

**STRATEGIC USE OF INFORMATION TECHNOLOGY AND  
PERFORMANCE OF MACHAKOS HUDUMA CENTRE**

**BY**

**GRACE KOKI MUTUKU**

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**DECLARATION**

This research project is my original work and has not been presented for any award of degree at the University of Nairobi or any other university.

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

**GRACE KOKI MUTUKU**

**D61/85626/2016**

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

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

**DR. J.N. KAGWE**

**SENIOR LECTURER**

**DEPARTMENT OF BUSINESS ADMINISTRATION**

**SCHOOL OF BUSINESS**

**UNIVERSITY OF NAIROBI**

## **DEDICATION**

I dedicate this research project to my parents; my father, Peter Mwikya, and my mother, Ruth Mutuku, both of whom were a source of encouragement and support.

## **ACKNOWLEDGEMENT**

To the Almighty God, I give all the thanks for giving me the grace and enabling me to achieve this goal.

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To my family and friends, I express my gratitude for your continued encouragement and prayers in pursuing my dreams.

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## **ABSTRACT**

The purpose of this study was to determine the effects of the strategic use of Information Technology (IT) on the performance of Machakos Huduma Centre. The research study conducted in the month of November 2018 was guided by two objectives namely; to determine the extent of use of Information Technology in Machakos Huduma Centre and secondly, to find out the effects of the strategic use of Information Technology on the performance of Machakos Huduma Centre. The research question of the study was, how does the strategic use of Information Technology affect the performance of Machakos Huduma Centre? The study used a case study research design. Data collection was done through use of interview guide as the primary instrument of data collection and Huduma Kenya publications, their website and other studies conducted on Huduma Centres as sources of secondary data. Research permits were given by the National Commission for Science, Technology, and Innovation and the Huduma Kenya Secretariat in order to authorize collection of data. Two managers, six staff members and four customers at Machakos Huduma Centre were interviewed. The collected data was analyzed through categorization, then emerging themes and patterns obtained to give the research results. The results showed that there was substantial connection between the strategic use of Information Technology and the performance of Machakos Huduma Centre. The results indicated positive effects on the performance of Machakos Huduma Centre, due to the strategic use of Information Technology. These effects included, customer satisfaction, efficient and effective service delivery, transparency and cost effectiveness. The study recommended that organizations should invest in Information Technology resources wisely, focusing on how to use them in a strategic manner. For the strategic use of Information Technology, IT should be aligned to the vision of the organization and applied to the critical areas of the organization. Also, strategic use of Information Technology necessitates that it be used in the formulation, implementation and achievement of the organization's strategy. The study also made recommendations to the management of Machakos Huduma Centre, to invest in regular training of the staff on IT-skills, to add more IT officers and to resolve the frequent system and network failures. This study is useful to scholars, managers and practitioners across the fields to understand what the strategic use of Information Technology is, as well as the effects of strategic use of IT on the performance of organizations.

## **CHAPTER ONE: INTRODUCTION**

### **1.1 Background of the study**

Information technology (IT) usage has gained overwhelming recognition as a means by which businesses compete and improve performance in the market. Advancements in IT have resulted in globalization, hence intensifying business competition. Organizational effectiveness and efficiency improvement can be attributed to use of IT in implementing successful business strategies. Organizations can therefore improve their performance by strategic use of IT to aid in business requirements (Abugabah, Ahed, Sanzogni, & Louis, 2009).

This study was grounded on two theories namely, Dynamic Capabilities Theory and Resource Based View. The Resource Based View is a model that is grounded on the view that the resources a firm has, are critical in creating a sustained competitive advantage which is translated to its performance (Wernerfelt, 1984). It holds on the claim that the performance of a firm is gauged by the resources it owns. Dynamic Capabilities Theory proposes that companies can create new form of competitive advantage by recognizing, reacting flexibly and rapidly to product innovation and market changes, while at the same time having the ability to control firms specific capabilities in a way that the external and internal competencies are effectively utilized (Teece, Pisano, & Shuen, 1997).

Kenya has made considerable number of reforms in the public service delivery sector since its independence in 1963. These reforms have aimed at creating an efficient government that reduces wasteful public expenditure and achieving higher levels of performance, transparency and accountability. To ensure quality public services and

accountability to the people, Huduma Kenya Programme was introduced (Kobia & Oliech, 2016). Huduma Kenya is a programme that has leveraged on IT to achieve its mission of offering government services that are efficient, at the convenience of the citizens. This research study focused on the strategic use of technology and the performance of the Huduma Centre located in Machakos town within Machakos County. Machakos Huduma Centre being one of the earliest Huduma Centres to be established in Kenya was a perfect case to be studied.

### **1.1.1 The Concept of Strategy**

‘Strategy’ is a concept that was initially used in military, before it was adopted in the business world. According to Mintzberg H. (1987), strategy can be described in multiple ways. Mintzberg describes strategy as a perspective- the way a firm does things, a ploy- a unique maneuver, a pattern- a regularity in behavior over time, a position- locating specific products in given markets and a plan- an intentional chosen course of action (Mintzberg, Ahlstrand, & Lampel, 1998). Chandler (1962) define strategy as the establishment of the desired future position of an organization and then taking the appropriate course of action and allocating the necessary resources to attain this position. This definition involves envisioning the organization’s future, and then working towards it.

Strategy as the means by which firms achieve their objectives, involves proper allocation of resources and cohesiveness. In describing the strategy that a firm is pursuing; a consideration is made of where the firm is competing and how it is competing. Strategy necessitates that focus be not only on the present of the firm but also on the tomorrow (Grant & Jordan, 2012). Therefore, the future objectives of the firm, and how they will be

met is also an aspect of strategy. From the above understanding, the concept of strategy can be taken as the key way of positioning organizational resources to enable the firm in achieving its desired goals and objectives and position itself in the market.

