this may be through; enhancing the quality of service, boosting the image of the firm, contribution in customer associations, item, improved delivery framework, and the advertising approach have been proposed to separate a firm (Davidson, 2014).

### **2.3.1 Corporate Governance and Ethics**

Corporate governance refers to the set practices, procedures and standards by which a foundation is controlled and coordinated defined by Mayer (1997). Administration structures and standards distinguish the task of the rights and duties among the distinctive leaders in the companies, for example, the directorate, chiefs, investors, loan bosses, inspectors, controllers and different partners. It likewise incorporates guidelines and methods for settling on choice in corporate issues (Kim & Nofsinger, 2007). Ethics on the other hand refer to moral principles that guide the conduct of officers at their place of work. Ethical conduct comprise; integrity, probity, honesty, diligence, trust and fairness.

Corporate governance and Ethics is a major issue in state owned entities. There is a high tendency of abuse of office among the employees. There has been sustained campaign to instill ethical practices and good corporate governance among state owned entities in the recent past. This has led to modernization of various aspects of operations in order to improve service delivery.

### **2.3.2 Performance Contracting**

Performance contracting is a management tool that is used to measure the performance of organizations. It identifies an organizations goals, and breaks down the strategic objectives into measurable performance indicators. The PC also spells out the methodology for performance measurement and the improvement to achieve the organizational goals. PC entails cascading of the organizational targets from organization, functional groups, up to individual level (Guerra-López & Hutchinson, 2013). The most commonly employed models for performance measurement is Balance Score Card (BSC). BSC however, should not be used as a tool to evaluate past performance but rather to communicate the strategy of the organization and to align individual, group goals to the business goal (Kaplan & Norton, 1996). Performance measurements leads to continuous improvement as individuals and groups strive to achieve their goals. This results in innovations to modernize the organizations operations.

### **2.3.3 ISO certification**

Certification is one ways organizations ensure standardization of an organizations operations. One such internationally reputable standardization body is ISO certification. There was no formal quality standard until 1950s (Hoyles, 2005). There are series of quality standards that have since been formed. ISO 9001; Quality Management System, ISO 14001: Environmental Management System, ISO 18001; Occupational Health Safety, ISO27001; Information Security Management System, ISO 31001; Risk Management System and so on. ISO 9001: Quality Management System is the most commonly used standard.

This standard outlines the requirements for evaluating activities, process improvement, data analysis, contracting, task and activities scheduling and process documentation. The standards are reviewed after every five years. The continuous review of the ISO standards help align processes hence modernization of operations. State Owned Entities were directed by the Ministry of Industrialization through Kenya Bureau of Standards to adopt ISO 9001: 2008 certification (KEBS, 2016). The main objective of ISO certification is to ensure that products and services conform to the customer requirements, achieve consistency and enhance consumer satisfaction through continuous improvement.

#### **2.3.4 Implementation of Service Charter**

Service Charter is the commitment an organization gives to its customers outlining the quantity, quality and timelines it takes to deliver various services. Organizations therefore have to stream line their operation in order to meet the commitments made to the customers. Most state owned entities have adopted the service as a way of improving service delivery to the public. The public can therefore challenge the organization if the service is not delivered on time. The pledges the organization gives to its customers are only useful if the customers are made aware of them. One of the challenges of using service charter as operations modernization strategy is publicity. Most of the time the customers realize the charter after or in the process of consuming the service. Organizations should therefore deliberately create awareness through various communications channels (Post & Agarwa, 2008). Service charters should be owned by employees who deliver service so that they are realistic. Service charters can be used to measure the performance of NCSOE as this will set a basis of customer expectations.

### **2.3.5 Business Automation; e-Government**

Digital transformation is at the core of every firm in the world today (Kane et al., 2015; Von et al., 2017). Firms which do not adapt to digital transformation will become extinct and only those that are responsive to the technological changes will remain competitive (Schwartz, 2001). It has become almost impossible for firms to operate in a technology vacuum. In order to achieve business automation, there is need to integrate all these digital technologies to business processes (Lui et al., 2011). This will then intern impact organization in three different dimensions. That is; internally, this relates to the business operations, decision making and organization structure. Externally, this entails digitally enhancing customer experience and improving the product or service life cycle. Finally, automating all the business segments and functions leading to a totally new business model (Kaufman & Horton, 2015). Automation benefits firms in so many way such as operations costs, reduce labour, and increase profitability by automating processes. In general, business automation is a complex operations modernization strategy the need to consider all the aspects of a firm; internally, externally and holistically. If the technology implementation challenges are addressed by the firm, then for sure it will result into superior performance of an organization (Kaufman & Horton 2015).

### **2.3.6 Process Alignment**

Most entities try to convey extraordinary client encounter, yet they are hampered by essential difficulties originating from inheritance advances. Bureaucracy caused by rigid organization structure is another challenge affecting firms' performance. Organizations have recognized the need for transformational change in their operations processes and technology, so as to share information and respond to customer requirements more effectively (John, 2016). Business process alignment is concerned

with the elimination of non-value add (NVA) activities along the service value chain. Several techniques have been employed to achieve this. Business Process Management (BPM), Business Process innovation (BPI) and Business Process Re-engineering (BPR) have been the primary techniques organizations use to align their business process. BPM is the gathering of advances equipped for making an interpretation of business process models into PC upheld exercises, giving up routine administration and control assignments from the authoritative specialists (Antunes & Mourão, 2011).

BPR is the essential re-evaluating and radical overhaul of business procedures to accomplish emotional changes in basic, contemporary proportions of execution, for example, cost, quality, service, and speed (Hammer & Champy, 1993). BPR has been commonly used by entities due to its radical approach to business transformation and rapid result it yields. Also, entities are driven using BPR when there is a substantial expectation gap between the service rendered and the desired service by the customers (Muthu, Whitman & Cheraghi, 2004).

Some of the possible solutions arising from aligning business process includes, Outsourcing of non-core activities, leasing, managed services, shared services, software-as-a-service etc. Outsourcing is when a firm turns over all or part of its operations to a third party vendor (Baitheimy, 2003). It can also be characterized as pulling back from specific stages or exercises of the esteem chain framework and depending on a third party vendor to provide the services or functions (Wasantha & Laksiri, 2004).

## **2.4 Operations Modernization Strategies and Service Delivery**

Service delivery entails meeting the customers' needs within the operations competencies of cost, quality, speed and flexibility. Service delivery in a broader sense to the quality of customer service, reliability, service accessibility, affordability, speed of delivery, courtesy and completeness, and the measured appropriateness of assistance and support provided to a customer (Parasuraman et al., 1988)

The operations modernizations strategies an entity invests in should be geared towards achieving customer satisfaction. The customer satisfaction ought to be central to the formulation of such strategies (Samra, Shain, & Bilsker, 2013). The customer requirements tend to be dynamic hence the need to constantly modernize the operations of a firm.

