

**INFORMATION TECHNOLOGY AND OPERATIONAL
PERFROMANCE OF FIRMS IN THE KENYAN HOSPITALITY
INDUSTRY**

BY

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DECLARATION

This project is my original work and has not been submitted for any award of degree in any other University or institution for any other purpose.

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DEDICATION

I dedicate this research project to my family for their never ending support.

I will remain forever grateful.

ABSTRACT

Information technology plays a major role in tourism, travel and hospitality industry. It has become a key pillar to business operations and growth. Adoption of information technology in operations helps reduce operations costs and improve operational efficiency. However the intuitive impact should be studied in details. The aim of this study is to ascertain the influence of information technology on operational performance of firms in the Kenyan hospitality industry. Specifically the study seeks to; to establish the extent to which information technologies is used in operations in the Kenyan hospitality firms and then determine the relationship between information technology and operational performance.

To achieve this objectives, the study employed a cross sectional descriptive survey. Data was collected using a semi-structured questionnaire from starred hotels in Nairobi Kenya. A total of 134 questionnaires were administered to various hotel firms, but the researcher managed to obtain 114 completed questionnaires representing a response rate of 90.0% .The researcher adopted an online survey –form approach where questionnaires were sent using email then the results were available immediately after every respondent finished answering questions.

The collected data was edited, coded and entered for analysis using the Statistical Package for Social Sciences (Version 17.0) computer package. Both descriptive and inferential statistics were used. Factor analysis sorted the eight factors into three main factor components according to their absolute values. The higher the absolute value of the loading, the more the explanatory power of the variable.The findings of this study will be of great use to the hotels management, regulating bodies in formulating IT policies so as to promote compliance in the hospitality sector. The recommendations show that the firms should align themselves to using ICT at a strategic level and to these strategies are cascaded to all levels of the hierarchy.

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LIST OF ABBREVIATIONS

CPU	Central Processing Unit
GDP	Gross Domestic Product
ICT	Information and communication Technology
IT	Information Technology
SPSS	Statistical Packages for Social Science

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Information technology plays a major role in tourism, travel and hospitality industry. The integration of ICT in the tourism industry is essential for the success of tourism enterprises. IT facilitates an individual to access the products information from anywhere any time, can also reach the targeted customers across the globe in a single click on the keypad through the use of mobile computers and web technologies (Bethapudi, 2013). Over the years, technology in business has been changing rapidly as the global environment becomes highly competitive and innovative. In particular information technology has become very vital to all organizations that intend to remain competitive in the market. The drivers of change in today's world include, deregulation, global excess capacity, global competition, changing customer expectations, IT, demographic shifts and changing work and lifestyles. These changes have led organizations to embark on activities that will provide a source competitive advantage and embrace the usage of IT (Shi, Alastair & Kevin, 2006).

Operational performance is defined as the firms performance measured against standard or prescribed indicators of effectiveness, efficiency and environmental responsibility (Hsieh & Lin, 2010). This is done by reviewing and optimizing the operations of the business units, through dedicated information technology solutions. According to Porter and Tanner (2012) Operational performance of a firm is measured against standards or prescribed indicators of effectiveness, efficiency and environmental responsibility e.g. cycle time, productivity, waste reduction and regulatory compliance.

The main role of operations is to ensure the efficient delivery of the goods and services without interruptions. The basis of operation performance is the service agreements where the

business and the IT have defined the service levels for different services as stipulated in the service level agreement in situations where there are several service providers. In a multi-vendor environment, it is essential to understand the division of services into basic IT services and application management services. Basic IT includes, for example, network services, server services, work station services as well as a service desk for user queries and problems.

The continual service improvement proposals accepted by the business are transferred to service production through service design and service transition. Furthermore, continual service improvement includes preparing for changes in the IT operating environment (DiRomauldo & Gurbaxani, 1996)

1.1.1 Information Technology

Information technology is a general term that describes any technology that helps to produce, manipulate, store, communicate and disseminate information. There are two parts in information technology; computer technology and communication technology. Information and communication technology is used as an extended synonym for the term information technology, the term comprises of unified communication, their integration to telecommunication networks, computers and the enterprise software, middleware, storage and audio-visual systems, which enable users to access, store, transmit, and manipulate information (Mpofu & Watkins-Mathys, 2011). The key concept in information technology that necessitates the study includes; capability, communication and collaboration, modeling and exploration and impact to business functions. The term information technology has expanded to include the role of IT tools not just inside the company but outside the company, for example, Archibugi and Coco (2005), claimed that IT is considered as a tool of marketing

and contacting customers and looking for possible customers, as well as presenting IT services is distinguished as a potential service for customers (Werthner & Klein, 1999).

According to Shirazi, Farid, Gholami and Dolores (2008) IT is also considered as a key enabler for globalization, facilitating worldwide flows of information, capital, ideas, people and products. Some researchers have tried to combine the previous definition by considering IT as a group of elements (hardware, software, and people) that should be working together in the process to present the benefits to the organization in the form of information, product or services (Christensen, 2002; Doganis, 2002; Werthner and Klein, 1999).

Laudon (2011) assert that IT includes all the technology that facilitates the processing, transfer and exchange of information and communication services. It is considered as a subject of expertise that links information technology (computers and applications) and telecommunication networks (intranet and internet), that lets people and computers interrelate irrespective of physical location. Werthner and Klein (1999) conclude that the IT term contains hardware, software, networks and people that should be integrated as a one unit by linking each one to the other in a clear process to generate the information that helps the decision makers, producing product and services presenting, promotion, controlling and for achieving the organization's aims and goals.

Information and communication technology is clearly considered as a key growth area in this century, specifically, in a dynamic business and highly competitive environment which requires utilizing advanced IT to improve efficiency, cost effectiveness, and to present high quality goods and services to the customers (Laudon, 2011).

1.1.2 Operational Performance

Operational performance is defined as the firm's performance measured against standard or prescribed indicators of effectiveness, efficiency and environmental responsibility (Hsieh & Lin, 2010). According to Tanner (2012) operational performance measurement is the use of evidence to determine progress toward specific defined organizational objectives. This includes both quantitative evidence (such as the measurement of customer service times) and qualitative evidence (such as the measurement of customer satisfaction and customer perceptions).

While operational performance management is defined as the alignment of the various business units within a company in order to ensure that the units are helping the organization achieve a global strategy and attain a set of centralized goals (Rummler & Brache, 2012). Operational performance management is design, operation and improvement of the production system that creates the firm's primary products and services. A set of quantifiable measure used to gauge or compare performance in terms of meeting their strategic and operational goals has to be in place, According to Ryus (2010), the measure of operational performance depends on a criterion, and the measures are generally referred to as key performance indicators (KPIs) or Key success indicators (KSIs). The key activities in operational performance management include; understanding the needs of customers, measuring customer satisfaction and using the information to develop new and improved goods and services, operations performance management helps build quality into goods, services, and processes and continually improving them to reduce errors, defects and waste.

Operational performance includes guidance on achieving effectiveness and efficiency in the delivery and support of services so as to ensure value for the customer and the service

provider (Neely, Gregory & Platts, 1995). Key operational performance measures used to assess the success of operations in a firm are; Efficiency, degree of responsiveness, flexibility and quality. Strategic objectives are ultimately realized through service operations efficiency, therefore making IT a critical capability (Inman, Sale, Green & Whitten, 2011). Operational performance management helps maintain stability in service operations, allowing for changes in design, scale, scope and service levels (Jacobs & Swink, 2011).

