INFORMATION TECHNOLOGY SERVICE MANAGEMENT AND ORGANISATION PERFORMANCE OF COMMERCIAL BANKS IN KENYA
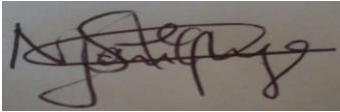
STEPHEN NJAU CHEGE

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A RESEARCH PROJECT WAS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION MANAGEMENT INFORMATION SYSTEMS (MIS)

SCHOOL OF BUSINESS

UNIVERSITY OF NAIROBI

DECLARATION

This research project is my original work and has never been submitted to any other university and or institution

SIGN: DATE: 18th November 2021

STEPHEN NJAU CHEGE

D61/81973/2015

SUPERVISOR

The project has been carried out under my guidance

SIGN   DATE: 18th November 2021

Prof Kate O. Litondo

Department of Management Science

School of Business

University of Nairobi

DEDICATION

I would like to dedicate this project to my family members especially my late grandfather and my late Dad your words are still fresh. To the rest of the family members thank you so much for the support.

ACKNOWLEDGEMENT

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATION

ATM   –   Automated Teller Machines

BSC   –   Balanced Scorecard

CBK   –   Central Bank of Kenya

CMMI   –   Capability Maturity Model Integration

COBIT   –   Control Objectives for Information Technology

KYC   –   Know Your Customer

ICT   –   Information Communication and Technology

IT   –   Information Technology

ITIL   –   Information Technology Infrastructure Library

ITSM   –   Information Technology Service Management

ISO/IEC   –   Organization for Standardization and the International Electrotechnical Commission

MDM   –   Mobile Device Management

MOF   –   Microsoft Operations Framework

NRA   –   Normatively Regulated Activities

OGC   –   Office of Government Commerce

PMBOK   –   Project Management Body of Language

PRINCE   –   Projects in Controlled Environment

RBT   –   Resource Based Theory

ROI   –   Return on Investment

SPSS   –   Statistical Package for the Social Sciences

ABSTRACT

Commercial banks have been increasingly adopting information technology to assist carry out its operations effectively. So as to better manage these services effectively IT service management has been implemented through frameworks such as COBIT, ISO/IEC 20000 and ITIL which consists of procedures, practices and guidelines on how to best deliver and effectively manage IT services. This research project aimed to establish the effect of ITSM on the organizational performance across commercial banks in Kenya. The specific objectives of the project were to determine the extent to which IT service management has been adopted across commercial banks in Kenya, to determine the effect of IT service management on the organizational performance and establish the benefits and challenges of adopting IT service management across commercial banks in Kenya. The research project used strategic alignment theory, resource-based theory and contingency theory.

Data collection in the study was done through the use of semi-structured questionnaires and analyzed using descriptive model analysis for two objectives while the third objective was analyzed through multiple regression analysis. Research findings established that ITSM version and ITSM function were significant predictors of organizational performance across commercial banks. It was recommended that ITSM framework functions be fully implemented and version upgraded so that commercial banks increase and enhance their performance. The research project will assist to bridge the gap in the study of ITSM effectiveness across organizations and will be used by policy makers, scholars and as reference to academic content.

CHAPTER ONE: INTRODUCTION

1.1   Background of the study

Information Technology (IT) has become the backbone of every organization and its impact is growing everyday leading to increased demand in its management to enhance efficiency in its utilization. Organizations are investing heavily in the development, support, implementation and management of IT resources to enhance service delivery, increase business value and enhance competitive advantage in their firms. According to Drogseth (2015), the value of Information Technology Service Management (ITSM) has grown greatly since it has become a service-aware, business aligned and organization facing practice which supports the management and the lifecycle of IT services. Drogseth, (2015) further states that ITSM is increasingly expanding IT value, impact and effectiveness in operational and development support of business requirements.

ITSM is shifting focus from technology driven focus to customer or business service delivery focus (Mcloughlin, Scheepers & Wijesinghe, 2014). Iden and Eikebrokk (2013) suggest that ITSM is perceived to improve organization performance by facilitating satisfaction of business requirements and alignment of IT with the organizational objectives through effective management and control of IT services. McNaughton, Ray and Levis (2010) stated that ITSM implementation has led to improved service quality of IT services and reduction in cost of service provision.

A lot of organizations have invested heavily on implementation of ITSM frameworks, however, according to Tan et al. (2007) ITSM benefits are difficult to realize, identify and measure. Marrone & Kolbe (2010) noted that minimal research has done on the quantification of ITSM benefits

Adoption of ICT systems across banks has greatly increased quality of delivery of products and services to their customers. These services, applications or equipment are critical for the day-to-day operations of the banks. Bank systems such as Core Banking Applications, Mobile Banking systems and ATM systems rely on IT to be effective and efficient in their operations. Wiseman (1988) highlights that organizations need to utilize information systems tactically to gain a substantial benefit. Further, Wiseman (1988) argues that while the use of information systems may not only lead to competitive benefit, it can function as a significant instrument in the organization's achievement of future goals and performance.

The study based its research on the foundations of strategic alignment theory which focusses on the need to align the resources of the organization to enhance the performance. Further, the resource-based theory provided a guide on how to organize, combine, integrate, and configure the available resources in the organization in order to stay relevant. In Kenya, commercial banks are investing a lot of resources in the implementation of ITSM, this paper looked at the relationship between ITSM and the performance of the Kenyan Commercials banks.

1.1.1 Information Technology Service Management

Information Technology Service Management (ITSM) refers to management of IT services by coordinating people, workflows and information technology in an organisation. There are three classes of business processes; strategic business processes, core business processes and supportive business processes ITSM falls under supportive business process and is usually carried out by external or internal service providers in the implementation, provision and management of quality IT-Services. Modern IT management approaches involve looking at IT functions and services from a business point of view and ensuring IT is aligned to organisational objectives. ITSM is about designing, implementing, developing, supporting and managing IT services in an organisation. This is best managed using best practise frameworks and standards such as Control Objectives for Information and Related Technologies (COBIT), Information Technology Infrastructure Library (ITIL) and Organization for Standardization and the International Electrotechnical Commission (ISO/IEC) 20000. (Cater-steel et al., 2008)

According Brenner (2006) ITSM provides an approach to efficiently and effectively deliver and support IT services while aligning these services to organisational needs with high quality. In another study, Bloomberg (2014) defined ITSM as the management of the IT environment against a predictable set of best practices which improves efficiency, effectiveness and helps reduce risk. Bloomberg (2014), further stated that implementation of ITSM can enhance value and cost effectively return on investment. Carbutt (2014) on the other hand defined ITSM as a framework of standardized, repeatable processes and procedures that enables organizations to demonstrate good corporate governance and comply with the regulations.

According to (Ferris State University, 2019) ITSM is a practice that involves implementation, management and delivery of IT services aligned to meet the needs of the organization.

1.1.2 Organization Performance

Organization performance looks into the use of company resources against the company set goals with an aim of increasing its organizational performance. According to Fellows, Wu and Liu (2010) there are performance indicators that indicates organization success, these include financial performance, growth performance, innovation performance, operation performance, value creation and competitive advantage as they show efficiency in utilization of company resources. According to Fellows et al. (2010) organizational performance measurements include return on investments, revenue, profit, net operating income and return on assets can be used to measure organization performance. However, these traditional financial measures cannot create an advantage for an organization in a competitive environment as they show financial performance and yet there are other means of understanding efficiency in use of company resources. Due to this, non-financial information such as on customers, internal process', learning and growth, strategy and alignment have been incorporated into the performance criteria giving rise to new concepts and models of measuring organization performance such as balance score card, economic value added, and market value added.

According to Bikker (2010), the organizations should combine financial measures of profitability such as return on assets, the market structure and efficiency in management of costs for detailed organization performance measurement. In this study, performance indicators that will be used are net profit, customer satisfaction and return on assets.

Customer Satisfaction in services offered by an organization is referred to customer's perception of the value received in a transaction offered by the organization, according to (Afshar , et al., 2011) the price and the acquisition cost should be relatively equal to the value and service quality received. Net promoter score will be used to measure customer satisfaction in this study

1.1.3 Commercial Banks in Kenya

According to the Central Bank of Kenya (CBK) report of 2020, there are 42 banking institutions under its regulation. Of the 42, 41 are commercial banks and 1 mortgage institution. Further, 40 of the commercial banks are owned privately while 2 have the Kenyan governments as the majority shareholder. These privately-owned banks have locally domiciled controlling shareholders (Central Bank Report, 2020). Banks in Kenya are classified either as being either Tier I, Tier II or

Tier III depending on the weighted composite index which consists of the net assets of the bank, deposit accounts, capital and reserves, customer deposits and the number of loan accounts (CBK, 2020)

According to the Central Bank of Kenya (2020) Information Communication and Technology (ICT) has been mentioned as a key development adopted by Commercial banks to help deliver on its key services. Commercial banks have been seen to navigate the turbulent economic times and economy by leveraging on available ICT to drive their business strategies and create models that provide services to their consumers in an efficient manner. Due to adoption of such mechanisms, banks are moving from the traditional manual systems, consequently allowing them to reach a wider customer base (CBK, 2019). Further, technology has allowed commercial banks to incorporate tools such as chatbots, video teller machines, and psychometric credit scores that have enabled commercial banks to swiftly serve their customers and enhance security which is an indication of the importance of IT. However, there is a need to understand how the management of IT systems relate to the organisational performance of commercial banks in Kenya.

1.2   Research Problem

Information technology constitutes a huge part of the budget of the organization especially in the banking sector, further, they are becoming increasingly complex as the demands of the banks and the consumers increase. Customers have additionally become more knowledgeable and aware of the nature of service being offered to them. The banking shareholders expect a return from the investment made into technology infrastructure whether software or hardware (Himi, Bahsani & Semma, 2011). Organizations are therefore adopting technology in a bid to coordinate people, workflows and information technology in an organisation, this means that the business processes, strategic business processes, core and supportive business are incorporated to ensure the success of the organization.