### **1.1.2 Information Technology**

Information Technology (IT) is the use of computers to retrieve, manipulate, process, store and transmit data or information. It is a tool that managers can use to optimize the operations of a firm as well as handle change. Information Technology comprises of; computer software - the various programs which control and manage the operations of a computer, computer hardware- the physical components of a computer, storage technology – the organized collection of logically related data and communication technology / computer network – the interconnection of computer devices to enable communication and transmission of information (Englander, 2009).

Information technology has been a significant factor in the evolution of the business world and operations of the organizations. Knowledge Based Systems are being used to help managers in their decision-making process. Employees now work together as a team collaborating closely even from distant locations thanks to networked computers. Traditional organizational boundaries or physical locations no longer limit firms in providing products and services, since network links people, assets and ideas to create and distribute products and services, bringing about virtual organizations (Englander, 2009).

### **1.1.3 Organizational Performance**

Organizations are crucial in every day to day life and their success is essential to the economic, social and political development of a nation. It is therefore crucial to determine their performance. The concept of organizational performance has received great interest from many authors and researchers. Initially, organizational performance was viewed as the degree to which organizations were able to realize their objectives (Georgopoulos & Tannenbaum, 1957). This concept later evolved into a firm's capacity to access and use the scarce resources in the environment (Yuchtman & Seashore, 1967). With increased studies in organizational performance, various definitions have been outlined. However, in this paper, organizational performance is viewed as the process of measuring and evaluating the accomplishment of an organization's mission, thus value creation.

Performance measurement systems of organizations are either financial measures or non-financial measures. Financial measures are quantifiable and involve the measure of the financial results that come about from the execution of the decisions that are made by the management. These financial measures include profit inventory turnover, return on equity, asset turnover rate and working capital. Non-financial measures are qualitative and are based on the organizational strategy (Henri, 2004). They are founded on the organization's current and potential competitive position. They possess predictive ability and have useful information that complements financial measures. They include customer satisfaction, operating efficiency, reliability, workflow improvements, data storing capability, innovation, employee performance and skill development.

Unlike private organizations, measuring performance of public organizations especially those involved in public service delivery is difficult, since reliable outcome data are sometimes not readily available. According to Cole and Parston (2006), the government is not focused in making profit, but its focus is to provide public goods. Cole and Parston claim that public service value is not just achieving results and minimizing cost, it is about achieving both in a balanced manner. Therefore, Accenture's Public Service Model, which is built upon the assumption that public service value is achieved through rendering improved outcomes in a more cost-effective manner, is instrumental in measuring the performance of organizations mandated with public service delivery (Cole & Parston, 2006).

This study adopted a multidimensional framework of measuring organizational performance, which is drawn from Kaplan's Balanced Scorecard and the Accenture Public Service Model. In the financial measure, the cost-effectiveness of the organization was the desired outcome. Cost-effectiveness determines the amount of financial costs that were borne by the organization and eventually the citizen, for the organization to achieve its outcomes. In determining the customer's perspective, the citizens' satisfaction was a paramount indicate to know whether value has been created for them. In the internal perspective, a determination of the improved effectiveness and efficiency of key internal business processes was considered. Finally, in learning and growth, a determination of whether the organization was learning and improving the process of service delivery was considered (Kaplan, 2001).

#### **1.1.4 Huduma Centres in Kenya**

Huduma is a Swahili word meaning 'Service'. Huduma Centres are a one-stop-shop citizen service centres, a product of Huduma Kenya Programme which is translated 'Service for Kenya Programme'. This is an initiative by the Kenyan Government to improve the delivery of public services through integrated technology platforms, where citizens access services found in various government departments, ministries and agencies. It is a replacement of the traditional model of service delivery that had the various government department / agencies sparsely distributed. The Huduma Kenya Programme is under the Ministry of Public Service, Youth and Gender Affairs through the Huduma Kenya Secretariat (Huduma Kenya Secretariat, 2016).

Huduma Centres make use of the one-stop-shop model where every Kenyan Citizen can access several public and government services efficiently at their convenience. A good number of public services are offered here. They include: - issuance of national identification cards, duplicate national identity cards, registration of voters, issuance of birth certificates, renewal of driver's licenses, issuance of business certificates, Nairobi county single business permits, payment of land rates, Kenya police abstract and many other services. The first Huduma Centre was launched at General Post Office (GPO) on 7<sup>th</sup> November 2013 by the President of the Republic of Kenya, H.E Uhuru Kenyatta (Huduma Kenya Secretariat, 2016). The number of the Huduma Centres has grown exponentially over the years with the current number standing at 52 centres countrywide. Huduma Kenya currently prides in providing more than 65 government services, serving 30,000 customers daily and collecting Kenyan Shillings (KES) 12 Billion as revenue (Huduma Kenya Secretariat, 2016).

### **1.1.5 Machakos Huduma Centre**

Machakos Huduma Centre is in Machakos town, at the Post Office building Opposite Cathedral Church. It was opened to the public in March 2014, making it one the earliest Huduma Centres to be opened after the launch of Huduma Kenya Programme. It provides public services to citizens, most of whom are Machakos County residents, from a single location. This has been enabled using the Huduma payment gateway, a channel that is integrated and consolidated, to make payment for government services easy.

Machakos Huduma Centre offers a great number of public services to the citizens in a fast and convenient way. These services include but not limited to: - Processing of birth certificates, identification cards, Kenya Revenue Authority (KRA) pin, NHIF, NSSF cards, certificates of good conduct, registration of business name, registration of welfare societies, issuance of single business permit, student loan application and repayment services (HELB). Machakos Huduma Centre is suitable for this study because it is one of the first Huduma Centres to be opened after the launch of the Huduma Kenya Programme, operating for slightly more than four years now (Huduma Kenya Secretariat, 2016).