1.1.3 Information Technology and Operational Performance

Information technology supports the primary objective of operational performance that is to ensure uninterrupted business operations, delivery of agreed services, cost efficiency and operations quality efficiency (Davenport, 2013). Information technologies can provide powerful strategic and tactical tools for organizations, which, if properly applied and used, could bring great advantages in promoting and strengthening their competitiveness. The proliferation of the internet, as a main stream communication media and as an infrastructure for business transactions has generated a wide range of strategic implications for businesses in general as well as for the service industries in particular (Christensen, 2002).

Information technology can be used not only for operational purposes, but also for tactical and strategic management of hospitality firms. This empowers tourism and hospitality enterprises to communicate directly and more efficiently with prospective customers and suppliers as well as to achieve competitive advantage (Aaker, 2012). It is very important to keep improving IT within an organization to ensure that benefits of better processes therefore improving the operations. With improvements in operations comes numerous benefits, some of these are; increased service availability to customers, improved return on investment, simplified and efficient work environments therefore increasing productivity.

Information technology and management information systems are today part of critical components of the institution's overall strategy; they support management's ability to perform reviews. IT should be used to recognize aspects, monitor, measure, limit risks, and manage operational performance. Efficient and useable IT should be both operational and informational. As such, management can use IT to measure performance, allocate, manage and control resources, and help an institution comply with regulatory requirements (Yusuf, 2013).

1.1.4 The Hospitality Industry in Kenya

The service sector in Kenya contributes to about 63% of GDP and its dominant segment is tourism industry. There has been a great chain of success in the airlines industry which has been made possible by among other things, the successful implementation and use of information and communication technology. As a result, they have been able to enhance their communication and efficiency, while at the same time, reduce costs and increase the number of passenger travel in their travel routes (Msafiri, 2012). Information and communication technology in the airlines influence the performance of the aviation to a large extent by assisting to improve on faster passenger handling and increased revenue generated from improved access to information. The hospitality industry is lagging behind in implementation and use of information technology in operations (Doll, 2004).

Hospitality sector is growing at a fast pace to address the needs for hospitality services within Kenya's tourism industry (Kuto & Groves, 2004). Kenya is one of the countries that adopted tourism as a major economic sector and the need for hospitality services is rapidly increasing. The industry has grown steadily over the years and, currently, tourism is a major foreign exchange earner for the country, and it contributes over 12% to the gross domestic product

(GDP). The development of hospitality industry in different parts of the world has shown that the industry presents opportunities for the economic growth (Daracha, 2013).

In Kenya, the rapid development of tourism has presented many challenges to the hospitality sector in the provision of accommodation and food services. The challenges include; Insecurity posed by tribal clashes within the tourist circuit areas and recently the ever increasing threat of terror to both foreign and local tourists (de Sausmarez, 2013). Acts of terrorism, such as the bombing of the embassy in Nairobi, the bombing of paradise beach hotel in Mombasa, the Westgate attack and the many Incidents of grenade attacks in the churches and markets places, consequently the tourism industry suffered a great blow (de Sausmarez, 2013). While the government has done a lot to curb the situation through preventive measures there is need to do more to avert further attacks. Technology will provide a lasting solution to this problem and ensure that Kenya remains the preferred destination for tourism (Gachigi, Kukubo&Kiamba, 2011).

The development of tourism in Kenya has not been accompanied with increased need for efficiency in Operations within the hospitality sector, particularly for the full service firms. There is a short fall in use of IT to improve service delivery and as marketing tool for Kenya as a destination (Gachigi, Kukubo& Kiamba, 2011).Kenya's strategy for developing tourism was traditionally to pursue the top end of the global tourist market rather than to promote mass tourism. This strategy has worked well thus far, but over the next few years the industry faces numerous pressing problems which need a different approach, requiring the industry players to take a different outlook to the strategy (Njenga & Alexander, 2012). Finally the low levels of IT presence and utilization is also a big challenge, this is because the tourist circuit areas are not covered with essential infrastructure necessary for IT technologies to thrive, these are; mobile telephone network, the internet, radio and television networks. This factor makes the destination unfavorable to tourists from developed countries (Kim,

Eves&Scarles, 2013).Hospitality organizations are turning to performance measurement and management in order to qualify for the International Organization for standardization standard certifications and company of the year Awards. General business pressures, the achievement of the coveted five-star rating and membership to international hotel associations have created the need for effective key performance indicators. Furthermore, organizations that have already implemented a performance measurement system have shown much better results (Njenga & Alexander, 2012).

1.2 Research Problem

Information technology attempts to improve the quality of goods and services offered, through cost management, time service delivery and improve processes and procedures. According to Porter and Tanner (2012) the development of IT has had profound effects on goods and services marketing. Traditionally IT facilities were primarily used for general business application such as data entry, analysis and manipulation of that data for reporting purposes (Kim, Eves& Scarles, 2013). Information technology is a key growth area in this century especially in a dynamic business and high competition environment, which requires utilizing, advanced IT tools to improve efficiency, cost effectiveness and to present high quality products and services to customers (Seethamraju, 2012).

Global studies focus on IT implementation, management and success in more developed countries like America and China (Davenport, 2013). Competition and dynamic business environment has also triggered any studies to evaluate the extent of use in various industries. However, little attention is given to information technology and operations performance of firms in the Kenyan hospitality industry. Mihalic and Buhalis (2013) studied ICT as a new competitive advantage factor; a case of small transitional hotel sector. This study contributed to the knowledge of IT competitiveness and IT productivity paradox in the hotel sector but did not focus on effects of IT on operations performance.Appaw and Agbola (2013) study on

use of IT in the front office operations of hotels chains in Ghana addressed how hospitality industry firms can take advantage of the pervasiveness of IT tools vis-à-vis technology based systems to advance some of the operations. The study has shown the need to study IT effects on operations performance of firms in the Kenyan hospitality industry.

Monge and Fulk (1999) in their study on the effects of IT network connectivity factors on operational performance of commercial banks; they wanted to establish the connectivity factors and their effects on operations. However the study only focused on IT networks and left out other key IT aspects. Mwamure (2013) study on effects of IT supported operations on service quality at the department of immigration, Kenya. The purpose of this study was to establish effects of IT on service quality in government sectors but failed to address key operations performance concepts of firms in the hospitality industry. It is evident that IT has been given more emphasis as a collection of systems rather than a tool of improving operations performance.

In reference to all these studies there is partial indication that superior use of IT leads to improved firm performance, the factors through which this is achieved are by no means clear. Additional research is therefore needed to identify the underlying factors connecting IT to operational performance.

It is through this view that calls for the research of information technology and operational performance of firms in the Kenyan hospitality industry to answer the following questions; how do hotel reservation systems influence the operational performance of Kenyan hospitality firms? To what extent do property management systems influence operational performance of firms in the Kenyan hospitality industry? How do yield management systems

influence operational performance of hospitality firms? What is the relationship between information technology and Operational performance?

1.3 Objectives of the Study

The study seeks to achieve the following two objectives.

- i) To establish the extent to which information technology is used in operations in the Kenyan hospitality firms.
- ii) To determine the relationship between information technology and operational performance.

1.4 Value of the Study

Management teams will use the findings as the base upon which to review their company performance. Necessary improvements identified could be undertaken to enhance performance at the work place. The findings can also be used by human resource management to help in boosting employee performance at the various workplaces.