Entities through continuous improvement endeavour to close the gap between the expectations of the consumer and that provided by the firm along the quality dimensions (Parasuraman et al., 1988). The gap arises as a result of mismatch between customer experience and expectations. Gronroos (1994) identified three dimensions of service quality; technical, functional and image quality. Technical quality, identifies what the customers receive when they interact with the firm. Functional quality on the hand, entails how the customer receives the final outcome. This involve the medium used to deliver the service and includes aspects like communication and competence. The image dimension entails the reputation of firm that is built over time resulting from technical and functional outcome.

It is always difficult to measure service delivery, this is due to the intrinsic characteristics of services; intangibility, heterogeneity and perishability. The service is consumed at the same time it is delivered, the customer is part of the delivery process.

Parasuraman et al. (1988) developed a framework model, known as SERVQUAL model, to measure quality of service delivery. The components are reliability, assurance, tangibility, empathy and responsiveness abbreviated as RATER. The consumers experience and the perceived final outcome is determined and measured. The SERVQUAL model has been criticized by some authors of its poor validity and reliability. For example, Syed et al., (1998) argued that despite the enthusiasm in pursuing a research utilizing this model, there were still need of using empirical framework. Rowley (1976) raised concern about the ability of an instrument neither being reliable nor unreliable. However, RATER is widely recommended and used to determine service quality in various industries.

## **2.5 Empirical Studies**

Several research has been done by various scholars on the impact of various operations strategies on service delivery. None has attempted to establish the Operations modernization Strategies commonly implemented by Non-Commercial state Owned Entities in Kenya to establish the relationship between the Operations modernization Strategies and Service delivery in Kenya. **Table 1** below is a summary of related research work.

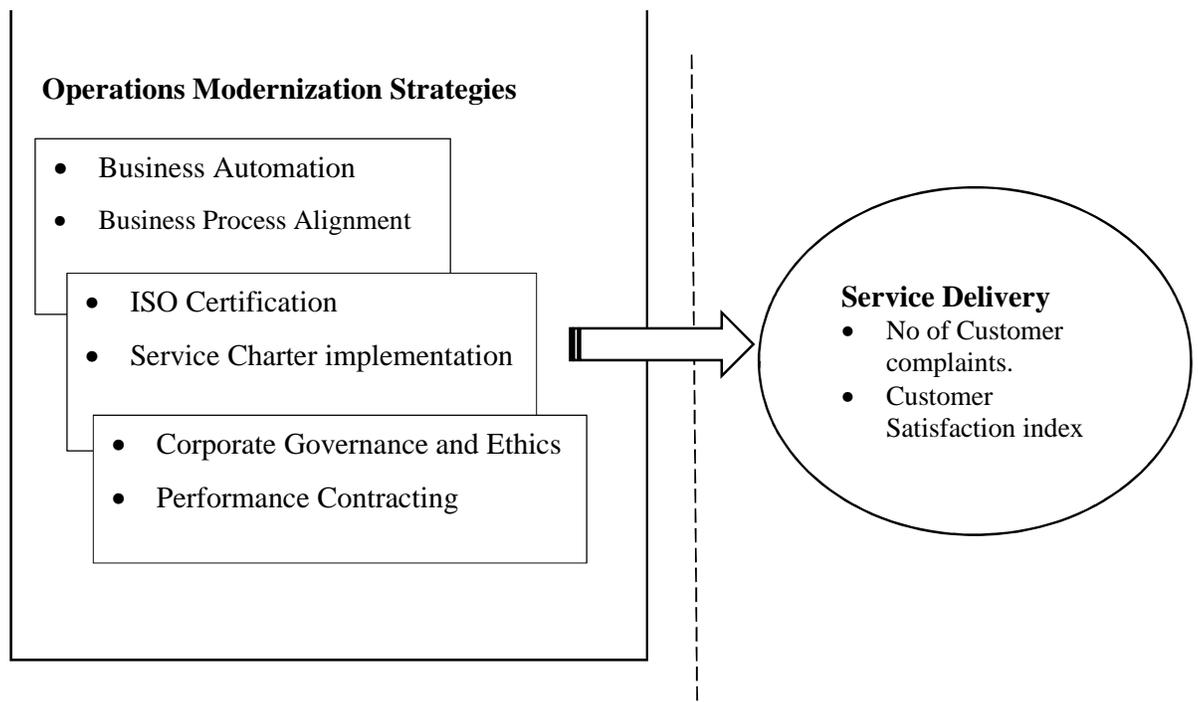
No.	Research	Objectives	Methodology	Findings	Gaps
1	Operations Strategy and Organization Performance of ailing firms in Kenya (Kipngetch, 2016)	To establish the influence of Operations Strategy and Organization Performance of ailing firms in Kenya	Primary data collection through questionnaire	Superior customer responsiveness and technological innovation were used by ailing firms	This research was limited ailing firms. It lacked information from NCSOE
2	Operations strategies and project performance for JICA funded projects in Kenya (Mungai, 2014 )	To determine the operations strategies adopted by JICA funded projects in Kenya and the relationship with the project performance.	The research was through descriptive research design.	There is a positive effect of adoption of modern operations strategies on the project sustainability.	The study does not look at the operations modernization strategies in NCSOE. It narrowed the scope to JICA funded projects only.
3	Effect of e-government strategy on service delivery in the government ministries (Karimi, 2013)	To investigate the effect of e-government strategy on service delivery in the government ministries	Descriptive survey research design was used.	e-Government helps speed up service delivery and lowers cost of service delivery.	The study did not considered other modernizations strategies. Focussed on only one entity.
4	Effect of Customer Service Charter on service delivery: NCWSC (Karen, 2015)	To establish employees service charter awareness, adherence and influence on service delivery	Survey research design used.	There was improved equity in water distribution, efficiency in water treatment and sewer disposal	The study did not considered other operations modernizations strategies. Also focussed on one entity.
5	Impact of ISO 9001:2008 on performance of public university (Nyasani, 2015)	To investigate the impact of ISO 9001: 2008 certification on the performance of public universities in kenya	Descriptive research design was used.	There was increased surplus and efficiency where certification was implemented.	The study did not considered other operations modernizations strategies.
6	Impact of ISO9001 on the financial performance of CSOE in Kenya (Kiplagat, 2013)	To establish the impact of ISO certification on CSOE in Kenya	Cross sectional survey design with casual research (expost facto)	Increased sales growth was recorded among CSOE that implemented ISO 9001.	The study was on CSOE and not NCSOE. Also did not consider other modernization strategies.
7	Corporate governance practices adopted by Kenya Commercial Bank (Martha, 2017)	To establish the corporate governance practices adopted by KCB	Descriptive case study was used.	Sound corporate governance lead to improved shareholders interest.	The study only considered one operations modernization strategy in a CSOE.
8	Performance Contracting, measurement and public service delivery in Kenya (Ndubai, 2016)	To determine the relationship between performance contracting in public service delivery.	Quantitative research entailing secondary data.	PC resulted in improved trust on government hence improved customer satisfaction.	The study only focused on one operations modernization strategy.

