SERVICE DELIVERY SYSTEMS AND OPERATIONAL PERFORMANCE OF SUPERMARKETS IN NAIROBI

BY

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DECLARATION

This research proposal is my original work and has not been submitted to any other college, institution or university for academic credit.

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

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May God bless you all!
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I want to dedicate this thesis to my dear family for their Patience and Unfailing support.

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ABBREVIATION AND ACRONYMS

GST : General Systems Theory
SDS : Service Delivery System
UST : Unified Services Theory
ABSTRACT

Service delivery systems provide high levels of the quality of service and generate value for organizations clients. Organizations are required to update their services delivery and ensure the implementation of the actual plan is successful. The objective of this study was to explore the relationship between service delivery systems and operational performance of supermarkets in Nairobi. The study employed a cross sectional descriptive research design and 43 supermarkets formed the population thus a census was considered since the population was small and finite. The study used a questionnaire to collect data. The questionnaires were self administered to the operations managers or equivalent of the 43 supermarkets in Nairobi County. The collected data was first summarized by use of descriptive statistics and regression analysis to realize the relationship between the variables, that is, the dependent and the independent using the SPSS. The results found that the relationship between facilities and layout, organizational practices and operational performance of supermarkets in Nairobi was negative and insignificant. The results also found that the relationship between technology and equipment, aggregate capacity planning, performance systems and operational performance of supermarkets in Nairobi was negative and significant. Further, the findings revealed that the relation between organizational policies and operational performance of supermarkets in Nairobi was positive and significant. The study concluded that technology and equipment, aggregate capacity planning, organizational policies and performance systems are the system delivery systems that influence the operational performance of supermarkets in Nairobi. The study recommended that the management of supermarkets in Nairobi should ensure they invest in up to date technologies and equipment, ensure proper allocation of task among employees and institute effective organizational polices and performance measurement systems.
CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Service delivery systems are very important when an organization wants to effectively set to action a business strategy and achieve good performance in customer retention, satisfaction and general profitability (Ponsignon, Smart & Maull, 2011). According to Banavar et al. (2009), organizations have to produce and deliver a service package that equals the customer’s expectation. Thus, an effective service delivery system leads to a better quality of service in both the perception of the customer, as it is more possible to view positively a service if the company provides effectively the promised value and in the actual technical quality terms (Poursaq, Gemmel & Verleye, 2016).

Theoretically, the service strategy triad supports the need of a company to reflect on the tactical decisions in the target market, service delivery system design that are connected through service encounters and service concept. Unified services theory supports that the usage of brand new technologies in service delivery systems, like the development of e-channels of service delivery and front-office automation hugely impact matters connected to design of service process and structure of the service system (Ponsignon et al., 2007). The general systems theory supports that for service deliveries to be efficient it is important to comprehend the entire delivery system and standardization of the system has to occur (Poikonen, 2015). According to Kostopoulos et al. (2015), the effectiveness of the delivery of services impacts the perceptions of the customer on the service quality they get in a positive and important way.

Supermarkets provide a wide assortment of goods and services at relatively cheaper prices compared to wholesalers and small retailers, given global sourcing strategies, and economies of scale (Nair & Chisoro, 2015). Supermarkets also give customers the additional service of packaging a varied collection of products selling simultaneously in an opportune setting and location focusing on value, all your shopping at one place and a general shopping experience (Nair & Chisoro, 2015). Supermarkets In Kenya, are fast entering the urban food retail and expanding out of their originally small market niche among the urban middle class to markets of lower-income class (Neven & Reardon, 2014). In Nairobi County, shopping malls and supermarkets not only
cater for over 30 per cent of the retail requirements and they are redefining skylines in terms of creation of employment and alleviation of poverty (Keana, 2015).

1.1.1 Service Delivery Systems

Service delivery systems are defined as sets of interdependent entities working together, like people, products, and processes important in service deliveries (Banavar et al., 2009). A system is made up of many, interdependent processes of providing services that include hierarchically organized process architecture and an integrated design approach is needed to make sure there is enough synchronization between practices inside the entire service system (Ponsignon et al., 2007). The system entails the organizational, technological and managerial aspects where by the delivery service is done and also entail the manner to which delivery of service to customer is done (Poikonen, 2015). The system of delivering services is related to the service providing organization concept of service (the service package offered) and the target market of the service provider (the customer) (Ponsignon et al., 2011).

A service delivery system major’s on customers being provided with the service concept. It includes the facilities, equipment, which is infrastructure and structure which is mostly skills and policies and integration of processes to provide the concept of service (Ponsignon et al., 2011). According to Roth and Menor (2003), physical features of the service system like facilities, equipment, and layout relate to structural choices. The role of providers of services such as policies, skill set and job design, is called structural choices. Integration choices involve adaptive mechanisms, coordination issues and service supply chains. Service delivery system design relates to how the service of a single service providing organization is delivered to target customers (Pourcq et al., 2016). Thus, planning well and good implementation of the delivery plans developed are major factors for the service delivery system (Kostopoulos et al., 2015).

The primary purpose of a service delivery system is to be on time while providing the required quality and price hence creating good value for the customers. This entails the use of personnel and processes, physical facilities and equipment (Mohd, 2015). The service delivery system is the way in which employees offering services try to reach the standards the managements’ fixed in regards to quality, so as to close the gap between the actual service delivery and the service quality specifications, that is,
third gap of services quality. Thus, a service delivery system bridges the gap existing between customer experience and expectations (Pourcq et al., 2016). Service delivery systems usually ought to handle producing more than a few outcomes that are positive, stretching from optimum customer experience, improved service quality increased availability of efficient operations and reduced costs (Kostopoulos et al., 2015).

1.1.2 Operational Performance

Operational performance is the measurable aspect of the results of organizational processes, for example, the ability to be reliable, inventory turns and production cycle time (Betru, 2010). Operational performance takes consideration into performance of the company in claiming its primary goals, i.e., service, productivity and quality (Bayo-Moriones & Cerio, 2012). Operational performance constitutes of direction on realizing efficiency and effectiveness in services support and delivery in order to guarantee service providers and customer values (Kungu, 2014). Operational performance is also regarded in both the strategic management literatures and industrial organization as firm’s-specific factors products such as cost control, management skills, market share, and innovation, which define existing performance of the firm, and analytically, the performance level sustainability. It later on affects performance measures of organizations such as customer satisfaction and market share (Betru, 2010).

Operational performance is the valued output of production of a system in terms of services or goods. The measures of operational performance differ from company to company and from industry to industry (Alamro, 2014). An organization’s operation performance decides the productivity efficiency in the most efficient and effective method and satisfaction level they impose on customers (Vencataya, 2011). It involves a main influence on reliability of product, cycle time and cost of product (Hwang et al., 2014). It is vital to businesses since it increases production effectiveness, customers are more satisfied and creates high quality products, causing improved profits and revenues for businesses (Kaynak & Hartley, 2008).

Operational performance measurement is important in satisfaction of customers, internal activities and processes well-directed at innovation and improvement of the firms, hence leading to financial returns in the future (Bayo-Moriones & Cerio, 2012).
Metrics of operations are used to scale and amount the performance of a manufacturing firm, which looks on the effectiveness of the operations and firms in attaining their aims (Hwang et al., 2014). Key operational performance measures used to assess the success of operations in a firm are; efficiency, degree of responsiveness, flexibility and quality. Operational performance management helps in stability maintenance in operation of services enabling alterations scale, scope, service level and design (Kungu, 2014).