Findings of the study will be of assistance to the government in setting the standards that hotels should work towards meeting if our hotels are to remain competitive in the world market and also for the improvements in service delivery in the industry. The use of IT will assist in monitoring of hospitality operations and more critically, improve the level of security measures under the modern day threat of terrorism.

The regulators and the policy makers can use the finding as reference for policy guidelines on information technology and human resource management in the hospitality industry. They will be able to use the findings of the study to formulate viable policy documents that effectively will in turn boost productivity.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This review scrutinizes the existing literature on the impact of IT on operations within the hospitality industry. Among the areas reviewed included; IT as a tool together with the sub-components, operational performance and the relationship between IT and operational performance of firms. There was no literature on the IT and operational performance though, so this reviews generally focuses on IT and operations materials in general.

2.2 Information Technology in the Hospitality Industry

Leung and Law (2011) assert that rapid development of IT in last decade has underscored the importance of understanding IT historical technologies and future trends. Information technology ensures service availability, service integration, and service automation for repetitive tasks and for the management planning and forecasting. Information systems are divided into four broad categories; transaction information systems, management information systems, decision support systems and office information systems. Transaction information system is information system application that capture and process data about business transactions, they are also called data processing systems, they respond to business transactions such as orders or process clients requests (Davenport, 2013).

Management information system is an information system application that provides for management-oriented reporting. Decision support system is an information system application that provides support to decision makers. Office information systems are applications concerned with getting information to all the users of that information (Ives,

Hamilton& Davis, 1980).Booking systems in hotels were examined by Choi and Kimes (2002) and presented an overview of some of the internal technology.

For hotels, the Property Management System (PMS) or central reservations system (CRS) are at the centre of both technology and hotel operations. These systems are used to manage the room inventory, record guest details and produce billing information. It often interfaces with other systems such as the telephone systems and food and beverage point of sales terminals to allow integrated billing and management reporting. There are also Global Distribution Systems (GDS) which are allocated a block of rooms within the hotels PMS systems but bookings from the GDS do not automatically update the PMS and must be entered manually. Either the customer or the travel agent makes bookings directly into the system via the internet (Mpofu&Watkins-Mathys, 2011).

Use of technology for marketing and advertising purposes has also grown over the time period. In smaller properties, the front office and booking processes may still not be computerised. Hotels are also doing their own website design and development rather than relying on outside providers. Sophistication of technology has allowed the move from management of reservations to yield management Curran et al. (2003). Yield Management was defined strategic control of inventory to sell it to the right customer at the right time for the right price. Whereas. Reservation Management is about process; basically strategy for handling reservations, information is able to be broadly shared utilising technology such as the Internet and private networks (Curran, Meuter& Surprenant, 2003).

The hospitality industry has gradually realized that the ICT revolution has changed best operational practices and paradigms, altering the competitiveness of all hospitality actors in

the marketplace (Buhalis, 2003). Hospitality corporations have integrated their back and front office in a framework that takes advantage of the capabilities of the Internet as well as of intranets and extranets. Convergence of all technological devices has gradually empowered greater connectivity, speed, transparency, and information-sharing. As a result, hospitality organizations are gradually focusing more on knowledge-based competition and on the need for continuous innovation, forcing management to stay abreast of the dynamic developments in the marketplace (Curran, Meuter & Surprenant, 2003).

2.3 Operational Performance

Marc (2004) asserts that a service is an open transformation process of converting inputs (consumers) into desired outputs (satisfied consumers) through the appropriate application of resources. More simply, services are economic activities that produce time, place, form or psychological transformation. Key activities in operations management include; understanding the needs of customers, measuring customer satisfaction and using the information to develop new and improved goods and services. Operations management helps build quality into goods, services, processes and continually improving them to reduce errors, defects and waste (Ghobadian, 1994). According to Porter (1985), use of information about customers, goods, services, operations, suppliers and employees to make better decisions in different situations.

Operational performance to address the following concerns; capacity of service delivery systems- types of capacity resources and efficient usage of capacity resources, service process types, role of automation technology, service facility location and service facility design (Papazoglou, 2007). Davenport (2013) describes capacity is the capability of a manufacturing or service resource such as a facility, process, workstation, equipment to accomplish its purpose over a specified time period. Capacity is a function of service desks or

points, number of service personnel available, the number of equipment available to serve customers. Kirkendall (2010) indicates that a well-defined system of operations performance measures can be a powerful means of prioritizing organizational goals and achieving them. Therefore measures inform planners of problems that require attention or monitor progress towards achieving goals.

2.4 Information technology and Operational Performance

Webster (2014) asserts that ICT is any technology that enables communication and the electronic capturing, processing and transmission of information. These technologies include products and services such as desktop computers, laptops, handheld devices, wired or wireless intranet, business productivity software such as text editor and spread sheet, enterprise software, data storage and security, network security and so on. Information technology in the hospitality industry has increased productivity, reduced costs, improved service quality, improved guest satisfaction and long term profitability (Cobanoglu, Corbaci & Ryan, 2001). The technology is divided into three categories: efficiency and productivity, guest service delivery and revenue management (Namasivayan, Enz & Sigaw, 2000).

The literature outlines the role of IT and how it affects operational performance, how the technology is used, and the facilities in use within the hospitality Industry and finally IT in general within the industry and the evolution in terms of developments. IT offers several advantages for hotels of all sizes; one of the advantages is increased effectiveness due to cost decrease and revenue expansion. Another advantage is higher quality customer relationships due to the possibility of personal contact services and dialogue with the customer (Wang, 2008). The literature review mainly captures the relationship between IT and operations in general. For instant, customers can respond questions about their personal preferences for

rooms, and regarding on this information, a customer receives services at the hotel that are adapted to his or her preferences. Given the benefits that IT offers to the hospitality industry, the wide use of technology would appear to be an expected conclusion (Siguaw, Enz & Namasivayam, 2000).

Productivity in the service sector has been achieved by delivering services swiftly and with little process variation, with the theories such the swift, even, flow theory being widely used. Morgan (2000) argues that the productivity of operations process rises with the speed by which inputs flows through a system and falls with increases the variability on the process or steps in the process itself.

Hotel operations comprise many activities that are performed to satisfy guests' needs for accommodation, business, dining, and entertainment. These activities consume resources and provide a wide range of services from checking-in to cleaning and re-supplying rooms (Bowie & Buttle, 2013). The manner in which a hotel's operations are performed determines the competitiveness of its operations therefore its performance. An information system is therefore essential for effective control and improvement and management of hotel operations. The competitiveness of economies will, to a great extent depends both on the development and application of these IT technologies.

2.5 Summary of Literature Review

Information technology in the hospitality industry has increased productivity, reduced costs, improved service quality, improved guest satisfaction and long term profitability(Cobanoglu, Corbaci & Ryan, 2001). The technology is divided into three categories: efficiency and productivity, guest service delivery and revenue management (Namasivayan, Enz &

Siguaw,2000). The general relationship between information technology and operations can be summarized as follows: IT Availability and accessibility + efficient utilisation = operational efficiency + enhanced productivity+ profit Margins (Samkange, 2008). The greater the availability and accessibility of IT resources plus the more efficient and effective the utilisation of those resources; the greater the operational efficiency and effectiveness; the higher the quality and quantity of productivity levels the more rewarding the profit margins; (Moyo, 1996).