## **1.2 Research Problem**

Recently, organizations have increased their investment in Information Technology to improve their business processes, while in the research field studies have been done to interpret the effects of IT on performance of the organizations. A study by Xue (2016), emphasized on the significance of the usage of IT applications in maintaining the competitive edge of organizations. Xue noted that the use of IT supports the organization's strategic objectives, helps the organization to produce differentiated



products as well as reduce the cost of producing products. It has therefore been noted that IT is a success contributing factor in organizations. However, it must be used strategically for organization's performance to be realized (Hackler & Saxton, 2007).

Huduma Kenya Programme is a flagship project of the Kenya Vision 2030. The study of its performance was therefore crucial to determine how much it has contributed to the transformation of Kenya into a newly industrializing, middle-income country that provides an improved quality of life to all its citizens. How much better to do this than to relate it to one of the anchors of the three pillars of Vision 2030, which is Science Technology and Innovation (STI). Hence the research topic; Strategic use of Information Technology and the performance of Machakos Huduma Centre. And as earlier stated, Machakos Huduma Centre was a suitable choice since it was among the first Huduma Centres to be opened in the country.

Numerous researches have been done worldwide to identify the link between the strategic use of Information Technology and the performance of organizations. Abugabah, Ahed, Sanzogni, and Louis (2009), provide a deep analysis of the connection between information systems and organizational performance. They conclude that to understand IT's role in the performance of organizations, its utilization must be measured rather than its investment. An evaluation of the strategic use of IT applications in attaining and maintaining competitive edge done by Madadipouya (2015), concluded that IT is a success contributing factor if it is used in a strategic manner and at the appropriate time. The author notes that IT should be linked to strategies adopted and aspects such as reliability, performance and alignment to the business environment should be considered. A more similar research to this study done by Hackler and Saxton (2007), focuses on how

non-profit organizations use IT strategically to improve capacity and unexploited potential. The authors state that to use Information Technology effectively, non-profit organizations must receive support to build an understanding of and capacity for IT usage.

Several studies on Huduma Centres have been done, but few have focused on how strategic use of IT has influenced their performance. Abdalla, et al. (2015) studies on the effect of Huduma Centres in service delivery, focusing on Mombasa Huduma Centre. The authors note that the customers felt satisfied with the dependable services offered by the Mombasa Huduma Centre, due to the efficiency of service delivery. Influence of Huduma Centre strategies on government service performance in Kenya has been researched on by, Sangoro, Roman, and Oirere (2016), focusing on Kakamega County. In their conclusion, the authors found that there were significant effects of government policy, management style and level of technology on the performance of Kakamega Huduma Centre.

Various studies and researchers have applauded the Huduma Kenya Programme, but a few have gone ahead to study on the influence that strategic use of Information Technology has had on the performance of Huduma Centers. It is assumed that Information Technology has been an enabler in the development and the implementation of the Huduma Kenya Programme. There has been no study on the strategic use of Information Technology and performance of Machakos Huduma Centre. Therefore, identifying, analyzing and applauding the role that IT has played in Huduma Kenya, must be based on research. How does the strategic use of Information Technology affect the performance of Machakos Huduma Centre?

### **1.3 Research Objectives**

The objectives of this study were: -

- i. to find out the extent of use of Information Technology in Machakos Huduma Centre.
- ii. to determine the effects of strategic use of Information Technology on the performance of Machakos Huduma Centre.

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

The results from this research added to the wealth of knowledge on the effects of the strategic use of information technology on organizations' performance. It also enlightened on how Information Technology can be strategically used. This information is of value to scholars, teachers as well as researchers in this area of study.

Huduma Kenya Programme is a project under Kenya Vision 2030 and thus, evaluating its performance was imperative to the government as it provides an enabler to determine the progress it has made in attaining this vision. This research, therefore provided a guide to the policy makers and the government in determining how Machakos Huduma Centre has contributed in transforming Machakos County into an industrializing county and in improving the citizen's quality of life.

The results of this research are crucial to help managers and practitioners across the fields become aware of the influence that IT has on the performance of organizations. Getting to understand how IT can be strategically used to ensure efficiency as well as effectiveness in attaining the organization's mission and vision, which translates to performance. And more specifically to the Huduma Centre managers, this study is

important in helping evaluate how strategic organizations they have been in the use of IT and how it has affected their performance.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

This chapter assesses current knowledge around the strategic use of IT and performance of organizations. It is based on previously done research, books and reports. It outlines the various theories that support this study, describes the effect of strategic use of IT on performance and provides a conceptual framework for the study.

### **2.2 Theoretical Foundation**

This research is grounded on two theories namely, Resource Based View (RBV) and Dynamic Capabilities theory (DCT). This section will provide an in-depth discussion on these theories, outlining their basic principles.

#### **2.2.1 Resource Based View**

The Resource Based View outlines that the unique, valuable resources that an organization control are the fundamental determinants of performance and competitive advantage. Resources are the tangible and intangible possessions that a firm controls (Caves, 1980). They include efficient procedures, machinery, skilled personnel, knowledge of technology, etc. RBV is founded on two assumptions, that firms found in an industry may be heterogeneous (unique) in connection to the resources that they possess. And the second assumption is that, the heterogeneity of resources may persist in time because the resources used to implement a firm's strategy may not be perfectly mobile across fields. This uniqueness of resources makes them a contributor to the competitive edge, hence the performance of the firm.

Even though Resource Based View provides an important framework to improve performance of a firm, this theory is limited in some scenarios. First, Resource Based View focuses on the interior factors of the firm at the expense of the external factors such as the demand of the market hence not considering the customer. Secondly, due to the heterogeneity of firms, coming up with a homogeneous sample to measure performance is hard. Thirdly, it does not explain how the mechanisms that enable competitive advantage, operate (Teece, Pisano, & Shuen, 1997). Finally, Resource Based View is limited in the ability to make predictions that are dependable (Priem & Butler, 2001).