1.1.3 Supermarkets in Nairobi

A supermarket is a type of grocery self-service joint that deals extensive variation of household commodities and food preset into branches. It trades small capacities of services and goods to customers for their business and personal usage (Mithamo, Marwa & Letting, 2015). In the country, the definition of a supermarket is a large scale retailing organization with more than a few divisions below one roof and offering self-service option, like food stuffs, cosmetics, and crockery, pharmaceutical. Within East Africa, Kenya is the most highly developed in terms of existence of supermarkets. The Kenyan supermarket sector is composed of diverse categories of local chains: grocery, electronics and the bulk of supermarkets in Kenya are located in Nairobi. Supermarkets in Kenya mushroomed from upper income suburbs in large cities to middle class and poorer consumer markets (Kibubi, 2016).

Supermarkets in Kenya are key contributors of the economic growth of Kenya due to the connection between consumption and production. They are both estimated to increase considerably as the economy rises to a 10% rate of growth in 2030 (Pilisi, Namusonge & Ngeno, 2016). The clear market leaders Uchumi, Nakumatt and Tuskys supermarkets followed by Naivas chains, and other small chains of which are autonomous (single stores) supermarkets (Kibubi, 2016). In Nairobi County, Nakumatt operates 16 branches, Uchumi supermarket has 13, and Naivas has 14, with Tuskys having 23 branches in Nairobi County. Other supermarkets include: Ukwala, Eastmatt, Chandarana, Rikana, Clean shelf, and others not in any order of size. The supermarket chains in Kenya have continued to grow tremendously because of the self service operations and the nature of the Kenyan customer on touch and feel mentality (Mutisya, 2015).
Supermarkets are seen as taking over market share in Kenya’s retail sector with the expanding middle class, improved infrastructure and high urban populations among many factors, supermarkets are on an upward growth path (Mithamo et al., 2015). A study by Mwebi (2013) explored the role of various information communication technology applications in the improvement of operational efficiency for supermarkets in Nairobi and concluded that supermarkets with largest extent of information communication technology application in their premises had the highest operational efficiency. Keana (2015) explored automated procurement systems and supermarkets performance in Kenya and found a significant positive effect of automated procurement systems and performance of selected supermarkets in Nairobi city.

1.2 Research Problem

Service delivery systems provide high levels of the quality of service and generate value for organizations clients. Organizations are required to update their services delivery and ensure the implementation of the actual plan is successful (Kostopoulos et al., 2015). Thus, the realization of the service concept should be supported by the design of the service delivery system. However, different forms of service concepts require different approaches to the design of service delivery systems (Ponsignon et al., 2011). Several studies also recognize that service delivery system design has become more complex, in that customers co-create unique customer experiences through activities and interactions with different touch points of a service provider along with other elements that do not fall under the control of the service provider (Pourcq et al., 2016).

In Kenya, over the years evolution has taken place in the supermarket way of doing things. Supermarkets have changed from only just serving the urban areas traditional high-end affluent consumers and have fruitfully penetrated new markets in lower-income communities (Nair & Chisoro, 2015). Nairobi alone has about 122 supermarkets (Mutisya, 2015). However, the sector has remained less competitive in comparison with global retail outlets like Walmart (Pilisi et al., 2016). According to Mithamo et al. (2015), supermarkets in Kenya face high cost of doing business, punitive tax regimes, red tape and bureaucratic practices before a firm can roll out its business. Kariuki (2011) also posits that supermarkets in Nairobi face stiff
competition as each superstores endeavor to outsmart each other. Additionally, the performance of supermarkets has not been on par with the industry growth. For instance, Uchumi Supermarkets has continuously reported a drop in their annual profits while Nakumatt and Tuskys have closed some of their branches citing high operating cost. Thus the need to explore the relationship between service delivery systems and operational performance of supermarkets in Nairobi.

Several studies have also explored the concepts of service delivery systems and performance of organizations. For instance, Poikonen (2015) studied how service delivery system of manufacturing companies can be developed and revealed the significance of participation of customers, standardization, and technology in the running and improvement of the delivery system. Ponsignon et al. (2011) explored the characteristics and contingencies of service delivery system design and found that the design characteristics of a service delivery system are contingent upon the degree of customization of the service concept. However, the studies by Poikonen (2015) and Ponsignon et al (2011) emphasize on the importance of service delivery systems but they did not identify the existing relationship between service delivery systems and operational performance.

In Kenya, Mutisya (2015) investigated technology as a competitive advantage in supermarket operations in Nairobi County and concluded that the adoption and applications of technology improved operational performance of the supermarkets. However, the study focused on technology adoption. Kibubi (2016) also studied the relationship between benchmarking practices and supermarkets performance and concluded that process benchmarking leads to improve the performance of supermarkets in Nairobi County. However, the study focused on benchmarking and operational performance and not service delivery systems. Thus, it is evident that empirical evidence on the relationship between service delivery systems and operational performance specifically among supermarkets is limited. This creates an empirical literature which this study intents to fill by solving the question: what is the relationship between service delivery systems and operational performance of supermarkets in Nairobi?
1.3 Research Objectives

1.3.1 General Objective

To explore the relationship between service delivery systems and operational performance of supermarkets in Nairobi

1.3.2 Specific Objectives

i. To establish the relationship between system infrastructure components and operational performance of supermarkets in Nairobi

ii. To investigate the relationship between system structure components and operational performance of supermarkets in Nairobi

1.4 Value of the study

The findings of this study will add value to the management of supermarkets in Kenya as they may use the findings to determine whether service delivery systems influence the operational performance of their organizations. Supermarket managers may also use the findings to come up with policy mechanisms on service delivery systems and operational performance. The findings of the research can also be of beneficial to other players in the retail sector. Further, policy-making institutions may also use the findings to generate policies concerning supermarkets and service delivery systems. Finally, the findings will add to the existing literature on service delivery systems and operational performance of supermarkets.
CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This section shows the theoretical context, the service delivery systems components, dimensions of operational performance, empirical studies on service delivery systems and operational performance. It also provides a short read of the conceptual framework and the literature review.

2.2 Theoretical Framework

The study will explore the unified services theory and the general systems theory as the underpinning theories for the study.

2.2.1 Unified Services Theory

The unified services theory emanated from Froehle and Sampson (2006). The foundational core of the UST presupposes that with service practices, the customer provides important input into production. The UST also contends that all issues of managerial nature exclusive to services, is because service processes involve customer inputs (Sampson & Froehle, 2011). The unified service theory states that to define a production process as a service process, presence of inputs from customers is an essential and sufficient circumstance (Trinh & Kachitvichyanukul, 2013). The theory also exposes common principles to extensive variety of services and gives a uniting basis for different models and theories for service operations (Gataara, 2014).

The UST centers on the creation of value output/input model, the management's backbone of operations (Ponsignon et al., 2007). Non-service processes are told apart from service processes because of existence of customer implications and customer inputs this is according to the UST. (Trinh & Kachitvichyanukul, 2013). The consideration of service versus non-service management holds important strategic and tactical significance for entrepreneurial decision-making. According to the UST services are productive practices in which each client provides one or extra input resources for that purchaser's instance of need fulfillment (Sampson & Froehle, 2011). The unified services theory delineates services processes from non-services processes and acts as a fundamental unifying principle by identifying and revealing
crucial commonalities through outwardly desperate service businesses (Gataara, 2014).

The UST offers a model that enables technology-driven procedure variations to be dealt with as it changes the attention from customer participation or customer-presence to the customer input types differentiating customer-information inputs from customer-self inputs (Ponsignon et al., 2007). The UST says that inputs from customers are the main source of the distinctive concerns and difficulties for managing services. Thus, service processes are managerially and fundamentally not alike to non-service processes. The process design dimensions are openly connected to the grouping or handling of customer inputs this is a major allegation of the UST (Trinh & Kachitvichyanukul, 2013). The service system design is a vital tactical matter as it enables affirm to change its plan onto the operational choices and that the usefulness of the strategy of operations is dependent on the right design choices made (Trinh & Kachitvichyanukul, 2013).