Commercial banks in Kenya have gone through turbulent times in the recent years; ranging from capping of the interest rates, uncertain political environment and increased foreign and local competition. The banking sector is highly competitive with the mobile telecommunication money transfer products such as M-pesa, Airtel money, Telkom Cash as well as mobile loan platforms such as M-Kopa, Tala, Branch among others. So as to remain competitive and profitable, banks

are forced to incorporate mobile phone activities in their operations. Furthermore, to deal with the market challenges, some Commercial Banks such as NIC, Diamond Trust Bank, and Cooperative in Kenya have also resorted to adopting expansion strategies, while others such as I &M bank merged with Giro Bank and Equity bank moving into acquisition of retail businesses. However, such strategies have not been fully able to meet the increased demand for productivity as well as uncertainty in the business world (Wasilwa & Omwenga, 2016). These strategies have been deemed slow and with the need to increase performance through the adoption and implementation of IT. Every other bank is working to acquire the best technology and the niche has been identified as IT service management. Keel et al. (2007) stated that there is a change in organization environment from resource orientation which focuses on IT functions specialization to service orientation where IT is a package that focuses to fulfill a greater purpose.

Hochstein et al (2005) looked into the benefits of IT service management with a focus on efficiency and optimizing processes and found that continuous improvement is critical if success is to be achieved. According to Cater-Steel et al (2006) the challenges of adopting ITSM included time, people and money. Cortina (2010) in a study on ITSM suggests the possible benefits that could be derived include reduction of costs, improvement of customer satisfaction and organization productivity improvement. Potgieter et al (2005) found that there is a positive correlation between service quality ITSM and customer satisfaction. Galup et al (2014) in an overview of ITSM indicates that ITSM plays a key role in optimizing company processes and therefore a strategic tool for the organization.

Despite the mentioned benefits of ITSM, prior literate is an indication organizations are not fully aware of the potential available in ITSM and is an area that needs to be explored in depth. Galup, Dattero, Quan and Conger (2007) note that there lacks adequate scholary work on the topic with the newness of the area being cited as a reason. Further, Marrone & Kolbe (2010) note that few studies has been undertaken to explore the effects of IT service management on the performance of an organization. Gacenga, Cater-Steel and Toleman (2011) pointed that there is an empirical literature study gap on ITSM performance measurement on IT organizations. They explain that no study has been done to show how to measure ITSM success rate. Zhang, Zhang and Chen (2013) note that even though ITSM investment are huge its failure rate continues to be high and thus there

is a critical need to the combination of the various success factors including people, processes and technology.

It is evident that the value of ITSM in the organization is large and the investment is huge yet the research area has received little attention from the literature in the study. Further, ITSM needs to be researched in depth especially in the context of the banking sector which is an area that the study will seek to cover and answer the question: How organizational performance across commercial banks in Kenya is affected by ITSM?

1.3   Research Objective

a)   To establish the extent to which ITSM has been adopted by commercial banks in Kenya

b)   To determine the effect of ITSM on the performance of commercial banks in Kenya

c)   To establish the benefits and challenges of adopting ITSM across commercial banks in Kenya

1.4   Value of the study

For the smooth running of operations across commercial banks in Kenya, ITSM plays a crucial role in this, the study provided insight to policy makers in the banking industry on decision-making processes to ensure establishment of ITSM policies in the banking sector to enhance its performance. The study will also assist in the design and implementation of service level agreements between IT and other departments.

The study covered the various ITSM models adopted across commercial banks and how they influence performance in each institution. Theoretically, the study contributed additional findings to the existing empirical literature done on IT service management. Practically, the study helped understand how ITSM affects performance across these Kenyan banking sector and at the same time bridge the various study gaps for further research.

CHAPTER TWO: LITERATURE REVIEW

2.1   Introduction

In the literature review chapter, information on previous done studies on information system service management and substantive knowledge on theories that support and challenged the area of study were explored as well the diagrammatical framework of the research concept.

2.2   Theoretical Framework

The research was based on the resource-based theory, strategic alignment theory and the contingency theory which were used to explain the theoretical framework adopted in the research study.

2.2.1   Strategic Alignment Theory

The theory, strategic alignment was proposed by Henderson and Venkatraman in 1993. The theory calls to attention the need to align the strategy, structure, and the culture to the goals of the organization.

According to the theory, for implementation of business and information systems to be successful, there needs to have a defined business IT management framework. The theory is a representation of the dynamic alignment between business strategic integration, information technology, organizational infrastructure and the processes applied in the business. According to Luftman (2000) IT strategic alignment consists of twelve components that further define the theory. Strategic alignment theory is useful in assessing the range of strategic choices available to managers and decision makers in an organization. It is useful in bringing out the interrelationship between external and internal domains of an organization (Shamekh, 2000). According to Shamekh (2000) rapid advancement in information systems and technology, is key that organizations utilize the alignment theory to improve the overall competitiveness and productivity of the organization. Though the theory was developed decades ago, it is still useful for organizations looking to align their businesses with the changing technology (Ward and Peppard, 2002).

Since ITSM is about processes, the theory was useful in identifying key business processes, strategies, organizational culture and align them to the ITSM processes to enable an organization

achieve competitive advantage through IS and facilitate responding of new opportunities by providing direction and flexibility.

2.2.2   Contingency Theory

According to (Burns & Stalker, 1961) contingency theory stipulates that in an organization there are various ways or procedures of doing things which are based on situations existing in the micro and macro environments.

According to the theory, different technology and technical systems of the organization, make different demands in that organization and though uptake of some strategies could prove advantageous to the business, there is no guarantee that the organization could find the ultimate strategic choice (Betts, 2011). The contingency theory assumes if an organization is well structured and technologically fit then its performance will be better. Further, decision makers need to be rationale to ensure that there is a consensus of goals. Another key assumption is that the environment and the managers influence the organization and not the vice versa (Weill & Olson, 1987).

The contingency theory provided an overall framework of the manner in which the management can integrate diverse processes of management, incorporate the environment and thereby bridge the gap between management theory and practice. ITSM is about understanding how to integrate the various dynamics of the business in order to achieve success. For an organisation to be successful, it might adopt multiple IT service management frameworks in order to deliver world class service to its customers. Even though there are industry standards for IT service management, various organisations vary in the implementation and delivery of IT service management to maximize the returns achieved.

2.2.3   Resource Based Theory

According to (Barney, 1991) the theory emphasizes that organizational resources are the critical determinants for the competitive advantage of the organization if it is to experience high performance. The theory assumes that firms within a given industry have heterogeneous resources that are under their control. Further, the theory stipulates that the heterogeneity may persist over time, heterogeneity is considered a unique characteristic of the firm that provides a competitive

edge for the organization. In the situation that firms have similar resources and have no strategy available to utilize these resources then that organization lacks competitive advantage (Mweru & Maina, 2015).

The competitiveness and survival of an organization depends on the uniqueness of the firms' resources. These resources are hard to copy, not readily available to all, sustainable and have the capacity to increase a firms' worthiness (Muhura, 2012). ITSM components include processes, products, partners and people. According to the resource-based theory if these resources or components are properly managed then organizations can achieve competitive advantage over its rivals. Barney (1991) explained that a firm can improve its performance, sustain its competitive advantage by exploiting rare, costly to imitate, valuable and non-substitutable resources.

2.3   ITSM Frameworks

ITSM consists of activities, procedures and process used to deliver IT services in business and organizations. ITSM frameworks are used for managing the delivery of efficient and cost-effective IT Services (OGC, 2007). The study will look at the most common ITSM frameworks according to Forbes Insight report of 2018, which are ITIL, COBIT and ISO/IEC 20000.

2.3.1.1   ITIL

Information Technology Infrastructure Library (ITIL), which is the most common framework used by hundreds of organizations across the globe to offer guidelines and procedures on provision of quality IT Services, processes, functions and the capabilities used to support them. (OGC, 2007). According to (Taylor 2007) IT departments must implement ITIL guidelines and procedures in order to design, build and deliver services that align to the business needs and requirement. According to (OGC, 2007) the core aspects combined to form the ITIL framework are service delivery, service support, service management implementation planning, security management, ITC infrastructure management, application management and business perspective.

ITIL service supporting functions are briefly described in the table below

Service Desk	Service desk is an interactive platform between users and service providers that provides solutions to IT problems

Incident Management	Incident management aims to minimize the impact of IT related problems. It involves quick problem resolution and problem analysis.
Problem Management	Problem management aims to analyze the root problem cause in order to minimize loss.
Configuration Management	Configuration management consists of configuration management database (CMDB) which stores service components. Configuration management controls the service components to ensure accurate management
Change Management	Change management is used for assessment, check, implementation and verification for all change operations to a system
Release Management	Release managements to pre-checks implementation process required before service resources and service components are connected to information systems

Table 2.1: ITIL Service Support functions

2.3.1.2 COBIT

The IT Service management framework, Control Objectives for Information and related Technologies (COBIT) was initially developed by the Information Systems Audit and Control Association (ISACA) in 1996 and the latest version COBIT 5 introduced in 2012. According to (Hill P. and Turbitt K, 2007) COBIT contains measures, indicators, processes and best practices to guide IT Management. COBIT 5 principles include meeting stakeholders' needs, applying a single integrated framework, enabling a holistic approach, covering the enterprise end-to-end and separating governance from management. Through the use of the principles, an organization can optimize its IT investment and benefit management frameworks (ISACA, 2012). According to (Zhang D & Zhou C, 2014) implementation of COBIT has led to increased management awareness since its implemenetation tool set includes excellent case information that best describes IT management concept to the executives. COBIT 5 as a model created value through the continuous improvement cycle and the IT and enterprise strategy interacton. ((Zhang D & Zhou C, 2014)

2.3.1.3 ISO/IEC 20000

The IT service management framework, ISO/IEC 20000 was released to specify requirements for the establishment, implementation, maintaining and improvement of a service management system (SMS) by the international Standard organization (ISO) and the international Electrotechnical Commission (IEC) in 2005. Service management systems should support the complete service management lifecycle that meet customers and organization goals (ISO/IEC 20000:2018).

The framework aims to improve the delivery of IT services by providing guidelines used in IT service management. According to (Kumbakara, N ,2008) IT services use ISO/IEC 20000 as a benchmark since it helps provides service providers with the specifications and also determine if the organizational services implemented follow the management standards.

ISO/IEC 20000 aims to improve IT service delivery by focusing on methods that satisfy IT service management, to ensure the best result achieved is capable of measuring ITSM maturity. It's a certificate awarded to organizations that meet the standard requirements successfully into their IT departments.