2.6 Conceptual Framework

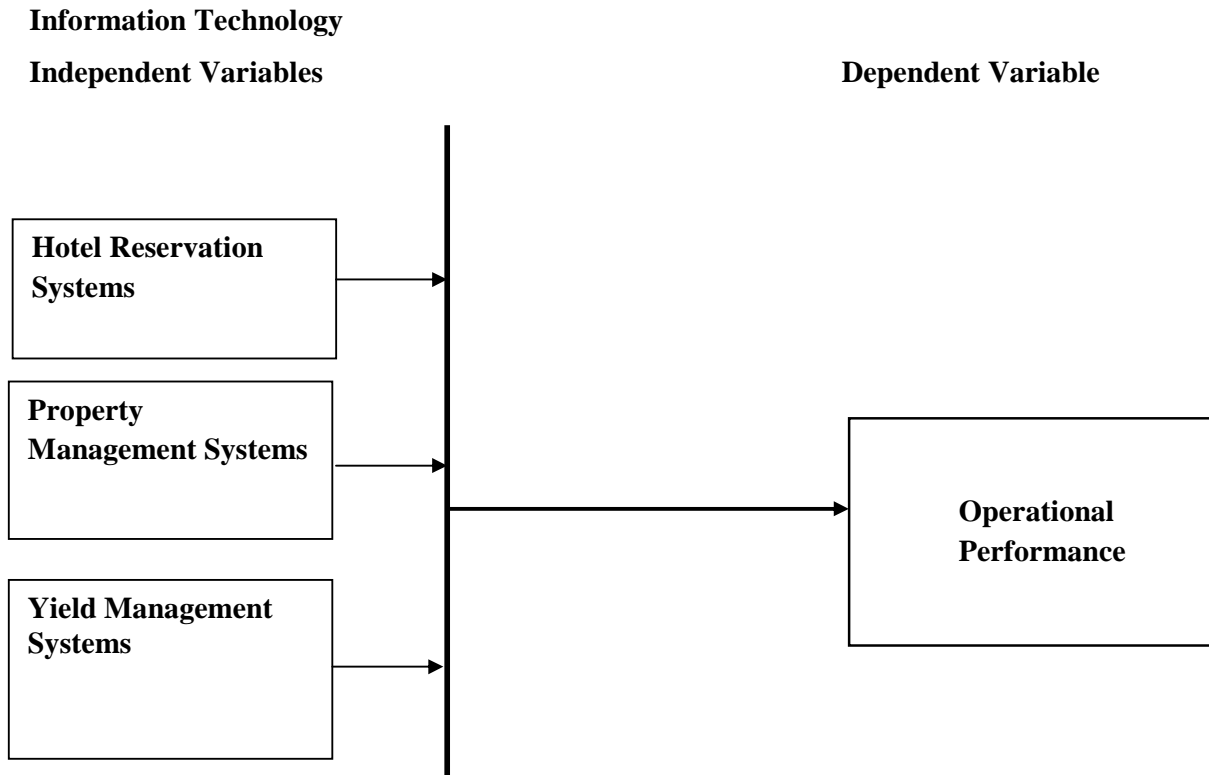


Figure 1 Conceptual Framework

In this framework, there are certain factors influencing information technology in the hospitality industry. For this study, three factors are considered as the independent variables. Operational Performance of the hospitality industry is the dependent variable that is affected by the independent variables as shown above.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter gives the methodology that was used to accomplish the already established research objectives and questions. It looks at the study's; research design, target population, instrument validity and reliability test, data collection, and data analysis discussed.

3.2 Research Design

The study adopted a descriptive survey design. According to Churchill (1991) descriptive research is sufficient for gathering information about prevailing conditions or situations for the purpose of description and interpretation. Khan (1993) recommends descriptive survey design for its ability to produce statistical information about aspects of education that interest policy makers and researchers. The design chosen for this study due to its ability to ensure minimization of bias and maximization of reliability of evidence collected.

3.3 Target Population

The population consisted of general managers and IT staff in 67 starred hotels in Nairobi Kenya (appendix II). Therefore a census was applied.

Table 3.1 Population Design

Hotel Rating (Class)	Number
5 star	14
4 Star	14
3 Star	32
2 Star	6
1 Star	1
Total	67

3.4 Data Collection

Primary data was used in this study. Primary data was gathered using structured questionnaire. The questionnaire was divided into two sections. Section A constituted of the background general information, while section B dealt with the Influence of information technology on operational performance of firms in the Kenyan hospitality industry.

Respondents were required to rate their responses using a likert scale designed questionnaire. This design enabled the researcher to capture the positive and negative attributes from the respondents. The questionnaires were administered through emails. Telephone calls were also used for clarification on some questions and probing. The respondents included general managers and IT staff; the study collected primary data. Primary data was collected from respondents using an anonymously filled questionnaire distributed to respondents by providing access to the online survey form by sending out notification emails. The results were available online immediately after every respondent had finished answering the questions.

3.5 Data Analysis

Since the data collected was in quantitative form, the study adopted quantitative methods of data analysis. In order to determine the level of IT use in operations among Kenyan

hospitality firms, frequencies and percentages were used. Regression analysis was applied to determine the relationship between information technology and operational performance in the Kenyan hospitality firms. The findings were presented were presented inform of tables. The following regression model was used to establish the relationship between information technology and operational performance in the Kenyan hospitality firms.

$$Y = a + b_1 X_1 + b_2 X_2 + b_3 X_3 + E$$

Where Y = Dependent variable

X₁, X₂, X₃ = Independent variables

a = Constant

b₁ b₂ b₃ = Coefficient

E = Error term

Table 3.2 Operational Definition of Variables

Objective	Variable	Indicator	Measurement	Analysis	Tools
Objective1	Cost, Availability, Ease of Use	-Very Positive -Positive -Fairly Positive -Negative -Very Negative	Likert Scale	Quantitative	Percentages & Frequencies
Objective2	Timeliness, Accuracy, Completeness Transactional costs	-Very Positive -Positive -Fairly Positive -Negative -Very Negative	Likert Scale	Quantitative	Percentages & Frequencies

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter is presented in two sections; this is the demographic information of the respondents, influence of IT on operational performance and finally looks at the relationship between information technology and operational performance of firms in the hospitality industry. The data has been presented in tables; the responses were analyzed using descriptive statistics.

4.2 Response Rate

Out of 134 questionnaires which were administered to the interviewees, 114 of them were returned for analysis. This translates to 90.0% return rate of the respondents. Overall the response rate can be considered to have been high enough and representative.

4.3 Demographic Information

4.3.1 General information of Respondents

The study sought to find out the distribution of respondents by gender to know which gender is the majority within the hospitality industry. This is part of the general information and not a direct objective of the study. The finds are presented below in table 4.1

Table 4.1 Distribution of Respondents by Gender

Gender	Frequency	Percentage
Male	68	60
Female	46	40
Total	114	100

The above results shows that majority of the respondents who participated in the study were male, representing 60 percent followed by Female at 40 percent. The results would imply that the majority of staff workforce in the Kenyan hospitality industry firms is male.

4.3.2 Distribution of Respondents by Age

The study sought to find out the distribution of respondents by age to know which age group is the majority within the hospitality industry. This is part of the general information and not a direct objective of the study. The findings are presented below in table 4.2

Table 4.2 Distribution of Respondents by Age

Age	Frequency	Percentage
Below 20 years	0	0
21-30 years	57	50
31-40 years	45	40
41-50 years	12	10
Above 50 years	0	0
Total	114	100.0

The above results shows that majority of the respondents who participated in the study were between the ages of 21 and 30 years, representing 50 percent followed closely by 31-40 years

age bracket at 40 percent. The results would imply that the majority of staff in the Kenyan hospitality industry firms is between the ages of 21-30 years. This could imply that majority of employees in this industry are middle aged probable reason being hospitality firms tend to retain their employees or employ experienced staff from other sectors.