Information Technology (IT) is considered a valuable firm resource that can enhance the organization's capabilities hence have positive effect on firm performance (Liang & You, 2009). Applying the resource-based framework to IT provides numerous insights on the role of IT in the firm, since RBV still stands as the paramount theoretical explanation of IT business value (Ruivo, Rodrigues, Johansson, Oliveira, & Rebelo, 2016)

### **2.2.2 Dynamic Capabilities Theory**

'Dynamic' refers to the capacity of making new capabilities to attain consistency with the evolving business environment, while 'capabilities' highlights the main function of strategic management in correctly adjusting, merging and rearranging internal and external firm's resources, functional competences and skills to match the needs of a rapidly evolving environment. Dynamic Capabilities Theory therefore explains how new competences can be created and how advanced resource and capabilities combinations can be used to achieve and sustain competitive advantages in an environment of evolving technology and market (Teece, Pisano, & Shuen, 1997).

Although Dynamic Capabilities Theory has been popular, it has received some criticism. Several scholars have expressed their concerns on the lack of, or weak empirical research on dynamic capabilities (Newbert, 2007). Wang and Ahmed (2007), is also concerned that the empirical research on dynamic capabilities was concentrated on small sections of the concept or done on case studies. Other concerns are uncertain value-added compared to existing ideas, lack of articulate theoretical underpinning and unclear practical implications (Arend & Bromiley, 2009).

Information Technology (IT) field is rapidly changing and in turn influencing the market changes. Dynamic Capabilities Theory is therefore useful to enhance strategic management of the rapidly changing IT. According to Raschke (2010), IT-enabled dynamic capability (ITDC) enables firms in planning and restructuring procedures to enhance productivity. This theory is thus handy in determining the ITDC of Machakos Huduma Centre.

### **2.3 Strategy and Organizations**

The success of any organization in its industry is embedded on the strategy it pursues. This is because strategy is a unifying theme that gives consistency as well as direction to the decisions and the actions of the organization. Grant and Jordan (2012), outline four factors of an organization's success in strategy as, creating goals which are simple, consistent and long term; having a deep knowledge of the environment in which the organization operates in; an intense knowledge of the organization's strengths and weaknesses and effective implementations of the strategy.

Strategy in an organization can be cascaded hierarchically into three levels. The highest level being the organization or corporate-wide strategy which covers the entire organization. The strategy at this level deals with managing the various groups of businesses that compose the organization and acquiring finances to allocate to them. The second level is the business-level strategy and it is involved in determining how each of the organization's strategic business unit ought to compete. And the last level is the functional-level strategy, which focuses on improving the operational effectiveness of operations within an organization.

The role of strategy in organizations cannot be adequately explained in one sitting. With the evolution of strategy as well as the growing knowledge and understanding of strategy, the importance of strategy in organizations has been evident. Strategy supports decision making by making the process of decision making simple; secondly, strategy brings about coordination of the actions of members in the organization, since it acts as a communication device. Thirdly, strategy envisions the future, setting targets and giving orientation to the organization (Grant & Jordan, 2012). Organizations are in an environment that is dynamic in nature and thus, the importance of strategy becomes apparent. This is because in an environment that is ever changing, the focus on the firm's objectives ought to be navigated by a clear sense of direction. When an organization is faced with numerous unforeseen threats, the environment also provides new opportunities, which with the help of strategy, the organization can be steered through the stormy seas.



## **2.4 Information Technology**

In today's day to day life, the use of Information Technology cannot be overlooked. Porter (1991), identifies change in technology as one of the factors that can increase or decrease the competitive value of resources. The ongoing Information Technology developments have had numerous implications on organizations' operations and performance. Some of the advancements in IT include cloud computing, artificial intelligence, decision support systems, intelligent business computing, among others. Communication and collaboration has thus been made simpler as well as easier business transactions and work flexibility.

Mixed reactions have been noted on the realized benefits of investments in IT. According to Nordin (1998), strategic use of IT is being viewed as one of the fundamental ways, which a business can use to gain a competitive edge for favorable business performance. Loveman (1988), writes that researchers have been unable to establish a substantial relationship between investment in IT and increased productivity at the national level. Even though it remains unclear whether a firm's performance is influenced by use of IT, organizations globally have gone ahead to invest in and use IT in their operations. This has also seen governments all over the world adopt the use of IT to efficiently and effectively meet the needs of their citizens. Kenya has not been left behind.

## **2.5 Strategy and Information Technology**

As Brynjolfsson and Hitt (2000) notes, the worth of computers is not limited by the computational capabilities, but on the manager's capacity to come up with new procedures, processes and organizational structures that leverage this capability, since computers are becoming cheaper and more powerful. This ability to leverage the

computational capabilities of Information Technology by adhering to Nordin's five dimensions of strategic use of IT, namely strategic cohesion, strategic vision, strategic targets, strategic criticality and strategic strengths; in formulation, implementation and achievement of an organization's strategy, is what strategic use of IT is all about (Nordin, 1998).

In defining the term 'strategic use of IT', there must be linkage of IT with strategy. Something is considered strategic if it has a linkable function in the execution of a strategy and attainment of competitive edge (King, Grover, & Hufnagel, 1989); if it basically alters the way an organization competes in the industry and eventually advances the organization's performance (McNurlin, 1986) and if, it contributes to the company's core competence (Ashmore, 1988). Although various authors have explored and debated on this, one thing remains clear that, the strategic use of IT broadly entails, the use of IT to help in the formulation, implementation and achievement of an organization's strategy.

