EFFECT OF INFORMATION COMMUNICATION TECHNOLOGY ON FINANCIAL PERFORMANCE OF HOSPITALITY FIRMS IN KENYA

By

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DECLARATION

I declare that this dissertation is my original work and has not been previously published or submitted elsewhere for award of a degree. I also declare that this contains no material written or published by other people except where due reference is made and author duly acknowledged.

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ABSTRACT

Competition among the hospitality firms has intensified and the players in this industry are struggling to attract customers. As a result, they have been forced to initiate innovative ways of surviving. One of the strategies they have adopted is information technology. Investment in technology can help improve the performance of the hospitality industry. This study aimed to establish the effect of information communication technology on the financial performance of hospitality firms in Kenya. The specific focus was to establish the effect of e-marketing, e-transactions platforms, customer relationship management systems and financial management systems on the financial performance of hospitality firms in Kenya. The study adopted the Technology Acceptance Model, Transaction Cost Theory and the Resource-Based Theory in providing a theoretical anchor to the study. An explanatory research design was adopted and the target population of the study was 79 hotels classified as level 4- and 5-star hotels in Kenya. A census was conducted on the 79 hotels. The target respondents were finance and Information Technology managers from the hotels. A questionnaire containing closed ended questions was adopted for this study. The quantitative data collected was analyzed through descriptive and inferential statistics. The study established that adoption of information communication technology, that is Financial Management Systems, E-Customer Relationship Management, E-transactions and E-marketing has a positive and significant effect on financial performance of level 4- and 5-star hotels in Kenya. This led to the recommendations that the management of hotels in Kenya, both level 4, 5 and others to aggressively invest in e-marketing practices such as Facebook, Instagram, twitter, LinkedIn, mobile apps and websites if they intend to significantly improve their financial performance ; aggressively invest in adoption of e-transactions practices such as credit cards, debit cards, pay pal, mobile payment services and master cards in order to significantly boost their financial performance ; invest in adoption of e-customer relationship management practices such as online call centers to handle complains, social platforms to handle complains, online room bookings, online book confirmation in order to realize a significant improvement in their financial performance and also invest in adoption of financial management systems such as electronic forensic analysis, accounting packages to manage accounts, internal control systems so as to have a significant improvement in their financial performance.

Key Words: e-marketing, e-transactions platforms, customer relationship management systems, financial management systems, financial performance, hospitality firms

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DEDICATION

To my family.

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ACRONYMS AND ABBREVIATIONS

CRM	Customer Relationship Management
CRS	Central Reservations Systems
COE	Capital Employed
ERS	Enterprise Resource Planning (ERP),
FDI	Foreign Direct Intelligence
GDP	Gross Domestic Product
ICT	Information Communication Technology
IT	Information technology
KMS	Knowledge Management System
OAS	Office Automation System
PMS	Project Management System
ROA	Returns on Assets
ROCE	Return on Capital Employed
ROE	Return on Equity
SCM	Supply Chain Management
SMEs	Small and Medium Enterprises
TAM	Technology Acceptance Model

USA	United States of America
UNWTO	United Nations World Tourism Organization
WTTC	World Travel and Tourism Council

TERMS AND DEFINITIONS

E-Customer Relationship Management is the application of Internet-based technologies such as emails, websites, chat rooms, forums and other channels to achieve customer relationship management objectives

e-financial management is the use of paperless, real-time e-bookkeeping and e-accounting services in financial management

E-marketing is a process of planning and executing the conception, distribution, promotion, and pricing of products and services in a computerized, networked environment, such as the Internet and the World Wide Web, to facilitate exchanges and satisfy customer demands.

E-transaction is the sale or purchase of goods or services, whether between businesses, households, individuals, governments, and other public or private organisations, conducted over computer-mediated networks

Financial performance indicates the strengths of the organization in monetary terms and can range from Return on Assets (ROA) and Return on Capital Employed (ROCE), Return on Equity (ROE), liquidity and growth in sales among other measures

Organizational performance is the achievement of set targets based on given inputs

CHAPTER ONE

INTRODUCTION

1.1 Background of Study

The hospitality sector to the economy is immense. In the year 2012 for instance, the contribution was over 260 million jobs, taking number one slot in 11 of the world's total jobs (UNWTO, 2016). Statistics by the WTTC (2019) indicated that this industry contributed a total of 330 Million jobs worldwide and 10.3% of the world GDP which is equivalent to US$8.9 Trillion. In 2014, the contribution of this industry to the world GDP was 10% in the tune of US$ 7.6 T. and generated more than 250 Million jobs (WTTC, 2015). In the year 2017, the industry contributed more than 10% of the jobs (UWNTO, 2017) and is among the fastest growing in the world based on a report by WTTC (2018).

In Kenya, it is one of the fastest growing and a top earner of foreign investments and revenue, however, it faces impediments ranging from high competition deterring quality. The intensity of competition is so high that the hoteliers struggle to get customers thus, they are investing in technology to turnaround the situation (Poon & Low, 2017). To ensure repeat guests, customer satisfaction is one of the contests they face is in a progressively modest operating atmosphere (Shahin & Dabestani, 2016). As a result, with the ever-increasing reliance on technology, the firms in the hospitality industry are embracing technology.

Despite the potential benefits of technology adoption by the hotels globally, Paryani, Masoudi and Cudney (2010) agreed that its adoption has been slower than expected. While most large hotels in developed economies have invested in technology and with technology now a growing trend, its adoption by hotels in developing economies has been slower. While many studies have linked e-business to business performance, the focus on the hotel industry

is limited. The focus has treated SMEs as a whole with no specific breakdown to the sub sectors. In Kenya, the advent of technology in hotels is more pronounced among the big hotels than the smaller ones. Even so, the smaller hotels are trying to catch up, those that are not able are dropping from the market. The competition in this industry has now been taken online where the competitive advantage is created (Masoudi & Cudney, 2010).

Those hotels that are not able to attract, follow up or even accept online payments for bookings are finding it hard to survive in the market. Even more intriguing is the fact that despite this, all the hotels face a challenging fit in terms of financial performance. In that case, the impact of technology adoption is hard to measure and that is why it is of paramount importance to establish the effect of IT adoption on financial performance, given that this sector's contribution to the Kenyan economy is significant.

1.1.1 Information Communication Technology

Kim, Eves and Scarles (2013) indicated that ICT is essential for operation of firms in improving the eminence of their services, reducing the time taken to deliver as well as improving the processes of operation thus reducing operational costs and improving financial performance. Today's environment of business operation is highly dynamic and turbulent with high competition which can require adoption of IT for improvement of costs and production of high-quality services (Seethamraju, 2012). Adoption of IT strategy is being viewed as a new competitive because they have led to an improvement in financial performance of the firms (Garbin, Alfirević, & Indihar, 2011).

In the hotel industry, firms have adopted various systems such as Central Reservations System (CRS) used to reserve rooms for guests, social media marketing and advertising, electronic transaction and online customer service management systems. The

hotels also use telephone systems and billing systems (Mpofu & Watkins-Mathys, 2011). Hotels also use technology for yield management where they manage their inventories through price discrimination and sell it to those customers of high value at the right time and price thus getting better revenue. The hotels also use information sharing systems in information sharing (Curran, Meuter & Surprenant, 2003).

Across the globe, firms in the hotel industry have continued to embrace technology to enhance their performance. In Thailand, Sirirak, Islam and Ba (2011) established that ICT adoption has influenced operational productivity, customer satisfaction and enhanced revenue among the hotels. In Central and South-Eastern Europe, Mihalic and Buhalis (2013), indicated that the hotels have adopted ICT as a competitive advantage and that has led to increased revenue. In the USA, firms in the hotel industry have embraced ICT and integrated systems such as office automation and that has led to improved financial performance (Li, 2012). Compared to their counterparts in USA, hotels in China have embraced ICT to enhance cost effectiveness and improve financial performance. The hotels in China use ICT to process data involving documents in the supply chain systems. In Jamaica, adoption of social media marketing saw some of the hotels realize an influx in the number of international guests arriving through an increase by 5 percent (Bethapudi, 2013).

Among the hotels in African continent, Appaw and Agbola (2013) indicated that firms in the hotel industry in Ghana have adopted IT in various services such as front office operations and yield management so as to improve their financial performance. Locally here in Kenya, Ng'ang'a (2013) argued that hotels have resorted to online marketing and customer service. Specifically, more than 90 percent of the hotels have adopted IT in their services such as operation systems and online marketing through social media. The scholar further argued that in the hospitality industry in Kenya, the significance of technology was mainly

felt in the ticketing industry. When it comes to hotels, its rate of adoption has been uneven whereby most large hotels had invested in it but smaller hotels had not.

1.1.2 Financial Performance of Hospitality Firms

Cook (2013) articulated organizational performance in terms of achievement of set targets based on given inputs. In measurement of organizational performance, various models have been adopted and they range from Balanced Score card, Performance Matrix and Fitzgerald's framework (Van Looy & Shafagatova, 2016). These models have captured both financial and non-financial performance. Nevertheless, regardless of the methodology adopted, Hasan (2018) termed a good performance measurement as one which takes in consideration both financial and non-financial indicators. While non-financial measures of performance determine how the organization performs in regard to consumers' opinion, in-house processes, innovation and learning (Olsen, 2011), financial performance indicates the strengths of the organization in monetary terms and can range from Return on Assets (ROA) and Return on Capital Employed (ROCE), Return on Equity (ROE), liquidity and growth in sales among other measures.

ROE has been supported as a good financial performance measure because it can well explain the market value as indicator of value to shareholders (Pennacchi & Santos, 2018). A higher value would demonstrate that the management is creating value given manageable costs (Norman, 2017; Kabajeh, Al Nuaimat & Dahmash, 2012). On the other hand, growth in sales revenue, to be employed in this study, captures the returns of a firm given the available resources. This measure is suitable in the hospitality industry compared to the use of ROA and ROE since the sector is not capital intensive but labor intensive. The use of ROA and ROE is mostly where a company has invested in assets that are supposed to

generate revenue for the returns. Such measures are mostly recognizable in the capital-intensive sectors.

Considering labour intensive sectors, studies have suggested the growth in sales as a good financial performance measure. Other scholars such as Ansah et al. (2012) have suggested that the use of sales as a measure of financial performance in labour intensive sector. Given that the hospitality industry is majorly a service providing industry, growth in sales is the best method of measuring performance. It would therefore make sense to determine revenue growth than comparing the assets or capital employed as in the case of manufacturing sector.