4.3.3 Distribution of respondents by education level

The study sought to find out the education level of respondents, this is for general information and not a direct objective of the study. The findings are presented below in table 4.3

Table 4.3 Distribution of Respondents by Education Level

Education Level	Frequency	Percentage
Certificate	0	0
Diploma	64	60
Undergraduate	36	30
Post graduate	14	10
Total	114	100.0

Figure 4.3 shows that more than half of the respondents (60%) have attained diploma level of education, 30% have attained undergraduate level of education and the minority (10%) has attained post graduate level of education. The findings depict the hospitality industry in Kenya employs relatively well learned professionals who have attained tertiary level of education and therefore they are able to answer the questions posed informatively.

4.3.4 Duration of service

The study sought to find out if how many years the respondent has worked with the firm.

This is for general information and is not a direct objective of the study. The results are shown

in

Table 4.4

Table 4.4: Duration of service

Duration	Frequency	Percentage
Less than 1 year	15	13
1-3 years	50	43
4-7 years	37	32
8-11 years	9	8
Over 11 years	3	4
Total	114	100.0

Table 4.4 shows that a good number of the respondents (43.0%) have been with the hotel for 1-3 years. The table further reveals that 32 % have been with the company for 4-7 years, 13% for less than 1 year and 8% for between 8 and 11 years. The findings could give an implication that the industry retains its employees and are probably good industry for employees. The above findings could mean that the firms have an advantage on the IT skills and competence brought by the young workforce.

4.3.5 Distribution of the respondents by department

The study further sought to find out the respondent's career orientation. This question was asked

to understand the distribution of the careers of the respondents. The question was asked to show the extent of the use of IT across departments. The results are presented in Table 4.5;

Table 4.5: Distribution of respondents by department

Department	Frequency	Percentage
Administration	5	4.0
Rooms Division	10	8.4
Food & Beverage	12	10.5
Culinary Operations	30	26
Sales & Marketing	8	7
Accounts	15	13
Engineering & Maintenance	5	4
Security	1	2.5
Human Resources	4	3.5
Information Systems	24	21.1
Total	114	100

Table 4.5 shows that many of the respondents (26%) are from culinary operations department, 21.1% are from Information Systems department, 13% are from Accounts department; 10.5% from food and beverage department, 12% from rooms division department, 11% from administration department, 4 % from engineering and maintenance and 3.5% from human resources department. This therefore indicates that the questionnaires were responded to by the most informed persons in the organizations regarding Information systems and operations.

4.4 Influence of IT on operational performance of hospitality industry

firms

All the respondents (100.0%) agreed that their firms have adopted IT to a large extent. All the respondents (100.0%) indicated that the adoption and use of IT services has improved the performance of the hotels.

4.4.1 Ways in which IT has improved efficiency in the department

The study sought to find ways in which IT has improved operational performance in the respective respondent's departments. The responses given included; helped automate processes and procedures; there is greater productivity and efficiency; shorter turnaround times on orders; staffs avoid useless repetitive tasks; improved customer satisfaction; unified communication among departments; sharing of data between parties ; tighter accounting controls ; it has enforced checks and balances across the different sections in the department in terms of well-defined workflows thus enhancing accountability and efficiency in carrying out the day to day tasks ; workstation mobility ; resource tools support and provides business analytics tools. The findings further revealed IT has improved efficiency through; improved lead times in service delivery, improved communication flow access to real time information; giving real time information thus helping in on time performance. Business modeling and simulations to see how a factor may impact a business; use of a website and related website technologies has assisted in increasing sales, reducing fraud cases, getting to know what our customers are saying about the firms and in turn changing; paperless environment reduces costs robust systems to support operations; remote access redundancy; and it has allowed for information to be shared across departments and stations which is required for decision making and other operations to be efficient.

The use of IT has reduced queues to barely negligible at the front office during check-in and check-out because of the use of the Internet and Electronic Point-of-sale (EPOS) system that transfers instant charges on guest accounts. Guest can remotely inspect their account from the convenience of their abode. The study sought to find out what company IT tool/device(s) the respondents have in their disposal to enable them to perform their duties. This is a direct objective of the study as it shows accessibility to the key aspects of the study.

The results are shown in Table 4.6:

Table 4.6: IT device(s) at disposal to enable performance of duties

Device /Tool	Frequency	Percentage
Mobile Phone	110	96.4
Desktop Computer	110	96.4
Laptop & Tablet	55	48.2
Point of Sale Station	40	35.0
Hotel Reservations System	100	87.7
Enterprise Resource Planner	65	57.0
Property Management System	100	87.7
Computer Applications	110	96.4

Table 4.6 shows that majority of the respondents (96.4%) have mobile phones and computer applications at their disposal to enable them to perform their duties. Table 4.7 further reveals 87.7% have access to the hotel reservations system, desktops (96.4%) and 48.2% the minority have laptops and tablets at their disposal to enable them to perform their duties. The findings give an implication that IT devices are useful in executing duties for staff in the hospitality industry.

The study also sought to find out from the respondents if as an individual, the provision of the items below has affected their performance at the workplace. This question is a direct subtheme of the study as it shows the relationship between use of different IT aspects shown and the performance of the hotel. The results are shown in Table 4.7:

Table 4.7: Effect of the IT aspects on performance at the workplace

Device /Tool	Yes	No	Maybe	No Response
Point of Sale Station	35.0%	3.0%	2.0%	0.0%
Hotel Reservations System	89.0%	10.0%	0.0%	1.0%
Enterprise Resource Planner	90.0%	5.0%	5.0%	0.0%
Property Management System	96.0%	1.0%	3.0%	0.0%
Computer Applications	92.0%	3.0%	5.0%	0.0%

Table 4.7 shows that almost all the respondents agreed to the provision of Property management system (96.0%), point of sale station (95.0%), computer applications (92.0%), enterprise resource planner (90.0%) and hotel reservations system (89.0%) affecting their performance at the workplace. The findings yet again affirm that company IT devices are important in executing duties to staff.

The study sought to find out the level of agreement on the perceived indicators of how well a hotel is performing. This is a direct subtheme of the study as it provides information on which are the perceived indicators of performance of a hotel. The findings are revealed in Table 4.8:

Table 4.8: Perceived Indicators of Performance of a hotel

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
	%	%	%	%	%
Additional hotel outlets	12	4	12	45	25
Positive Cash Flows	13	0	22	0	35
Diverse new markets	11	45	31	8	10
Increased number of repeat guests	50	44	20	15	3
Customer Loyalty	38	25	22	0	0
Large Number of Assets owned	13	17	0	8	65
Improved Hotel rating	66	57	12	1	5
Low employee turnover	10	0	4	67	70

Table 4.8 reveals majority of the respondents agreed to improved hotel rating (66.0%), increased number of repeat guests (50.0%), customer loyalty (38.0%), as perceived indicators of how well a hotel is performing.

4.5 Factors that have led to the use of IT

The study sought to find out the extent to some factors that have led to use of IT in the hotels.