ISO/IEC 20000 comprises of two parts which are specification and code of practice. Specification contains formal requirements for certification while code of practice provides ITSM best practices and procedures implementation of requirements. (Clifford 2008). According to Clifford (2008) ISO/IEC 20000 system processes are End-to-End service management, Customer-focused, Integrated Processes and continual service improvement.

H_{01}: Adoption of ITSM Framework has significant impact on the organizational performance across Kenya's banking sector.

2.3.2   Benefits of ITSM

According to (Rexhepi & Rotim, 2016) ITSM presents the benefit of service improvement through continuous improvement in the efficacy of the management system. ITSM frameworks such as ISO/IEC 2000 and ITIL provide best management practices like continuous service improvement which is a recommendation management practice. According to (Boiral, 2011) ITSM insists on formalization and standardization of management processes which results to increased uniformity,

processes and services consistency, improved planning and control, knowledge retention and increase of staff motivation (Tari et al, 2013; Alhur et al.,2014).

Hochstein et al (2005), listed the following benefits of ITSM; efficiency, uniformity and transparency of process documentation and monitoring, improved IT service quality and optimization of processes. After a research on implementation of ITIL on customer satisfaction Potgieter et al. (2005), found that there was a correlation between use of ITIL, customer satisfaction and quality of service. Marrone et al, (2010) identified the following factors considered ITSM benefits; customer satisfaction improvement, internal processes improvement, process standardization, increase of efficiency and rate of return improvement. Cervone (2008) highlighted the following ITSM benefits to an organization; improved customer satisfaction , IT department productivity improvement and cost reduction.

2.3.3   Challenges of ITSM

According (Cater-steel et al, 2008) adoption of ITSM can be hampered by; lack of management support, resistance in terms of culture change, limited resource management such as time, people and finances. Iden and Langeland (2010), highlighted the following challenges in the implementation of ITSM; lack of management support, lack of skills and knowledge to implement ITSM standards, lack of finances in funding /adoption and stall of project progress. Hochstein et al (2005), cited that absence of management support, ITSM skills and knowledge gap, lack of finances to implement ITSM and organization resistance to change are some of the challenges faced during the implementation of ITSM.

According to (OGC, 2002) the reasons facing ITSM implementation are; inadequate commitment and understanding, lack of training, insufficient authority granted to staff implementing the projects, lack of initial funding and lack of long-term benefits. Mingay (2004), cites that ITSM projects are costly to implement and maintain. According to a KPMG report, carried out in 2007on ITSM application status highlighted the following challenges in the implementation of ITSM; change in culture shift, difficulty in integration with current systems/processes, lack of ITSM related knowledge, inappropriate management tools and lack of a clear management target.

According to Marrone and Kolbe (2011), some of the key challenges in adoption of ITSM include the ability to keep up with regulation, keeping up with regulatory compliance in IT adoption and management since sensitive information held in the banks can be a challenge and should not be ignored in the ITSM strategy. Lack of compliance with the standards set could lead the organization incurring hefty penalties that can lead to losses in the organization. Adoption of ITSM in commercial banks need to be managed adequately and audits done to ensure that the systems are able to save time, reduce risks and manage the costs of the organization.

Cybersecurity is a huge risk that commercial banks cannot afford to ignore in the planning and adoption of ITSM. Commercial banks are in a field where they hold sensitive customer data. The level of assurance that customers have that their data is safe in commercial banks determines whether they will keep investing in the organization or they will move to other institutions (Janj-Jaccard, 2014).

The literature review on challenges of ITSM have been studied in general with regard to their relationship with performance of institutions, hence the study hypothesized that:

2.4   Empirical Studies of ITSM and Organizational Performance

Empirical study was instrumental in making an analysis of studies that have been done in the past in relation to ITSM and the performance of organizations. The empirical study bases it conclusion on the findings of other scholars both locally and internationally.

A study done by Marrone and Kolbe (2011) on ITSM framework impact on financial and banking industries sought to address the effect of implemented processes, the challenges and the realized benefits of IT service management. The study utilized a questionnaire for data collection from 503 IT experts. From the study population 18 were commercial banks. The research study indicated that ITSM led to improvement in the return on investment of the organization, enhancement of the staff morale, reduction in costs, reduction in IT downtime and business IT alignment. The study indicated that it was limited to focus on United Kingdom and the United States and over sampling on too many large organizations in different sectors leaving a need to understand the impact in specific industries such as the banking sector.

Taghva, Taghavifard and Fasili (2016) evaluated ITIL framework in the Bank and Mining Industry. The study noted that ITSM provided a structure through which IT processes, information and organizational goals connect together. The study issued questionnaires to IT professionals who have worked in the area for at least 3 years. The study findings note that the IT Service Management maturity in the banking and mine industry is at the initial set up years and there are many areas that need strengthening and weaknesses still need to be understood.

Gacenga, Carter-Steel, Tan and Toleman (2011) looked into IT service management and the role of the contingency theory of performance measurement. The study notes that measurement of performance requires understanding key metrics that effect of ITSM, these metrics are include the culture of the firm, the philosophy of the management, the industry sector and the legislation. The study adopted case study research design and chose six case organizations and issued survey questions to an initial 263 respondents. The study utilized content analysis to look into the data collected and make a conclusion. The study findings indicated of a positive correlation between the corporate performance framework and a well-articulated ITSM metrics.

International studies also indicate that the relationship between ITSM and performance of banking institutions has not been studied and understood. It therefore leaves a need to study the area to understand the relationship between the variables in the study.

Bobura (2015) did a study on Kenyan State corporations in order to determine the impact ITSM practices have on service delivery. The Study involved a cross-sectional survey with data being collected through a questionnaire and quantitative analysis done using the assistance of SPSS. Bobura (2015) found that ITSM and service delivery relationship was statistically significant. The study recommended that ITSM needs to be incorporated in day to day operations of state corporations and appropriate policies that support it should be put in place. Further, the study recommended that studies should be done in the private sector to understand the impact that ITSM has on its operations.

Nelima (2013) looked into the impact of information technology infrastructure library (ITIL) on 60 firms listed under the Nairobi Securities Exchange (NSE). The findings of the study indicated that ITIL is still a new concept in the Kenyan market with senior finance management and IT

experts understanding the concept. The study noted that the adoption has significantly enhanced service delivery to customers

According to (Mwithiga, Njihia and Iraki ,2017) on a study of IT integration and firm performance there is no defined relationship between the two. The study sought to understand the relationship that exists between performance and business processes, the IT infrastructure and partnerships that exist. The study adopted a pragmatist philosophical approach and qualitatively sought to address the research objectives. The study targeted financial institutions including commercial banks and MFI's. The study found that there is a positive relationship between IT integration and firm performance. The study indicated that a well-organized IT integration strategy is critical if firms are to remain competitive and sustainable.

The empirical review of local studies in Kenya showed limited studies done on IT service management with a focus on the banking industry and thus creating a study gap that needs to be addressed so as to understand the manner in which IT service management affects the performance of commercial banks.

2.5   Conceptual Framework

The conceptual diagram below, highlights the relationship of the variables in the study. Based on the study objectives, the independent variables included ITSM version and ITSM functions while the dependent variable was organizational performance across commercial banks. Organization performance in the study was measured using Net profit (profitability), Net promoter score (Customer satisfaction) and the return on asset (ROA).

Independent Variables   Dependent Variable

- ITSM Version
- ITSM Function

Performance of Commercial Banks

- Net Profit
- Net Promoter Score
- Return on Asset (ROA)
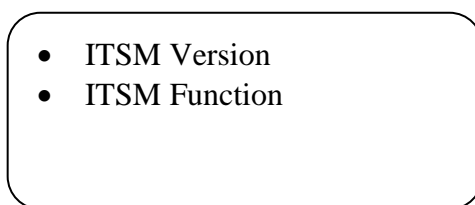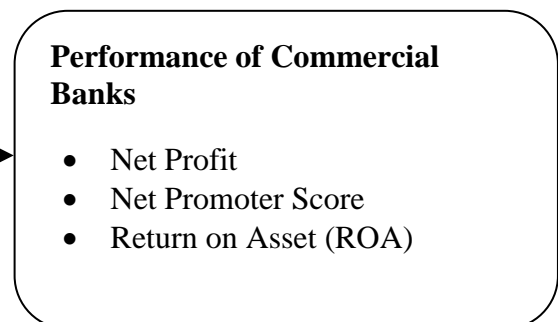
Figure 2.1: Conceptual Diagram

15

2.6   Summary of the Literature Review

The chapter reviewed the various studies that have been done in relation to performance and the various variables in the study including impact from adoption of ITSM staff knowledge, processes management and challenges in adoption ITSM. The chapter also highlighted the various theories that would be used to explain the study objectives.

The review of literature was fundamental in bringing into perspective that though the importance of ITSM is being appreciated, minimal studies have been done into the area which is the study gap that the study addressed while focusing on commercial banks in Kenya.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1   Introduction

This chapter describes the various methods used in the research study, data collection procedures, target population, research design as well as research analysis & methodology were also discussed.

3.2   Research Design

The research design was an important part of research as it provided a framework for which the researcher answered the research questions. It provided insight into the how the study was conducted. The main aim of descriptive study was to provide a deeper understanding on the characteristics of the data in the study (Kothari, 2004).

The principal of the study was to establish the effect of IT service management on the organizational performance across commercial banks in Kenya. The research objective was conducted through descriptive correlational research. Correlational research on the other hand describes and predicts the relationship between two variables without the researcher attempting to affect the causation between them. Correlational descriptive research allows the scholar to collect and gather either primary or secondary data to uncover new facts and meaning in research.

3.3   Population of the Study

The target population in this research study were all the 42 Commercial Banks in Kenya listed under the Central Bank of Kenya report of 2020 to make a census. From these banks, performance data was collected from representatives in the information technology department.

3.4   Data Collection

The study adopted the use of a questionnaire as the data collection tool through census data collection method. Data collection in the study entailed issuance of questionnaires to the IT department staff of the banks in Kenya, focusing on IT service manager and the Head of IT. Questionnaires were filled through online means and presented using google forms to ensure the respondents are reached with efficiency and within the period of the study.