1.1.3 ICT and Financial Performance of Hospitality Firms

Tsai *et al*. (2009) argued that hoteling firms can advance their financial gains by embracing ICT technology, yet adoption of ICT technology does not always improve financial performance. Sigala, Airey, Jones and Lockwood (2004) argued of the paradox of ICT where it was revealed that ICT can also affect productivity negatively as well as financial performance especially if it is costly to manage. Yiu, Grant and Edgar (2007) indicated that ICT has brought about competitiveness, saving time, enhancing convenience and saving costs.

Wanjiku (2018) argued that ICT does not necessarily improve performance nor create competitive advantage among hotels. Based on the Resource based theory, they argued that its adoption cannot lead to competitive advantage because it is highly imitable and tradable in the hotel industry given it's a necessity. In addition, technology adoption can improve financial performance of the hotels to an extent that is incomparable to competitors, there is a need to involve other capabilities other than just IT. Specifically, a firm needs to

invest in human resource in order to enhance IT capability and not just investment in IT only. This presents the paradox of the effect of IT adoption on financial performance.

Buhalis (2004) demonstrated that ICT usage in reservation systems for instance computer reservation systems save time and increase accuracy and priority which maximizes the hotel revenue thus improving financial performance. Siguaw, Enz and Namasivayam (2000) argued that in the USA hoteling firms IT strategy has been embraced to gain competitive advantage leveraging on speed, improving employee productivity and enhancing revenue generation thus better financial performance. IT reduces operational costs, enhanced productivity, revenues and customer satisfaction (Aziz *et al*., 2012). Bethapudi (2013) added that a firm manages costs and enhances revenue through integration of ICT.

Ansah, Blankson and Kontoh (2012) documented that technology is used to predict the number of customers expected for room reservation, managing operational services, managing the revenues generated through budgeting, reserving rooms for customers and yield management. Hotels use technology to forecast guest demand for reservation, management of guest services, accounting for guests, data management, revenue management, reservation management, and yield management (Ansah *et al*., 2012). In yield management for instance, hotels manage their inventories through price discrimination and sell it to those customers of high value at the right time and price thus getting better revenue.

1.1.4 Hospitality Industry in Kenya

Hospitality industry in Kenya is made up of hotel sector that is harmonized with the tourism sector. Based on the Hotel Act Cap 494, hotels are classified into star ratings ranging from one to five. The rating is based on the amenities and service provided whereby the five-star ones offer the highest level of accommodations and services. They are also characterized by

luxurious menu and furnishings with other services like fitness centers and 24-hour services. In Kenya, there are only 24 Five star and 55 four-star hotels defined by the Tourism Regulatory Authority (2019).

A key driver of performance of the hospitality industry is its suitability that has continuously dominated GDP contribution especially since the year 2013 according to WTTC (Kibicho, 2016). It is second after agriculture in economic contribution which provides ratification of its importance to the Kenyan economy. The Kenyan government has continued to provide support to this industry with an aim of making it a preferred destination and thus, the expectation is that it should grow and hence intensify competition (Christian & Nathan, 2013).

The hotels have also resorted to IT adoption as a result of increasing online activities and high competition. Among the challenges facing this industry are cases of violence and terrorism which lead to international advisory issuing communications of warnings. Other significant factors are changes in customer needs, preferences and tastes. To cope, the hotels need to step up their efficiency in order to be at par with other hotels worldwide (Chege, 2016). However, hope is there since there is an increasing change in the social-economic setting of Kenyans which has increased local tourism (Christian *et al.,* 2013).

Competition in the hotel industry based on the Cytonn Real Estate report is rife. In the year 2017 for instance, the report indicated that 4-star hotels recorded better performance compared to the other categories and their occupancy averaged 56.6 percent against 46 percent in the five star hotels. On the other hand, the occupancy rate of the 3 start hotels was 49.4 percent. Even so, most of the hotels did not meet an occupancy rate above 60

percent to imply that their performance is still not as good as those of their European counterparts which average an occupancy rate of 89 percent.

1.2 Statement of Problem

Foreign direct intelligence (2018) report indicated that the hospitality industry can serve as a strong economic growth pillar, yet it is mostly ignored because it experiences way too many obstacles. In Kenya, the hospitality sector alone caters for over 509,000 jobs annually representing 10% of total employment in Kenya (Ondieki & Kung'u, 2016). Comparison shows that emerging economies lag behind advanced economies in terms of attracting tourist at rate of 45 percent to 55 percent. The success behind Europe's and other advanced economies numbers is the advancement in technology (UNWTO, 2018).

A report by UNWTO (2018) indicated that developing countries which have put in place good ICT infrastructure such as online booking, e-marketing, e-transactions and e-customer services are the main reason why the tourist traffic is up surging there. This translates to more revenue, investment, customer interaction and retention (Craig, Dehoratius & Raman, 2014). Other arguments in support of ICT adoption in this industry are; Achieng' and Makori (2017) who stated that ICT can enhance revenue generation, Jediel (2016) reasoned that ICT can enhance customer interaction and satisfaction, thus improving sales. E-transactions additionally enhance security, speed and abridged charges in payments (Lule *et al.,* 2012).

Even though there is an argument that investment in technology can improve revenue generation in the tourism industry, the advancement of technology in this sector is lagging behind in developing economies. Most hotels are not so technologically advanced like their European counterparts. Even so, it's not clear how technology contributes to

financial performance since some of the firms that have adopted technology struggle equally in revenue generation just like their competitors which have not invested in technology.

Another reason for this study is that most of the studies linking ICT to financial performance have focused on economies outside Kenya such as Kotler (2010) in Europe, Kaaya (2014) focused on Tanzania, Sathye (2012) focused on Australia, Dahlberg and Mallat (2012) based their study in Thailand, Makongoro, (2014) focused on Tanzanian firms and Matikiti, Afolabi and Smith (2012) focused on the hospitality industry in South Africa. Their results therefore cannot be generalized to a Kenyan setting because the depth and magnitude of ICT adoption as well as the ICT policy differs between them and Kenya. The study therefore sought to fill this contextual research gap.

1.3 Research Objectives

The general objective of the study was to establish the effect of information communication technology on financial performance of hospitality firms in Kenya.

The following were the specific objectives;

i. To establish the effect of e-marketing on financial performance of hospitality firms in Kenya

ii. To determine the effect of e-transactions on financial performance of hospitality firms in Kenya

iii. To assess the effect of e-customer relationship management on financial performance of hospitality firms in Kenya

iv. To determine the effect of real time financial management on financial performance of hospitality firms in Kenya

1.4 Research Hypotheses

H_{01} *e-marketing has no significant effect on financial performance of hospitality firms in Kenya*

H_{02} *e-transactions platforms has no significant effect on financial performance of hospitality firms in Kenya*

H_{03} *Customer Relationship Management Systems has no significant effect on financial performance of hospitality firms in Kenya*

H_{04} *Financial Management Systems has no significant effect on financial performance of hospitality firms in Kenya*

1.5 Scope of Study

The study focused on establishing the effect of information communication technology on the financial performance of hospitality firms in Kenya. The specific focus was on e-marketing, e-transactions platforms, customer relationship management systems and financial management systems. The time scope was the year 2020 and the target firms were the classified level 4- and 5-star hotels which are 79 according to the Tourism Regulatory Authority (2019) list.

1.6 Significance of Study

The hotel industry is important to the economy of Kenya and hence the findings of the study are relevant to a number of stakeholders in the industry ranging from the government policy makers, hotel management and academicians and scholars.

1.6.1 Policy Makers

Government policy makers ranging from the Ministry of ICT to the Ministry of Tourism as well as the Tourism Regulatory Authority can find this study insightful. The role of ICT has been established and championed as one of the ways to improve financial performance of the firms in the industry given the recommendations. As a result, policies which favor adoption of ICT in the industry can be formulated.

1.6.2 Management of Hospitality firms

The findings of the current study provide managers of hospitality firms as well as managers and stakeholders in other industries reliable information on the role of ICT on financial performance. This means that the managers can have statistically reliable information to enable them make decisions regarding adoption of ICT to enhance their financial performance.

1.6.3 Researchers and Academicians

Besides conducting an empirical review of the past studies on the theme through inferential analysis, the study has determined which services demand which types of ICT investment and its financial effect. This opens up an avenue for further interrogations. The cross examination provides material for reference and comparison in future probes.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter provides insights into the literature reviewed on the subject matter, critiques and research gaps on the topic. This chapter is important in highlighting previous works on the subject and providing a direction for this interrogation. Other areas covered are conceptual model and summary.

2.2 Theoretical Review

To interrogate the concepts of information technology and its financial effects, the study will adopt the Technology Acceptance Model (TAM), Transaction Cost Theory and the Resource Based Theory as presented and explained in this subsection.

2.2.1 Technology Acceptance Model (TAM)

Propounded by Davis (1989), the theory postulates that technology is successfully adopted when there is understanding of its usefulness or the ease of use. The users of the technology must understand how to use it as well as its usefulness. Technology is being adopted by various businesses to maximize on speed and cut costs so as to enhance its financial performance (Munoz-Leiva *et al*. 2017).

The perceived usefulness of adopting technology in the hospitality industry ranges from easy exchange of documents, access to banking facilities, easy transaction of payments, accuracy, time saving, improvement of customer interaction and retention and convenience which in turn improves revenue (Lee, 2016). The theory has previously been used in studies by Zain *et al.* (2005) to determine the relationship between information technology

acceptance and organizational dexterity in Malaysia; Lee and Park (2008) to analyze the Mobile technology usage and its effect and Ahearne, Srinivasan and Weinstein (2004) to establish technology adoption effect on sales.

Makworo, Muhoho and Mugambi (2019) adopted the theory to establish the effect of E-Banking Strategy on SMEs in the Hospitality Industry in Nairobi County. In addition, Njeri (2017) who determined adoption of e-marketing in the hospitality industry in Kenya and how it influenced the performance of those targeted firms as well as Kiriro (2015) who tested the impact of IT on organizational performance also used TAM in their studies. Globally, Sugiharto, Suhendra and Hermana (2016) used it to model IT adoption among small food processing firms in Indonesia while Kansakar, Munir and Shabani (2019) used the theory to investigate the challenges and advantaged of technology adoption in the hospitality industry in Tunisia.