**Table 1: Summary related studies previously done**

## 2.6 Conceptual Framework

This study will seek to establish the operations modernization strategies commonly employed by organizations in order to improve the service delivery among non-commercial state owned entities. The independent variables in the study would be the operations modernization strategies such as customer intimacy, automation of business processes and process design realignment. The study will seek to establish the impact of applying operations modernization strategies on service delivery. The study will help in the realization of how operations modernization strategies can make a considered difference to an organization's capability of providing continuing improvement in service delivery and attaining organizational objectives and goals that drives the search for new ways of implementation, managing and improving NCSOEs' performance.

**Figure 2.1: Conceptual Model**



Source: Author (2018)

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter comprise the examination techniques employed to establish the operations modernization strategies and the impact on service delivery among non-commercial state owned entities in Kenya. It details research design, target population, sampling, data collection and data analysis.

#### **3.2 Research Design**

The study is meant to cover the identification and impact of operations modernization strategies Non-Commercial State Owned Entities in Kenya on service delivery. In conducting this study, descriptive design was adopted. Descriptive study design defines a subject by grouping certain of characteristics of people, events, cases through data collection and analysis of frequency of the research variables then establishing their interaction thereof. (Copper & Schindler, 2006). The Descriptive study provide qualitative data from respondents. The data was collected through the answered questions regarding the objective of the subject under study.

#### **3.3 Population**

According to Kothari (2004) populace is an entire arrangement of people, cases or questions with some normal recognizable qualities. Since there are limited resources in terms of time and money to collect data from everyone in a population, the goal becomes finding a representative subset of population which becomes the target population. Target population alludes to every one of the individuals from a genuine or speculative arrangement of individuals, occasions or protests which the scientist wishes to sum up the aftereffects of the examination (Mugenda & Mugenda, 2013).

The target population of the study comprise 183 non-commercial state owned entities in Kenya. The list of Non-Commercial State Owned Entities in Kenya is as per appendix II (ISC, 2018)

### **3.4 Sample Design**

Sampling is a procedure in which the populace is isolated into at least two pertinent strata and an irregular is drawn from every one of the strata and subjects are chosen so that the current subgroups in the populace are pretty much imitated in the example (Kothari, 2004). The sampling method employed is simple random sampling. Random sampling technique involves dividing the population into homogenous subgroups and then taking sample in each subgroup (Mugenda & Mugenda, 2003). Simple Random sampling is the most suitable for this study as the population is considered homogeneous. The recommended sample size of 10% or more of the entire target population is representative of the population (Mugenda & Mugenda, 2003). The study settled for a sample of 30 non-commercial state owned entities in Kenya. This is approximately 16% of the target population. The respondents comprise the Chief Operations Officer or equivalent in the sampled NCSOE.

### **3.5 Data Collection**

The study relied on both primary and secondary data. Collection of primary data was done through questionnaires. Questionnaire enable the researcher to focus on the area of importance which address the research problem directly (Leedy et al., 2001). The choice was guided by the need to acquire relevant and sufficient information about the subject matter under investigation. Structured and non-structured as well as open ended and closed ended questions were used in the questionnaire. The structured questions help reduce the data collection time while the unstructured questions encourage the

respondents' to give in depth information regarding the subject in question thereby enhancing the quality of data collected (Cooper & Schindler, 2018). The questionnaires were administered to the Chief Executive Officer or the Chief Operations Officer of the sampled corporations. Pick and drop method was used. The Officers were given three (3) days to respond. A follow up through e-mails and phone calls were used to improve response rate.

The secondary data was collected comprise performance evaluation reports of the NCSOE from the Inspectorate of State Corporation.

### **3.6 Data Analysis and Presentation**

The collected data was cleaned of any errors and inconsistencies. Data analysis was conducted using both inferential and descriptive statistics. The descriptive statistics that were used include mean and frequencies. The descriptive statistics was used to establish the operations modernization strategies used by NCSOE. The inferential statistics used was to establish the relationship between operations modernization strategies and service delivery. Multiple regression was used to analyse the relationship between the independent variables and the dependent variable. These were modelled as below:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8$$

Whereby:

Y = the dependent variable;

X<sub>1, 2, 3...n</sub> = represent the independent variables;

$\beta_0$  = represent a constant term; and

$\beta_1, 2, 3...n$  = represent the coefficient of the independent variables.

The purpose of  $\beta_1$  and  $\beta_2$  is to measure the sensitivity of the dependent variable Y to the changes in the independent variables X<sub>1, 2, 3...n</sub>.

## **CHAPTER FOUR**

### **DATA ANALYSIS, FINDINGS AND DISCUSSIONS**

#### **4.1 Introduction**

The government is committed to improving service delivery to the citizenry. One way of ensuring efficiency is by modernizing the operations of the entities. The objectives of the study is to establish the operation modernization strategies used by NCSOE and their impact on service delivery. The chapter outlines the analysis of the data collected, presentation of the findings thereof and discussion to interpret the result. Descriptive and inferential statistics was used to analyse the data.

#### **4.2 Response Rate**

A total of 30 questionnaires were sent out to non-commercial state owned entities, 26 of them responded fully completed. This represent approximately 87% response rate, which according to Kothari (2008), a response rate of 70% and above is sufficient for data generalization. This was then considered sufficient for the realization of the objectives of the study.

#### **4.3 Demographic Information**

Demographic Information entail the characteristics of the respondents. The information collected from the questionnaire comprise demographic information of the respondents. The respondents were asked to state the name of the corporation, which industry the corporation serves or operate in and the duration of service of the respondent. The respondents were also to indicate their role and duration of service in the organization.

The findings were tabulated as indicated in **Table 2** below.