2.2.2 General Systems Theory

The GST emanated from von Bertalanffy (1969). GST is an interdisciplinary theory on every nature system, society and in several areas of science along with a basis where we can examine spectacles from a tactic that is holistic (Helou & Caddy, 2016). As per the understanding of the systems it assesses constant interaction of organizations with their surroundings. Relationships between stakeholders or agents and other beyond control factors constitutes to the organizational environment (Amagoh, 2011). Systems can be either closed or open, the former reflects the environment externally and how the organization mixes with it, to be for the most part inconsequential, the open approach outlooks the mixing of organizations with the outside environment as important for success and endurance of organizations (Hayajneh, 2012).

GST is basically involved with operation of systems, and joins in an extensive systems variety by identifying and naming common processes and patterns among them (Amagoh, 2011). The systems theory is therefore a prospect of theoretical that evaluates a phenomenon viewed as a whole and not just the entire elementary parts. The attention is on the relationships and interactions amongst parts so as to understand the organization of an entity, outcomes and functioning (Pels,
Mels & Polese, 2010). The prospect of systemic contends that breaking up a phenomenon into elementary parts and then reforming does not make us to fully comprehend it but rather applying a global vision to highlight its functioning does (Hayajneh, 2012). General systems theory importance is on its interaction’s focus. The center in interactions sustain that the conduct of a solo autonomous element is dissimilar from its conduct when the element interrelates with new elements (Mele et al., 2010).

In operations management, when different parts that are independent work in unison in a related manner they form a system (Hayajneh, 2012). Different departments, sections, form an organization and units comprised of groups and individuals that are self-governing, but striving together to attain a mutual objective with the purpose of transforming organizational vision into reality (Chikere & Nwoka, 2015). The systems theory deliberates the input-throughput-output component and their relations both within the external environment and within themselves, the elements of purpose, technique, information, people and structure must be combined and directed by the systems of managerial, so as to fully exploit the organizational value (Amagoh, 2011). The service delivery system for instance includes the procedures, people, management, equipment and technology needed in the service conveyance (Poikonen, 2015).

2.3 Service Delivery System Components

The service delivery systems components forms the architecture of service delivery systems that links the service content tactic as distinct by the selection of strategic design options and the strategies allied to execution and the customers’ understood services value encounters. The service delivery system design encounters how the service model is conveyed to objected customers (Ponsignon et al., 2007). According to Menor and Roth (2003) systems of service delivery constitute of the infrastructure i.e. equipment and facilities, structure i.e. skills and job design.

Infrastructural choices show the physical characteristics of the service system such as layout, equipment, and facilities (Poikonen, 2015). The structural design choices revolve around the role of procedures, layout, facilities, service processes, technology, equipment, and people. Since the relations between physical elements, people, and service processes, the proportions must be measured together to efficiently
characterize a system of service conceives and plan the system of service delivery (Ponsignon et al., 2007). A study by Poikonen (2015) revealed the effectiveness of technology to systems of service delivery and its impact on issues of management. infrastructural choices constitute those based on the emphasis of customer contact touch points, like the relative service allocation task to the front- and back-rooms and types and number of channels of distribution (traditional mail, internet, kiosks, and stores) (Roth & Menor, 2003). Structural choices denote service providers’ roles such as skills, policies, and job design (Ponsignon et al., 2007). The decisions relate to policies, people, practices, performance processes and systems (Poikonen, 2015). Structural decisions also relate to the policies, behavioral aspects, and programs of service plan. Practices involve open reflection of the techniques and tools engaged in performing workforce scheduling decisions, management of service eminence, and the setting of standards of service and measurement of systems performance. Precise structural matters dealing with service processes, management of performance, people and leadership comprise a complex set of choices and are usually long-term naturally (Roth & Menor, 2003).

2.4 Dimensions of Operational Performance

Organizational performance is among the significant concepts where judgment of all activities in the organization is done by judging their contribution to organizational performance in management research (Alamro, 2014). A recurring subject in the diverse zones of the academic literature is the focus of the conceptualization and assessment of performance of operations in an organization and measurement subject (Bayo-Moriones & Cerio, 2012). For instance, the Van Wassenhove’s and Corbett model deliberates on scopes of operational performance, which includes efficiency or cost, time and quality. However, operational performance in the various sectors is generally evaluated using four dimensions: efficiency (cost), quality, speed, and flexibility. According to Madi and Munapo (2016) all parts of process operations reduction uncertainty and variability within the operational system are due to the vital guides that lead to simultaneous enhancements in cost, quickness of delivery, delivery reliability and quality consistency.
Efficiency entails the rise in the percentage of production hours regarding the total number of hours of the workforces ‘direct presence. Efficiency is also the greatest conceivable use of all resources that are present so as to make output as big as possible (Madi & Munapo, 2016). It reveals competence and waste in the productive system and recognizes fruitless time as a result of organizational difficulties (Bayo-Moriones & Cerio, 2002). Quality is explained by its conformance to requirement, henceforth measures of quality-based performance have concentrated on matters such as the quality cost and the number of defects produced (Bayo-Moriones & Cerio, 2012). Quality competitiveness improves significantly reaction to the reliability of the customer’s needs and operational efficiency. Service firms can evade amplified costs of service production by decreasing the likelihood of doing same work again or delay of services caused by failure of services. This is accomplished by the acquisition of a certain level of quality capability, (Cho, 2014).

Time shows the enhancement in the fraction of dates of supply satisfied. This’ a classic punctuality scheme of measurement, and is well-thought-out as a simple feature of customer service (Bayo-Moriones & Cerio, 2012). Deliveries on time may have a substantial bearing on the satisfaction of the customer; hence an issue to seriously take into considerations in management of operations (Madi & Munapo, 2016). When sustaining shifting demands and varied requests from customers firms can increase response and the reliability of quality of service. It can be said that improving the flexibility of the process would improve the quality capabilities of service firms’ (Cho, 2014). An extremely flexible course would lower speed of production, while in the service sector, bearing in mind the remarkably many service encounters, various customer complaints and needs rise and hasty solutions are necessary in numerous cases (Cho, 2014).

2.5 Service Delivery System and Operational Performance

A number of studies have explored systems delivery design and operational performance. For example, Kostopoulos et al (2015) explored the effectiveness and impact on customers’ perceived quality of services in the service delivery system. The study focused on four precise pointers of the SDS’ efficiency that is, their compliance to individual needs of customers, front line employees’ performance of role, and the helpfulness of their cooperation and the services control of process on the quality of
service perceived is tested. Using an approach that’s hierarchical which integrated both customers’ and managers ‘opinions the study found that perceived service quality is considerably influenced by the coordination effectiveness, process’ control effectiveness and role performance.

In their study, Zomerdijk and Vries (2010) investigated how the design of service delivery systems was affected by the dissimilarity between non-contact and contact activities and to detect crucial design choices for back office work and structuring front office. The study focused on the amount of client contact in the process, the employees grouping and the activities decoupling and applied a case study design and fifteen systems of delivery of services in the sector of financial services. The study results established that differentiating between the 3 design decisions is more appropriate for communicating practices of contemporary times than the customary back office – front office thinking.

A study by Mohd (2015) investigated the degree of service delivery system activities in hotels in Malaysia. The study collected data through questionnaire from 474 star-rated hotels in Malaysia. The study used descriptive statistics and factor analysis to analyze data. It was found that it was possible to gauge the magnitude of hotel service delivery system through fresh products/services, push/pull orientation hotel operations layout, standardization level, customer participation, human resource specialization and use of information technology.