In this study, it helps probe the need for technology adoption among the firms in the hotel industry. It has been argued that it enhances efficiency and improves effectiveness thus improving revenue. The theory also indicates that when the perceived benefits and ease of using a new technology are positive, it can be adopted to enhance performance.

2.2.2 Transaction Cost Theory

Advocated by Williamson (1979) the theory states that during transactions, there is information asymmetry which may be costly to eradicate and needs massive use of channels such as ICT. The reduction of the Transaction's Costs would in advance improve the business growth prospects. In the hospitality industry, businesses are relying on technology to source information on markets trends, demand, prices, charges, available rooms and other rates thus saving on the transactional costs.

Through ICT, the transactional costs reduce which in turn improves the sales revenue generated (Bahli & Rivard, 2017). The theory has gained prominence in amplification of the role technology plays in enhancing financial performance of firms through cost efficiency in studies such as Poston and Grabski (2001) who established the financial impacts of enterprise resource planning implementations; Lee and Grewal (2004) who probed how firms respond to new technology and its impact and Kraemer, Gibbs and Dedrick (2005) who linked e-commerce to firm delivery. The theory has also been adopted in a study by Lee, Choi, Lee, Min and Lee (2016) predict IT investment and performance among Chinese firms.

Nekesa and Olweny (2018) used the theory in interrogation of the impact of financial innovation among DT MFIs in Kajiado. Other studies such as Mbogo (2010) who focused on the extent of adoption of e-payment platforms by businesses and its impact on the financial performance of the SMEs in Kenya, Gichane and Moronge (2018) who cross examined whether e-purchasing impacts retail chains delivery and Nakhumwa (2016) who established whether the adoption of cashless payments had helped commercial banks realize significant increase in financial returns, adopted the theory in their interrogations.

The theory provides support that adoption of ICT technology can improve both operational and financial performance of firms through reduction of the costs involved in seeking information (Transactional Costs). The theory therefore predicts a positive effect of ICT in the financial performance of firms in the hospitality industry.

2.2.3 Resource Based Theory

The impression of resources as sources of competitive advantage started with Wernerfelt (1984) but the same was advanced by Barney (1991). Resource based theory looks at resources as essential in achieving competitive edge and increased financial performance.

However, the resources must not be imitable, substitutable and easy to copy. In short, the resources must be unique in nature in order to achieve the intended purpose of enhancing competitive advantage and performance.

The description of the unique resources is not limited to physical resources or financial resources only but also focuses on human, intellectual resources and capabilities. The capabilities, such as ICT capabilities, have been seconded as second to none in improving an organization's overall competitive edge as well as performance (Hitt, Xu & Carnes, 2016). The theory has also been widely used to present ICT technology as an important capability and resource of the firm in enhancing financial performance.

Studies for instance Wu, Yeniyurt, Kim and Cavusgil (2006) applied the theory to predict the impact of IT on performance; Melville, Kraemer and Gurbaxani (2004) and Ruiz-Mercader, MeroñO-Cerdan and Sabater-SáNchez similarly adopted the theory to establish the relationship between IT and organizational performance. In their study, Rehman, Nor, Taha and Mahmood (2018) adopted the theory in establishing the impact of information technology capabilities on performance of SMEs in Malaysia while Irwin, Hoffman and Geiger (2018) similarly applied the theory in determining the effect of technological adoption on organizational performance of large hospitals in USA. Locally, Erambo, Mulwa, Aketch, Sangoro and Muchibi (2016) who linked use of IT in financial management and its impact among Busia town SMEs and Kilonzo (2012) who probed whether financial management systems were of benefits to SMEs in Nairobi County, Kenya, used Resource based theory.

The theory seconds adoption of ICT as a unique capability in enhancing a competitive edge and improving financial performance of the organization. It has been argued that it will not only reduce costs, but also improve speed, effectiveness, accuracy and convenience in

delivery of key business processes. As a result, the theory is relevant in linking ICT adoption to financial performance. It predicts a positive relationship between the variables.

2.3 Empirical Review

The section gives a review of the previous empirical works linking ICT adoption and financial performance among various entities across the world. From this review, it is important to identify the research gaps from it and build the current study upon those gaps.

2.3.1 E-marketing and Financial Performance

In Europe, Kotler (2010) interrogated the marketing strategies being adopted by firms in the tourism industry in Europe. The study also linked the same to financial performance of the hotels. This motivated the use of both primary and secondary data. The primary information was collected through structured questionnaires, coded and then used to establish correlations and regression analysis. The findings established showed that most of the hotels used ICT in marketing (e-marketing) and relied on websites, apps advertisement and promotions and social media such as Twitter, Facebook and Google to get more customers. In the long run, it improves their financial performance.

Another study in Tanzania interrogated the general marketing strategies adopted by Tanzanian firms in the tourism industry. Focusing on the tours as well as hotels, the study by Kaaya (2014) was limited in scope to those firms in Arusha town only and centered the methodological approach on primary data collected through questionnaires which were structured. No interviews were conducted to build on the data collection process and purely went for quantitative data. It was analyzed through regression analysis and revealed that among the most significant approaches is e-marketing, which has greatly increased the number of customers and has led to a significant improvement in the revenues generated.

Njeri (2017) aimed to determine adoption of e-marketing in the hospitality industry in Kenya and how it influenced the performance of those targeted firms. The study focused on the 293 registered tours and travel firms only. The main data collection form used was a questionnaire which were structured in a Likert form. The study revealed that e-marketing improved the financial performance of the tours and travel firms through reducing the costs of operations.

Abdi (2014) conducted a descriptive interrogation of the link between e-marketing strategy and profitability of tour firms in Kenya. The study based on both questionnaires and interviews through mixed methods approach. The collected data was analyzed through quantitative as well as thematic methods where the main themes from the responses were categorized. It was demonstrated that higher revenues were realized through wide internet marketing approaches since the influx of customers increased.

Focusing on Telephony firms, Kiriro (2015) tested the impact of IT on organizational performance. The study based on both questionnaires and interviews through mixed methods approach. The collected data was analyzed through quantitative as well as thematic methods where the main themes from the responses were categorized. The results ascertained that IT led to a significant improvement in performance. Those firms that adopt such strategy were better placed to improve firm returns.

Adede (2017) on the other hand focused on the relationship between electronic marketing, corporate culture and organizational performance of firms in Kenya. Through a critical literature review, the effect was termed as beneficial. This study did not evoke any statistical methods of hypothesis testing but relied on a critical review of literature. The study was however conducted in a wider context without clearly specifying the sector. The study

therefore assumed heterogeneity among the interrogated firms which presents a contextual difference with this study that seeks to narrow down to hospitality industry.

In their interrogation, Thuo (2018) indicated that adoption of technology in the hospitality industry in Kenya was advanced. However, it was not clear whether it necessarily improves competitive edge in the sector. Their argument was that technology was highly tradable and needed involvement with other capabilities in order to realize returns. In contrast to this study, the study focused on competitive advantage and not financial performance which presents a conceptual research gap with this study.

2.3.2 E-transactions and Financial Performance

Sathye (2012) study in Australia aimed at establishing the adoption of e-transactions such as mobile payments by businesses and how it has affected their financial performance of firms. The study focused on both the firms and residents in Australia. It was revealed through inferential analysis that despite firms' improvement on financial performance, they faced challenges of cyber risks. The study was however conducted in a developed economy where the economic conditions for IT thriving cannot be compared to Kenya. As a result, the study presents a contextual research gap which this study seeks to fill.

In Thailand, Dahlberg and Mallat, (2012) tested the acceptance of the TAM model by Davis in as far as adoption of the electronic payments platforms is concerned among the SMEs. It was revealed that despite its importance, businesses faced challenges with the consumer's perceived ease of use. However, businesses continued to use and were trying as much as possible to train their customers to adopt it. The study was however conducted in a developed economy where the economic conditions for IT thriving cannot be compared to Kenya. As a result, the study presents a contextual research gap which this study seeks to fill.

Makongoro (2014) interrogated the extent of adoption of internet transactions by businesses in Tanzania and what challenges hindered adoption of internet transactions. The study made use of questionnaires which were directed towards the providers of mobile money payments. It was revealed that the extent of use of internet transactions by the time of the study was not so advanced. However, it had improved financial performance and enhanced convenience. The major problem facing its adoption as at the time of the study was lack of awareness from the consumers.

Mbogo (2010) focused on interrogating the extent of adoption of e-payment platforms by businesses and its impact on the financial performance of the SMEs in Kenya. A questionnaire was used and among other factors being investigated was the determining factors. It was established through descriptive analysis that adoption of e-payment platforms has improved accounts receivables as well as the overall financial performance of the businesses. The study was however conducted in the context of SMEs without clearly specifying the sector. The study therefore assumed heterogeneity among the SMEs which presents a contextual difference with this study that seeks to narrow down to hospitality industry.

Focusing on retail chains in Kenya, Gichane and Moronge (2018) cross examined whether e-purchasing impacts retail chains delivery. The study adopted mixed methods whereby data was collected through semi-structured questionnaires. It demonstrated that adoption of e-transactions can improve firm performance. The study narrowed down to retail chains while this study interrogates hospitality sector. As a result, the magnitude and frequency of IT adoption between the two sectors differs and thus a conceptual research gap exist between the two studies.

In another study, Okello (2016) established the effect of electronic retail payment services among banking sector through questionnaires and showed that electronic retail payment services have improved the performance in the banking industry through ensuring its productivity and efficiency is greatly improved. The study narrowed down to the banking sector while this study interrogates hospitality sector. As a result, the magnitude and frequency of IT adoption between the two sectors differs and thus a conceptual research gap exist between the two studies.

Nakhumwa (2016) established whether the adoption of cashless payments had helped commercial banks realize significant increase in financial returns. The study also interrogated the driving factors and indicated that the changing trends of the customers were the driving factors for technology adoption. The results indicated that adoption of technology had improved returns and enhanced customer satisfaction. The study, in contrast to this study, focused on the banking industry which is a contextual difference to this study.

2.3.3 E-Customer Relationship Management and Financial Performance

Haislip and Richardson (2017) interrogated how adoption of Customer Relationship Management influenced firm performance captured in terms of sales, profits, cash flow from operations and customer satisfaction. It was revealed through a survey that it had a significant effect on these indicators of firm performance of European based firms. The study was however conducted in a developed economy where the economic conditions for IT thriving cannot be compared to Kenya. As a result, the study presents a contextual research gap which this study seeks to fill.