The strategic use of IT brings about cost-effectiveness since it reduces the business processes cost. Cakmak and Tas (2012) noted that Multi-phase Integrated Automation System (MITOS) and Automation System for Architectural Practices (ASAP) are being used in Turkey construction companies to reduce operation costs. These systems provide fast access of updated and correct data, data storage and it makes communication easier. Premier designs Inc, a USA clothing manufacturing company, has also strategically utilized IT to reduce the cost. The company made a mobile application "Premier Designs Jeweler" which enabled customers to design their own clothes, with the information being automatically updated in the company's database. This enabled them to cut on

labour cost on design teams as well as improving operational efficiency as the ideas come from the consumer (Hemmatfar, Salehi, & Bayat, 2010).

The strategic use of IT reduces lead time, the latency between the initiation and the execution of a process, in organizations. This is because IT improves the efficiency of business processes. According to Clarke (2005), Mercedes-Benz would take about seven days to complete a single order, in 1998. However, in 2010 the company integrated Microsoft Dynamic CRM and Microsoft Dynamic GP to their existing applications, cutting down the order fulfillment time by 85 per cent.

The strategic use of IT also increases organization's productivity. When IT resources are used on the critical areas of business, operational effectiveness and efficiency is realized. An example is given of an automotive company in China that implemented "Just In Time" systems in 2002, and managed to triple its production by 2006 and reduce its storage cost (Madadipouya, 2015).

As seen above, the strategic use of IT is instrumental in the improved performance of organizations. Porter (1991), identifies change in technology as one of the factors that can increase or decrease the competitive value of resources. Therefore, at a time when there are dynamic changes in IT, how it is utilized and not how quick an organization is to acquire up to date information systems, is what increases the competitive advantage of an organization, leading to improved performance.

## **2.6 Empirical Studies and Research Gaps**

Studies have been done to investigate the influence of strategic use of Information Technology on the performance of organizations. Also, various studies have been done

on Huduma Centres, investigating their strategies and the effects they have had on the public service delivery. Table 2.1 gives a summary of some of the global and local studies that have been done, and the research gaps that these studies have not addressed.

Author	Study	Methodology	Findings	Gaps
Kasra Madadipouya (2015)	A review on the strategic use of IT applications In achieving and sustaining competitive advantage	Descriptive research design	IT contributes to the success of a firm, especially if customers are involved and the systems are used strategically and at the right time	This study focused on effect of strategic use of IT in achieving and sustaining competitive advantage, a similar research is needed to investigate the effect on performance
Moon-Koo Kim and Kyoung-yong Jee (2007)	Factors Influencing Strategic Use of Information Technology and Its Impact on Business Performance of SMEs	Descriptive-survey research design	Strategic use of IT helps SMEs attain competitive advantage and improve performance.  External environmental characteristics influence investment in Information Technology and the strategic use of IT	This study was done in Korea, a similar research needs to be done in Kenya

<p>Violet Kagasi, Mr. Oscar Sangoro, Mr. Aketch Roman and Dr. Dorcas Oirere (2016)</p>	<p>Influence of Huduma Centre innovation strategies on government service performance in Kenya; a case of Kakamega County.</p>	<p>Descriptive survey design</p>	<p>All Innovation strategies had significant effect on the Government Service Performance in Huduma Centre Kakamega County, Kenya.</p>	<p>This study concentrated on Huduma Centre innovation strategies, there is need for a research on the effect of strategic use of IT.</p>
<p>Rachael Ndunge Kimeu and Gabriel Githu (2017)</p>	<p>Effect of E-Governance Pillars on Service Delivery in Decentralized Governments: Case Study of Machakos County in Kenya</p>	<p>Descriptive research design</p>	<p>The county governments are also in the learning process on provision of services that have been devolved from/ the central government.</p>	<p>This research focused on service delivery in Machakos Huduma Centre, thus a study is needed to know the effect of IT on the performance of Machakos Huduma Centre</p>

Table 2.1: Empirical Studies and Research Gaps

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

This chapter outlines the research methods used in this study. It outlines the research design, the instrument used in collecting data and the analysis methods of the collected data that were used.

### **3.2 Research Design**

This study used a case study to investigate the strategic use of information technology and the performance of Machakos Huduma Centre. This design was suitable because it offered an exhaustive and in-depth analysis that gave worthwhile insights to the research. According to Mugenda and Mugenda (2003), if the focus is on the depth of the study as opposed to the breadth, then a case study is the suitable choice. This is because a detailed study is done on the chosen unit of study. This study also adopted a cross-sectional time horizon, at a given time, due to the time limitation.

The purpose of this study was to describe the influence that strategic use of IT has on the performance of Machakos Huduma Center. Therefore, a descriptive research design was used in carrying out this research. According to Mugenda and Mugenda (1999), descriptive design involves collecting data from members of the population with respect to one or more variables. Descriptive research design was suitable because it depicts a precise profile of persons, events or situations (Saunders, Lewis, & Thornhill, 2007).

### **3.3 Data Collection**

Data collection was done with the aid of an interview guide. It was preferred in this study since it was a useful aid in administering the questions in a personal interview, allowing

rigorous collection of data from the various personnel within the firm. It was also suitable because according to Saunders, Lewis and Thornhill (2007), interviews aid in collecting valid and reliable data that is applicable to objectives of this study. This study adopted a semi-structured interview guide, which was divided into two sections. The first part was administered to top management and selected personnel in Machakos Huduma Center, while the second part was administered to selected customers in Machakos Huduma Centre. Two managers, six staff members and four customers were interviewed.

This study also utilized secondary data which was collected from previous research, the various Huduma Kenya publications and online data. The secondary data sources were considered in this study since they save on time and cost of acquiring information, in addition to providing data that can be used to authenticate the information provided by interviewees (Sekaran, 2003).