This question is a direct sub theme to see what factors have led to the use of IT. The findings are revealed in Table 4.9:

Table 4.9: Factors that have led to use of IT in the hotels

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	%	%	%	%	%
Competition	8.0	0.0	4.0	29.0	45.0
Convenience	4.0	4.0	0.0	39.0	52.0
Better Decision making process	4.0	0.0	4.0	30.0	50.0
Easy to use applications	4.0	0.0	18.0	20.0	44.0
Need for complete and comprehensive information	8.0	0.0	22.0	20.0	30.0
Safety and security	4.0	0.0	14.0	8.0	17.0
Accuracy in information provided	4.0	4.0	15.0	21.0	30.0
Improve turnaround times to customer queries	8.0	8.0	11.0	19.0	26.0

Table 4.9 reveals majority of the respondents agreed to convenience (39.0%), better decision making process (30.0%), Competition (29.0%), ease of application use (20.0%), accuracy of the information provided (21.0%), complete and comprehensive information (20.0%), prompt response to customer enquiries (19.0%), safety and security (8.0%) as factors that have led to use of IT in hotels. The table further shows that a large proportion strongly agreed to the following as being factors that have led to use of IT in the hotels: convenience (52.0%), better decision making process (50.0%) and competition (45.0%). The study sought to find out the level of agreement to the following perceived challenges faced while using IT services. This question is a direct sub theme of the study and was asked for the purpose of understanding what the challenges of using IT are. The respondents were presented with twelve challenges to respond to using a scale of 1-5. The responses were subjected to factor analysis in order to establish the challenges that have a lot of impact on the implementation of IT services. The findings are revealed in Table 4.10:

Table 4.10: Perceived challenges faced while using IT services

	N	Minimum	Maximum	Mean	Sdeviation
Delays due to system failures on transactions	12	1.000	5.000	3.42983	1.18030
Too Many Steps in a Procedure	12	1.000	5.000	3.30702	0.96686
Systems taking long to respond	12	1.000	5.000	3.42983	1.09239
Information available not clear	12	1.000	5.000	3.88597	1.12615
Total systems failure	12	1.000	5.000	3.45614	0.94209
Slow speed of user adoption	12	1.000	5.000	2.79825	0.85049
Complicated Applications	12	1.000	5.000	4.09649	1.20318
Lack of commitment from staff	12	1.000	5.000	3.64912	1.09966
Costs of systems implementation	12	1.000	5.000	3.81579	1.00932
Skills /Competence gaps among IT staff	12	1.000	5.000	3.07018	0.90023
Business and IT are not integrated	12	1.000	5.000	4.06140	1.06830
Lack of commitment from management on IT development	12	1.000	5.000	3.23684	0.90084
Valid N	12				

Table 4.10 above table the challenges faced while using IT services were rated between 2.51 and 4.5 indicating that the challenges had a great impact on the IT services. Specifically, the highest rated challenge was complicated applications (mean, 4.09649) , this was closely followed by Lack of integration of business processes with IT (mean, 4.06140) , information availed for decision making is not clear (mean, 3.88597), cost of system implementation being too high (mean, 3.81579), lack of commitment from staff was also stated as a challenge (mean, 3.64912) , total system failure (mean, 3.45614), slow system response and system failures on transactions both tied (mean, 3.42983).Other challenges listed included; lack of commitment from management on IT development (mean,3.23684) and slow user adoption (mean, 2.79825) . The study sought to find out the extent to which IT has affected the items below. This question is a direct sub theme of the study and was asked for the

purpose of understanding the relationship between the impact of the use of IT on the performance indicators. The findings are shown in Table 4.11:

Table 4.11: Extent of Impact of IT on Operational Performance

	N	Minimum	Maximum	Mean	Std deviation
Additional Hotel Outlets	8	1.000	5.000	2.7708	0.99444
Positive Cash flows	8	1.000	5.000	2.9375	1.19228
Diverse new markets	8	1.000	5.000	2.8125	0.95997
Increased number of repeat guests	8	1.000	5.000	2.8333	1.11724
Customer Loyalty	8	1.000	5.000	2.9375	1.19228
Large number of assets owned	8	1.000	5.000	2.7708	0.99444
Improved hotel rating	8	1.000	5.000	3.0625	1.07992
Low employee turnover	8	1.000	5.000	2.7708	0.99444
Valid N	8				

Table 4.11 from the table above, all the impact of IT on operational performance indicators was rated between 2.51 and 3.5 indicating that IT had been implemented to a moderate extent by the hospitality firms. Specifically, the highest rated indicator was improved hotel rating (mean, 3.0625), this was followed by positive cash flows (mean, 2.9375), customer loyalty (mean, 2.9375), increased number of repeat guests (mean, 2.8333), diverse new markets (mean, 2.8125), low employee turnover (mean, 2.7708), additional hotel outlets (mean, 2.7708) and large number of assets owned (2.7708) as extent to which IT has affected certain items in the hospitality industry. The findings thus indicate that the IT has been implemented to a large extent by the Kenyan hospitality firms, and has had a great effect on the operational performance of these firms.

The study sought to establish the relationship between the factors identified with IT implementation. A multivariate linear regression equation was fitted to the data with IT Implementation factors as the independent variables and operational performance as the dependent variable. The table below shows the coefficients estimates.

Table 4.12: Coefficients Estimates

Model	Unstandardized Coefficients			Standardized Coefficients	
	B	Std. Error	Beta	t	Sig.
Constant	.734	.886		.829	.412
Hotel Reservations systems	-.470	.099	-.450	-4.758	.000
Property Management Systems	-.228	.111	-.197	-1.058	.146
Yield Management systems	.295	.081	.349	3.634	.001

From the above table the equation obtained was as follows

$$Y = 0.734 + -0.470 X_1 + -0.228 X_2 + 0.295 X_3$$

Where Y = Operational Performance

X1= Hotel Reservation Systems

X2= Property Management Systems

X3= Yield Management Systems

From table 4.12 above, hotel reservations systems ($b_1 = -0.47$) and property management system ($b_2 = -0.228$) both have a negative but statistically significant relationship with operational performance. While yield management systems ($b_3 = 0.295$) had positive and statistically significant relationships with operational performance.

4.6 Additional suggestions and recommendations

The study sought to find out suggestions/recommendations on the influence of information technology on operational performance of the hospitality industry. The findings are shown in table 4.13 below.

Table 4.13 Suggestions and Recommendations

	N	Minimum	Maximum	Mean	Std deviation
Make use of IT system in Place	8	1.000	5.000	2.9375	1.19228
Security Must not be compromised	8	1.000	5.000	2.8333	1.11724
Measures to curb Fraud must be implemented	8	1.000	5.000	2.3187	0.73474
Safeguard process from interference	8	1.000	5.000	2.8333	1.11724
Outlook of IT as an investment	8	1.000	5.000	2.3316	0.58750
Enforce proper change management	8	1.000	5.000	2.7708	0.99444
Adopt new technologies as they emerge	8	1.000	5.000	2.1939	0.62788
Align IT strategy to the overall firm strategy	8	1.000	5.000	2.7708	0.99444
Valid N	8				

The table above shows suggestion and recommendations made by the respondents which includes: make use of IT systems put in place (mean, 2.9375) ,security must not be compromised (mean, 2.8333),safe guard all the processes from interference from the terrorist (mean,2.8333),enforce proper change management (mean, 2.7708) ,align IT strategy to the overall firm strategy (mean, 2.7708),measures to curb fraud must be implemented (mean, 2.3187) and not look at information technology as a cost but an investment (mean,2.3316). which in the long run will contribute to increase in the efficiency of the different departments of the establishments;hotels that embrace IT have a competitive edge and customers are satisfied with the service provided; The respondents further recommended; change management should be properly managed whenever there are new systems; the more the processes are automate the more they are able to save time which translates to better performance. Have more self-service enabled services to improve customer service;

automate all critical processes to achieve efficiency, reliability and have better control of process; transfer of knowledge should be quite key during IT projects implementation; building in house capacity to handle IT governance ,systems policies and procedures that attempt to retain IT staff while in the integration stage, ensure that backup plans are well designed, tested and implemented; also helps to understand what the goals of the organization are and align IT strategic plan to the overall organizational strategic plan and alignment of business, management and IT objectives is key.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The basic purpose of this chapter is to give the summary of findings, discussions, conclusions and recommendation of the study. This was based on the research findings that is presented and discussed in the previous chapters.