Al-Dmour, Algharabat, Khawaja and Al-Dmour (2019) linked e-CRM among Jordanian firms through a survey design. Quantitative data was collected through structured questionnaires and analyzed through correlation and regression methods. It was demonstrated that its impact was resourceful to both financial and non-financial measures. The study was however conducted in a developed economy where the economic conditions for IT thriving cannot be compared to Kenya. As a result, the study presents a contextual research gap which this study seeks to fill.

Another study by Al-Azzam (2016) investigated whether adoption of e-CRM was beneficial among hotels in Jordan. Through a survey of 50 hotels, the study collected both qualitative and quantitative data and used inferential statistics to analyze. It was shown that the use of e-CRM had significantly improved the performance of the hotels. The study focused on Jordan which is a different context from this study. The depth of ICT adoption differed significantly between the country and Kenya thus presenting a contextual research gap. The findings of the study cannot hence be generalized to Kenya.

Liu, Chuang and Huang (2012) delimiting to Taiwanese Sinopac bank adopted a regression analysis of primary quantitative data and showed that using e-CRM obviously improved the performance and penetration of the banker. Based on these reviewed studies, the expected link is positive. ICT technology is expected to enhance financial performance of the organization. The study was however conducted in a developed economy where the economic conditions for IT thriving cannot be compared to Kenya. As a result, the study presents a contextual research gap which this study seeks to fill.

Lodiong (2015) focused on the extent of adoption of CRM systems by firms in the financial sector in Kenya. The study also sought to find out how the adoption impacted on financial performance measured as ROA at Chase bank Kenya Ltd. It was established that

among the CRM systems adopted by the bank, is online customer response systems, automatic emails and call centers and it was indicated that they had a significant improvement in their customer retention rate and financial performance in the long run. The study narrowed down to the banking sector while this study interrogates hospitality sector. As a result, the magnitude and frequency of IT adoption between the two sectors differs and thus a conceptual research gap exist between the two studies.

Kioko (2014) interrogated how and the impact of commercial banks responding to IT competitions and established that banks have improved their financial performance. This is so because of specialized attention and response to the need of the customers. The use of CRM systems led to an improvement in the banks customer complaints handling time which led to a high number of customer retention. The study narrowed down to the banking sector while this study interrogates hospitality sector. As a result, the magnitude and frequency of IT adoption between the two sectors differs and thus a conceptual research gap exist between the two studies.

2.3.4 E-Financial Management and Financial Performance

Zhu, Kraemer and Xu, (2010) conducted a study to find out the impact of ICT adoption on the growth and profitability of SMEs. The study focused on the use of financial management systems, e-marketing and e-commerce on profitability of SMEs in Asia. Through a survey design and correlation analysis, it was revealed that the use of financial management, increased productivity and reduced costs. In the long run, it has increased financial performance. The contextual focus of Asian countries provides a geographical difference with this study since the depth of IT adoption in Asian countries cannot be comparable to Africa. Therefore, the study presents a contextual research gap.

Additionally, Al Nahian *et al* (2009) focused on analysis of how adoption of ICT in financial management practices such as internal control, collection of receivables such as bills and accounting packages affected financial performance. The study made use of secondary data while this study used primary data. It was later established through inferential analysis that adoption of ICT in financial management was critical reducing fraud and enhancing the overall financial performance of the investigated SMEs.

Matikiti, Afolabi and Smith (2012) focused on establishing how the use of technology in financial management and marketing has impacted South African hospitality players. Most of the firms were shown to have adopted ICT in marketing, online booking and billing of rooms. Through questionnaires, it was established that this trend has improved their financial performance significantly.

Erambo, Mulwa, Aketch, Sangoro and Muchibi (2016) also linked use of IT in financial management and its impact among Busia town SMEs. The impact, through a survey, demonstrated the importance of such practices. The study narrowed down to the SMEs while this study interrogates hospitality sector. The SMEs were approached from a heterogeneity perspective implying that they share characteristics which may be true since SMEs in different sectors adopt IT to different extent.

Muhunyo and Jagongo (2018) focused on the public sector in Kenya to establish how the use of financial management systems affected delivery. Focusing on 96 randomly sampled respondents, it was determined that the adoption of the systems was found to enhance accountability, transparency and efficiency thus improving the overall financial performance. The study was conducted in the public sector which presents a contextual research gap. This study focuses on the private sector.

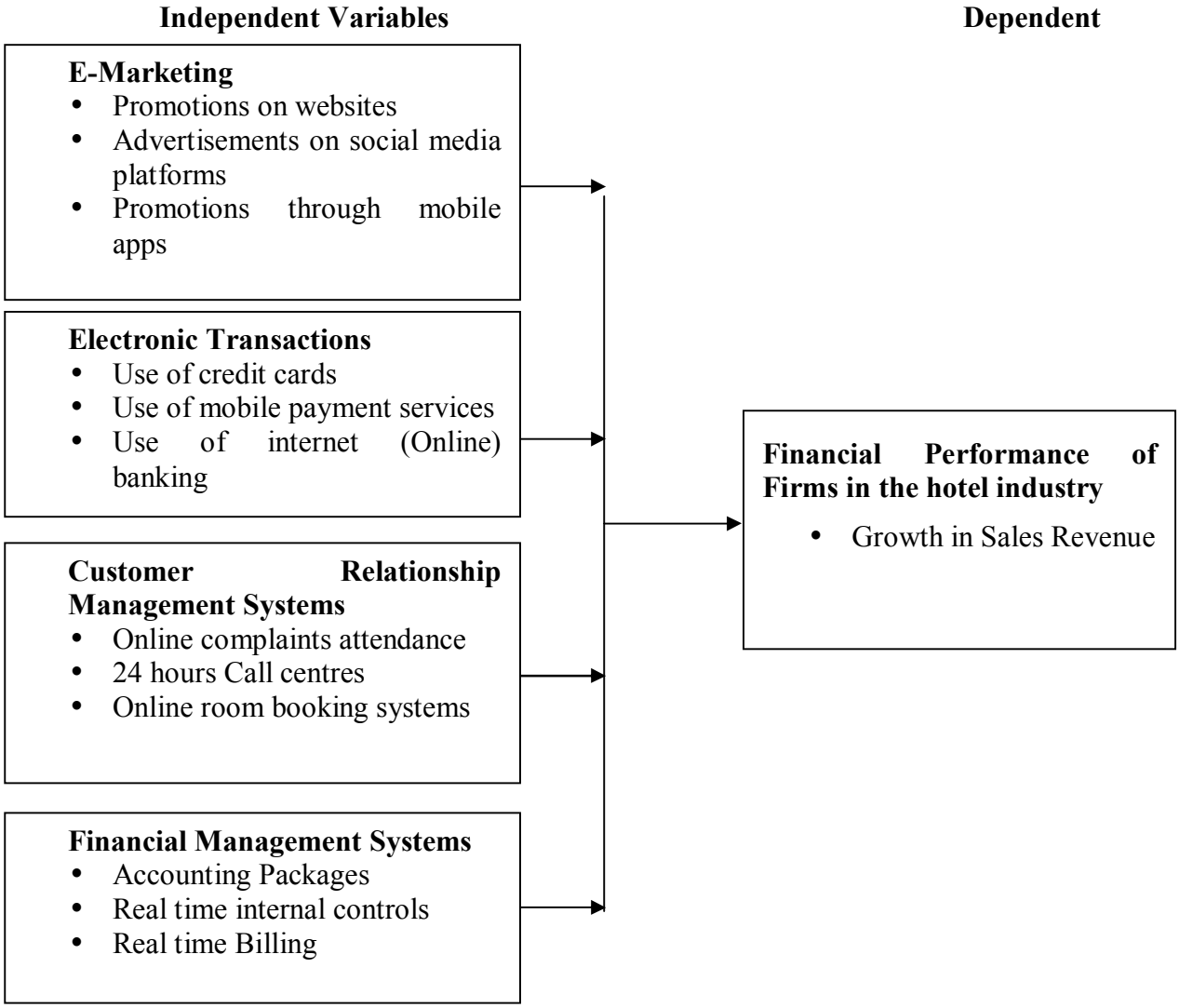
Furthermore, Kilonzo (2012) probed whether financial management systems were of benefits to SMEs in Nairobi County, Kenya and reinforced the argument that it augments delivery and advances revenue generation. The study narrowed down to the SMEs while this study interrogates hospitality sector. The SMEs were approached from a heterogeneity perspective implying that they share characteristics which may be true since SMEs in different sectors adopt IT to different extent.

2.4 Conceptual Framework

A conceptual outline gives a demonstration of the link between key variables of focus in a figure form (Smith, 2015). In this study, the link between ICT adoption (e-marketing, e-financial management systems, e-transactions and customer management systems) and financial performance delimiting to hospitality firms as confirmed in Figure 1.

FIGURE 1

Conceptual Framework



2.5 Operationalization of Variables

TABLE 1

Operationalization of Variables

Variable	Type	Indicators	Measurement Scale
e-marketing	Predictor Variable	• Promotions on websites • Advertisements on social media platforms • Promotions through mobile apps	- Interval Scale
e-transactions	Independent Variable	• Use of credit cards • Use of mobile payment services • Use of internet (Online) banking	- Interval Scale
e-CRM systems	Independent Variable	• Online complaints attendance • 24 hours Call centres • Online room booking systems	- Interval Scale
e-Financial management systems	Independent Variable	• Accounting Packages • Internal control systems • Billing systems	- Interval Scale
Financial performance	Dependent Variable	• Growth in sales revenue	- Interval Scale

2.6 Summary of Literature review

The reviewed studies presented contextual knowledge gaps whereby in as much as the studies have made efforts to focus more on ICT adoption and financial performance, the focus is on different contexts other than what this study focus on. The study by Kotler (2010) was conducted in Europe, Kaaya (2014) focused on Tanzania, Sathye (2012) focused on Australia, Dahlberg and Mallat (2012) based their study in Thailand, Makongoro, (2014)

focused on Tanzanian firms and Matikiti, Afolabi and Smith (2012) focused on the hospitality industry in South Africa. Their results therefore cannot be generalized to a Kenyan setting.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The methodological approach to testing of the hypotheses is articulated in this section. The design, units to be focused on and the procedure of data gathering are highlighted in the section. The appropriate methods of interrogation are also given and justified.