### **3.4 Data Analysis**

Data analysis is a technique that helps in inferring data that has been collected using an objective and systematic identification of specific features (Bryman & Bell, 2003). The data collected was first prepared for analysis through editing and rectifying inconsistencies. It was then classified into meaningful categories, which are the codes used in grouping the data. Next, the data was unitized by attaching the appropriate units of data to the devised categories. Categorization of the data helped in recognizing relationships, themes and patterns which were useful in coming up with conclusions of the study. This process was thorough, and started immediately after the data collection began, to allow emerging findings to inform the continuing data collection process (Burnard, Gill, Stewart, Treasure, & Chadwick, 2008).

The analyzed qualitative data was presented in form of narratives, under each main category or theme. This aided in describing and explaining the findings of the study. These findings were compared with the theoretical approach, themes and empirical studies in the literature review, and then interpreted in line with research objectives and theory.



## **CHAPTER FOUR: RESULTS / FINDINGS AND DISCUSSIONS**

### **4.1 Introduction**

This chapter gives the analysis of data, results and discussion of the findings of the research. The research objectives of this study were to find out the extent of use of Information Technology in Machakos Huduma Centre and to determine the effects of strategic use of IT on the performance of Machakos Huduma Centre.

#### **4.1.1 Background Information**

Data was collected using interview guides administered to the Centre Manager, the Deputy Centre manager, six staff members and four customers in Machakos Huduma Centre. The staff in Huduma Centres are drawn from various public service departments, ministries and departments in the government of Kenya. Therefore, the staff selected for the interview were from different departments, giving the diverse representation in Machakos Huduma Centre.

The interviewees were requested to specify their length of service in Machakos Huduma Centre. From the findings, the Centre Manager indicated that she had been working in Machakos Huduma Centre, since its opening which is a period of four years eight months. The Deputy Centre Manager indicated that she had been working in the organization for four years, while the staff members period of working in Machakos Huduma Centre were as follows, four years, three years, two years - six months, two years, six months and one month.

## **4.2 The Extent of Use of Information Technology in Machakos Huduma Centre**

The first objective of this research was to find out the extent of use of Information Technology in Machakos Huduma Centre.

### **4.2.1 Information Technology Resources in the Organization**

The study sought to find out the IT resources in the organization that the staff had at their disposal in performing their duties. The respondents were given a list of various IT resources to identify the ones that were available in the organization. All the respondents identified computers, internet, queue management system and VoIP phones as IT resources at their disposal to help them perform their duties. The respondents also indicated that they had softwares to aid them in performing their duties, managing their customer's details as well as in generating the necessary reports. Some of the respondents acknowledged their use of social media to keep their customers informed and respond to any queries.

The interviewees were asked of their level of competence in using IT in their daily routines. Most of them indicated that they were highly competent, while a few noted that they were moderately competent. On further questioning on the frequency of IT-skills training to the staff, it was clear that this was a neglected area. The respondents indicated that they have only been trained once on the use of IT. The researcher sought to find out what happens in case of technical issues when working with IT resources. It was evident that there was one onsite IT officer who assisted in resolving the issues. The respondents also noted that they had access to contact the headquarters IT helpdesk for assistance.

The respondents were asked on how frequent upgrades and maintenance of IT resources is done. From the findings, maintenance of the hardware IT resources is done by the IT officer to the level of his ability. Upgrades are however done according to each financial year, which is annually. Due to it taking such a long time to do upgrades and thorough maintenance, some IT resources get to a very bad state that they cannot be used.

#### **4.2.2 Extent of Information Technology Agreement with the Vision of the Organization**

The respondents were requested to describe the organization's vision and mission. According to the findings, the respondents stated that the mission of Machakos Huduma Centre was to improve the access and delivery of government services to all Kenyans, through a one-stop shop model where all public services can be found under one roof. The respondents also noted that the vision of the organization was to change the perception of Kenyan's on public services, ensuring their satisfaction through efficient service delivery.

The respondents were further asked whether the use of Information Technology supported the organization's mission and vision. According to the findings, all agreed that IT is a major contributing factor in the progress towards the attainment of the organization's vision, mission and goals. The one-stop shop model has been made possible through the interconnectivity that has been enabled by the use of IT. From the findings Information Technology has brought about easier communication, minimizing on the need to travel or send physical documents over long distance. This has thus translated to efficiency and cost-effectiveness on the part of the organization as well as the customers.

### **4.2.3 Extent of Information Technology Use in the Key Areas of the Organization**

For the strategic use on Information Technology to be realized, it must be implemented on the critical / key areas of the organization (Nordin, 1998). This is measured by examining the degree to which an organization can use IT to support the critical success factor of Machakos Huduma Centre. According to findings, the key areas in Machakos Huduma Centre are centered around the citizens. These areas include citizens' access of quality services in effectiveness and integrity, promoting greater transparency, better use of public funds and improved service delivery.

The respondents were asked whether IT was being used in the key areas or functions of the organization. From the findings, they indicated that IT has been implemented in the key areas of the Huduma Centre and it helped in the key functions of the organization. The interviewees agreed unanimously that Information Technology resources such as computers and internet had enabled automation of the manual processes, helped in the quick access of citizens details as well as in communication, thus improving service delivery to the citizens. The citizens interviewed felt that the services offered were of better quality and far more convenient, as compared to the period before the Huduma Kenya programme. They also expressed much satisfaction with the queue management system, since it helped manage queues, ensuring transparency to the citizens.

### **4.3 The Effects of Strategic Use of Information Technology on the Performance of Machakos Huduma Centre.**

The second objective of the study was to determine the effects of strategic use of Information Technology on the performance of Machakos Huduma Centre.