3.5 Validity and Reliability

Data validity in research study is used to check the extent to which a study measures that which it intended to measure. It means that the instrument in the study collects adequate content with respect to the variables and measures the concept intended. To validate the questionnaire in the study independent people reviewed and provided feedback on the same as suggested by (Bolarinwa, 2015)

Reliability looks into the consistency of the study instrument. It means that similar results are acquired if the instrument was used in a different but similar study. Cronbach alpha which ranges from 0 to 1, was used to measure the reliability of the research data where data value of 0 is considered not reliable and data value of 1 is considered absolutely reliable (Bolarinwa, 2015).

3.6 Data Analysis

For research conclusion, data must be analyzed by cleaning, coding, transforming and modelling in a bid to formulate results based on the objectives of the study. Data collected in the study was analyzed as follows; for objective (a) and (c) the data was analyzed using descriptive model analysis. For objective (b) data collected was analyzed using the regression model analysis, multiple linear regression. Data analysis was carried out through the assistance of the statistical package for social sciences (SPSS). SPSS enabled the study to derive statistics that addressed the study questions such as mean, standard deviations, variances and the regression model.

The relationship between adoption of ITSM and performance of commercial banks was analyzed through a multiple linear regression model generated from SPSS and took the form:

$$Y_i = \beta_0 + \beta_1 X_i + + \beta_2 X_{ii} + error$$

Where:

Y_i = Net Profits, Y_2 = Net Promoter Score, Y_3 = Return on Asset (ROA)

β_0 = Regression constant of organizational performance

$\beta_{1,} \beta_{2,}$ = independent variables parameters

error = standard error of regression

The independent variables in the study are indicated as X_i and X_{ii},

X_i= ITSM Version

X_{ii}= ITSM Function

3.7   Ethical Considerations

Research ethics were considered throughout the research period. Feedback from the respondents was treated with confidentiality and used for research purposes only. Further, the respondents in the study gave their consent before filling in the questionnaire.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

In this chapter, the main aim objective of the study was discussed. Research data was collected using google forms questionnaire and the research findings presented according to the research objectives.

4.1.1 Response rate

Out of the 84 questionnaires distributed, 58 questionnaires were duly filled and submitted, which achieved 72% response rate. According to Mugenda and Mugenda (2003), a response rate of 50% or more is adequate for research analysis hence the response rate of 72% was adequate for date analysis.

Table 4.1: Response rate

Response Rate	Frequency	Percent
Respondents	58	72%
Non-Respondents	12	28%
Total	84	100%
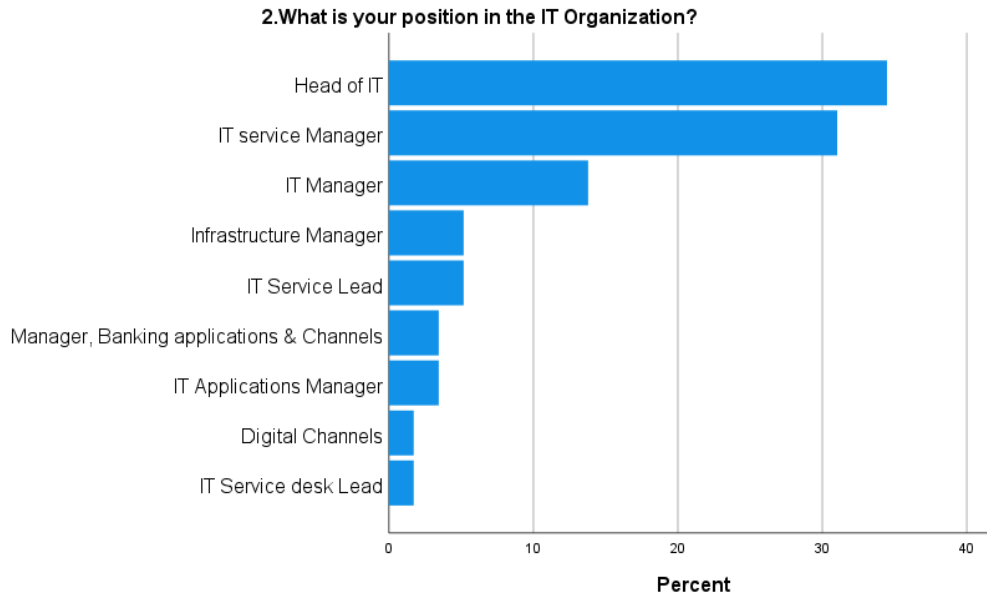
Figure 0-1: Position held in the organization

Figure 4.1 Among the respondents, 34.4% were head of IT, 31% were IT service managers, 13.8 % were IT managers, 5.2% were Infrastructure managers and IT service lead, 3.4 % were Banking, applications & channels manager and IT applications manager, 1.7% were in digital channels and IT service desk lead positions

Table 4.2: ITSM version Adopted

		Frequency	Percent
Valid	ITIL V3	33	56.9
	ITIL V4	17	29.3
	ITIL V2	7	12.1
	Open Source - Spice works	1	1.7
	Total	58	100.0

Table 4.2 above show 56.9% of the respondents have implemented ITSM ITIL V3, 17% have implemented ITSM ITIL V4 and 7% of the respondents have implemented ITSM ITIL V2

Table 4.3: ITSM Function Adopted

		Frequency	Percent
Valid	1.00	3	5.2
	2.00	10	17.2
	3.00	22	37.9
	4.00	5	8.6
	5.00	18	31.0
	Total	58	100.0

Table 4.3 show results from the findings that 31% of the respondents have implemented five ITSM framework functions, 37.9% have implemented three ITSM framework functions, 17.2% have implemented two ITSM framework functions, 8.6% have implemented four ITSM framework functions and 5.2% have implemented one ITSM framework function.

Figure 4.2 below indicates that 46.6% of the respondents have implemented ITSM for 4 to 6 years, 32.8% have implemented ITSM for 7 to 9 years and 20.7% have implemented ITSM for between 0 to 3 years
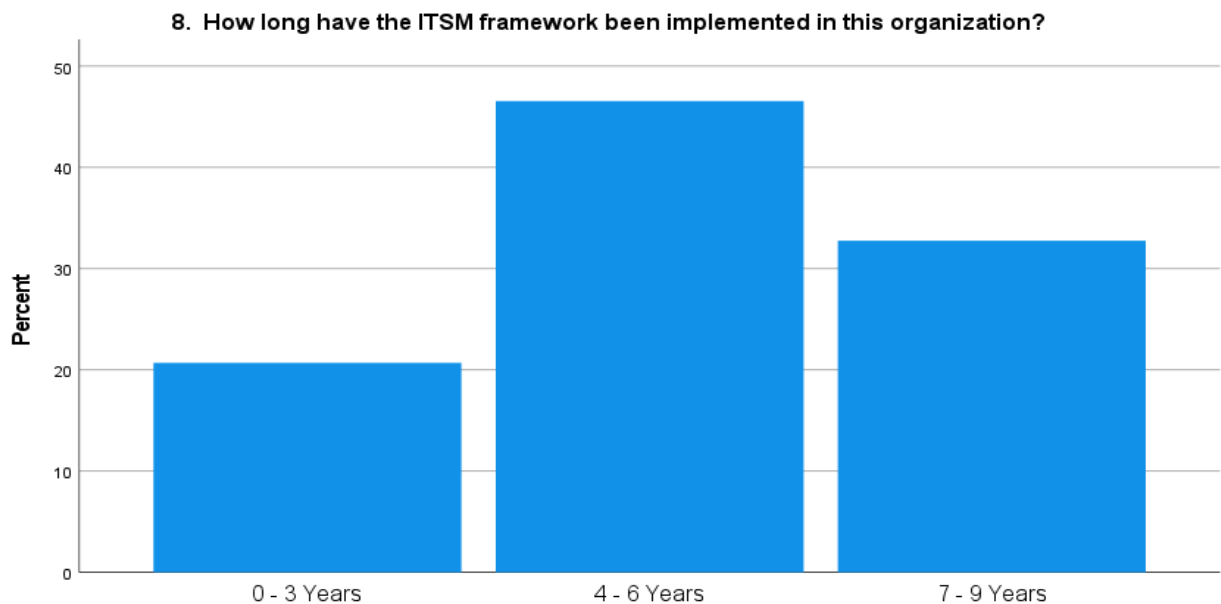
Figure 0.2: Duration ITSM has been implemented

Table 4.4: Size of the IT Department across commercial Banks in Kenya

Number of employees in the IT
Department

Valid		57
Missing		1
Mean		23.58
Minimum		10
Maximum		46

Table 4.4 above highlights the number employees in the IT department across commercial banks in Kenya with a mean of 23 per department. The lowest number of IT personnel is 10 and the highest number is 46.

4.1.2   Reliability of the Data

Table 4.5: Reliability Results

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	Number of Items
.790	.934	5

To test reliability of the findings, cronbach alpha was used. The overall cronbach alpha value for the three dependent variables and two independent variables as indicated in Table 4.5 was 0.790

Table 4.6: Variable Reliability Results

	Corrected Item-Total Correlation
ITSM Version	.794
ITSM_Function	.697
Net_Profit	.849
ReturnOnAssets	.925

NPS		.849	

Table 4.6 shows cronbach value for ITSM version (0.794) and ITSM function (0.697) as the independent variables and Net Profit (0.849), Return on Assets (0.925) and NPS (0.849) as the dependent variables. Since all the values were 0.6 and above, they were fit for analysis. According to Tavakol and Dennick (2011) cronbach alpha value of 0.6 and above is considered acceptable to inform analysis. This is also supported by Trizano-hermosilla and Alvado (2016) who reported that a value of 0.6 can be considered for analysis. The study was considered fit for analysis and internally reliable as then cronbach alpha value was 0.790.

4.1.3   Tests of Normality

The findings were tested for normality using the Shapiro-Wilk test since the data population was less than 100.

Table 4.7: ITSM Version Normality test

	ITSM Version	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
NPS	ITIL V2	.305	6	.085	.817	6	.083
	ITIL V3	.138	26	.200[*]	.955	26	.305
	ITIL V4	.231	15	.030	.831	15	.009
ReturnOnAssets	ITIL V2	.314	6	.066	.722	6	.061
	ITIL V3	.234	26	<.001	.862	26	.492
	ITIL V4	.151	15	.200[*]	.953	15	.572
Net_Profit	ITIL V2	.301	6	.096	.760	6	.065
	ITIL V3	.318	26	<.001	.756	26	.051
	ITIL V4	.204	15	.095	.916	15	.169

a. Lilliefors Significance Correction

Table 4.8: ITSM Function Normality Test

ITSM_Function	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.