3.2 Research Design

Research design is the plan and structures from data collection and analysis which can be used to answer the research questions (Kumar, 2019). There are many designs ranging from descriptive, exploratory and explanatory (Mackey & Gass, 2015). This study however used an explanatory research design which is suitable in achieving a cause effect relationship. An explanatory research design, better supports interrogating the casual effect between phenomena. As such, to establish the relationship between ICT and financial performance, the most suitable design is one which supports cause-effect and that is the explanatory research design (Silverman, 2016).

3.3 Target Population

Silverman (2016) defined it as the entire unit which comprises of the observations to be studied. The target population of this study will be 79 hotels classified as level 4 and 5-star hotels (Tourism Regulatory Authority, 2019). The respondents were the hotel finance managers and the IT managers from each of the hotels. Therefore, a total of 158 respondents formed the focus of this probe.

TABLE 2

Target Population

Level	**Population**
Five Star Hotels	24
Four Star Hotels	55
Total	**79**

Tourism Regulatory Authority (2019)

3.4 Sample Size and Sampling Technique

Taylor, Bogdan and DeVault (2015) defined a sample as a smaller part of the target population. The study considers the entire set of level 4 and level 5-star hotels since the target population is small. Alvesson and Skoldberg (2017) argued that when a target population is below 200, the entire size can be considered instead of adopting a sampling procedure. As a result, the total of 79 hotels is small to be sampled hence the entire population was considered. Through convenience sampling, as reasoned by Mugenda and Mugenda (2003), IT and Finance managers were sampled from each of the 79 hotels resulting to 158 respondents.

3.5 Instrumentation and Data Collection

Questionnaires were the main data collection instruments. Flick (2015) indicated that questionnaires can be used to cover a wider range of units in a cheap and flexible manner. Questionnaires enable collection of fresh and new data for the first time (Bresler & Stake, 2017). The questionnaire had a five point-Likert scale format. The Likert scale ranged from the strongly disagree, disagree, neutral, agree and strongly agree.

The questionnaire was grouped into six sections whereby section A asked questions on demographic characteristics of the respondents, Section B asked questions on e-marketing, Section C asked questions on e-transactions, Section D asked questions on e-CRM systems, Section E asked questions on e-financial management systems and Section F asked questions on financial performance of the hotels.

Alvesson and Skoldberg (2017) defined data collection as a systematic way of collecting information which can be used to achieve research objectives. For the hotels within

Nairobi, the researcher dropped the questionnaires himself then picked from the hotels after a period of three days. For those outside Nairobi, emails were used where the researcher sought consent from the management and then sent the questionnaires through emails. Where non-response was experienced, more time was allocated to wind up the response within two weeks.

3.6 Reliability and Validity of the Research Instrument

The questionnaire was tested for reliability and validity before main use in order to minimize the instrumentation errors normally associated with untested instruments (Quinlan, Babin, Carr & Griffin, 2019). Reliability measures the consistency of the research instrument in the sense of its meaningfulness (Alvesson & Skoldberg, 2017). On the other hand, content validity measures the instrument's ability and extent to measure what it is supposed to measure (Fletcher, 2017). The population of a pilot study should be in the range of 1% to10% of the population although it does not necessarily need to be scientific. This study conducted a pilot study on 15 respondents (10%) of the target population. This sample was however obtained from level 3 hotels.

Using the data from the 15 questionnaires, reliability was tested through internal consistency measure of Cronbach Alpha set at a threshold of 0.7. Cronbach Alpha ranges from 0 to 1 but the closer it is to 1, the more reliable the instrument is but this study used a cutoff value of 0.7 for reliability (Alvesson & Skoldberg, 2017). Content validity on the other hand was established through getting expert opinion from the supervisor and pilot testing results.

3.7 Data Analysis and Presentation

Walliman (2017) defined data analysis as systematic modeling of data to meaningful information. The data collected was quantitative in nature and hence it needed coding and cleaning before being used for analysis. The software to aide in data analysis was SPSS version 22. Both descriptive and inferential analysis methods were used whereby the descriptive analysis was means and standard deviations. Inferential analysis on the other hand were Pearson correlation and multiple regression analysis which were used to test the hypotheses. The entire statistical tests were tested at 5% significance level.

The multiple regression model adopted by this study was as indicated below: $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$ where: Y = Financial Performance of Firms in the Hospitality Industry, X1 = e-marketing, X2 = e-transactions, X_3 = e-Customer Relationship Management, X_4= e-Financial Management, β_1 to β_4 are the beta coefficients, e is the error term and β_0 is the y intercept (Constant term). The analyzed data was presented using tables and pie charts.

3.8 Diagnostic Tests

The study adopted Ordinary least square thus its assumptions were met before adoption. As a result, the study tested these assumptions before using the model. The assumptions are those of normality, multicollinearity, Heteroskedasticity and autocorrelation.

3.8.1 Normality

Normality demands that the data must take a bell shape which is a representation of normality. Data which is not normally distributed would always give spurious results and would not be suitable for parametric tests. As a result, the study tested this through Smirnov-Kolmogorov test. In the test, a significance value above 0.05 at 5% significance level demonstrates that the data is normally distributed.

3.8.2 Multicollinearity Test

Multicollinearity test demonstrates whether the predictor variables are highly related. In cases where they are, it gives spurious results. This was tested through Variance Inflation Factor (VIF) method where the acceptable values are below 10. VIF Values above 10 showed that the problem of multicollinearity existed.

3.8.3 Heteroskedasticity Test

Heteroskedasticity shows whether the error terms are independent and were conducted using the Breusch Pagan test. In this test, Homoscedasticity is said to exist if the Probability Chi Square value is not significant (Prob Chi2 > 0.05).

3.8.4 Autocorrelation Test

On the other hand, autocorrelation ensured that the residual is not correlated and this was tested through Durbin Watson test of autocorrelation whereby a value above 2 indicated presence of serial autocorrelation. A value between 1.5 and 2.0 indicates that the data is free from autocorrelation.

CHAPTER FOUR

FINDINGS AND DISCUSSIONS

4.1 Introduction

The main aim of the study was to establish the effect of information communication technology on financial performance of hospitality firms in Kenya. The specific focus of the study was to establish the effect of e-marketing on financial performance of hospitality firms in Kenya, determine the effect of e-transactions on financial performance of hospitality firms in Kenya, assess the effect of e-customer relationship management on financial performance of hospitality firms in Kenya and determine the effect of real time financial management on financial performance of hospitality firms in Kenya.

The study used primary data obtained from the level four and five-star hotels in Kenya to conduct both descriptive and inferential analyses. Measures of central tendency that is means as well as measures of dispersion that is standard deviation were the specific descriptive statistics used to describe the data. On the other hand, Pearson correlation and multiple regression analysis were the inferential statistics applied to establish the relationship between the study variables. Before conducting inferential analysis, diagnostic tests were conducted to ascertain that the assumptions of classical linear regression were not violated. The description of the analysis and results as well as the presentation and explanation are

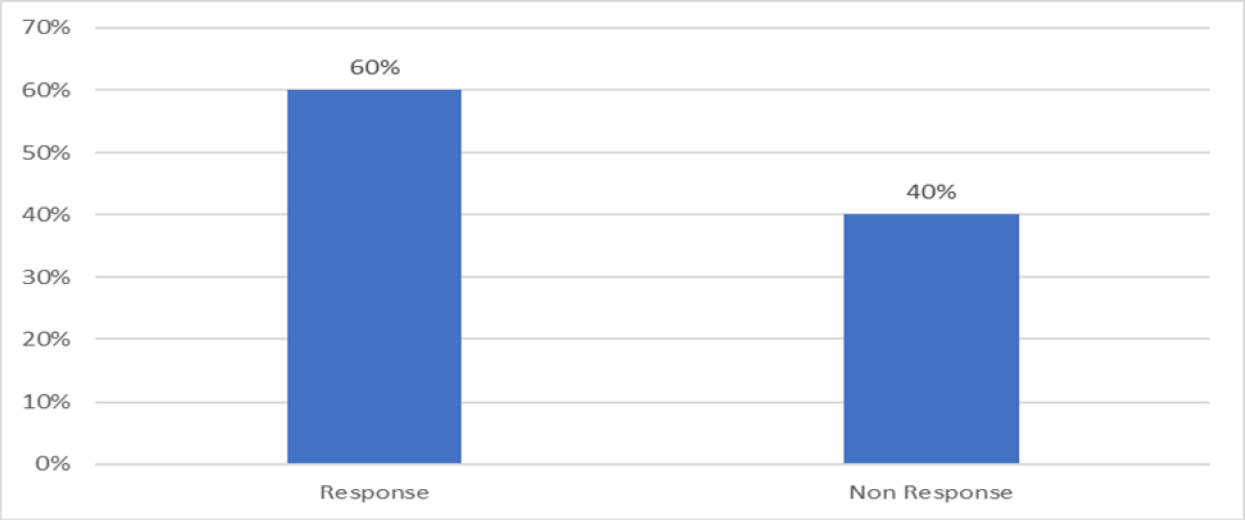
presented in this chapter. Tables as well as figures were used to present the findings of the study.

4.2 Response Rate

For the purpose of obtaining the primary data required, the study involved sampling of hotel finance managers and the IT managers from each of the level 4- and 5-star hotels in Kenya. Therefore, a total of 158 respondents were targeted. Out of the distributed questionnaires, a total of 95 were properly filled and returned. This gave a response rate of 60% as shown in Figure 2. This response rate was considered adequate based on assertion by Alvesson and Skoldberg (2017) who indicated that a response rate above 50% is satisfactory for a survey. Similarly, Quinlan, Babin, Carr and Griffin (2019) indicated that a response rate above 60% is satisfactory to make generalizations and based on this, the response rate obtained in this study was considered satisfactory.

FIGURE 2

Response Rate



4.3 Pilot Test Results

Before using the questionnaire to collect primary data, a pilot was conducted whereby 15 questionnaires were issued to IT and finance managers of randomly sampled level 3-star hotels in Nairobi. The data from the 15 respondents was used to test for internal consistency whereby the Cronbach Alpha was used. The threshold was set at 0.7 in accordance with Kumar (2011). The results are presented in Table 3.