**Table 2: Findings for Demographic Information**

<b>Industry</b>	<b>Frequency</b>	<b>Percentage</b>
Regulatory	7	27
Social Services	6	23
Advisory	5	19
Regional Development	5	19
Training and Research	3	12
<b>Total</b>	<b>26</b>	<b>100</b>
<b>Years of Service</b>		
5 to 10 Years	12	46
11 to 20 Years	6	23
Below 5 Years	5	19
Over 20 rears	3	12
<b>Total</b>	<b>26</b>	<b>100</b>
<b>Respondents Position</b>		
Supervisor	13	50
Operations Manager	5	19
Others (Technical staff)	5	19
General Manager Operations	2	0.08
Chief Operations Officer	1	0.04
<b>Total</b>	<b>26</b>	<b>100</b>

From the findings, it is evident that most of the corporations were regulatory (27%), Social services (23%), advisory and regional development authorities (19%), tertiary learning institutions and research institutions (12%). The respondents were also asked the duration of service and their current role in the respective organizations. Most of the respondents had works for the organization between 5 to 10 years (46%), 11 to 20 years (23%), below 5 years (19%) and over 20 years (12%). Half of the respondents were the supervisors (50%), Operations Managers (19%). Very few senior manager responded at General Manager Operations (0.08%) and Chief Operations Office (0.04%).

The findings above implies that, non-commercial state owned entities generally provide regulatory and social services. A large number also perform regional development, training and research role. Most of the respondents are young middle management staff. This is confirmed by the number of years they have worked and their role. Most of the senior management have spent longer durations in the organization and were not readily available to fill in the questionnaires.

Non-Commercial State Owned Entities are those entities that do not engage in commercial activities as their primary role, but to provide state services to the citizenry. Hence the industries identified from the responses above. The NCSOE are injecting new staff from college or other entities to boost their human resource capacity. This is supported by the high number of staff below 5 years duration of service. Most of the staff who have stayed long in the organization are in middle level management. Most senior managers were not available to fill in the questionnaires. They delegated the work to their junior staff.

#### **4.4 Operations Modernization Strategies**

This section of the questionnaire was meant to establish which operations modernization strategies commonly employed by the NCSOEs. The aim and manner in which the strategies are employed and if the strategies were deliberate and in line with the overall organizations strategy.

The respondents were asked to indicate in the questionnaire whether the strategies were documented as part of the organizations strategy. They were also required to indicate the motivating factor they consider mostly contributed to the implementation of the strategies.

Findings of this study was then tabulated as indicated in **table 3** below. The responses were from 26 NCSOE were captured in terms of frequency and percentage.

**Table 3: Operations Modernization Strategies Alignment**

<b>Response</b>	<b>Frequency</b>	<b>Percentage</b>
YES	19	73%
NO	7	27%
<b>Total</b>	<b>26</b>	<b>100</b>
<b>Motivating factors</b>		
<b>Motivating factors</b>	<b>Frequency</b>	<b>Percentage</b>
Lessons from bench marking	4	15%
Presidential directives	5	19%
Compliance with laws/legislations	6	23%
Performance contract commitment	11	42%
<b>Total</b>	<b>26</b>	<b>100%</b>

From the findings above it can be observed that 73% of the sample actually have operations strategies form part of the organization strategy that is 19 out of 26 respondents. The other 27% (7) do not have clearly documented operations strategy. Regarding the motivating factor, the respondents selected performance Contracting commitment by board as the major motivating factor at 42% followed by compliance to the laws and legislations. Presidential directives and benchmarking follow at 19% and 15% respectively.

Most of the state corporations interviewed had operations strategies in place aimed at modernizing service delivery. Some of the corporations have operations modernization strategies in place but are not documented and only relied on their respective corporate strategies to implement their operations. Most of the entities have however adopted the documentation of operations modernization strategies. The common way of implementing operations modernization strategies among the entities is through implementation of performance contracting commitments by the board of directors of

the various state corporations. Other ways are through legislation, presidential directives and bench marking with other corporations.

Performance contracting is driven by the customer satisfaction needs hence the most prominent motivating factor. The board of directors are appointed in office to drive the government agenda of service provision to the citizenry. They therefore have to come up with strategies to achieve this objective hence the operation modernization strategies.

#### **4.5 Application of Operations Modernization Strategies by NCSOE**

The study identified six operations modernization strategies commonly employed by the state owned entities to provide service delivery. The strategies include, automation of business processes, implementation of service charter, adoption of corporate governance and ethical practices, use of performance contracting to cascade the operation modernization objectives, adoption of standardizations such as ISO 9001 and use of business process re-engineering to radically change the operations of the entities. The respondents were asked to indicate the extent to which they consider the said operations modernization strategies have been implemented by their various organizations. The questionnaire provided a range of score to select from 1 (not at all) to 5 (very large extent).

Findings were then tabulated as indicated in the **table 4** below showing the mean from the 26 responses for each strategy. The table also indicate the standard deviation from the mean.

**Table 4: Extent of application of the Operations Modernization Strategies.**

	<b>Operations Modernization Strategies</b>	<b>Mean</b>	<b>SD</b>
<b>1</b>	<b>Business Automation:</b> The organization engagement in Automation of its operations such as system integration, intelligent machines, online services has addressed service delivery challenges	4.1923	0.810294
<b>2</b>	<b>Service Charter Implementation:</b> Organization's commitment to its customers on the outlined quality, cost and timeline standards are being met	2.5769	0.584078
<b>3</b>	<b>Corporate governance and Ethics:</b> Introduction of corporate governance and ethics as best practice has led to improved accountability and adherence to code of conduct.	3.8077	0.713196
<b>4</b>	<b>Performance Contracting:</b> The organization employs Performance Contracting as service delivery performance measurement tool and is used effectively.	3.7692	0.704527
<b>5</b>	<b>ISO Certification:</b> The ISO 9001: Quality Management System certification has aligned the organizations operations and improved efficiency.	4.0385	0.769379
<b>6</b>	<b>Business Process Re-engineering:</b> The radical change in business process has been used to elimination redundant processes and simplified service delivery	2.4615	0.59105

The findings can be interpreted as follows. There is greater appreciation of Business process automation as key to service delivery (mean: 4.1923). Standardization by adoption of ISO certification through the alignment of business processes is also perceived to improved efficiency in service delivery (mean: 4.0385). Implementation of corporate governance and enforcement of ethical practices is perceived to result in greater accountability and adherence to code of conduct in state owned entities (mean: 3.8077). Performance contracting is employed by all state owned entities as a measurement tool and is effective in ensuring service delivery by state owned entities (mean: 3.7692). Service charter adoption has not created a lot of impact in service delivery (mean: 2.5769). Finally, the impact of deploying Business Process re-engineering (BPR) was considered to have minimal simplification of service delivery (mean: 2.4615).

The implication of the above findings is that implementation of business process automation and standardization through ISO certification are more widespread among the NCSOE followed by the performance contracting and corporate governance. Implementation of business process reengineering and service charter are less popular among the organizations. The implementation could be mandatory but the perceived impact is minimal.