Bhappu and Schultze (2016) explored if business-to-business clienteles that used the service delivery systems to encourage constant individual dealings between a specific service provider and a customer would assume self-service know-how and why they would do that. The findings revealed that the gains from operational performance and losses from relational performance were associated to a prospective self-service technology. The study also found that operational performance gains perceived by the customers increase their aim to embrace self-service technology but losses gotten in relational performance lowers it. The study also found that it was weaker, that is, the positive influence of supposed performance of operation additions for customers with higher purchase occurrence on the customers intention to adopt self-service technology.
In another study, Tax, McCutcheon and Wilkinson (2013) studied the idea of network in service delivery. The study concluded that to effectively serve the customer, managers must comprehend the part they hold in service journey defined by customers and be ready to synchronize their undertakings with corresponding suppliers. The study also introduced a service delivery network and structured into groupings including collaborative networks and building cooperative, systems thinking, customer co creation, managing service failure and recovery customer relationship management, customer-to-customer interactions, and building capabilities.

2.6 Summary of the Literature Review

The theories reviewed included the unified services theory and the general systems theory. The general systems theory views the service delivery system to be fragment of the total service system in which place then ultimate assembly of the components occurs and the customer gets the finished product. The unified services theory views a service delivery system as system that unites the distinct features of services by displaying they are as a result of causes that are shared. Additionally, the components of service delivery system, which comprises of aspects of structure, infrastructure, and integration as advanced by Roth and Menor (2003), have been explored in the chapter and the four dimension of operational, which comprises of efficiency quality, speed and flexibility.

The chapter has also reviewed several studies on service delivery systems. For instance, Kostopoulos et al (2015) examined the service delivery systems effectiveness on customers’ perceived service quality and did not focus on operational performance hence a contextual gap. Zomerdijk and Vries (2010) focused on how non-contact and contact actions affects the service delivery systems design hence the study did not look at the effect of service delivery systems on operational performance. Additionally, Mohd (2015) studied the spread of service delivery system practices in hotels found in Malaysia but the study focused on hotels and aimed at established the service delivery system practices via factor analysis.

Bhappu and Schultze (2016) explored how personal interactions were promoted on a repeat by service delivery systems and adoption self-service technology but the relationship between service delivery systems and operational performance was not
explored. This leads to the conclusion that the concept of service delivery system has not been explored mostly in developing countries in Africa and specifically in Kenya. This calls for research on the relation between service delivery systems as well as the operational performance of supermarkets in Nairobi County in Kenya.

2.7 Conceptual Framework

A conceptual framework gives an overview of the area under investigation and clearly explains the various variables used in the study and their presumed interrelationships. The independent variables will comprise of the service delivery system components, which comprises of system structure and infrastructure as proposed Roth and Menor (2003). The dependent variable will be operational performance. Figure 2.1 shows the conceptual framework.

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Dependent variable</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>System infrastructure</strong></td>
<td></td>
</tr>
<tr>
<td>• Layout and Facilities</td>
<td></td>
</tr>
<tr>
<td>• Equipment and Technology</td>
<td></td>
</tr>
<tr>
<td>• Aggregate capacity planning</td>
<td></td>
</tr>
<tr>
<td><strong>System structure</strong></td>
<td></td>
</tr>
<tr>
<td>• Organization policies</td>
<td></td>
</tr>
<tr>
<td>• Practices of the organization</td>
<td></td>
</tr>
<tr>
<td>• Performance systems</td>
<td></td>
</tr>
</tbody>
</table>

**Operational Performance**
- Efficiency
- Quality
- Speed
- Flexibility

Figure 2.1 Conceptual Framework
CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This section highlights the design used in research, population used, the data collection procedure, validity and reliability and finally the data analysis procedure.

3.2 Research Design

This study employed a cross sectional descriptive research design. A cross sectional descriptive design tries to find information and to depict the present phenomena by questioning the individual attitudes and perceptions. Additionally, a cross sectional descriptive research is usually organized and precisely intended to study the characteristics termed in the research questions (Hair et al., 2011).

3.3 Population of the study

According to the Nairobi City County licensing department (2017), there are forty-three medium and large supermarkets in Nairobi. Kibubi (2016) also posits that the 43 supermarkets have the largest market share. The 43 supermarkets formed the population thus a census was considered since the population was small and finite.

3.4 Data Collection

This study used a questionnaire to collect data. The questionnaires were self administered to the operations managers or equivalent of the 43 supermarkets in Nairobi County. The questionnaire was structured in nature and contained only closed ended questions. According to Sekaran & Bougie (2010), one can design a questionnaire to examine facts about the topic or individuals known by the subject; truths about events or situations known by the subject; or beliefs, attitudes, opinions, levels of knowledge or intentions of the topic.

3.5 Data Analysis

The collected data was first summarized by use of descriptive statistics and regression analysis to realize the relationship between the variables, that is, the dependent and the independent using the SPSS. The regression equation was formulated as follows

\[ Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \varepsilon \]
Where:

\[ Y = \text{Operational Performance} \]
\[ X_1 = \text{Facilities and layout} \]
\[ X_2 = \text{Technology and equipment} \]
\[ X_3 = \text{Aggregate capacity planning} \]
\[ X_4 = \text{Organization policies} \]
\[ X_5 = \text{Organizational Practices} \]
\[ X_6 = \text{Performance systems} \]
\[ \beta_1 - \beta_6 = \text{Regression Coefficients} \]
\[ \beta_0 = \text{Constant} \]
\[ \varepsilon = \text{Error term} \]
CHAPTER FOUR: DATA ANALYSIS, RESULTS AND INTERPRETATION

4.1 Introduction

This chapter presents the response rate, the background information, and the findings on system infrastructure, system structure and operational performance results. The chapter also presents the inferential statistics results and an interpretation of the findings.

4.2 Response Rate

This study targeted 43 supermarkets in Nairobi and complete data was obtained from only 39 supermarkets. The 39 supermarkets made a response rate of 90.7% response rate which considered sufficient to for the study.

4.3 Background Information

This section explores the period the supermarkets had been in operation and the number of branches. Table 4.1 shows the results

| Table 4.1 Supermarkets Profile |
|------------------------------|---|---|
| Period in operation          | Frequency | Percent |
| Below 5 years                | 6       | 15.4  |
| 6-10 years                   | 19      | 48.7  |
| 11-15 years                  | 10      | 25.6  |
| Over 16 years                | 4       | 10.3  |
| No of branches               | Frequency | Percent |
| Less than 2                  | 10      | 25.6  |
| 3-4 branches                 | 21      | 53.8  |
| Over 5 branches              | 8       | 20.5  |

Source: Research findings

Table 4.1 shows the findings on the supermarkets profile. The findings on the table indicate that 48.7% of the supermarkets had been in operation for a period of 6-10 years whereas 25.6% had been in operation for a period of 11 -15 years. The results indicate that 15.4% and 10.3% of the supermarkets had been operation for less than 5
years and more than 16 years respectively. The results indicate that on average most of the supermarkets had been in operation for more than 5 years. The results on the number of branches indicate that 53.8% of the supermarkets had 3 – 4 branches whereas 25.6% of the supermarkets had less than two branches whereas 20.5% had more than five branches. On average, the results indicate indicate that most of the supermarkets had more than two branches.

4.4 System Infrastructure

This section explores the systems infrastructure components among them layout and facilities, technology and equipment and aggregate capacity planning.