TABLE 3

Reliability Test Results

Variable	Cronbach Alpha	Number of Items	Rule	Decision
E-marketing	0.789	6	> than 0.7	Reliable
E-transactions	0.768	5	> than 0.7	Reliable
Customer Relationship Management Systems	0.817	4	> than 0.7	Reliable
Finance Management Systems	0.764	4	> than 0.7	Reliable
Financial Performance	0.823	4	> than 0.7	Reliable

The results in Table 3 indicate that all the five variables of the study had an overall Cronbach Alpha values above 0.7. Specifically, the 6 items used to measure e-marketing had an overall Cronbach Alpha value of 0.789, the 4 items used to measure e-transactions had an overall Cronbach Alpha value of 0.768, the 4 items used to measure customer relationship management systems had an overall Cronbach Alpha value of 0.817, the 4 items used to measure finance management systems had an overall Cronbach Alpha value of 0.764 and the 4 items used to

financial performance had an overall Cronbach Alpha value of 0.823 which are all greater than 0.7 to mean that they are reliable. This is consistent with the argument by Alvesson and Skoldberg (2017) that a Cronbach Alpha value surpassing the threshold of 0.7 demonstrates reliability.

In regard to validity, three types of validity were established in this study, that is face, content and construct validity. Face validity was tested through expert and non-expert opinion and content validity was tested through both exhaustive literature review on the research topic and expert opinion. Based on these two results, the questionnaire was deemed reliable and valid.

4.4. Demographic Characteristics

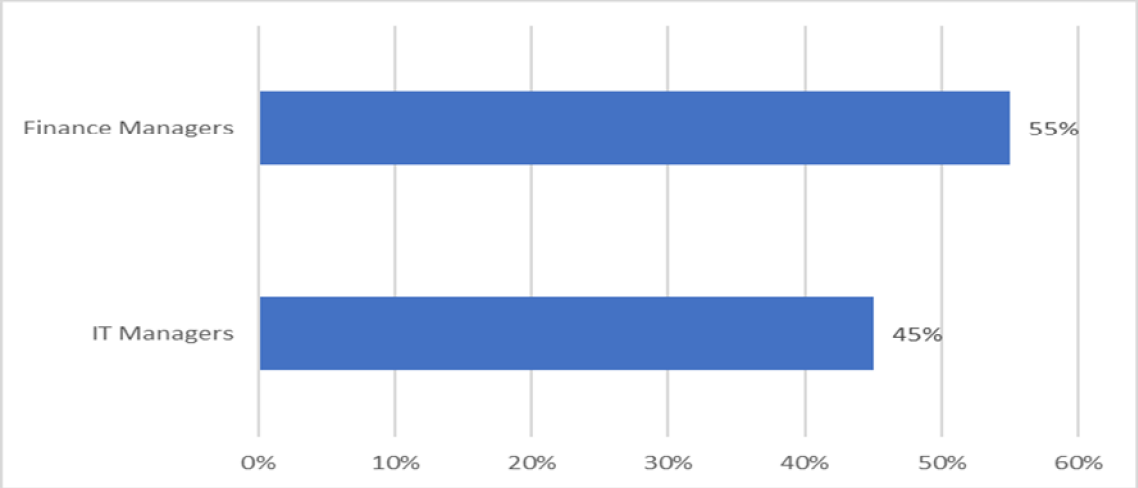
The study sought to establish the characteristics of the study respondents in terms of their work position, level of education and work experience. The section therefore presents the results of these characteristics.

4.4.1 Respondent's Work Position

The study targeted 79 IT managers and 79 finance managers of the level 4- and 5-star hotels in Kenya. Thus, an equal number of questionnaires was administered to them. Out of the number, 55 percent of the respondents were finance managers while 45 percent of them were IT managers. This implies that there was representativeness in the unit of observation with less or no bias. The data analyzed was thus collected from the targeted respondents.

FIGURE 3

Respondent's Work Position



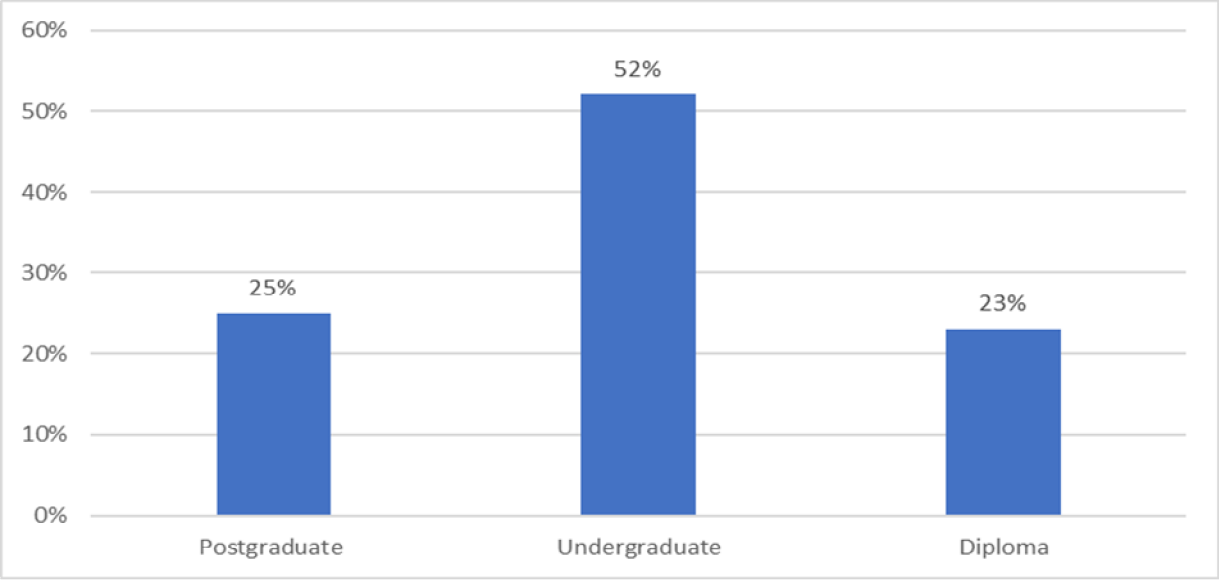
4.4.2 Respondent's Level of Education

The study sought to describe the respondent's highest level of education. There was a need to find out whether the IT and finance managers had attained either college or university education to be able to demonstrate high literacy level to respond to the questionnaires which were self-administered. This interrogation was critical in establishing whether the respondents were in a position to read and interpret the questions in the questionnaire.

The results in Figure 4.3 indicate that 52 percent of the IT and finance managers in Kenyan level 4- and 5-star hotels had an undergraduate level of education, 25 percent had a postgraduate while 23 percent had a college certificate as their highest level of education. These imply that they had high intellectual capacity hence in a position to read and understand the questions in the self-administered questionnaire.

FIGURE 4

Respondent's Level of Education

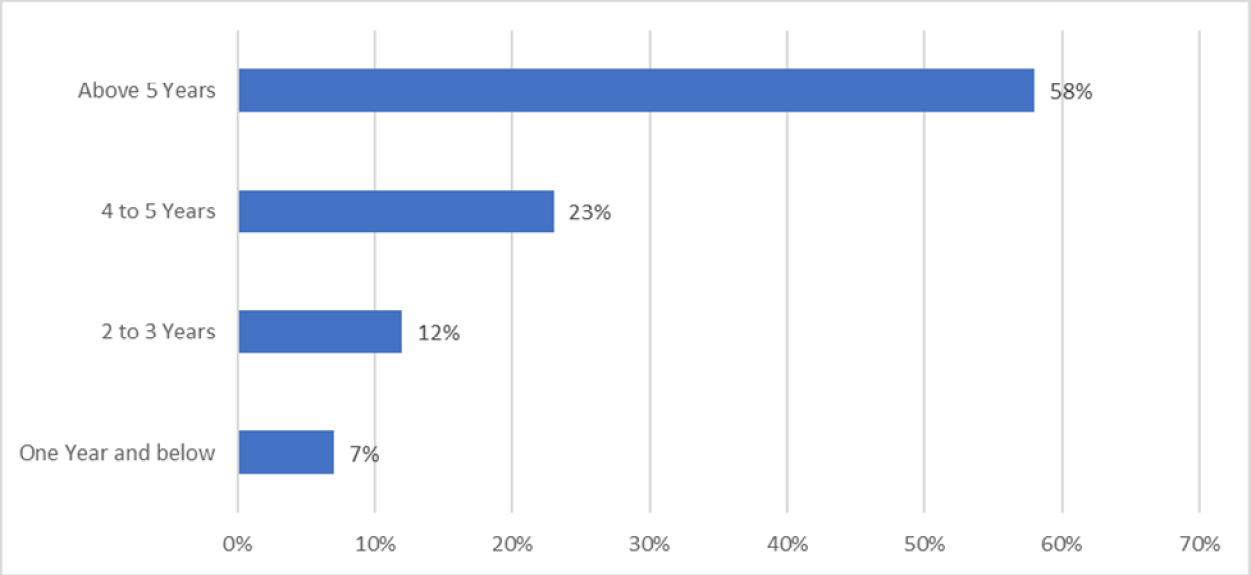


4.3.3 Respondent's Work Experience

The study also sought to describe the respondent's work experience. The categories were 1 year and below, between 2-3 years, between 4-5 years and above 5 years. The work experience indicates the institutional knowledge of the respondents regarding the study concept, that is adoption of technology and financial performance. The results in Figure 4.4 indicated that majority of the IT and finance managers (58%) of the firms interrogated had a work experience above 5 years, 23 percent had a work experience between 4 and 5 years, 12 percent had a work experience between 2 and 3 years and 7 percent had a work experience of one year and below. This shows that the respondents had a high work experience implying enhanced institutional knowledge regarding the study concept, which is adoption of technology and financial performance.

FIGURE 5

Respondent's Work Experience



4.5 Descriptive Findings and Analysis

The study used mean and standard deviation descriptive statistics to capture the responses based on the various indicators of study variables on a Likert scale of 1-5 (5= Very Large Extent; 4 =Large Extent; 3= Moderate Extent; 2= Low Extent and 1= Very Low Extent). This section therefore presents the average responses on each of the variables whereas the standard deviation indicates the magnitude of variations in the responses.

4.4.1 Descriptive Findings of E-Marketing

The first objective of the study was to establish the effect of e-marketing on financial performance of hospitality firms in Kenya. Respondents were asked to indicate the extent to which various e-marketing practices had been adopted in their respective hotels through a

rating of 1-5 (5= Very Large Extent; 4 =Large Extent; 3 = Moderate Extent; 2= Low Extent and 1= Very Low Extent). The results are presented in Table 4.