As the business environment changes, NCSOE are forced to embrace technology and standardization such as ISO certification in order to do business with the commercial and private entities which have already adopted such strategies in order to gain competitive advantage. This is in concurrence with Cumps (2006) observation that application of technology greatly impacts one of the key concept of operations strategy. Use of technology enable entities to compete on several priorities simultaneously.

Adherence to the service charter commitments had less impact since in most instances the customer is not aware of the commitments. Similarly, BPR had less impact due to the fact that most state owned entities are governed by legislation such as The Public Procurement and Disposal Act (2015). This limits the extent to which processes can be aligned.

#### **4.6 Application of Operations Modernization Strategies by NCSOE**

The study sought to establish the extent to which operations modernizations strategies impact on service delivery. Service delivery was measured in terms of Customer satisfaction index, and; number of customer complaints. The study also sought to establish the trend in the said parameters over a period of five years for the organizations contacted.

The respondents were asked to indicate the extent to which they consider the operations modernization strategies identified have impacted the service delivery indicators in their respective organizations. On a scale of 1 to 5 the respondents scored the entities based on how they perceived each of the operations modernization strategies have impacted service delivery indicators. For instance, how the implementation of business processes has led to improvement of service delivery.

The findings of the impact of OMS on customer satisfaction and customer complaints were as tabulated in **tables 5 to 10** below. The tables indicate levels of impact of OMSs on the service delivery in both dimensions of customer satisfaction index and the number of customer complaints.

##### **4.5.1 Automation and Service Delivery**

The findings of impact of automation on service delivery is captured in **table 5** below.

**Table 5: Impact of Automation on Service Delivery**

<b>1</b>	<b>Service Delivery Indicators</b>	<b>Mean</b>	<b>SD</b>
1.1	The implementation of business processes automation have led to higher efficiency in service delivery.	4.307692	0.844673
1.2	The number of recorded delays and erroneous have reduced.	4.346154	0.856214

The findings above indicate that automation of business processes have high impact on both the staff satisfaction and customer complaints indices among the respondents at (mean: 4.307692 and 4.346154). The findings also indicated a standard deviation of 0.844673 and 0.856214 respectively.

This finding is in concurrence with the findings of Mugambi (2013) that e government lead to reduction in transaction time, cost of service delivery and loss of customer records. This shows automation leads to higher customer satisfaction and reduction in customer complaints.

#### **4.5.2 Service Charter and Service Delivery**

The findings on the impact of Service Charter on service delivery are indicated in **table 6** below.

**Table 6: Influence of Service Charter on Service Delivery**

<b>2</b>	<b>Service Charter Implementation</b>		
2.1	Adherence to the committed standards of service has led to more happy customers.	3.461538	0.652365
2.2	Streamlining of operations in order to meet commitments has reduced the complaints.	3.384615	0.6427

The findings indicate that adherence to the commitments leads to customer satisfaction. There was a moderate impact as established from the respondents (mean: 3.461538 and standard deviation: 0.652365). This was not very different from the reduction in customer complaints (mean: 3.384615 and SD: 0.6427).

These findings agree with study by (Mwania, 2015) which established that for a greater impact of service charter to be felt in service delivery, there is need to create awareness among the staff and the customers. The same is pointed out by (Jody & Ray, 2004) that there is need for monitoring adherence, hence reducing the frequency of evaluation.

#### 4.5.3 Corporate Governance and Ethics and Service Delivery

**Table 7** below shows the findings on the impact of corporate governance and ethics on service delivery.

**Table 7: Influence of Corporate Governance on Service Delivery**

<b>3</b>	<b>Corporate governance and Ethics</b>		
3.1	Implementation of corporate governance resulted in efficiency in service provision	3.576923	0.669793
3.2	Improved ethical behaviors has led to objectivity in service provision	3.576923	0.669793

From the findings above, it was established that there is a considerable impact of ethics and corporate governance on service delivery (mean: 3.576923) for customer satisfaction index and (mean: 3.576923) for reduction in customer complaints.

The findings are in line with those of (Wainaina, 2017) who established that corporate governance and ethical practices positively impact the performance of Kenya Commercial bank. This finding is relevant to this study as it was conducted for a

Kenyan Bank which was previously government owned. Corporate governance and ethics is gaining prominence in the running of SOE in Kenya. The presence of regulatory, legal and institutional frameworks has fueled the implementation of this strategy. The selection of board members for example is governed by a legislative framework. Accountability of the SOE is also emphasized by the various institutions set up to enforce transparency.

#### 4.5.4 Performance Contracting and Service Delivery

The findings on impact of performance contracting on service delivery are indicated in **table 8** below.

**Table 8: Influence of Performance Contracting on Service Delivery**

<b>4</b>	<b>Performance Contracting</b>		
4.1	Targets set with Customer Focus given more weight as a key deliverable.	4.153846	0.800404
4.2	Accountability and motivation of staff to perform results in improved service delivery	3.461538	0.652365

From the findings of the study Performance Contracting to a very large extent impacts the service delivery by putting a lot of weight on customer focus (mean: 4.153846). The PC also to a large extent impacts service delivery through motivation of staff and improved accountability (mean: 3.461538).

This finding is in agreement with that of (Simitu, 2008) on the effectiveness of performance contracting on the performance of regulatory state owned entities in Kenya. The study established that the implementation of Performance contracting as a planning and control tool has led to the improvement in the efficiency of the entities. The strategy has a feedback mechanism which promotes continuous improvement. Trivedi (2004) asserts that PC helps in accountability and responsibility by eliminating the “Not me” culture.

#### 4.5.5 ISO certification and Ethics and Service Delivery

The findings on the impact of ISO certification on service delivery are indicated in the **table 9** below.

**Table 9: Influence of ISO certification on Service Delivery**

<b>5</b>	<b>ISO Certification</b>		
5.1	Certification results in better quality of service delivered	3.846154	0.722705
5.2	Aligning of process results in less faults, mistakes and errors.	3.961538	0.749943

From the findings, the respondents indicated that ISO certification impact quality of service delivered to a large extent (mean: 3.846154) and reduction of faults, mistakes and errors (mean: 3.961538). Hoyles (2005) states that ISO certification benefits an entity by providing an independent external audit of the processes, formal document control and recognition in the market.

The need for standardization through ISO certification has been on the rise and the impact of which on service delivery is high according to the findings of this study. The findings from this study mirrors that carried out by (Kiplagat, 2013) that there is statistical difference between the performance of commercial state owned entities before and after the implementation of ISO 9001.