5.2 Summary of findings

This study aimed at assessing the influence of information technology on the operational performance of the Kenyan hospitality industry. The task included; establishing the extent to which information technology is used in operations in the Kenyan hospitality firms and also to determine the relationship between information technology and operational performance.

The researcher reviewed previous studies with a view to establish academic gaps which the present study sought to bridge. This was done through library research. The procedure included: reading, evaluating the methodology employed in terms of design choice, target population, sample and sampling procedure data collection instruments, (in terms of suitability, validity and reliability) data collection procedures, data analysis, findings and recommendations.

The study employed quantitative research as the main approach to guide the study. The target population included staff of 67 starred hotels in Nairobi Kenya.

The research instrument used in data collection was a questionnaire from the respondents. To ensure validity of the instruments, expert opinion was sought. Data analysis was started

immediately after the collection. Data was summarized into frequencies and percentages and presented in graphs, pie charts and tables.

5.3 Discussions

This section comprises of discussion based on the specific research objectives of the study.

The findings shows that the shows that the majority of the respondents who participated in the study were male between the ages of 21 and 30 years, who have attained diploma level of education. The findings further reveal that almost of the respondents who participated in the study have worked for their organizations for between 1-3 years, are in food and beverage production and service and culinary operations department.

The findings reveal that all the respondents agreed that their firms have adopted IT to a large extent and use of IT services has improved the operational performance of the hotels. The study agrees with the statement that utilization of IT tools has an important influence on the organizational performance and all of its elements including people, culture, structure, process and tasks (Zorn, Flanagan & Shoham, 2011).

The study findings reveal that majority of the respondents gave the following as ways in which IT has improved operational performance: helped automate processes and procedures; there is greater productivity and efficiency; shorter turnaround times on orders; staffs avoid useless repetitive tasks; improved customer satisfaction; unified communication among departments; sharing of data between parties ; tighter accounting controls ; it has enforced checks and balances across the different sections in the department in terms of well-defined workflows thus enhancing accountability and efficiency in carrying out the day to day tasks ; workstation mobility; resource tools support and provides business analytics tools. Twining,

(2002) recommended four dimensions for describing ICT practices: operational support, business process support, manages support and innovation support. The findings further revealed that IT has improved operational performance in the following ways; improved lead times in service delivery, improved communication flow access to real time information; giving real time information thus helping in on time performance. Business modeling and simulations to see how a factor may impact a business; use of a website and related website technologies has assisted in increasing sales, reducing fraud cases, getting to know what our customers are saying about the firms and in turn changing; paperless environment reduces costs robust systems to support operations; remote access redundancy; and it has allowed for information to be shared across departments and stations which is required for decision making and other operations to be efficient.

The use of IT has reduced queues to barely negligible at the front office during check-in and check-out because of the use of the Internet and Electronic Point-of-sale (EPOS) system that transfers instant charges on guest accounts. Guest can remotely inspect their account from the convenience of their abode. The findings further show that majority of the respondents have mobile phones, desktop computer, computer applications, hotel reservations system, property management system, erp, laptops and tablets and with a small proportion having point of sales stations to aid them to perform their duties. The findings also reveal that the provision of property management system, hotel reservations system and computer applications has greatly affected staff performance at the workplace.

The findings further reveal that majority of the respondents agreed to; improved hotel rating, positive cash flows, customer loyalty, increased number of repeat guests, diverse new markets, low employee turnover, additional hotel outlets and large number of assets owned to be perceived indicators of how well a hotel is performing. In which the respondents also agreed to be the extent to which IT has affected positively at the hospitality firms.

The study findings depict majority of the respondents agreed to convenience, better decision making process, Competition, ease of application use, accuracy of the information provided, complete and comprehensive information, prompt response to customer enquiries, safety and security as factors that have led to use of IT in hotels.

The findings further reveal that majority of the respondents agreed to: delays due to system failures on transactions, systems taking too long to respond cost of system implementation, business process and IT not integrated, complicated processes and procedures, competence gaps among IT staff, complicated applications, information not clear and total system failure as perceived challenges faced while using IT services.

5.4 Conclusions of the Study

On the basis of the above findings, the following conclusions were made for information technology and operational performance of firms in the Kenyan hospitality industry.

The study found that, the use of IT in operations in a large extent has improved its operational performance. Some of the ways in which IT has improved operational performance in the departments include; increased productivity and efficiency; faster processing of customer requests hence greater customer satisfaction; immediate dissemination of information throughout organizations; faster sharing of data between different departments; processing of enormous amounts of data; easy accessibility of information at any time; enforced checks and balances across the different sections in the department in terms of well-defined workflows thus enhancing accountability and efficiency in carrying out the day to day tasks at the departments; accuracy, speed and volume of work done; improved process management; improved lead times in service delivery; improved communication flow access to real time information; reduced operational costs; data accuracy and using applications that validate against business rules.

The study found that majority of the employees of the hospitality firms have mobile phones, computer applications, desktops computers and a small proportion have laptops and tablets to aid them in performing their duties. The findings affirmed that the provision of IT tools affects staff performance at the workplace. The study asserts; to improved hotel rating, positive cash flows, customer loyalty, increased number of repeat guests, diverse new markets, low employee turnover, additional hotel outlets and large number of assets owned as extent to which IT has affected operational performance in the hospitality industry.

The study affirms; convenience, better decision making process, competition, ease of application use, accuracy of the information provided, complete and comprehensive information, prompt response to customer enquiries, safety and security as factors that have led to use of IT in hotels. The study further found that: delays due to system failures on transactions, systems taking too long to respond, cost of system implementation, business process and IT not integrated, complicated processes and procedure, competence gaps among IT staff, complicated applications, information not clear and total system failure as perceived challenges faced while using IT services.

From the study findings the study concludes that information technology has a direct influence on operational performance.

5.5 Recommendations

On the basis of the above conclusions, the following recommendations were made for information technology and operational performance of firms in the Kenyan hospitality industry. From the findings the study recommends that; make use of IT systems put in place; various products must be considered when designing solutions for this industry meaning that IT

security must not be compromised at all cost, products to curb fraud and money laundering should be put in place and always safe guard all the processes from interference from the terrorist; the industry should adopt new technology and solutions as they emerge, and not look at information technology as a cost but an investment which in the long run will contribute to increase in the efficiency of the different departments of the establishments; hotels that embrace IT have a competitive edge and customers are satisfied with the service provided.

The respondents further recommended; change management should be properly managed whenever there are new systems; the more the processes are automate the more they are able to save time which translates to better performance. Have more self-service enabled services to improve customer service; automate all critical processes to achieve efficiency, reliability and have better control of process; transfer of knowledge should be quite key during IT projects implementation; building in house capacity to handle IT governance ,systems policies and procedures that attempt to retain IT staff while in the integration stage, ensure that backup plans are well designed, tested and implemented; also helps to understand what the goals of the organization are and align IT strategic plan to the overall organizational strategic plan.