The results demonstrate that level 4- and 5-star hotels in Kenya have invested in the use of social platforms (Facebook) to market their products and services to a high extent (M = 4.19; SD = 0.88), invested in the use of social platforms (Instagram) to market their products and services to a high extent (M = 4.26; SD = 1.20) and also invested in the use of social platforms (Twitter) to market their products and services to a high extent (M = 4.08; SD = 0.99). The results also showed that the hotels have invested in the use of social platforms (LinkedIn) to market their products and services to a high extent (M = 4.20; SD = 1.06), invested in the use of mobile apps to market their products and services to a high extent (M = 3.86; SD = 1.06) as well as invested in the use of websites to market their products and services to a high extent (M = 3.89; SD = 1.02).

Overall, the findings imply adoption of e-marketing practices (Facebook, Instagram, twitter, LinkedIn, mobile apps and websites) by level 4- and 5-star hotels in Kenya to a high extent (M = 4.08). There was also a small variation in the responses to demonstrate that the respondents had little differences in their opinion (SD = 1.03).

TABLE 4

Descriptive Findings of E-Marketing

Statement	Mean	Standard Deviation
The company has invested in the use of social platforms (Facebook) to market its products and services	4.19	0.88
The company has invested in the use of social platforms (Instagram) to market its products and services	4.26	1.20
The company has invested in the use of social platforms (Twitter) to market its products and services	4.08	0.99
The company has invested in the use of social platforms (LinkedIn) to market its products and services	4.20	1.06
The company has invested in the use of mobile apps to market its products and services	3.86	1.06
The company has invested in the use of websites to market its products and services	3.89	1.02
Average	**4.08**	**1.03**

4.4.2 Descriptive Findings of E-transactions

The second objective of the study was to determine the effect of e-transactions on financial performance of hospitality firms in Kenya. Respondents were asked to indicate the extent to which various e-transactions practices had been adopted in their respective hotels through a rating of 1-5 (5= Very Large Extent; 4 =Large Extent; 3 = Moderate Extent; 2= Low Extent and 1= Very Low Extent). The results are presented in Table 5.

The findings indicated that level 4- and 5-star hotels in Kenya have adopted platform for payment using credit cards to a high extent (M = 4.28; SD = 0.75), have adopted platform for payment using debit cards to a high extent (M = 4.45; SD = 0.94) as well as adopted platform for payment using pay pal to a high extent (M = 3.85; SD = 1.33). The hotels have also adopted platform for payment using mobile payment services to a high extent (M =3.84; SD = 1.08) and also adopted platform for payment using master cards to a high extent (M = 4.22; SD = 0.97).

Overall, the findings imply adoption of e-transactions practices (credit cards, debit cards, pay pal, mobile payment services and master cards) by level 4- and 5-star hotels in Kenya to a high extent (M = 4.13). There was also a small variation in the responses to demonstrate that the respondents had little differences in their opinion (SD = 1.01).

TABLE 5

Descriptive Findings of E-transactions

Statement	**Mean**	**Standard Deviation**
The company has adopted platform for payment using credit cards	4.28	0.75
The company has adopted platform for payment using debit cards	4.45	0.94
The company has adopted platform for payment using pay pal	3.85	1.33
The company has adopted platform for payment using mobile payment services	3.84	1.08
The company has adopted platform for payment using master cards	4.22	0.97
Average	**4.13**	**1.01**

4.4.3 Descriptive Findings of e-Customer Relationship Management

The third objective of the study was to assess the effect of e-customer relationship management on financial performance of hospitality firms in Kenya. Respondents were asked to indicate the extent to which various e-customer relationship management practices had been adopted in their respective hotels through a rating of 1-5 (5= Very Large Extent; 4 =Large Extent; 3 = Moderate Extent; 2= Low Extent and 1= Very Low Extent). The results are presented in Table 6.

It was revealed that level 4- and 5-star hotels in Kenya have invested in online call centers to respond to customer complaints to a high extent (M = 3.80; SD = 1.27), have invested in social platforms to respond to customer complains to a high extent (M = 4.08; SD = 0.99), have invested in online room booking systems to a high extent (M = 4.37; SD = 0.70) as well as invested in online book confirmation and cancelation systems to a high extent (M = 4.26; SD = 0.98).

Overall, the findings imply adoption of e-customer relationship management practices (online call centers to handle complains, social platforms to handle complains, online room bookings, online book confirmation) by level 4- and 5-star hotels in Kenya to a high extent (M = 4.13). There was also a small variation in the responses to demonstrate that the respondents had little differences in their opinion (SD = 0.98).

TABLE 6

Descriptive Findings of e-Customer Relationship Management

Statement	Mean	Standard Deviation
The company has invested in online call centers to respond to customer complaints	3.80	1.27
The company has invested in social platforms to respond to customer complains	4.08	0.99
The company has invested in online room booking systems	4.37	0.70
The company has invested in online book confirmation and cancelation systems	4.26	0.98
Average	**4.13**	**0.98**

4.4.4 Descriptive Findings of Financial Management Systems

The fourth objective of the study was to determine the effect of real time financial management systems on financial performance of hospitality firms in Kenya. Respondents were asked to indicate the extent to which various financial management systems practices had been adopted in their respective hotels through a rating of 1-5 (5= Very Large Extent; 4 =Large Extent; 3 = Moderate Extent; 2= Low Extent and 1= Very Low Extent). The results are presented in Table 7.

The results showed that 4- and 5-star hotels in Kenya have adopted the use of technology in forensic analysis to a high extent (M = 4.19; SD = 0.80), have invested in the use of accounting packages to enhance financial management to a high extent (M = 4.28; SD = 0.84), have invested in the use of real time internal control systems to a high extent (M = 4.37; SD = 0.91) as well as invested in the use of real time room billing systems to a high extent (M = 4.18; SD = 1.01).

Overall, the findings imply adoption of financial management systems (electronic forensic analysis, accounting packages to manage accounts, internal control systems, real

time room bookings) by level 4- and 5-star hotels in Kenya to a high extent (M = 4.26). There was also a small variation in the responses to demonstrate that the respondents had little differences in their opinion (SD = 0.92).

TABLE 7

Descriptive Findings of Financial Management Systems

Statement	**Mean**	**Standard Deviation**
The company has adopted the use of technology in forensic analysis	4.19	0.80
The company has invested in the use of accounting packages to enhance financial management	4.28	0.94
The company has invested in the use of real time internal control systems	4.37	0.91
The company has invested in the use of real time room billing systems	4.18	1.01
Average	**4.26**	**0.92**

4.4.5 Descriptive Findings of Financial Performance

Respondents were asked to indicate the extent to which they agreed with various statements on financial performance of their respective hotels through a rating of 1-5 (5= Strongly Agree; 4 = Agree; 3 = Moderately Agree; 2 = Disagree and 1 = Strongly Disagree). The results are presented in Table 4.6. The results indicated an agreement that the market share of level 4- and 5-star hotels in Kenya has been increasing over the years (M = 4.11; SD = 0.81), the sales of level 4- and 5-star hotels in Kenya has been increasing over the years (M = 4.47; SD = 0.50), the revenue of level 4- and 5-star hotels in Kenya has been increasing over the

years (M = 4.66; SD = 0.56) as well as the returns of level 4- and 5-star hotels in Kenya has been increasing over the years (M = 3.89; SD = 1.19).

TABLE 8

Descriptive Findings of Financial Performance

Statement	**Mean**	**Standard Deviation**
Market share has been increasing over the years	4.11	0.81
Sales have been on an upward trend over the years	4.47	0.50
Revenue has been increasing over the years	4.66	0.56
Returns on capital has been increasing over the years	3.89	1.19
Average	**4.28**	**0.76**

The respondents also indicated the trends in the financial performance (Growth in sales revenue) for the last five years between the year 2014 and 2018. The results are shown in Table 4.6. The results indicate that in the year 2014, up to 32 percent of the level 4- and 5-star hotels in Kenya recorded a decrease in financial performance by more than 50 percent, 25 percent of them recorded a decrease in financial performance by less than 50 percent, 26 percent of them recorded an increase in financial performance by less than 50 percent while only 17 percent of them recorded an increase in financial performance by more than 50 percent.

The results also showed that by the year 2015, up to 28 percent of the level 4- and 5-star hotels in Kenya recorded a decrease in financial performance by more than 50 percent, a decrease from that of the year 2014 signifying an improvement in financial performance. In addition, 35 percent of them recorded a decrease in financial performance by less than 50 percent, an improvement from that of 2014 which is also signifying an improvement in financial performance. It was also shown that 30 percent of them recorded an increase in financial performance by less than 50 percent signifying an improvement in financial performance while only 7 percent of them recorded an increase in financial performance by more than 50 percent, which is a decrease from that of the year 2014.

In the year 2016, it was indicated that up to 22 percent of the level 4- and 5-star hotels in Kenya recorded a decrease in financial performance by more than 50 percent, a decrease from that of the year 2015 signifying an improvement in financial performance. In addition, 20 percent of them recorded a decrease in financial performance by less than 50 percent, an improvement from that of 2015 which is also signifying an improvement in financial performance. It was also shown that 45 percent of them recorded an increase in financial performance by less than 50 percent signifying an improvement in financial performance while only 13 percent of them recorded an increase in financial performance by more than 50 percent, which is an increase from that of the year 2015 signifying an improvement.

In regard to the year 2017, it was indicated that up to 20 percent of the level 4- and 5-star hotels in Kenya recorded a decrease in financial performance by more than 50 percent, a decrease from that of the year 2016 signifying an improvement in financial performance. In addition, 22 percent of them recorded a decrease in financial performance by less than 50 percent, a deterioration compared to the year 2016 which is signifying a deterioration in financial performance. It was also shown that 40 percent of them recorded an increase in

financial performance by less than 50 percent signifying an improvement in financial performance while only 18 percent of them recorded an increase in financial performance by more than 50 percent, which is an increase from that of the year 2016 signifying an improvement.

In comparison to the year 2014, the financial performance of the level 4- and 5-star hotels in Kenya has improved significantly. This is because, compared to 32 percent in the year 2014, only 15 percent in the year 2018 recorded a decrease in financial performance by more than 50 percent, a significant decrease signifying an improvement in financial performance. In addition, compared to 25 percent in the year 2014, 17 percent of them in the year 2018 recorded a decrease in financial performance by less than 50 percent, a significant decrease signifying an improvement in financial performance.