#### 4.5.6 Business Process Re-engineering and Service Delivery

The findings on the impact of business processes re-engineering on service delivery are indicated in **table 10** below.

**Table 10: Influence of Business Process Re-engineering on Service Delivery**

<b>6</b>	<b>Business Process Re-engineering</b>		
6.1	Elimination of redundant processes improved the speed of service delivery	3.346154	0.638481
6.2	Aligned processes has given the customer more visibility to the service provision.	2.961538	0.620403

From the findings above, it shows that the respondents perceived that BPR impact service delivery but not to a large extent. The impact of elimination of redundant processes impacts service delivery (mean: 3.346154 and SD: 0.638481) and the impact on alignment of processes to enable customers more visibility of the service provision (mean: 2.961538 and SD: 0.620403).

BPR was found not to be very popular among NSCOE, most of the entities who responded did not indicate a very strong impact on service delivery because it is not commonly employed as an operations modernization strategy to improve service delivery. This finding are in agreement, though lower, with the findings of (Ogada, 2017) finding on the study of Business Process re-engineering and performance of commercial of commercial state corporations in Kenya. Ogola (2017) established that there is a positive impact of BPR on the performance of CSOE in Kenya. He however, pointed out that the SOE needs to carry out proper market research in order to identify the best methodology to use in implementing the BPR. This if not done properly may lead to failure of the strategy as the stakeholders are likely to resist and sabotage the radical changes that are a characteristic of BPR.

#### 4.6 Correlation between OMS and service delivery

This analysis attempts to establish the relationship between the operation modernization strategies and service delivery. Regression analysis and correlation analysis was used to establish the relationship.

The computation was done and indicated in the **tables 11** and **12** below.

**Table 11: Regression Analysis**

	Coefficients	Standard Error	t Stat	P-value
<i>Intercept</i>	23.4896	5.4171	4.3362	0.0004
Automation	0.8764	2.8211	0.3107	0.7594
Service Charter	2.0434	1.7860	1.1441	0.2668
Ethics and Governance	2.9390	1.1087	2.6508	0.0158
Performance Contracting	0.6292	1.9510	0.3225	0.7506
ISO Certification	2.8534	2.2583	1.2635	0.2217
BPR	0.8487	1.3878	0.6115	0.5481

**Table 12: Correlation Analysis**

Model	Multiple R	R Squared	Adjusted R squared	Standard Error	F-Statistics
1	0.9491	0.9007	0.8694	3.5748	0.000

From the finding indicated in **table 11** above, there is a positive relationship between the various operations modernization strategies and the service delivery. The mean of the customer satisfaction index (in percentages) obtained from the secondary data of the PC of various entities over a period of 5 years was regressed against the mean score of the 26 entities that responded. The relationship can therefore be represented as:

$$Y = 23.4896 + 0.8764X_1 + 2.0434 X_2 + 2.9390X_3 + 0.6292X_4 + 2.8534X_5 + 0.8487X_6$$

From the regression equation it can be seen that Ethics and governance, Service charter implementation and ISO certification have higher impact on service delivery compared to the other strategies. The intercept is positive and all the coefficient of the independent variables are also positive. This imply that the increase in the extent of implementation of the operations modernization strategies results in increase in service delivery. This outcome is supported by previous studies that have indicated a similar relationships.

The **table 12** above shows analysis of the regression statistics from the study findings.  $R^2$  represent the changes in service delivery that can be explained by the changes in extent of implementation of operations modernization strategies. This therefore means that 90.07 % of the changes in services delivery can be explained by the changes in the strategies. However, for the sample of 26 the adjusted  $R^2$  gives a lower percentage of 86.94% .

Evidently there is a strong indication that the implementation of the OMS systematically have an impact on the service delivery.

## **CHAPTER FIVE**

### **SUMMARY, RECOMMENDATIONS AND CONCLUSIONS**

#### **5.1 Summary**

The study established that as there is increased demand from the citizenry for better services due to exposure to technological changes, NCSOE realized the need to modernize their operations in order to meet the emerging customer requirements. Business Process Automation and Performance Contracting stood out as the most commonly used operations modernization strategies to improve service delivery to the public. The other strategies such as ISO certification, corporate governance and ethics have also been implemented widely among NCSOE in order to improve their operations. Implementation of Service Charter and Business process re-engineering have not been widely used to improve service delivery.

Proper operations modernization strategies are not only necessary for CSOE and other commercial private entities but also to NCSOE which do not need to have competitive advantage over a rival in the industry. Operations modernization strategies are essential for improved service delivery among the NCSOE as established in the study. Organizations that adopted most of the strategies tend to demonstrate higher customer delivery indices and less customer complaints. They also recorded higher rate of implementation of customer satisfaction survey.

The study showed that automation leads to higher efficiency in service delivery. Automation of the business processes reduces errors, mistakes duplication roles which is common in manual processes. There are higher customer satisfaction levels when automation is implemented in the operations of an entity. Similarly, adoption of ISO certification leads to improved process alignment and continued improvement as there

is standard operating procedure which guide the staff delivering the services. The study found out that corporate governance and ethics is gaining prominence among NCSOE. This strategy impacts the operations of an organization through people. Entities that have embraced corporate governance and ethics demonstrated higher levels of efficiency, transparency and objectivity in service delivery.

Operations modernization strategies of business process re-engineering when implemented produces rapid results to the customers when redundant processes get eliminated. The customer visibility of the service delivery is also improved according to the study. It is not commonly used among the NCSOE that were sampled. The service charter which is a commitment to the customers by the entity is fairly used, however, from the study there is less adherence to the promised standards. Many entities do not enforce adherence and still the customers are usually not aware of the standards.

The study established that implementation of sound operations modernization strategies impacts the quality of service delivery. The study also revealed a trend in continuous improvement in service delivery among the entities that employed the strategies. There was a sustained customer satisfaction and declined or diminished customer complaints more so when the customer satisfaction recommendations were fully implemented.

## **5.2 Conclusion**

From the research findings in this study, there is a positive relationship between the operations modernization strategies and the service delivery. Entities need to embrace sound operations modernization strategies in order to improve service delivery to customers. The effect of the combined strategies in operations modernizations indicated impact on the quality of service delivery. Improved service delivery measured by the customer satisfaction and the reduced number of customer complaints show could

among other factors be influenced by modernization of operations. The entities therefore need to not only come up with sound corporate strategies but also operations strategies modernized to cope with the changes in the environment.

It can also be concluded from the study that operations modernization strategies have to be all inclusive. This means that the strategies should address machine, people and process in order for an entity to realize the full benefits of operations modernization strategies. Success of implementation of these strategies will only be realized if proper service delivery measurement are put in place. Entities should identify the strategies that bring out their strength, this should be in line with the industry they operate in. Some entities may not have the structures to support some of the strategies.