NPS	1.00	.260	2	.			
	2.00	.324	7	.025	.717	7	.056
	3.00	.202	18	.050	.861	18	.063
	4.00	.	2	.			
	5.00	.219	18	.023	.874	18	.071
ReturnOnAssets	1.00	.260	2	.			
	2.00	.348	7	.010	.787	7	.080
	3.00	.262	18	.002	.876	18	.053
	4.00	.260	2	.			
	5.00	.159	18	.200*	.934	18	.231
Net_Profit	1.00	.260	2	.			
	2.00	.189	7	.200*	.923	7	.493
	3.00	.272	18	.001	.809	18	.102
	4.00	.260	2	.			
	5.00	.159	18	.200*	.942	18	.319

a. Lilliefors Significance Correction

Table 4.7 and 4.8 show the findings on test of normality based on the independent variables ITSM function and ITSM Version. The rule for Shapiro-Wilk indicates that if the significance value is below 0.05 then the data in the study was normally distributed. As per the tables above both variables ITSM function and ITSM version had significant variables greater than 0.05 hence the data for the variables was normally distributed.

4.1.4   Analysis of Variance (ANOVA)

Table 4.9: Anova summary on Net Profit

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10560.148	2	5280.074	36.905	<.001[b]
	Residual	7868.861	55	143.070		
	Total	18429.009	57			

a. Dependent Variable: Net_Profit

b. Predictors: (Constant), ITSM_Function, ITSM Version

Table 4.9 above indicated that the independent variables were significant predictors of profitability as the significance value was at 0.001 when the confidence levels were at 95%. The model was statistically significant since the significance value of 0.001 was less than the alpha value of 0.05 to indicate that the independent variables influenced organizational performance.

Table 4.10: Anova summary on Net Promoter Score

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10739.930	2	5369.965	29.989	<.001[b]
	Residual	7878.841	44	179.065		
	Total	18618.771	46			

a. Dependent Variable: NPS

b. Predictors: (Constant), ITSM_Function, ITSM Version

Table 4.10 above indicated that the independent variables were significant predictors of customer satisfaction as the significance value was at 0.001 when the confidence levels were at 95%.. The model was significant as the significance value of 0.001 was below the alpha value of 0.05 to indicate that the independent variables influenced organizational performance

Table 4.11: Anova Summary on Return on Assets

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4035.443	2	2017.722	27.323	<.001[b]
	Residual	4061.619	55	73.848		
	Total	8097.062	57			

a. Dependent Variable: ReturnOnAssets

b. Predictors: (Constant), ITSM_Function, ITSM Version

Table 4.11 above indicated that the independent variables were significant predictors of on return on assets as the significance value was at 0.001 when the confidence levels were at 95%. The model was significant as the significance value of 0.001 was below the alpha value of 0.05 to indicate that the independent variables influenced organizational performance.

In addition, F value in the above tables i.e 36.905, 29.989 and 27.323 were above the absolute value of 2 indicating that the independent variables had a positive significant influence on the profitability, customer satisfaction and asset turn over. These findings agree with findings by (NDUNG'U, 2021) who found out that ITIL continuous service improvement and IT business alignment had a positive significant alignment on banks' performance.

4.1.4.1   Extent to which ITSM has been implemented across Kenya's banking sector

Table 4.12: Extent of using ITSM across commercial banks in Kenya

ITSM Frequency

		N	Percent	
ITSM Frame[a]	ITIL	57	98.3%	98.3%
	Solar WInds	1	1.7%	1.7%
Total		58	100.0%	100.0%

Based on research findings, 98.3 percent of the respondents indicated that they use ITIL framework in their banks as summarized by Table 4.12, 1.7 percent of the respondents indicates they use Solar Winds and none of the respondents use either COBIT or ISO/IEC 20000 in their organization. This indicates that ITSM has been greatly adopted across commercial banks in Kenya.

4.1.4.2 Benefits and challenges of ITSM across commercial banks in Kenya

Table 4.13: Benefits of ITSM across commercial banks in Kenya

The study sought to identify the benefits of ITSM on organizational performance across commercial banks in Kenya.

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Likert Mean
The management fully supports adoption and continuous improvement in ITSM	0%	0%	8.6%	79.3%	12.1%	4.03
ITSM has improved service provision	0%	1.7%	12.1%	56.9%	29.3%	4.14
Employees find ITSM Simple to use and navigate	0%	8.6%	3.4%	63.8%	24.1%	4.03
Adoption and use of ITSM has led to an increase in net profit generated	0%	8.6%	6.9%	72.4%	12.1%	3.88
ITSM has increased staff efficiency and thus saving company time	0%	3.4%	37.9%	41.4%	17.2%	3.72
The use of ITSM has increased the rate of service delivery to customers	0%	1.7%	15.5%	51.7%	31%	4.12

The use of ITSM has aligned the use of resources to achievement of company goals	0%	6.9%	13.8%	50%	29.3%	4.02
The use of ITSM has led to innovation that has enhanced company competitive advantage	0%	6.9%	65.5%	22.4%	5.2%	3.26
The use of ITSM has enabled the bank to meet customer increased demands	0%	8.6%	6.9%	72.4%	12.1%	3.88
The use of ITSM has led to improved customer satisfaction	0%	0%	17.2%	74.1%	8.6%	3.91
Does the ITSM framework Implemented provide continuous service improvement	0%	5.2%	44.8%	36.2%	13.8%	3.59
Have IT services been standardized	0%	3.4%	20.7%	67.2%	8.6%	3.81
ITSM has led to improvement of IT service quality	0%	0%	10.3%	75.9%	13.8%	4.03
ITSM has led to employee satisfaction in IT services	0%	8.6%	1.7%	75.9%	13.8%	3.95
The use of ITSM has led to cost reduction in the IT department	0%	15.5%	6.9%	60.3%	17.2%	3.79

ITSM has improved employee satisfaction	0%	29.3%	32.8%	36.2%	1.7%	3.10
ITSM has enhanced employee productivity	0%	25.9%	22.4%	41.4%	10.3%	3.36
ITSM has reduced downtime in IT Systems	0%	0%	1.7%	67.2%	31%	4.28
ITSM has standardized processes in the company	0%	5.2%	46.6%	39.7%	8.6%	3.52
ITSM has led to reduction of operational costs	0%	32.8%	24.1%	41.4%	1.7%	3.12
ITSM has increased the number of transactions processed	0%	3.4%	6.9%	77.6%	12.1%	3.98
ITSM has led to improved communication to both internal and external customers	0%	5.2%	10.3%	34.5%	50%	4.29
Overall Likert Mean						**3.81**

Table 4.13 indicated that 91% of the respondents agree that management supports adoption and the continuous improvement of ITSM, 86.2% of the respondents agree that ITSM has improved service provision, 87.9% of the respondents agreed that ITSM is easy to use and navigate, 84.5% of the respondents agreed that ITSM adoption has produced increased profitability, 58.6% of the respondents agreed that ITSM has increased staff efficiency, 82.7% of the respondents agreed that ITSM has increased the rate of service delivery to customers, 79.3% of the respondents agreed that

the use of ITSM has aligned resources in achievement of company goals, 65.5% were not sure whether ITSM has led to innovation which creates competitive advantage.

84.5% agreed that ITSM has enabled the bank to meet increased customer demands, 80.7% agreed that ITSM has led to increased customer satisfaction, 50% of the respondents agreed that ITSM provides continuous service improvement, 75.8% agreed through ITSM IT services has been standardized, 89.7% agreed that ITSM has led improvement of IT service quality and ITSM has led to employee satisfaction in IT services, 77.5% agreed that ITSM has led to IT department cost reduction, 37.9% agreed that ITSM has improved employee satisfaction while 32.8% where not sure of the same.

51.7% agreed that ITSM has enhanced employee productivity, 98.2% agreed that ITSM has reduced IT systems downtime, 48.3% agreed that ITSM has standardized company processes while 46.6% were not certain of the same. 43.1% of the respondents agreed that ITSM has led to reduction of operational costs while 32.8% disagreed of the same. 89.7% agreed that through ITSM the number of transactions processed has increased, 84.5% of the respondents agreed that ITSM has led to improved communication to both internal based customers and external based customers. The mean result of the respondents was 3.81 which indicated that respondents agreed with the indicated benefits due to implementation of ITSM across commercial banks in Kenya.

These findings concur with those mentioned by Cater-steel et al (2006), that the listed benefits of ITSM improved communication, reduced system downtimes, provided seamless IT service and were consistent to IT service management processes. These findings also support findings reported by Bon (2007) who reported that ITSM reduces downtime, improves service quality, increases customer satisfaction and standardizes processes.

Table 4.14: Challenges of ITSM across Kenya's banking sector

The research study aimed determine the challenges of implementing ITSM on the banking sector in Kenya.

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Likert Mean
Cyber security has cost the bank money in the past	0%	15.5%	20.7%	55.2%	8.6%	3.57
Information Security Management is costly for the bank	31%	51.7%	0%	15.5%	1.7%	2.05
Keeping up with ITSM regulations is costly	37.9%	50%	1.7%	10.3%	0%	1.84
Management does not support the use of ITSM	43.1%	37.9%	1.7%	10.3%	6.9%	2.00
Users find ITSM difficult to adopt due to inadequate training on the use of ITSM	0%	31%	0%	58.6%	10.3%	3.48
ITSM ensures constant audit of systems to prevent risk	17.2%	51.7%	1.7%	27.6%	1.7%	2.45
ITSM is costly for the bank to adopt	22.4%	69.0%	1.7%	6.9%	0%	1.93
ITSM migration is hard, lengthy and vigorous task	0%	24.1%	12.1%	60.3%	3.4%	3.43
Employees find ITSM complex and thus creating resistance to adoption	22.4%	69%	3.4%	5.2%	0%	1.91
ITSM requires	19.0%	58.6%	1.7%	17.2%	3.4%	2.28

massive resources implement						
Overall Likert Mean						**2.49**

Table 4.14 indicates that 63.8% agreed that cyber security has cost the bank money in the past. 82.7% of the respondents disagreed that information security management is costly for the bank. 87.9% disagreed that ITSM regulations are costly. 81% disagreed that management does not support the use of ITSM. 68.9% agreed that ITSM is difficult to adopt due to in-adequate training on the use of ITSM.