4.4.1 Layout and Facilities

Figure 4.2 shows the results on layout and facilities. According to the results on the table 82.1% of the respondents agreed that properly maintained facilities are vital for the operations of supermarkets with mean value of 1.18, which indicates, agree. The table also shows that 76.9% of the respondent also agreed that a well designed supermarket layout enhances convenience and accessibility of products and services whereas 71.8% of the respondent agreed that adequate resources ensure that the organization meets its current obligations. The table also indicates that 61.5% and 69.2% of the respondent agreed that a supermarket physical layout does not play any role towards increased sales and a properly designed service procedures are of advantage to a supermarket respectively. The findings on average indicate that the respondents agreed that a supermarkets layout and facilities are vital.
Table 4.2 Layout and facilities

<table>
<thead>
<tr>
<th>Description</th>
<th>Agree F (%)</th>
<th>Disagree F (%)</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Properly maintained facilities are vital for the operations of supermarkets</td>
<td>32(82.1)</td>
<td>7(17.9)</td>
<td>1.18</td>
<td>.389</td>
</tr>
<tr>
<td>A well designed supermarket layout enhances convenience and accessibility of products and services</td>
<td>30(76.9)</td>
<td>9(23.1)</td>
<td>1.28</td>
<td>.456</td>
</tr>
<tr>
<td>Adequate resources ensure that the organization meets its current obligations</td>
<td>18(71.8)</td>
<td>11(28.2)</td>
<td>1.23</td>
<td>.427</td>
</tr>
<tr>
<td>A supermarket physical layout does not play any role towards increased sales</td>
<td>24(61.5)</td>
<td>15(38.5)</td>
<td>1.38</td>
<td>.493</td>
</tr>
<tr>
<td>Properly designed service procedures are of advantage to a supermarket</td>
<td>27(69.2)</td>
<td>12(30.8)</td>
<td>1.36</td>
<td>.486</td>
</tr>
</tbody>
</table>

Source: Research Findings

4.4.2 Technology and Equipment

The results on technology and equipment are shown by table 4.3. The results on table 4.3 indicate that 64.1% and 61.5% of the respondents respectively agreed that technology has a great impact to the service delivery system and up to date technological equipment enables a supermarket to offers services quickly. The findings also show that 84.6% and 69.2% of the respondents respectively agreed that supermarket should regularly update their equipments and technology helps supermarkets to manage their operations effectively. Finally, the results indicate that 64.1% of the respondents agreed that adequate equipment helps the organizations to deliver services efficiently. The results on technology and equipment indicate that technology and equipment are key components of the system infrastructure.
Table 4.3 Technology and Equipment

<table>
<thead>
<tr>
<th>Statement</th>
<th>Agree F (%)</th>
<th>Disagreed F (%)</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology has a great impact to the service delivery system</td>
<td>25(64.1)</td>
<td>14(35.9)</td>
<td>1.31</td>
<td>.468</td>
</tr>
<tr>
<td>Up to date technological equipment enables a supermarket to offer services quickly</td>
<td>24(61.5)</td>
<td>15(38.5)</td>
<td>1.38</td>
<td>.493</td>
</tr>
<tr>
<td>Supermarket should regularly update their equipment</td>
<td>33(84.6)</td>
<td>6(15.4)</td>
<td>1.15</td>
<td>.366</td>
</tr>
<tr>
<td>Technology helps supermarkets to manage their operations effectively</td>
<td>27(69.2)</td>
<td>12(30.8)</td>
<td>1.31</td>
<td>.468</td>
</tr>
<tr>
<td>Adequate equipment helps the organizations to deliver services efficiently</td>
<td>25(64.1)</td>
<td>14(35.9)</td>
<td>1.36</td>
<td>.486</td>
</tr>
</tbody>
</table>

Source: Research Findings

4.4.3 Aggregate Capacity Planning

Table 4.4 Aggregate Capacity Planning

<table>
<thead>
<tr>
<th>Statement</th>
<th>Agree F (%)</th>
<th>Disagreed F (%)</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adequate staff are vital to ensure the smooth functioning of a supermarket</td>
<td>29(74.4)</td>
<td>10(25.6)</td>
<td>1.26</td>
<td>.442</td>
</tr>
<tr>
<td>Well trained staff play an important part in quality service delivery</td>
<td>31(79.5)</td>
<td>8(20.5)</td>
<td>1.21</td>
<td>.409</td>
</tr>
<tr>
<td>Allocation of duties in a proper manner reduces confusion among supermarket employees</td>
<td>29(74.4)</td>
<td>10(25.6)</td>
<td>1.26</td>
<td>.442</td>
</tr>
<tr>
<td>Flexible working hours enhances staff morale and productivity</td>
<td>23(59.0)</td>
<td>16(41.0)</td>
<td>1.41</td>
<td>.498</td>
</tr>
</tbody>
</table>

Source: Research Findings

Table 4.3 shows that 74.4% shows that the adequate staffs are vital to ensure the smooth functioning of a supermarket whereas 79.5% agreed that well trained staff play an important part in quality service delivery respectively. The results also indicate 74.4% and 59% of the respondents agreed that allocation of duties in a proper
manner reduces confusion among supermarket employees and flexible working hours enhances staff morale and productivity respectively. The aggregate capacity planning results indicate that aggregate capacity planning is a critical component of the system infrastructure.

4.5 System Structure

This section explores the system structure components, which include organization policies and practices and performance systems.

4.5.1 Organization Policies

The findings on organization policies are presented in table 4.5

Table 4.5 Organization policies

<table>
<thead>
<tr>
<th></th>
<th>Agree F (%)</th>
<th>Disagreed F (%)</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effective policies guides a supermarket to greater heights and good performance</td>
<td>32 (82.1)</td>
<td>7 (17.9)</td>
<td>1.18</td>
<td>.389</td>
</tr>
<tr>
<td>Adherence to the policies instate by the management reduces conflicts in supermarket</td>
<td>27 (69.2)</td>
<td>12 (30.8)</td>
<td>1.31</td>
<td>.468</td>
</tr>
<tr>
<td>Supermarkets management should communicate all policies to its employees</td>
<td>28 (71.8)</td>
<td>11 (28.2)</td>
<td>1.28</td>
<td>.456</td>
</tr>
<tr>
<td>Policies should be frequently assessed and revised to incorporate changing conditions</td>
<td>30 (76.9)</td>
<td>9 (23.1)</td>
<td>1.23</td>
<td>.427</td>
</tr>
</tbody>
</table>

Source: Research Findings

The findings on table 4.5 shows that 82.1% and 69.2% of the respondents agreed that effective policies guides a supermarket to greater heights and good performance and adherence to the policies instate by the management reduces conflicts in supermarket respectively. The results further show that 71.8% and 76.9% of the respondents agreed that supermarkets management should communicate all policies to its employees and policies should be frequently assessed and revised to incorporate changing conditions respectively. The organization policies results indicate that organization policies are critical components of the system structure.
4.5.2 Organizational Practices

Table 4.6 shows the results on organizational practices.

**Table 4.6 Organizational Practices**

<table>
<thead>
<tr>
<th></th>
<th>Agree F (%)</th>
<th>Disagreed F (%)</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service quality management enhances the proper and effective delivery of services</td>
<td>25 (64.1)</td>
<td>14 (35.9)</td>
<td>1.36</td>
<td>.486</td>
</tr>
<tr>
<td>Setting of service standards is vital for effective delivery of services in a supermarket</td>
<td>29 (74.4)</td>
<td>10 (25.6)</td>
<td>1.26</td>
<td>.442</td>
</tr>
<tr>
<td>Ethical practices makes it possible for supermarkets to retain and attract customers</td>
<td>26 (66.7)</td>
<td>13 (13.3)</td>
<td>1.33</td>
<td>.478</td>
</tr>
<tr>
<td>Supermarkets should adopt practices which enhance level of interaction between customers and employees</td>
<td>28 (71.8)</td>
<td>11 (28.2)</td>
<td>1.28</td>
<td>.456</td>
</tr>
</tbody>
</table>

*Source: Research Findings*

The results on table 4.6 indicate that 64.1% and 74.4% of the respondents agreed that service quality management enhances the proper and effective delivery of services and setting of service standards is vital for effective delivery of services in a supermarket respectively. According to the findings 66.7% and 71.8% of the respondent respectively agreed that ethical practices makes it possible for supermarkets to retain and attract customers and supermarkets should adopt practices which enhance level of interaction between customers and employees. The results on organizational practices indicate that organization practices are critical components of the system structure.