### **5.3 Recommendation**

The evidence from the study indicated that not all the operations modernization strategies have influence on the service delivery and therefore entities need to identify the operations modernization strategies which they have strength in implementing. Entities should implement those strategies that address all aspects of the organization in terms of people, machine and processes. Automation will address machine and process aspects, ISO certification will help address processes and people, performance contracting, corporate governance and ethics will help address people aspect of the organization. Business process re-engineering will address process aspect of the organization.

In order to achieve improvement in service delivery, organic transformation approach is recommended. This is less disruptive to business and has higher rate of buy in from various stake holders. Radical strategies like BPR, though produces rapid results, they have higher failure rate and are disruptive hence usually lacks buy in from stakeholders.

#### **5.4 Limitation of the Study**

The study was only limited to the most commonly used operations modernization strategies by state owned corporations. Even though it was possible to establish the impact of such studies on the service delivery, there could be other factors that would impact service delivery that would be studied together with the operations modernization strategies identified. Other factors such as legislation, political interference, funding constraints would also affect the performance of NCSOE. These needs to be studied in relation to the operations modernization strategies and their impact on service delivery. In order to

The study was limited to NCSOE and not all SOE more creative operations modernization strategies applied by CSOE would have been identified since they are faced with competition from private entities. A comparison of their performance would generate more information that could be of interest to the policy makers.

#### **5.5 Suggested Further Research**

There is need to study the operational evolution of state owned entities in the face of technological changes and other macro-economic factors such as globalization. How central operations management has become to entities that are not operating in a competitive environment such as not-for-profit organizations, not necessarily in Kenya but world-wide.

The role of other factors such as legislation and political interference, funding constraints on the provision of service to the citizens. How much involvement by the government will interfere with the operations of the state owned entities? The adequacy of the existing legislative frameworks and the need to improve on the legislation in order to protect the state owned entities from political interference. The possibility of NCSOE to be self-sustaining so as to spur vigour in pursuing operational excellence rather than relying on the state for funding.

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## APPENDICES

### APPENDIX I: QUESTIONNAIRE

#### A: BACKGROUND INFORMATION:

*Kindly fill in the following form as per the instructions.*

Name of your organization \_\_\_\_\_

In which industry is your organization \_\_\_\_\_

What is your current role in your organization? *(Please mark as appropriate [x])*

Chief Operations Officer [ ]

General Manager Operations [ ]

Operations Manager [ ]

Supervisor [ ]

Others (Specify) \_\_\_\_\_

How long have you been working with your organization? *(Please mark as appropriate [x])*

Less than 5 years [ ]

5 – 10 Years [ ]

11 – 20 years [ ]

Over 20 Years [ ]

**B: OPERATIONS MODERNIZATION STRATEGIES**

1. Does your organization have documented Operations modernization strategies as part of the corporate strategy?

[YES] [NO]

2. What motivated most the implementation of the operations modernization strategies: *(Please tick as applicable)*

a. Lessons from bench marking [ ]

b. Presidential directives [ ]

c. Compliance with of laws/legislations [ ]

d. Performance contract commitment [ ]

3. To what extent has your organization implemented the following Operations Modernization Strategies to improvement of service delivery? *(Please tick as applicable)*. Where: **1** - Not at all; **2** - Small Extent; **3** - Some extent; **4**- Large Extent; **5** – Very Large Extent.

S.N	Operations Modernization Strategies	1	2	3	4	5
1	<b>Business Automation:</b> The organization engagement in Automation of its operations such as system integration, intelligent machines, online services has addressed service delivery challenges					
2	<b>Service Charter Implementation:</b> Organization’s commitment to its customers on the outlined quality, cost and timeline standards are being met					
3	<b>Corporate governance and Ethics:</b> Introduction of corporate governance and ethics as best practice has led to improved accountability and adherence to code of conduct.					
4	<b>Performance Contracting:</b> The organization employs Performance Contracting as service delivery performance measurement tool and is used effectively.					

<b>5</b>	<b>ISO Certification:</b> The ISO 9001: Quality Management System certification has aligned the organizations operations and improved efficiency.					
<b>6</b>	<b>Business Process Re-engineering:</b> The radical change in business process has been used to elimination redundant processes and simplified service delivery					

**C: OPERATIONS MODERNIZATION STRATEGIES AND SERVICE DELIVERY**

To what extent do the operations modernization strategies influence service delivery measured in terms of customer satisfaction and the number of customer complaints. *(Please tick as applicable)*. Where: **1** - Not at all; **2** - Small Extent; **3** - Some extent; **4** - Large Extent; **5** – Very Large Extent.

<b>1</b>	<b>Business Automation</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1.1	The implementation of automation projects have led to higher efficiency in service delivery.					
1.3	The number of recorded delays and erroneous have reduced.					
<b>2</b>	<b>Service Charter Implementation</b>					
2.1	Adherence to the committed standards of service has led to more happy customers.					
2.2	Streamlining of operations in order to meet commitments has reduced the complaints.					
<b>3</b>	<b>Corporate governance and Ethics</b>					
3.1	Implementation of corporate governance resulted in efficiency in service provision					
3.2	Improved ethical behaviors has led to objectivity in service provision					
<b>4</b>	<b>Performance Contracting</b>					

4.1	Targets set with Customer Focus given more weight as a key deliverable.					
4.2	Accountability and motivation of staff to perform results in improved service delivery					
<b>5</b>	<b>ISO Certification</b>					
5.1	Certification results in better quality of service delivered					
5.2	Aligning of process results in less faults, mistakes and errors.					
<b>6</b>	<b>Business Process Re-engineering</b>					
6.1	Elimination of redundant processes improved the speed of service delivery					
6.2	Aligned processes has given the customer more visibility to the service provision.					

#### **D: SERVICE DELIVERY MEASURES**

Kindly provide the following information to enable us complete the service delivery index.