68.9% disagreed that ITSM ensures constant audit of systems to prevent risk, 91.4% disagreed that ITSM is costly for the bank to adopt. 63.7% of the respondents agreed that ITSM migration is hard, lengthy and vigorous task. 91.4% disagreed that ITSM is complex and 77.6% disagreed that ITSM requires massive resources to implement. The mean results of the responses was 2.49 which indicated that respondents disagreed with the indicated challenges of implementing ITSM across the banking sector.

4.2   Interpretation of Findings

4.2.1   Effect of ITSM on organizational performance across Kenya's banking sector.

The research study used regression analysis to determine the impact of the independent variables (ITSM Version, ITSM Function) to the dependent variables (Net profit, Net promoter score and return on assets). The relationship between ITSM and performance of commercial banks was analyzed through a multiple linear regression model generated from SPSS in the form.

$Y_i = \beta_0 + \beta_1 X_i + + \beta_2 X_{ii} + error$

Where:

Y_i = Net Profits, Y_{ii} = Net Promoter Score, Y_{iii} = Return on Asset (ROA).

These dependent variables were used as organizational performance measurements across the banking sector in Kenya.

β_0 = Regression constant of organizational performance.

$\beta_1, \beta_2,$= independent variables parameters

From the study, since ITIL version had been selected as the only ITSM framework, ITIL version and ITIL functions formed the independent variables. Hence

X_i= ITIL Version

X_{ii}= ITIL Function

The main aim was to measure the extent in which changes in the independent variables affects changes in the dependent variable. Version 28.0 of SPSS was used to analyze the variables, generate coefficient models, analysis of variance (ANOVA) as well as regression analysis.

4.3   Model Summary

Table 4.15 Model Summary for Net Profit

Model	R	R Square	Adjusted R Square	Estimate Error	Durbin-Watson
1	.757[a]	.573	.557	11.96120	1.821

a. Predictors: (Constant), ITSM_Function, ITSM Version

b. Dependent Variable: Net_Profit

The table 4.15 explains the variation of organizational performance i.e Net Profit as explained by the independent variables ITSM function and ITSM version. R square value of 0.573 indicated that 57.3% of the variation in organizational profitability was influenced by ITSM version and ITSM function adopted across commercial banks in Kenya.

The adjusted R square value of 0.557 indicated that 55.7% of the proportion in variance in organizational performance (net profit) was explained by the ITSM versions and ITSM function.

Table 4.16: Model summary net promoter score

Model	R	R Square	Adjusted R Square	Estimate Error	Durbin-Watson
1	.759[a]	.577	.558	13.38150	1.895

a. Predictors: (Constant), ITSM_Function, ITSM Version

b. Dependent Variable: NPS

Table 4.16 explains the variation of organizational performance (Net promoter score) as explained by ITSM version and ITSM function variables. R square value of 0.577 indicated that 57.7 percent of the variation in organizational performance (NPS) was influenced by the ITSM version and ITSM function independent variables.

The adjusted R square value of 0.558 indicated that 55.8 percent of the proportion in variance in the organizational performance (NPS) was explained by the ITSM version and ITSM function.

Table 4.17 Model summary return on assets (ROA)

Model	R	R Square	Adjusted R Square	Estimate Error	Durbin-Watson
1	.706[a]	.498	.480	8.59346	2.138

a. Predictors: (Constant), ITSM_Function, ITSM Version

b. Dependent Variable: ReturnOnAssets

Table 4.17 explains the variation of organizational performance (return on assets) as explained by ITSM version and ITSM function variables. R square value of 0.498 indicated that 49.8% of the variation in organizational performance (ROA) was influenced by ITSM version and ITSM function variables.

The Adjusted R square value of 0.480 indicated that 48% of the variations in organizational performance (ROA) was explained by ITSM version and ITSM function.

4.4   Multiple Regression Analysis

Table 4.18: Coefficient Variables against Net profit

Model		Coefficients - Unstandardized		Coefficients - Standardized	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-35.849	5.818		-6.162	.001
	ITSM Version	10.240	2.738	.381	3.740	.001
	ITSM_Function	7.084	1.473	.490	4.811	.001

a. Dependent Variable: Net_Profit

Table 4.18 indicated that ITSM Version had a positive correlation on profitability across the banking sector in Kenya as indicated by the values, the relationship is significant ($t = 3.740$, $P < 0.05$). ITSM function also had a positive correlation and was statistically significant to profitability as indicated by the values ($t = 4.811$, $P < 0.05$)

Table 4.19 Coefficient Variables against Net Promoter Score (NPS)

Model		Coefficients - Unstandardized		Coefficients - Standardized	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.173	7.132		.165	.870
	ITSM Version	16.093	4.055	.518	3.968	<.001
	ITSM_Function	4.944	2.077	.311	2.380	.022

a. Dependent Variable: NPS

Table 4.19 shows that both variables ITSM version and ITSM Function had positive and significant effect on customer satisfaction banking sector in Kenya as indicated by the beta values ($t = 3.968$, $P<0.05$) and ($t = 2.380$, $P < 0.05$) respectively.

Table 4.20 Coefficient variables against Return on Assets (ROA)

Model		Coefficients - Unstandardized		Coefficients - Standardized		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-6.004	4.180		-1.437	.157
	ITSM Version	8.196	1.967	.460	4.166	<.001
	ITSM_Function	3.373	1.058	.352	3.188	.002

a. Dependent Variable: ReturnOnAssets

Table 4.20 shows that ITSM version and ITSM function had significance effect on the organizational performance (Return on Assets) across commercial banks in Kenya. The relationship was significance with ITSM version (t = 4.166, P < 0.05) and same as ITSM function (t = 3.188, P < 0.05)

The findings agree with the study done by (Itai, Binuyo, & Asikhia, 2020) on the effect of ITSM on bank efficiency. The study found out that IT service management resources had positive significance to bank efficiency in Lagos state, Nigeria. The findings were supported by findings made by Bobura, C. (2015), that ITIL practices effect organization performance i.e. service delivery positively.

The findings also indicated that ITSM had a positive significant relationship to organizational performance that is profitability, customer satisfaction and return on assets. This shows there is a relationship between ITSM version & ITSM function adopted and the organizational performance across Kenya's banking sector. This meant that a change in ITSM version and ITSM function adopted would have a positive change in the performance of the institutions.

Tables 4.8, 4.9 and 4.10 showed the various constants -35.849, 1.173and -6.004 as the expected values of net profit, net promoter score and return on assets when other variables values were zero.

Based on the findings, the regression analysis formula resulted to

$Y_i = -35.849 + 10.240\ X_i + 7.084\ X_{ii} + 5.818$

When Y_i = Net Profit

X_i = ITSM Version

X_{ii} = ITSM Function

$Y_{ii} = 1.173 + 16.093\ X_i + 4.944\ X_{ii} + 7.132$

When Y_{ii} = Net Promoter Score (NPS)

X_i = ITSM Version

X_{ii} = ITSM Function

$Y_{iii} = -6.004 + 8.196\ X_i + 3.373\ X_{ii} + 4.180$

Where Y_{iii} = Return on Assets (ROA)

X_i = ITSM Version

X_{ii} = ITSM Function

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATION

5.1   Introduction

This chapter presented the research summary, conclusion and recommendations found in relation to the study objectives.

5.2   Summary of the Study

IT Service management is a practice that has been implemented to enable organizations design, develop, implement, manage and support IT services (Cater-steel et al., 2008). The main research objective was to determine the effect of IT service management on organizational performance on the banking institutions in Kenya. The independent variables in the research study were ITSM Version and ITSM function while the dependent variable was organizational performance represented as follows; net profit measured profitability, net promoter score measured customer satisfaction and return on assets. The theories used in the study were strategic alignment theory, resource-based theory and contingency theory. A sample of 84 questionnaires were distributed across commercial banks in Kenya and 58 were duly filled to achieve a response rate of 72 percent. Regression analysis was done and the summarized findings are as follows.

Among the respondents, 34.5 percent were heads of IT and 31 percent were IT service managers. The average number for IT staff was 23, the highest number being 46 and the lowest number 10. The findings also revealed that 46 percent of the institutions had implemented ITSM framework between 4 to 6 years.

The major ITSM framework implemented was ITIL with a 98 percent, while the major ITSM version implemented was ITIL V3. The findings also showed that 33 percent of the organizations had implemented five functions of the framework.

The research findings revealed that 76.2 percent of the respondents agreed with the ITSM benefits indicated with a mean of 3.81 while 49.8 percent of the respondents disagreed with the ITSM challenges indicated with a mean of 2.46. This was supported on study by Bon (2007) who reported that ITSM reduces downtime, improves service quality, increases customer satisfaction and standardizes processes.

5.2.1 Regression Analysis summary

The study sought to determine the effect of ITSM on the organizational performance across the banks in Kenya. Regression analysis findings were as follows ITSM function and ITSM version ($P < 0.05$) were significant predictors of organizational performance that is profitability, customer satisfaction and return on assets.

5.3 Conclusion

The study sought to establish the extent to which ITSM has been implemented across the banking institutions in Kenya and found out that it has been greatly adopted with ITIL being the framework widely used to manage IT services across the banks. The study also found that more than ninety percent of the banks have implemented various ITSM framework functions to help deliver IT services

The second objective was to establish the effect of ITSM on organizational performance across the banking sector in Kenya and realized that ITSM framework version and ITSM framework function adopted were significant predictors of organizational performance, profitability, customer satisfaction and return on assets.

The third research objective was to establish the benefits and challenges of ITSM across banking sector in Kenya, which the study revealed that ITSM benefits are huge and respondents agreed that commercial banks have greatly benefited due to the implementation of ITSM. The respondents did disagree with the indicated challenges and agreed that ITSM is not costly to implement and neither does it require major resources to implement.