4.5.3 Performance Systems

The performance systems results are shown in table 4.7
### Table 4.7 Performance systems

<table>
<thead>
<tr>
<th></th>
<th>Agree F (%)</th>
<th>Disagreed F (%)</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effective performance measurement systems are necessary for planning in supermarkets</td>
<td>27 (69.2)</td>
<td>12 (30.8)</td>
<td>1.31</td>
<td>.468</td>
</tr>
<tr>
<td>Good performance systems enables the management to monitor and to take corrective actions</td>
<td>29 (74.4)</td>
<td>10 (25.6)</td>
<td>1.26</td>
<td>.442</td>
</tr>
<tr>
<td>Performance evaluation enables a firm to set new service delivery procedures</td>
<td>31 (79.5)</td>
<td>8 (20.5)</td>
<td>1.21</td>
<td>.409</td>
</tr>
<tr>
<td>Performance measurement systems are necessary for investments in specific resources</td>
<td>25 (64.1)</td>
<td>14 (35.9)</td>
<td>1.36</td>
<td>.486</td>
</tr>
</tbody>
</table>

**Source: Research Findings**

The findings on table 4.7 show that 69.2% and 74.4% of the respondents agreed that effective performance measurement systems are necessary for planning in supermarkets and good performance systems enable the management to monitor and to take corrective actions respectively. The results further indicate that 79.5% and 64.1% of the respondents agreed that performance evaluation enables a firm to set new service delivery procedures and performance measurement systems are necessary for investments in specific resources. The findings on performance systems indicate that performance systems are critical components of the system structure.

### 4.6 Operational Performance

This section presents results on operational performance measurements which include efficiency, services quality, speed of services delivery and flexibility.
4.6.1 Efficiency

Table 4.8 shows the findings on efficiency

Table 4.8 Efficiency

<table>
<thead>
<tr>
<th>Efficiency</th>
<th>Excellent F (%)</th>
<th>Good F (%)</th>
<th>Average F (%)</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficiency in the management of costs</td>
<td>17 (43.6)</td>
<td>16(41.0)</td>
<td>6 (15.4)</td>
<td>1.72</td>
<td>.724</td>
</tr>
<tr>
<td>Usage of resources efficiently</td>
<td>14 (35.9)</td>
<td>20(51.3)</td>
<td>5(12.8)</td>
<td>1.77</td>
<td>.667</td>
</tr>
<tr>
<td>Efficiency in time management</td>
<td>15(38.5)</td>
<td>16(41.0)</td>
<td>8(20.5)</td>
<td>1.82</td>
<td>.756</td>
</tr>
<tr>
<td>Efficiency in allocation of duties</td>
<td>11(28.2)</td>
<td>17(43.6)</td>
<td>9(23.1)</td>
<td>2.00</td>
<td>.761</td>
</tr>
</tbody>
</table>

Source: Research Findings

Table 4.8 shows that 43.6% of the respondents indicated that their supermarket efficiency in the management of costs was excellent whereas 51.3% indicate that the usage of resources efficiently by their supermarkets was good respectively. The findings also show that 41% and 43.6% of the respondents indicated that their supermarkets efficiency in time management and allocation of duties was good respectively. The results on average indicate that the supermarkets in Nairobi efficiency was good

4.6.2 Quality of Services

Table 4.9 show the service quality results

Table 4.9 Quality of services

<table>
<thead>
<tr>
<th>Quality</th>
<th>Excellent F (%)</th>
<th>Good F (%)</th>
<th>Average F (%)</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conformance to specifications</td>
<td>16(41.0)</td>
<td>14(35.9)</td>
<td>9(23.1)</td>
<td>1.82</td>
<td>.790</td>
</tr>
<tr>
<td>Effective quality control process</td>
<td>13(33.3)</td>
<td>16(41.0)</td>
<td>10(25.6)</td>
<td>1.92</td>
<td>.774</td>
</tr>
<tr>
<td>Engagement of customers in service quality improvements</td>
<td>15(38.5)</td>
<td>17(43.6)</td>
<td>7(17.9)</td>
<td>1.72</td>
<td>.790</td>
</tr>
<tr>
<td>High level of quality capability</td>
<td>11 (28.2)</td>
<td>17(43.6)</td>
<td>11 (28.2)</td>
<td>2.00</td>
<td>.761</td>
</tr>
</tbody>
</table>

Source: Research Findings
The findings on table 4.9 indicate that 41% of the respondents indicated that their supermarkets conformance to specifications was excellent and the supermarkets effective quality control process was good respectively. The results also show that 43.6% of the respondents indicate that their supermarkets engagement of customers in service quality improvements and high level of quality capability were good respectively. On average, the results indicate the quality of services in the supermarkets in Nairobi quality of services was good.

### 4.6.3 Speed of Delivery

The results on speed of delivery are shown by table 4.9. The results on table 4.9 indicate that 46.2% and 41% of the respondents indicated that the supermarkets quick response to customer enquiries and reduced queuing time was good. The results also show that 35.9% and 43.6% of the respondents indicated that their supermarkets timely delivery of services and timely production of business reports was good. The results indicate the speed of delivery services among supermarkets in Nairobi is good.

<table>
<thead>
<tr>
<th>Table 4.9 Speed of Delivery</th>
<th>Excellent F (%)</th>
<th>Good F (%)</th>
<th>Average F (%)</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quick response to customer enquiries</td>
<td>17 (43.6)</td>
<td>18(46.2)</td>
<td>4(10.3)</td>
<td>1.67</td>
<td>.662</td>
</tr>
<tr>
<td>Reduced queuing time</td>
<td>13(33.3)</td>
<td>16(41.0)</td>
<td>10(25.6)</td>
<td>1.92</td>
<td>.774</td>
</tr>
<tr>
<td>Timely delivery of services</td>
<td>12(30.8)</td>
<td>14(35.9)</td>
<td>13(33.3)</td>
<td>2.03</td>
<td>.811</td>
</tr>
<tr>
<td>Timely production of business reports</td>
<td>14 (35.9)</td>
<td>17(43.6)</td>
<td>8(20.5)</td>
<td>1.85</td>
<td>.745</td>
</tr>
</tbody>
</table>

Source: Research Findings
4.6.4 Flexibility

The results on flexibility are shown in table 4.9

Table 4.9 Flexibility

<table>
<thead>
<tr>
<th></th>
<th>Excellent F (%)</th>
<th>Good F (%)</th>
<th>Average F (%)</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complaints handling flexibility</td>
<td>11(28.2)</td>
<td>20(51.3)</td>
<td>8(20.5)</td>
<td>1.92</td>
<td>.703</td>
</tr>
<tr>
<td>Incorporation of new demands</td>
<td>13(33.3)</td>
<td>14(35.9)</td>
<td>12(30.8)</td>
<td>1.97</td>
<td>.811</td>
</tr>
<tr>
<td>Reliability of quality services</td>
<td>14 (35.5)</td>
<td>15(28.5)</td>
<td>10(25.6)</td>
<td>1.90</td>
<td>.788</td>
</tr>
<tr>
<td>Adjustment to business changes</td>
<td>15(38.5)</td>
<td>14(35.9)</td>
<td>10(25.6)</td>
<td>1.87</td>
<td>.801</td>
</tr>
</tbody>
</table>

Source: Research Findings

The findings on table 4.9 show that 51.3% and 35.9% of the respondents indicated that their supermarkets complaints handling flexibility and incorporation of new demands was good respectively. The results also indicate that 35.5% and 38.5% of the respondents indicated that their supermarkets reliability of quality services and adjustment to business changes was excellent respectively. The results on average indicate the Nairobi supermarkets flexibility was good.

4.7 Inferential Statistics

Regression analysis was used to determine the relationship between service delivery components and organization performance of supermarkets in Nairobi. The results comprise of the model summary, analysis of variance (ANOVA) and the summary of the regression coefficients.