*(The response should be in percentage form)*

<b>S.N</b>	<b>Service Delivery Measures</b>	<b>Unit of Measure</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
1	<b>Customer satisfaction</b> Annual customer satisfaction survey result.	%					
3	<b>Resolution of customer complaints.</b> Number of annual customer complaints	%					

## APPENDIX II: NON COMMERCIAL STATE OWNED ENTITIES IN KENYA

1	National Authority for the Campaign Against Alcohol and Drug Abuse
2	Kenya Citizens and Foreign Nationals Management Service
3	Constituency Development Fund Board
4	National Drought Management Authority
5	Kenya Institute of Public Policy Research and Analysis
6	Kenya National Bureau of Statistics
7	Kenya School of Government
8	National Coordinating Agency for Population and Development
9	Public Benefits Organizations Regulatory Authority
10	South-South Centre
11	Youth Enterprise Development Fund Board (YEDFB)
12	Kenya Ordinance and Factories Corporation (KOFC)
13	Capital Markets Authority
14	Competition Authority
15	Financial Reporting Centre
16	Industrial & Commercial Development Corporation
17	Insurance Regulatory Authority
18	Kenya Trade Network Agency
19	Kenya Accountants and Secretaries National Examinations Board
20	Kenya Deposits Protection Authority
21	Kenya Revenue Authority
22	Local Authorities Provident Fund
23	Policy Holders Compensation Fund
24	Privatization Commission
25	Public Procurement Oversight Authority
26	Retirement Benefits Authority
27	Unclaimed Financial Assets Authority
28	Agricultural Development Corporation
29	Agricultural, Fisheries and Food Authority
30	Bukura Agricultural College
31	Coffee Development Fund
32	Commodities Fund
33	Kenya Agricultural and Livestock Research Organization
34	Kenya Animal Genetics Resource Center
35	Kenya Dairy Board
36	Kenya Marine & Fisheries Research Institute
37	Kenya Plant Health Inspectorate Services
38	Kenya Tsetse & Trypanosomiasis Eradication Council
39	Kenya Veterinary Vaccine Production Institute

40	National Biosafety Authority
41	National Cereals and Produce Board
42	National Irrigation Board
43	Nyayo Tea Zones Development Corporation
44	Pest Control Products Board
45	Chuka University
46	Commission for University Education
47	Cooperative University College
48	Dedan Kimathi University College of Science and Technology
49	Egerton University
50	Embu University College
51	Garissa University College
52	Higher Education Loans Board
53	Jaramogi Oginga Odinga University of Science and Technology
54	Jomo Kenyatta Foundation
55	Jomo Kenyatta University of Agriculture and Technology
56	Karatina University College
57	Kenya Institute of Curriculum Development
58	Kenya Literature Bureau
59	Multi-Media University of Kenya
60	Kenya National Commission for UNESCO
61	Kenya National Examinations Council
62	Kenya Universities and Colleges Central Placement Services
63	Kenyatta University
64	Kibabii University College
65	Kirinyaga University College
66	Kisii University
67	Laikipia University College
68	Maasai Mara University
69	Machakos University College
70	Maseno University
71	Masinde Muliro University of Science and Technology
72	Meru University of Science and Technology
73	Moi University
74	Murang'a University College
75	National Commission for Science, Technology and Innovation
76	Pwani University
77	Rongo University College
78	School Equipment Production Unit
79	South Eastern Kenya University- SEKU
80	Taita Taveta University College

81	Technical Industrial, Vocational Entrepreneurships Training Authority
82	Technical University of Mombasa
83	The Technical University of Kenya
84	University of Eldoret
85	University of Kabianga
86	University of Nairobi
87	Energy Regulatory Commission (ERC)
88	Geothermal Development Company (GDC)
89	Kenya Electricity Transmission Company (KETRACO)
90	Kenya Nuclear Electricity Board
91	Kenya Pipeline Company (KPC)
92	Rural Electrification Authority (REA)
93	Anti-Counterfeit Agency
94	Export Processing Zones Authority (EPZA)
95	Kenya Bureau of Standards
96	Kenya Industrial Estates Ltd.
97	Kenya Industrial Property Institute
98	Kenya Industrial Research & Development Institute
99	Kenya Investment Authority
100	Kenya Leather Development Council
101	Kenya National Accreditation Service
102	Sacco Societies Regulatory Authority
103	Small and Micro Enterprises Authority
104	Tourism Fund
105	Bomas of Kenya
106	Export Promotion Council (EPC)
107	Kenya Tourist Board
108	Kenya Tourist Finance Corporation
109	Kenya Utalii College
110	Kenyatta International Convention Centre
111	Tourism Regulatory Authority
112	Tourism Research Institute
113	Council of Legal Education
114	Kenya Copyright Board
115	Kenya Law Reform Commission
116	Kenya School of Law
117	Nairobi Centre for International Arbitration
118	National Council for Law Reporting
119	National Crime Research Center
120	National Social Security Fund
121	National Social Security Assistance Authority

122	National Council for Persons with Disabilities
123	National Industrial Training Authority
124	Kenya Academy of Sports
125	Kenya Film Classification Board
126	Kenya Film Commission
127	Kenya National Library Service
128	National Museums of Kenya
129	National Youth Council
130	Sports Kenya
131	Brand Kenya Board
132	Communications Authority of Kenya
133	Information and Communications Technology Authority
134	Kenya Institute of Mass Communication
135	Kenya Year Book Editorial Board
136	Konza Technopolis Authority
137	Kenya National Highways Authority (KENHA)
138	Kenya Airports Authority
139	Kenya Civil Aviation Authority
140	Kenya Ferry Services
141	Kenya Maritime Authority
142	Kenya National Shipping Line
143	Kenya Ports Authority
144	Kenya Railways Corporation
145	Kenya Roads Board
146	Kenya Rural Roads Authority
147	Kenya Urban Roads Authority
148	LAPSET Corridor Development Authority
149	National Transport & Safety Authority
150	Coast Development Authority
151	Coast Water Services Board
152	Ewaso Ng'iro North Development Authority
153	Ewaso Ng'iro South Development Authority
154	Kenya Forest Service
155	Kenya Forestry Research Institute
156	Kenya Water Towers Agency
157	Kenya Wildlife Service
158	Kerio Valley Development Authority (KVDA)
159	Lake Basin Development Authority (LBDA)
160	National Environmental Management Authority (NEMA)
161	Athi Water Services Board
162	Lake Victoria North Water Services Board

163	Lake Victoria South Water Services Board
164	Kenya Water Institute
165	National Water Conservation and Pipeline Corporation
166	Northern Water Services Board
167	Rift Valley Water Services Board
168	Tana and Athi Rivers Development Authority
169	Tana Water Services Board
170	Tanathi Water Services Board (TAWSB)
171	Water Resources Management Authority
172	Water Services Regulatory Board (WASREB)
173	Water Services Trust Fund
174	National Construction Authority
175	Kenya Medical Laboratory Technician and Technologists Board
176	Kenya Medical Research Institute (KEMRI)
177	Kenya Medical Supplies Authority (KEMSA)
178	Kenya Medical Training College
179	Kenyatta National Hospital
180	Moi Teaching and Referral Hospital
181	National Hospital Insurance Fund
182	National AIDS Control Council
183	National Quality Control Laboratories

Source: (ISC, 2017)