5.4 Recommendations

The research study revealed that ITSM had positive significant impact on the organizational performance. Based on the conclusion above, commercial banks should

1. Ensure elaborate and effective management of IT services, put in controls to ensure that IT service management guidelines are duly followed and practiced. Top Management executives should ensure that service level agreements are monitored.

2. Also aim to upgrade on the version of IT service management framework which consists of functions designed to help manage and deliver IT services effectively

3. Align as many business goals as possible to IT services to ensure they are adequately managed through the various IT service management frameworks

Since the study was focused on the IT department, future studies should incorporate other departments in order to enrich the study.

5.5 Limitations of the study

The research objectives were met, however there were several limiting factors were encountered during the study;

Few studies have been done on the topic area of ITSM and organizational performance across commercial banks, therefore lack of literature material to refer was the major setback during the study

Lack of responses from the targeted individuals hence reducing the percentage of the response rate in the study.

REFERENCES

Afshar , J., Asghar, G. H., Mirdamadi, M. A., Nawaser, S. A., Khaksar, K., & Sadegh, S. M. (2011). Study of the effects of customer service and product quality on customer satisfaction and loyalty. *International Journal of Humanities and Social Science. 1*.

Alshamy, M. Elfakharany, E & Elaziem, M. (2012). Information Technology Service Management (ITSM) Implementation Methodology Based on Information Technology Infrastructure Library Ver.3 (ITIL V3). *International Journal of Business Research and Management (IJBRM). 3 (3)*. 113 - 132

Andrew, K. (1971). *Personal values and corporate strategy*. Harvard Business Review.

Andry, J.F., Agung, H., Erlyana, Y., Management Information System for Order Fulfillment: *A Case Study, Proceeding of 9th International Seminar on Industrial Engineering and Management,* (2016)

Ansoff, I. (1965). *Corporate Strategy*. New York: McGraw-Hill.

Ayat, M., Sharifi, M., & Sahibudin, S. (2009). Adoption Factors and Implementation Steps of ITSM in the Target. *Third Asia International Conference on Modelling & Simulation* (p. 6). Bali, Indonesia: IEEE.

Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management,* 99-120.

Betts, S. (2011). Contingency Theory: Science Or Technology?. *Journal of Business & Economics Research. 1.* 10.19030/jber.v1i8.3044.

Bertram D (2009). *Likert Scales are the meaning of life*. Available from: http://poincare.matf.bg.ac.rs/~kristina/topic-dane-likert.pdf.

Bikker J A. Measuring Performance of Banks: An Assessment. *Journal of Applied Business and Economics* vol. 11(4). 141-170

Bloomberg, D. (2014, July 8). *ITSM Principles can benefit SMEs*. Retrieved from IT News Africa: http://www.itnewsafrica.com/2014/07/itsm-principles-can-benefit-smes/

Brenner, M (2006). Classifying ITIL Processes A Taxonomy under Tool Support Aspects. *Proceedings of the First IEEE/IFIP International Workshop on Business Driven IT Management* 1(1).

Bobura, C. (2015). *Information Technology Service Management Practices, Enablers, Integration Strategies And Service Delivery Among Kenyan State Corporations*. University of Nairobi. Doctor of Philosophy in Business Administration.

Bolarinwa, O. (2015). Principles and methods of validity and reliability testing of questionnaires used in social and health science researches. *Nigerian Postgraduate Medical Journal,* 22(4), 195. doi: 10.4103/1117-1936.173959

Carbutt, E. (2014). *Choosing the right Service Management model for your business*. Retrieved from IT News Africa:

Cater-Steel, A., & McBride, N. (2007). IT service management improvement-actor network perspective. *Proceedings of the 15th European Conference on Information Systems (ECIS 2007),* (pp. 1202-1213). University of St Gallen.

Cater-Steel, A., Tan, W., & Toleman, M. (2009). Implementing IT service management: A case study focusing on Critical success factors. *Journal of Computer Information Systems.* 3 (1)

CBK. (2019). *CBK | Central Bank of Kenya.* Retrieved 29 August 2019, from https://www.centralbank.go.ke/

Cortina, S 2010, *Why Perform Process* (Ferris State University, 2019)*Assessments?* ITSM Portal, viewed 12 April 2014, <http://www.itsmportal.com/columns/why-perform-processassessments>

Drogseth, D. (2015). *The Future of ITSM: How Are the Roles (and the Rules) Changing?* Retrieved from www.enterprisemanagement.com: http://blogs.enterprisemanagement.com/dennisdrogseth/2015/05/27/future-itsm-roles-rules-changing/

Edwards, J. (2019). *Mastering Strategic Management - 1st Canadian Edition.* Vancouver: PressBooks.

Eikebrokk, J. I. (2016). *ITSM Nordic Research Workshop, April 5. IT Service Management:* Exploring ITIL Adoption over time in the Nordic Countries.

Eikebrokk, T. R., & Iden, J. (2016). Enabling a culture for IT services; the role of the IT infrastructure library. *International Journal of Information Technology and Management*, 14-40.

Esposito, A., & Rogers, T. (2013). *Ten steps to ITSM success.* Ely, Cambridgeshire, U.K.: IT Governance Pub.

Evans, J., & Schaefer, C. (2001). *Ten Tasks of Change: Demystifying Changing Organizations.* Pfeiffer.

Gacenga F J (2013). *A Performance Measurement Framework For It Service Management.* Doctor of Philosophy. University of Southern Queensland

Ferris State University. (2019, June 24). *https://www.ferris.edu/.* Retrieved from Ferris State University: https://www.ferris.edu/

Gacenga, F, Cater-Steel, A, Toleman, M & Tan, W-G 2011, 'Measuring the Performance of Service Orientated IT Management'. *Proceedings of the 2011 SIGSVC Workshop AIS Special Interest Group on Services. Shanghai, China*

Galup, S., Dattero, R. & Conger, S. (2009). *An overview of IT service management. Communications Of The ACM,* 52(5), 124.

Galup, S., Dattero, R., Quan, J., & Conger, S. (2007). Information technology service management: An emerging area for academic research and pedagogical development.

*Proceedings of the 2007 ACM SIGMIS CPR conference on Computer personnel research:
The global information technology workforce* (pp. 46-52). St Louis: ACM.

Gholami H, M, Asli N., Shirkouhi, S. & Noruzy, A. (2013). Investigating the Influence of
Knowledge Management Practices on Organizational Performance: *An Empirical Study.
Acta Polytechnica Hungarica*. 10. 205-216.

Henderson, J.C., Venkatraman, N. & Oldach, S., 1996. Aligning Business and IT Strategies.
Competing in the Information Age: *Strategic Alignment in Practice*, 21-42.

Himi, A., Bahsani, S., & Semma, A. (2011). *The IT Service Management according to the ITIL
framework applied to the enterprise value chain*.1(1).

Hochstein, A., Tamm, G. & Brenner, W. (2005) *Service-Oriented IT Management: Benefit, Cost
and Success Factors. European Conference on Information Systems.* Regensburg,
Germany.

Huizingh, K. R. (1995). *Marketing and Sales Information systems. Schoonheven.* The Netherlands:
Academic Text. Dutch

Iden, J., & Langeland, L. (2010). Setting the Stage for a Successful ITIL Adoption: A Delphi Study
of IT Experts in the Norwegian Armed Forces. *Information Systems Management,* 103-
112.

Imran, M., Maqbool, N., & Shafique, H. (2014). Impact of Technological Advancement on
Employee Performance in Banking Sector. *International Journal Of Human Resource
Studies,* 4(1), 57. doi: 10.5296/ijhrs.v4i1.5229

ISACA. (2019). *COBIT 2019 Framework: Introduction & methodology.* Retrieved from ISACA:
https://community.mis.temple.edu/mis5203sec001sp2019/files/2019/01/COBIT-2019-
Framework-Introduction-and-Methodology_res_eng_1118.pdf

Itai, M. M., Binuyo, A. O., & Asikhia, O. U. (2020). Information Technology Service
Management and Bank Efficiency in Nigeria: The Moderating Role of Branch Network.
IOSR Journal of Business and Management, 13-23.

Keel, A., Orr, M., Hernandez, R., Patrocinio, E., & Bouchard, J. (2007). From a technology-
oriented to a service-oriented approach to IT management. *IBM Systems Journal,* 549-564.

Kothari C.R. (2004), *Research Methodology,* Third Edition,New Age International Publishers,
New Delhi

Kotur, B., & Anbazhagan, S. (2014). The Influence of Education and Work-Experience on the
Leadership Styles. IOSR *Journal of Business And Management,* 16(2), 103-110. doi:
10.9790/487x-1621103110

Luftman, J. (2000) . Assessing Business-IT Alignment Maturity. *Communications of the
Association for Information Systems:* 4 (14)

Malhotra, NK 1999, *Marketing research: An applied orientation*, 3rd edn, Prentice Hall, New
Jersey.

Marrone, M., & Kolbe, L. (2010). ITIL and the Creation of Benefits: An Empirical Study on Benefits, *Challenges and Processes. European Conference on Information Systems* (p. 66). Pretoria: University of Pretoria.

Mehravani, S. (2011). ITIL Adoption Model based on TAM. Conference: *International Conference on Social Science and Humanity*. 1(1). 1-32

Mweru, C. & Maina, T. (2015). Features of Resource Based View Theory: An Effective Strategy in Outsourcing. *International Journal of Management and Commerce Innovations*. 3. 215-218.

McNaughton, B., Ray, P., & Lewis, L. (2010). Designing an evaluation framework for IT service management. *Information & Management,* 47(4), 219-225. doi: 10.1016/j.im.2010.02.003

Mwithiga, L. Njihia, J & Iraki, X. (2017) Information Technology (It) Integration And Firm Performance. *International Journal of Economics, Commerce and Management*. 5(5). 1-22\

Moraes O. and Laurindo, B. (2011) (2013). Maturity and Performance in Information Technology Project Management. *Journal Of Technology Management & Innovation*, 8, 5-6.

Muhura, S. W., *Organizational capabilities as a source of competitive advantage at Airtel Kenya.* University of Nairobi. Degree of Masters in Business Administration.

Ndung'u, E. W. (2021). *Information Technology Quality Management And Performance Of Commercial Banks In Nairobi County.* Nairobi.