4.7.1 Model Summary

The model summary comprises of coefficient of determination (R square), correlation coefficient (R), adjusted R square and the standard error of estimate. Table 4.10 show the results
Table 4.10 Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.970&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.941</td>
<td>.930</td>
<td>1.11606</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Performance systems, Technology & equipment, Facilities & layout, Organization policies, Organizational practices, Capacity planning

**Source: Research Findings**

Table 4.10 shows that the coefficient of determination value (R square) is 0.941, which indicates that 94.1% variation in the dependent variable is explained by the independent variables. The correlation coefficient value of 0.970 indicates that there is a strong correlation between the dependent and independent variables.
4.7.2 Analysis of Variance

The ANOVA results are shown by table 4.11

**Table 4.11 ANOVA**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>635.936</td>
<td>6</td>
<td>105.989</td>
<td>85.092</td>
<td>.000a</td>
</tr>
<tr>
<td>Residual</td>
<td>39.859</td>
<td>32</td>
<td>1.246</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>675.794</td>
<td>38</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Operational performance
b. Predictors: (Constant), Performance systems, Technology & equipment, Facilities & layout, Organization policies, Organizational practices, Capacity planning

**Source: Research Findings**

Table 4.1 shows that the F statistics value is 85.092 and the p value is 0.000, which is less than 0.05. This indicates that the regression model is significant and a good predict of the relationship between the dependent and independent variables.

**Table 4.12 Coefficients**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>278.289</td>
<td>89.567</td>
<td>3.107</td>
<td>.004</td>
</tr>
<tr>
<td>Facilities &amp; layout</td>
<td>-.148</td>
<td>.112</td>
<td>-.142</td>
<td>-1.321</td>
</tr>
<tr>
<td>Technology &amp; equipment</td>
<td>-.987</td>
<td>.125</td>
<td>-.949</td>
<td>-7.869</td>
</tr>
<tr>
<td>Capacity planning</td>
<td>-6.035</td>
<td>1.541</td>
<td>-1.589</td>
<td>-3.916</td>
</tr>
<tr>
<td>Organization policies</td>
<td>2.042</td>
<td>.404</td>
<td>.755</td>
<td>5.058</td>
</tr>
<tr>
<td>Organizational practices</td>
<td>-4.130</td>
<td>3.586</td>
<td>-.350</td>
<td>-1.152</td>
</tr>
<tr>
<td>Performance systems</td>
<td>-40.838</td>
<td>9.285</td>
<td>-.735</td>
<td>-4.398</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Operational performance

**Source: Research Findings**

From the results on table 4.12 generates the following regression equation
\[ Y = 278.289 - 0.148X_1 - 0.987X_2 - 6.035X_3 + 2.042X_4 - 4.130X_5 \\
- 40.838X_6 + \varepsilon \]

The regression coefficients results on table 4.12 show that the relationship between facilities and layout and operational performance of supermarkets in Nairobi is negative and insignificant. The results also indicate that the relationship between technology and equipment and operational performance of supermarkets in Nairobi is negative and significant. The results further show that the relationship between aggregate capacity planning and operational performance of supermarkets in Nairobi is negative and significant. Further, the findings indicate that the relation between organizational policies and operational performance of supermarkets in Nairobi is positive and significant while the relation between organizational practices and operational performance of supermarkets in Nairobi is negative and insignificant. The results further indicate that the relation between performance systems and operational performance of supermarkets in Nairobi is negative and significant.

4.8 Interpretation of the Findings

The results found that there is a negative and insignificant relationship between facilities and layout and operational performance of supermarkets in Nairobi. This is an indication that facilities and layout do not have a significant effect on operational performance of supermarkets in Nairobi. The findings also revealed that a negative and significant relationship between technology and equipment and operational performance of supermarkets in Nairobi. This is an indication that technology and equipment has a significant but inverse effect on operational performance of supermarkets in Nairobi.

The research findings also found a negative and significant relationship between aggregate capacity planning and operational performance of supermarkets in Nairobi. This indicates that aggregate capacity planning has a significant but inverse effect on operational performance of supermarkets in Nairobi. The study results also established that there is a positive and significant relationship between organizational policies and operational performance of supermarkets in Nairobi. This indicates that organizational policies have a significant and direct effect on operational performance of supermarkets in Nairobi.
In addition, the study found a negative and insignificant relationship between organizational practices and operational performance of supermarkets in Nairobi. This is an indication that organizational practices do not have a significant effect on operational performance of supermarkets in Nairobi. Finally, the study revealed a negative and significant relationship between performance systems and operational performance of supermarkets in Nairobi. This indicates that performance systems have a significant but inverse effect on operational performance of supermarkets in Nairobi.

The above studies are supported by previous scholars among them Bhappu and Schultze (2016) who revealed that the gains from operational performance and losses from relational performance were associated with effective service delivery systems. Tax, McCutcheon and Wilkinson (2013) concluded that to effectively serve the customer, managers must institute effective service delivery systems. Kostopoulos et al (2015) found that service delivery systems enhance the effectiveness on customers’ perceived service quality. Mohd (2015) found that it was possible to gauge the magnitude of hotel service delivery system through fresh products/services, push/pull orientation hotel operations layout, standardization level, customer participation, human resource specialization and use of information technology.
CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the findings of the study and gives the study conclusions and recommendations. The chapter also outlines the research limitations and suggestions for further research.

5.2 Summary

The main objective of this study was to explore the relationship between service delivery systems and operational performance of supermarkets in Nairobi. The study focused on system infrastructure components and structure components. The study explored the unified services theory and the general systems theory as the underpinning theories for the study. This study targeted 43 supermarkets in Nairobi and complete data was obtained from only 39 supermarkets. The 39 supermarkets made a response rate of 90.7% response rate, which was deemed sufficient to for the research.

The descriptive findings established that supermarkets system infrastructure components among theme layout and facilities, technology and equipment and aggregate capacity planning vital components of the system infrastructure. The findings further established that structure components among them organization policies, organizational practices and performance systems are key components of the system structure. The findings on operational performance established that the efficiency, quality of services, speed of delivery and flexibility among supermarkets in Nairobi was good. The inferential statistics established that 94.1% variation in the dependent variable was explained by the independent variables and that there was a strong correlation between the dependent and independent variables. The results also established that the regression model was significant.

The regression coefficients results established that the relationship between facilities and layout and operational performance of supermarkets in Nairobi was negative and insignificant. The results also found that the relationship between technology and equipment and operational performance of supermarkets in Nairobi was negative and
significant. The results revealed that the relationship between aggregate capacity planning and operational performance of supermarkets in Nairobi was negative and significant. Further, the findings revealed that the relation between organizational policies and operational performance of supermarkets in Nairobi was positive and significant while the relation between organizational practices and operational performance of supermarkets in Nairobi was negative and insignificant. The results revealed that the relation between performance systems and operational performance of supermarkets in Nairobi is negative and significant.

5.3 Conclusions

The findings of this study revealed a negative and insignificant relationship between facilities and layout and operational performance of supermarkets in Nairobi. The study based on this finding concludes that facilities and layout do not have a significant effect on operational performance of supermarkets in Nairobi. The study results established a negative and significant relationship between technology and equipment and operational performance of supermarkets in Nairobi. The study based on this finding concludes that technology and equipment has a significant but inverse effect on operational performance of supermarkets in Nairobi.

The findings on aggregate planning capacity found a negative and significant relationship between aggregate capacity planning and operational performance of supermarkets in Nairobi. The study based on this finding concludes aggregate capacity planning has a significant but inverse effect on operational performance of supermarkets in Nairobi. The results on organizational policies established that there is a positive and significant relationship between organizational policies and operational performance of supermarkets in Nairobi. The study based on this finding concludes that organizational policies have a significant and direct effect on operational performance of supermarkets in Nairobi.