5.6 Limitations of the study

The findings of this study are directly applicable to the starred hotel firms in the Kenyan hospitality industry.

The time duration was no adequate to conduct a survey of all hotel firms in Kenya, this is the reason the study chose only the starred hotel firms in Nairobi.

5.7 Suggestions for further research

This study sought to evaluate information technology and operational performance of firms in the Kenyan hospitality industry attempting to bridge the gap in knowledge that existed. Although the study attained these objectives, it mainly focused on Kenyan hospitality firms. There is need to replicate the study looking at the wider view to include tourism and travel to

find out if there are any more factors influencing information technology on operational performance.

There is need to conduct further study which will attempt to find out the underlying factors relating information technology and operational performance.

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APPENDICES

APPENDIX I: TRANSMITTAL LETTER

Daniel K. Kungu
P.O Box 51968, 00200
Nairobi,
29thSeptember 2014

Dear Respondent,

RE: **DATA COLLECTION**

I am a student at the University of Nairobi. I am currently doing a research study to fulfill the requirements of the Award of Master of business administration (MBA) on **INFORMATION TECHNOLOGY AND OPERATIONAL PERFORMANCE OF FIRMS IN THE KENYAN HOSPITALITY INDUSTRY**. You have been selected to participate in this study and I would highly appreciate if you assisted me by responding to all questions in the attached online questionnaire as completely, correctly and honestly as possible. Your response will be treated with utmost confidentiality and will be used only for research purposes of this study only.

Yours Faithfully,

Daniel K. Kungu

D61/75965/2012

APPENDIX II: STRUCTURED QUESTIONNAIRE

Instructions: Please respond to the following questions and where applicable, mark the relevant box with a tick (✓).

Confidentiality: The responses you provide will be strictly confidential. No references will be made to any individual (s) in the report of the study.

SECTION A: GENERAL INFORMATION

1. What is your gender?

Male

Female

2. In which of the following Age brackets do you belong?

Below 20years **21-30 years** **31-40years** **41-50 years**

Above 50 years

3. What is your education level (state the highest level?)

Certificate **Diploma** **Undergraduate**

Post Graduate **Other.....**

4. How long have you worked with the company?

Less than 1 year **1 – 3 years** **4 – 7 years** **8-11years**

Over 11 years

5. What is your career orientation?

Accounts **Marketing** **Business Management** **IT**

Professional

Technical **Other**

6. Kindly indicate your department.....

SECTION B: INFLUENCE OF IT ON OPERATIONAL PERFORMANCE OF HOSPITALITY INDUSTRY

7. In your opinion has the adoption and use of IT service improved the Operational performance of your organization? Yes [] No []

8. If yes to Question 7 above, Kindly indicate ways how IT has improved efficiency in your department

9. What company IT device/ Tool (s) do you have in your disposal to enable you perform your duty?

[] Mobile Phone [] Desktop Computer [] Laptop & Tablets [] Point of Sale station

[] Hotel Reservations system [] ERP [] Property Management System

[] other computer applications

10. As an individual, has the provision of the IT company devices/ Tool(s) in Question 9 enhanced your performance at the workplace? Please tick (√) appropriately

Device/Tool	Yes	No	Maybe
Mobile Phone			
Desktop Computers			
Laptop & Tablets			
POS station			
Hotel Reservations System			
ERP			
Property Management system			
Computer Applications			

11. The following are perceived indicators of how a hotel is performing. Please indicate your level of agreement.

	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
Additional hotel outlets					
Positive Cash Flows					
Diverse new markets					
Increased number of repeat guests					
Customer Loyalty					
Large Number of Assets owned					
Improved Hotel rating					
Low employee turnover					

12. The following are perceived challenges faced while using IT services. On a scale of 1 to 5, where 5= Strongly agree , 4= Agree , 3= Neutral ,2= Disagree , 1= Strongly Disagree

	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
Delays due to system failures on transactions					
Too Many Steps in a Procedure					
Systems taking long to respond					
Information available not clear					
Total systems failure					
Slow speed of user adoption					
Complicated Applications					

Lack of commitment from staff					
Skills /Competence gaps among IT staff					
Business and IT are not integrated					
Lack of commitment from management on IT development					
Costs of systems implementation					

13. To What extent do you agree with the factors below that have led to the use of IT at the hotel? On a scale of 1 to 5, where **5=strongly agree**, **4= Agree**, **3= Neutral**, **2= Disagree**, **1= Strongly Disagree**.

	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
Competition					
Convenience					
Better decision making Process					
Easy to use applications					
Website with comprehensive information					
Safety and Security					
Accuracy in information provided					
Improve turnaround times to customer queries					

14. To what extent do you feel IT (devices, applications, networks), has affected the items below? On a scale of 1 to 5, where 5= strongly agree, 4= Agree, 3= Neutral, 2= Disagree, 1= Strongly Disagree.

	Strongly Agree 5	Agree 4	Neutral 3	Disagree 2	Strongly Disagree 1
Additional hotel outlets					
Positive Cash Flows					
Diverse new markets					
Increased number of repeat guests					
Customer Loyalty					
Large Number of Assets owned					
Improved Hotel rating					
Low employee turnover					

15. Please give suggestions/recommendations on the influence of information technology on operational performance of hospitality industry.

Appendix III: List of Participating Hotels

1. Villa Rosa Kempinski
2. The Sarovastanely
3. Nairobi Serena Hotel
4. Intercontinental Nairobi
5. Sankara Nairobi
6. Fairmont the Norfolk
7. The Boma
8. Tribe Hotel
9. Soverign Suites
10. Panari Hotel
11. DusitD2 Nairobi
12. Windsor golf & country Club
13. Hotel Royal orchid Azure Nairobi
14. Hemingways Nairobi

15. Hilton Nairobi

16. Laico regency Hotel

17. The Heron Portico

18. Kahama Nairobi

19. Nanchang Nairobi
20. Crowne Plaza Hotel Nairobi
21. Eka Hotel Nairobi
22. West House-A one degree south Hotel
23. Ole Sereni
24. Prideinn Lantana suites Hotel & Conferencing
25. House of Waine
26. The headquarters inn
27. Fairview apartments
28. Fairview country Hotel
29. Boma Inn
30. Comfort Gardens-Guest House
31. Eden Gardens Hotel Nairobi
32. Fahari Guest House
33. Hennessis Hotel
34. Hotel Troy Nairobi
35. Jacaranda Hotel Nairobi
36. KiviMilimani Hotel
37. Marble arch
38. Nairobi Airport Hotel

39. Nairobi Tented Camp
40. Nairobi transit hotel
41. Nairobi Uphill hotel
42. Paris Hotel
43. Park Place hotel
44. Pride inn hotel westlands
45. Pride inn rapta road
46. Sarovapanafric
47. Sentrim 680 hotel
48. Silver springs hotel
49. The Kenya comfort hotel suites
50. The strand hotel
51. Tropical towers apartments
52. West breeze hotel
53. Wood avenue towers
54. Bush house and camp
55. Country lodge
56. Diamond plaza apartments
57. La jardine hotel
58. Longview Suites
59. Meridian Hotel
60. Sunrise hotel
61. Blue Hut hotel
62. Hotel ambassadeur
63. Khweza Bed & breakfast
64. Mvuli House
65. Sentrim Boulevard
66. Sirona Hotel
67. Kenya comfort Hotel

Source: <http://kenya.travel.spb.ru/all-hotels-in-kenya.htm>