Nelima, S. M. (2013). *Information Technology Infrastructure Library (ITIL) Adoption and Its Effect on Organizational Performance – A Survey of Listed Firms on The Nairobi Securities Exchange*, Univesity of Nairobi, Nairobi.

Potgieter, B. C., Botha, J. H. & Lew, C. (2005) Evidence that use of the ITIL framework is effective. *18th Annual Conference of the National Advisory Committee on Computing Qualifications*. Tauranga, NZ.

Rockart, J. F., & De Long, D. W. (1988). *Executive support systems: the emergence of top management computer use*. New York: Dow Jones-Irwin.

Rexhepi, E., & Rotim, S. T. (2016, 06 16). *adapting-itil-and-implementing-isoiec-20000-for-a-successful-organizationbusiness.* Retrieved from PECB: https://pecb.com/article/adapting-itil-and-implementing-isoiec-20000-for-a-successful-organizationbusiness

Selznick, P. (1957). *Leadership in administration.* Berkeley: University of California Press.

Shamekh F. R (2010). *Leveraging Organizational Performance Through Enterprise Business Architecture.* Master of Science Thesis in Information Systems. Sweden

Simiyu, M. N. (2013). *The effect of ITIL adoption on Organisation performance on Nairobi Securities Exchange listed firms.*

Spemic, M., Zmirak, Z., & Kraljevic, K. (2008). IT and business process performance management: Case study of ITIL implementation in finance service industry. *Conference: Information Technology Interfaces, 2008. ITI 2008. 30th International Conference.* Zagreb: Research Gate.

Stroes, H. J. & Egberts, M. E. (1996). *Veranderen met Resultant.* Denveter. The Netherlands. Kluwer (Dutch Text)

Taghva, M. Taghavifard, B. and Fasili, J. (2016) *A Hybrid Genetic Algorithm for the Optimal Constrained Web Service Selection Problem in Web Service Composition.* IEEE, New York.

Taylor, S. 2007. *The Official Introduction to the ITIL Service Lifecycle*. The Stationary Office, London.

Tan, W., Cater-Steel, A., & Toleman , M. (2010). Implementing IT service management:a case study focusing on critical success factors. *Journal of Computing Information Systems,* vol.50(2), p-12.

Vaitha, K. J & Francis, N. (2016). Approaches to IT Service Management in Improving IT Management in the Banking Sector – A Case Study in Tanzanian Banks. *Proceedings of the Fourth International Conference on Digital Information Processing.* 1(1). 1-15

Ward, J & Peppard, J. (2002). Strategic Planning for Information Systems (3rd Edition). John Wiley and Sons. United States

Wasilwa N S & Omwenga J (2016). Effects of ICT Strategies on Performance of Commercial Banks in Kenya: A Case of Equity Bank. *International Journal of Scientific and Research Publications.* 6(11). 382-453

Weill, P. and Olson, M, (1987). An Assessment of the Contingency Theory of Mis (April 1987). *Information Systems Working Papers Series*, Vol., pp. -, 1987.

Wiseman, C. (1988). *Strategic Information Systems*, Irwin, Homewood, Illinois.

Zhang, Y., Zhang, J., & Chen, J. (2013). Critical Success Factors in IT Service Management Implementation: People, Process, and Technology Perspectives. 2013 *International Conference On Service Sciences* (ICSS). doi: 10.1109/icss.2013.38

APPENDIX I: LETTER OF INTRODUCTION

Dear Respondent

I Am Stephen Njau Chege a graduate student at the University of Nairobi and for my dissertation I am examining:

INFORMATION TECHNOLOGY SERVICE MANAGEMENT AND ORGANISATIONAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA

For data collection purposes the following questionnaire will be used and will take approximately five minutes to complete. The main purpose for this paper is academic research and information provided will be used for academic purpose only. Your name will not be referenced while strict confidentiality and proper ethical principles will be observed.

Please do not indicate your name in the questionnaire.

CONSENT SECTION

- o   I agree to participate in this study
- o   I do not agree to participate in this study

APPENDIX II: QUESTIONNAIRE

The general purpose of this questionnaire is to collect data so as to investigate the effect of Information Technology Service Management (ITSM) on Performance of the banking institutions in Kenya. Information obtained will be treated confidentially and will be used for academic research purpose only.

Please fill in the following questionnaire by answering all the questions given as instructed.

SECTION A: BACKGROUND INFORMATION

1. What is your gender?

Gender	Male	Female
Tick($\sqrt{}$)		

2. What is your role in the IT Organization?

Role	IT service manager	Head of IT	Other
Tick($\sqrt{}$)			

If other please specify…………………………………..

3. Which ITSM framework do you use in this organization?

ITSM Framework	ITIL	COBIT	ISO/IEC 20000	other
Tick($\sqrt{}$)				

If other please specify…………………………………..

4. Based on your answer to question 3 above, indicate the version of ITSM framework your organization is using

i.   ITIL framework

ITIL Version	Tick($\checkmark$)
ITIL V2	
ITIL V3	
ITIL V4	

ii.   COBIT framework

COBIT Version	Tick($\checkmark$)
COBIT 5	
COBIT 2019	

iii.   ISO/IEC 20000 framework

ISO/IEC 20000	Tick($\checkmark$)
ISO 20000:2011	
ISO 20000:2018	

5.   Which ITSM functions have been adopted (Tick where Applicable)

ITSM Function	Service level Agreement	Change Management	Incident Management	Problem Management	Other
Tick($\checkmark$)					

6.   How long have the ITSM framework been implemented in this organization?

Period	Years	Months
Duration		

7.   What is the Number of employees in the IT Department?

No of employees

8. Which factors below do you consider important for ITSM to be successful. Indicate on the scale Rate of 1 to 5 where 5= strongly agree, 4= agree, 3= neutral, 2= disagree and 1 = strongly disagree

Statements	1	2	3	4	5
9. Top Management support					
10. Adopted process should be aligned to IT services and business needs					
11. Technicians should have high problem-solving skills and good communication skills					
12. Continuous improvement of processes					

SECTION B: BENEFITS OF ITSM IN YOUR ORGANISATION

To what extent do you agree with the following statements on the Effects of ITSM in your bank Indicate on the scale Rate of 1 to 5 where 5= strongly agree, 4= agree, 3= neutral, 2= disagree and 1 = strongly disagree

Statements	1	2	3	4	5
1. The management fully supports adoption and continuous improvement ITSM					
2. ITSM has improved service provision					
3. Employees find ITSM Simple to use and navigate					
4. Adoption of ITSM has led to a decrease in cost of operations					
5. Adoption and use of ITSM has led to an increase in net profit 6. generated					
7. ITSM has increased staff efficiency and thus saving company time					
8. The use of ITSM has increased the rate of service delivery to 9. customers					
10. The use of ITSM has aligned the use of resources to achievement of company goals					
11. The use of ITSM has led to innovation that has enhanced company competitive advantage					
12. The use of ITSM has enabled the bank to meet customer 13. increased demands					
14. The use of ITSM has led to improved customer satisfaction					
15. ITSM has standardized Processes					

	1	2	3	4	5
16. Does the ITSM framework implemented provide continuous service improvement					
17. Have IT services been standardized					
18. ITSM has led to improvement of IT service quality					
19. ITSM has led to employee satisfaction in IT services					
20. The use of ITSM has led to improved productivity of the IT department					
21. The use of ITSM has led to cost reduction in the IT department					
22. ITSM has improved service provision					
23. ITSM has improved employee satisfaction					
24. ITSM has enhanced employee productivity					
25. ITSM has reduced downtime in IT Systems					
26. ITSM has standardized processes in the company					
27. ITSM has led to reduction of operational costs					
28. ITSM has increased the number of transactions processed					
29. ITSM has led to improved communication to both internal and external customers					
30.					

SECTION C: CHALLENGES IN ADOPTION OF ITSM ON THE ORGANISATION PERFORMANCE OF COMMERCIAL BANKS

To what extent do you agree with the following statements on challenges in adoption of ITSM and performance? Indicate on the scale Rate of 1 to 5 where 5= strongly agree, 4= agree, 3= neutral, 2= disagree and 1 = strongly disagree

Statements	1	2	3	4	5
1. Cyber security has cost the bank money in the past					
2. Information Security Management is costly for the bank					
3. Keeping up with ITSM regulations is costly					
4. Management does not support the use of ITSM					

5. Users find ITSM difficult to adopt due to inadequate training on the use of ITSM					
6. ITSM ensures constant audit of systems to prevent risk					
7. ITSM is costly for the bank to adopt					
8. ITSM migration is hard, lengthy and vigorous task					
9. Employees find ITSM complex and thus creating resistance to adoption					
10. ITSM requires massive resources to implement					
11.					
12.					

SECTION E: PERFORMANCE OF COMMERCIAL BANKS

1. Indicate the percentage rate of your net promoter score (NPS) for your bank

Net Promoter Score (NPS)	%

2. Please indicate the latest Net Profits figures for your organization

Net Profits	

3. Please indicate the latest figures for Return on Asset (ROA) for your organization

Return on Asset (ROA)	

APPENDIX III: LIST OF COMMERCIAL BANKS IN KENYA

1. African Banking Corporation
2. Access Bank Kenya
3. Bank of Africa Kenya
4. Bank of Baroda
5. Bank of India
6. Barclays Bank of Kenya
7. Citibank N.A. Kenya
8. Consolidated Bank of Kenya
9. Co - operative Bank of Kenya
10. Credit Bank
11. Development Bank of Kenya
12. Diamond Trust Bank Kenya
13. DIB Bank Kenya
14. Ecobank Kenya
15. Equity Bank Kenya
16. Family Bank
17. First Community Bank
18. Guaranty Trust Bank Kenya
19. Guardian Bank
20. Gulf African Bank
21. Habib Bank AG Zurich
22. HFC Limited
23. I&M Bank
24. Kingdom Bank
25. Kenya Commercial Bank

26. Mayfair Bank
27. Middle East Bank
28. M-Oriental Commercial Bank
29. National Bank of Kenya
30. NCBA Bank Kenya
31. Paramount Universal Bank
32. Prime Bank
33. SBM Bank Kenya
34. Sidian Bank
35. Spire Bank
36. Stanbic Bank Kenya
37. Standard Chartered Bank
38. UBA Bank of Kenya
39. Victoria Commercial Bank