#### **4.3.1 Strategic Use of Information Technology and Cost Effectiveness of the Organization**

The research findings showed that the strategic use of IT led to the cost-effectiveness of the organization. The respondents whose work processes had been recently automated by the use of IT attested that, the strategic use of IT had significantly lowered the operational cost. They further informed the researcher that, previously, there was huge paper work, which occupied lots of space and required movement of the documents to the head offices and back, which was expensive. With some of the processes automated, some job positions were rendered redundant, to the advantage of the organization, reducing the labour cost.

The customers interviewed felt that the introduction of Huduma Centres reduced the financial burdens they had in seeking for public services. According to the findings, most of the public services offered are available under one roof, in fact in one sitting, thus no more expenditure needed for moving from one office to another which were previously located in different counties. With this, citizens felt that they were getting value for their money, thus cost-effective.

#### **4.3.2 Strategic Use of Information Technology and the Satisfaction of the Organization's Customers**

The Machakos Huduma Centre customers interviewed expressed their fulfillment with the services offered as well as how they are offered. They commended the speed in which it takes to have their service needs met. Some compared the process with how it would take months to receive services that currently take only minutes. The queue management

system also received praises, as it promoted transparency, assuring fairness in service delivery.

The respondents however aired their concerns on some instances when they cannot receive the services they have come for, due to network failures. These concerns were also echoed by the staff respondents, who noted that frequent network and system failures do affect their service delivery, leading to dissatisfied customers.

#### **4.3.3 Strategic Use of Information Technology and Effectiveness and Efficiency of the Organization**

The interviewees were requested to describe how the use of IT had affected the operation of Machakos Huduma Centre. In response, they stated how the use of IT had reduced operations lead time. According to the findings, the automation of processes, such that all the work is done in one sitting via the computer, accessing the organization's server; reduced the time wasted moving from one point to another or moving documents from one office / location to another. This has in turn improved the speed and efficiency of service delivery. The respondents unanimously agreed on the improved accuracy in carrying out their duties. This has been enabled by the use of IT which has helped in the integration of various government departments data, thus quick access of information and ability to cross-check the citizens' data.

The respondents however acknowledged that there are times when they experience slow internet connectivity, poor network and systems failures, leading to reduced efficiency and in worst cases forcing them to ask customers to come later. Also, due to poor maintenance, some of the IT resources were not functional, forcing the staff to look for

options outside their work stations, thus slowing them down. The fact that there is only one IT officer to assist was a concern to the respondents, since at times, he gets overwhelmed with the issues to respond to, affecting his effectiveness and eventually the efficiency of the staff.

#### **4.4 Discussion**

As Nordin (1998) puts it, strategic use of IT can only be strategic if it emanates from the vision of the firm and if it is applied to the critical areas of the organization. From the findings, the strategic use of IT is evident in Machakos Huduma Centre. Information Technology has been considered in the forecasting of the organization's vision of delivering public services excellently through a "one stop shop" model. IT has also been instrumental in the achievement of this vision. IT has also been used in the key / critical areas of the Huduma Centre as seen in the findings.

According to Madadipouya (2015), factors such as reliability, performance, serviceability and durability are critical in the strategic use of IT. From the findings, some of these features have not been given the deserved attention. Network and system failures experienced in Machakos Huduma Centre have affected the reliability of the services. The durability of the IT resources is also at question due to the minimal focus given to upgrades, maintenance and training of the staff. It is however worth noting that the performance and the serviceability of IT in Machakos huduma Centre is creditable.

The findings of this research agree with the Resource Based View theory discussed in the literature review. That, the valuable resources that an organization controls are the fundamental determinants of performance. The study found out that the Machakos

Huduma Centre's investment in Information Technology resources, aligned it to its vision, enhanced its capabilities and improved its performance.

The study findings are also in agreement with the Dynamic Capabilities Theory, which explains how new competencies can be created and how advanced resource and capabilities combinations can be used to achieve sustained competitive advantage, which translates to performance, in an environment of evolving technology and market (Teece, Pisano, & Shuen, 1997). Huduma Kenya Programme has exploited advancements in technology, skilled personnel and research to create enhanced ways to provide public services. This has been evident through Huduma Centres.



## **CHAPTER FIVE: SUMMARY RECOMMENDATIONS AND CONCLUSIONS**

### **5.1 Introduction**

This chapter provides the summary of the findings, conclusions, limitations of the study, recommendations of the study and suggestions for further studies.

### **5.2 Summary of Findings**

This study assessed the extent of use of Information Technology in Machakos Huduma Centre and determined the effects of strategic use of Information Technology on the performance of Machakos Huduma Centre. The organization has extensively used Information Technology as evidenced by the IT resources available to the staff, the alignment of IT with the organization's vision and mission and the application of IT on the key/ critical areas in the organization. However, the regular training of staff on IT usage and the availability of more IT officers are areas that are wanting in the organization.

Huduma Centres are regarded a major breakthrough in the public service delivery in Kenya. This is evidenced by this study done on Machakos Huduma Centre. As seen in the vision of Huduma Kenya, Machakos Huduma Centre has been able to provide a great number of public services under one roof through excellent customer experience. Customer satisfaction, service efficiency and effectiveness, transparency and cost effectiveness are the performance outcomes that have been achieved by the organization.

The strategic use of IT in Machakos Huduma Centre has seen commendable effects on the organization's performance. It has enhanced the service delivery experience, ensuring

transparency, effectiveness and efficiency. This has led to the satisfaction of the customers. It has also brought about cost effectiveness in the organization, lowering the operational and labour costs as well as being pocket friendly to the customers.

### **5.3 Conclusion**

This study shows that the strategic use of Information Technology has applaudable effects on the performance of Machakos Huduma Centre. The notable investment in IT resources, the consideration of IT in formulation of the organization's strategy, the alignment of IT to the vision of the organization and the application of IT on the key areas of the organization, has led to the admirable performance of the organization. The satisfaction of the customers, cost-effectiveness, the effectiveness, efficiency and transparency of the public service delivery are the applaudable effects that have been realized in Machakos Huduma Centre due to the strategic use of IT.