The findings on organizational practices found a negative and insignificant relationship between organizational practices and operational performance of supermarkets in Nairobi. The study based on this finding concludes that organizational practices do not have a significant effect on operational performance of supermarkets in Nairobi. The study findings on performance systems revealed a negative and significant relationship between performance systems and operational
performance of supermarkets in Nairobi. The study based on this finding concludes performance systems have a significant but inverse effect on operational performance of supermarkets in Nairobi.

5.4 Recommendations

The study concluded that technology and equipment has a significant effect on operational performance of supermarkets in Nairobi. The study therefore recommends that the managers of supermarkets should ensure that they invest resources toward up to date technology and equipment to enhance their operational performance.

The research also concluded aggregate capacity planning has a significant effect on operational performance of supermarkets in Nairobi. The study based on this conclusion recommends that manager of supermarkets should ensure that their staffs are properly trained and effective measures put in place concerning allocation of duties to employees working in the supermarkets.

Based on its findings of the study it is concluded that organizational policies have a significant and direct effect on operational performance of supermarkets in Nairobi. The study thus recommends that the supermarket managements should ensure they come up with effective policies, which would ensure that the performance of the organization is good.

The study concluded that facilities, layout, and organizational practices do not have a significant effect on operational performance of supermarkets in Nairobi. The study however recommends that supermarkets management should ensure they facilities are well maintained to cut cost related with maintenance and ensure they set up practices, which ensure conformance to ethics and standards to protect the supermarkets image.

The study concluded that performance systems have a significant but inverse effect on operational performance of supermarkets in Nairobi. The study based on this conclusion recommends that supermarkets managers should institute effective performance measurement systems to ensure that they can monitor and control any deviations, which would adversely affect the operational performance of supermarkets.
5.5 Limitations of the Study

The objective of this study was to explore the relationship between service delivery systems and operational performance of supermarkets in Nairobi. Thus, the findings are limited to the context of the study, which is supermarket in Nairobi County and may not be applicable to supermarket in other localities in Kenya since location may determine the type of service delivery systems to be adopted by supermarkets.

The study also concentrated on large-scale supermarkets in Nairobi County. However, other retail stores, small and medium scale supermarkets and wholesalers offer similar service like supermarket in Nairobi. The findings may not be generalized to the other types of business, which offer similar services like supermarkets.

5.6 Suggestion for Further Research

This study focused on system infrastructure and system structure components of the service delivery systems of supermarkets in Nairobi County. The study recommends a similar study on other forms of retail store and wholesalers, which provide similar services like supermarkets in Nairobi. The study also recommends an examination of system delivery systems on financial performance in terms of returns on assets or returns on equity of supermarkets in Nairobi County.
REFERENCES

Alamro, A. (2014). *The Impact of New Product Flexibility (NPF) on Operational Performance: Evidence from Jordanian Manufacturing Companies*. Qatar University


APPENDICES

Appendix I: Questionnaire

The aim of this questionnaire is to collect data on service delivery systems and operational performance of supermarkets in Nairobi County. This study is academic in nature and it aimed at fulfilling the requirements for the award of the degree of Master of Business Administration (MBA) at the University of Nairobi. Please respond where appropriate

Part I: Background Information

1. Supermarket name (optional) ________________________________

2. Indicated the period the supermarket has been in operation

   Below 5 years [   ]

   6-10 years [   ]

   11 – 15 years [   ]

   Over 16 years [   ]

3. Indicate the number of branches

   Less than 2[   ]

   3 – 4 branches [   ]

   Over 5 branches [   ]
### Part II: System infrastructure

4. Please evaluate the following system structure components are and indicate your level of agreement to the statements.

<table>
<thead>
<tr>
<th>Component</th>
<th>Statement</th>
<th>Agree</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Layout and facilities</td>
<td>Properly maintained facilities are vital for the operations of supermarkets</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A well designed supermarket layout enhances convenience and accessibility of products and services</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Adequate resources ensure that the organization meets its current obligations</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A supermarket physical layout does not play any role towards increased sales</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Properly designed service procedures are of advantage to a supermarket</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technology and equipment</td>
<td>Technology has a great impact to the service delivery system</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Up to date technological equipment enables a supermarket to offers services quickly</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supermarket should regularly update their equipments</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Technology helps supermarkets to manage their operations effectively</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Adequate equipment helps the organizations to deliver services efficiently</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aggregate capacity planning</td>
<td>Adequate staff are vital to ensure the smooth functioning of a supermarket</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Well trained staff play an important part in quality service delivery</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Allocation of duties in a proper manner reduces confusion among supermarket employees</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Flexible working hours enhances staff morale and productivity</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Part III: System structure

5. Please evaluate the following system structure components are and indicate your level of agreement to the statements.

<table>
<thead>
<tr>
<th>Component</th>
<th>Statement</th>
<th>Agree</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization policies</td>
<td>Effective policies guides a supermarket to greater heights and good performance</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Adherence to the policies instate by the management reduces conflicts in supermarket</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supermarkets management should communicate all policies to its employees</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Policies should be frequently assessed and revised to incorporate changing conditions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organizational Practices</td>
<td>Service quality management enhances the proper and effective delivery of services</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Setting of service standards is vital for effective delivery of services in a supermarket</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ethical practices makes it possible for supermarkets to retain and attract customers</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supermarkets should adopt practices which enhance level of interaction between customers and employees</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance systems</td>
<td>Effective performance measurement systems are necessary for planning in supermarkets</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Good performance systems enables the management to monitor and to take corrective actions</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Performance evaluation enables a firm to set new service delivery procedures</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Performance measurement systems are necessary for investments in specific resources</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Part III: Operational Performance Measures

6. How would you rate the following organizational performance measures in your supermarket?

<table>
<thead>
<tr>
<th>Component</th>
<th>Statement</th>
<th>Excellent</th>
<th>Good</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficiency</td>
<td>Efficiency in the management of costs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Usage of resources efficiently</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Efficiency in time management</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Efficiency in allocation of duties</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality of services</td>
<td>Conformance to specifications</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Effective quality control process</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Engagement of customers in service</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>quality improvements</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>High level of quality capability</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Speed of Delivery</td>
<td>Quick response to customer enquiries</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reduced queuing time</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Timely delivery of services</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Timely production of business reports</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flexibility</td>
<td>Complaints handling flexibility</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Incorporation of new demands</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reliability of quality services</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Adjustment to business changes</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Thank you
Appendix II: List of Supermarkets

1. Acacia Supermarkets
2. Chandarana Supermarkets
3. Cleanshelf Supermarkets
4. Eastmatt Supermarkets
5. Easy Mart Supermarket Ltd
6. Galmart Supermarket
7. G-Mart Supermarkets
8. Home Depo Supermarket
9. Homechoice Supermarket
10. Ibrahim’s Electronics supermarket
11. Jaharis Supermarkets
12. JD's Supermarket
13. Jeska Supermarket Ltd
14. Karrymatt Supermarkets
15. Kassmart Supermarkets
16. Kimsa supermarkets
17. Leestar Supermarket
18. Maathai Supermarkets
19. Maguna Andu Supermarkets
20. Mesora Supermarkets
21. Midas Supermarket Ltd
22. Naivas Limited
23. Nakumatt Supermarkets
24. Ng’ororgaa Supermarkets
25. PakMatt Supermarket
26. Quickmart Supermarkets
27. Rikana Supermarkets
28. Saltes Supermarkets
29. Selfridges Supermarket
30. Seraben Supermarket
31. Skymart
32. Society Stores Supermarkets
33. StageMatt Supermarket
34. Suntec Supermarkets Ltd
35. Tumaini Supermarkets
36. Tuskys
37. Uchumi Supermarkets
38. Ukwala Supermarkets
39. Wagon Shopping Limited
40. Waiyaki Way Supermarket
41. Stop & Shop Supermarket
42. Kibao Supermarket
43. Eagles Supermarket

Source: Yellow pages (2017)