### **5.4 Limitations of the Study**

This study faced several challenges when being conducted. The key challenge being that the staff in Huduma Centres are drawn from different public service departments in the Government of Kenya. Due to this and also the differences in the services offered in the Huduma Centre, each staff interacts with different Information Technology systems from the other. The respondents would find themselves comparing the IT resources and operations in their departments to those of the Huduma Centre. The researcher had a difficult task in choosing the data that was relevant to the study.

Huduma Centres have centralized management, with decisions being made at the headquarters and cascaded down to the branches. Thus, decisions on the use of IT in the

formulation, implementation and achievement of the organization's strategy is primarily done at the head office. With this, the respondents did not have comprehensive information on the formulation and implementation of the organization's goals and strategy, and how IT has been used to aid this.

### **5.5 Recommendations of the Study**

The importance of Information Technology cannot be overlooked in a world where there are dynamic technological advancements and market changes. It is however not how many IT resources that an organization has control over nor how much investment has been done on IT, that matters, but how the available IT resources in an organization are used. This research study therefore goes ahead to recommend that IT be used in the formulation, implementation and achievement of the organization strategy.

This research further recommends that the use of Information Technology in any organization should emanate from and be in alignment with the organization's vision. It is recommended that IT should be applied on the critical areas or functions of the organization, to maximize on its usage on the key competencies of the organization. Heeding to this will guarantee the strategic use of Information Technology and therefore reaping of its benefits.

This study make recommendation to Machakos Huduma Centre's management to invest in training the staff on IT-skills to ensure learning and growth as well as the durability of the service delivery. There is need for more IT officers in Machakos Huduma Centre for quick resolving of technical issues. Again, to improve on the reliability of the services, the network and system failures need to be dealt with.

## **5.6 Suggestions for Further Studies**

This research study sought to determine the effects of strategic use of Information Technology to the performance of Machakos Huduma Centre. Having been limited to Machakos Huduma Centre, the results of this study cannot be generalized to the rest of the Huduma Centres countrywide, due to varying diversities, perception and reception across the country. This study therefore suggests that similar studies be carried out on the other Huduma Centres.

Huduma Centres are just one of the channels of service delivery in Huduma Kenya Programme. The other channels include, E and M Huduma, Huduma Life App, Huduma call center, Huduma card and Huduma Mashinani. Further studies are suggested to research on the strategic use of Information Technology in these other channels of service delivery and the performance of public service delivery in Kenya. Again, Huduma Centre have centralized management, with decisions being made at the headquarters and cascaded down to the branches. Therefore, studies should be done on how the headquarters' decisions affect the strategic use of Information technology and performance of Machakos Huduma Centre.

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## APPENDICES

### Appendix I: Interview Guide

The following section provides the questions used in collection of data.

PART A: Interview Guide for Top Management and personnel of Machakos Huduma Center

1. What is your designation?
2. For how long have you worked in this organization?
3. Has Machakos Huduma Centre has been able to achieve its mission and vision? In what ways?
4. Which of the following IT structures are being used in Machakos Huduma Centre

Computers

  

Internet

  

Social media

  

Reporting systems

Customer Relationship management (CRM)

Enterprise resource planning (ERP)

Any other

-----

5. How does Information Technology (IT) support the achievement of the mission and vision of the organization?
6. What is your level of competence in the use of IT in Machakos Huduma Centre?

Highly Competent

Moderately Competent

Require more training on IT

7. How often are IT upgrades done to improve on productivity?
8. Are there any shortcomings you experience while using IT in performing your duties?
9. How does IT support the key functions/ operations of Machakos Huduma Centre?
10. Do you have IT support department or personnel in case of technical issues?
11. What are the performance indicators in your organization?
12. How has the use of IT affected the achievement of the above indicators?
13. How do you compare the investment made in IT and the benefits it provides?

**PART B: Interview Guide for the Customers Machakos Huduma Center**

1. How often do you visit Huduma Centre?
2. Were your service needs met at Huduma Centre?
3. What's your view on the time taken during the service provision?
4. What challenges have you experienced in Machakos Huduma Centre when seeking for service?
5. Have you ever sought this service before, before the introduction of Machakos Huduma Center?
6. What is the comparison in relation to the effectiveness (outcomes) and efficiency (time) with the recent service obtained from Machakos Huduma Centre?

Appendix II: Research Approval

REPUBLIC OF KENYA



**THE PRESIDENCY**  
**MINISTRY OF PUBLIC SERVICE, YOUTH AND GENDER AFFAIRS**  
**STATE DEPARTMENT OF PUBLIC SERVICE AND YOUTH**  
**HUDUMA KENYA SECRETARIAT**

Telegraphic address: "Personnel", Nairobi  
Telephone: Nairobi 2227411

P.O. BOX 47716 – 00100  
NAIROBI,  
KENYA.

When Replying please quote:

Ref. No: HKS/BPR/007/14/VOL1(3)

20<sup>th</sup> November, 2018

**TO WHOM IT MAY CONCERN**

Dear Sir/Madam,

**RE: RESEARCH APPROVAL: GRACE KOKI MUTUKU**

This is to confirm that the Management has duly authorized you to collect data at **Huduma Centre – Machakos** for fulfilment of your Master in Business Administration academic research on the topic "**The Strategic use of Information Technology and performance of Machakos Huduma Centre**".

You are hereby advised to treat the information given as strictly confidential and use it only for intended purposes.

You will be expected to share a copy of your Final Research Project with the Management.

A handwritten signature in blue ink, appearing to read 'Martin Situma'.

**Martin Situma**  
**For Secretary/CEO**