It was also shown that compared to the year 2014 when only 26 percent of the hotels recorded an increase in financial performance by less than 50 percent, those that had a similar increase in the year 2018 were up to 45 percent, implying a significant increase to demonstrate an improvement in financial performance over the year. Similarly, that compared to the year 2014 when only 17 percent of the hotels recorded an increase in financial performance by more than 50 percent, those that had a similar increase in the year 2018 were up to 23 percent, implying a significant increase to demonstrate an improvement in financial performance over the year. It can therefore be argued that over the years, probably due to an investment in technology, the financial performance of the level 4- and 5-star hotels in Kenya has improved.

TABLE 9

Trends in Financial Performance

Year / Percentage Change	Reduced by more than 50%	Reduced by less than 50%	Increased by less than 50%	Increased by more than 50%
2014	32%	25%	26%	17%
2015	28%	35%	30%	7%
2016	22%	20%	45%	13%
2017	20%	22%	40%	18%
2018	15%	17%	45%	23%

4.6 Correlation Analysis

A correlation analysis was used to establish the association between the study variables. This study made use of Pearson correlation coefficient to establish the association between the variables used in the study. According to Kumar (2011), a correlation analysis indicates the direction and strength of the relationship between variables and ranges from -1 to +1. The results for the correlation analysis are presented in Table 10. The results in Table 4.7 indicate that e-marketing is positively and significantly associated with financial performance of level 4- and 5-star hotels in Kenya ($r = .598$; $P < 0.05$). This implies that an increase in the adoption of e-marketing practices (Facebook, Instagram, twitter, LinkedIn, mobile apps and websites) by level 4- and 5-star hotels in Kenya would lead to a significant improvement in their financial performance.

It was also indicated that e-transactions are positively and significantly associated with financial performance of level 4- and 5-star hotels in Kenya ($r = .656$; $P < 0.05$). This implies that an increase in the adoption of e-transactions practices (credit cards, debit cards, pay pal, mobile payment services and master cards) by level 4- and 5-star hotels in Kenya would lead to a significant improvement in their financial performance.

The Pearson correlation results also showed that e-customer relationship management is positively and significantly associated with financial performance of level 4- and 5-star hotels in Kenya ($r = .356$; $P < 0.05$). This implies that an increase in the adoption of e-customer relationship management practices (online call centers to handle complains, social platforms to handle complains, online room bookings, online book confirmation) by level 4- and 5-star hotels in Kenya would lead to a significant improvement in their financial performance.

The Pearson correlation results further showed that financial management systems are positively and significantly associated with financial performance of level 4- and 5-star hotels in Kenya ($r = .438$; $P < 0.05$). This implies that an increase in the adoption of financial management systems (electronic forensic analysis, accounting packages to manage accounts, internal control systems, real time room bookings) by level 4- and 5-star hotels in Kenya would lead to a significant improvement in their financial performance.

TABLE 10

Correlation Analysis

		E-marketing	E-transactions	E-CRM	Financial Management Systems	Financial Performance
E-marketing	Pearson Correlation	1				
	Sig. (2-tailed)					
E-transactions	Pearson Correlation	.525**	1			
	Sig. (2-tailed)	0				
E-CRM	Pearson Correlation	.228*	0.138	1		
	Sig. (2-tailed)	0.026	0.182			
Financial Management Systems	Pearson Correlation	.371**	.313**	0.167	1	
	Sig. (2-tailed)	0	0.002	0.106		
Financial Performance	Pearson Correlation	.598**	.656**	.356**	.438**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	
	N	95	95	95	95	95
** Correlation is significant at the 0.01 level (2-tailed).						
* Correlation is significant at the 0.05 level (2-tailed).						

4.7 Regression Model Diagnostic Tests

The study conducted diagnostic tests before using an ordinary least square regression model to test the study hypotheses. The tests were normality test, linearity test, multicollinearity, Heteroskedasticity and autocorrelation tests. The subsections that follow present the results of the tests.

4.7.1 Normality Test

The assumption of a classical linear regression model demands that the data must take a bell shape which is a representation of normality. Data which is not normally distributed would always give spurious results and would not be suitable for parametric tests. As a result, the

study tested this through Smirnov-Kolmogorov test as well as Q-Q plots. The Q-Q plots should form an oval shape to indicate normal distribution. In the Kolmogorov-Smirnova (K-S) test, the null hypothesis is that the data is normally distributed while the alternative hypothesis is that the data is not normally distributed.

A significance value greater than 0.05 indicated that the data is normally distributed since the null hypothesis was not to be rejected. The results for the Kolmogorov-Smirnova (K-S) test is presented in Table 11. The results indicate that the significance of the KS statistic was not significant (Sig = 0.062 > 0.05). The null hypothesis that the data is normally distributed was not rejected. The data on the dependent variable was therefore normally distributed implying that normality assumption would not be violated if a multiple regression model is adopted.

TABLE 11

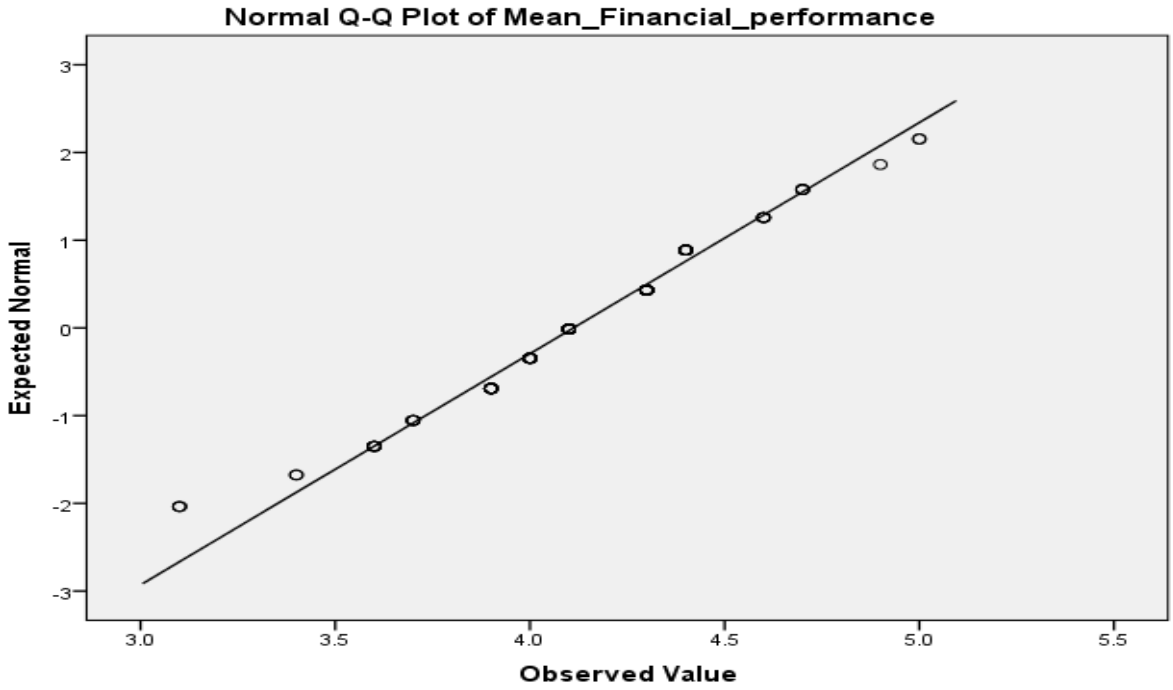
Kolmogorov-Smirnova (K-S) test of Normality

Tests of Normality						
	Kolmogorov-Smirnova			**Shapiro-Wilk**		
	Statistic	Df	Sig.	Statistic	df	Sig.
Financial Performance	1.198	95	0.062	1.867	95	0.059
Lilliefors Significance Correction						

The results were confirmed through a normal Q-Q plot as shown in Figure 6. The results indicate that the observations on financial performance of level 4- and 5-star hotels in Kenya were along the line of best fit with no outliers which indicate that the data was normally distributed hence suitable to use in a regression model.

FIGURE 6

Normal Q-Q Plot



4.7.2 Multicollinearity Test

Multicollinearity demonstrates a scenario where the predictor variables are highly related with a correlation above 0.8. In cases where they are, it gives spurious results. Such values cannot be relied on to predict a relationship between the independent and dependent variables. The study tested for multicollinearity through Variance Inflation Factor (VIF) method where VIF values below 10 are acceptable. The findings for the VIF values are presented in Table 12. The results indicate that E-marketing has a VIF value of 1.514, E-

transactions has a VIF value of 1.411, E-Customer Relationship Management has a VIF value of 1.064 and Financial Management Systems has a VIF value of 1.195 all of which are less than the threshold of 10 which imply that they are within the threshold for absence of multicollinearity.

TABLE 12

Variance Inflation Factor (VIF) Test of Multicollinearity

Predictor Variables	**Collinearity Statistics**	
	Tolerance	**VIF**
E-marketing	0.661	1.514
E-transactions	0.709	1.411
E-Customer Relationship Management	0.94	1.064
Financial Management Systems	0.837	1.195
Dependent Variable: Financial Performance		

4.7.3 Heteroskedasticity

Heteroskedasticity shows whether error terms are independent and the variance is constant. In this test, Breusch Pagan method was used whereby significance value of the probability chi square greater than 0.05 indicates absence of Heteroskedasticity. The results presented in Table 13 indicated that the Prob > Chi^2 value was (0.114 > 0.05) hence the null hypothesis of constant variance was not rejected. Therefore, the data was suitable to run an OLS regression without violating this assumption.

TABLE 13

Breusch Pagan test of Heteroskedasticity

Breusch-Pagan test for Heteroskedasticity	
Ho: Constant variance	
Variables: Financial Performance	
$Chi^2(1)$	8.76`
Prob > Chi^2	0.114

4.7.4 Autocorrelation

Another assumption of OLS is that the error terms in the regression should not be correlated (Absence of autocorrelation). For autocorrelation, there was a need for the error term of the regression not to be correlated. The study used Durbin Watson test of autocorrelation whereby a value above 2 indicated presence of serial autocorrelation. A value between 1.5 and 2.0 indicates that the data is free from autocorrelation. The results are presented in Table 14. The results indicate a DW value of 1.973 which is between 1.5 and 2.0 implying that the data did not have a problem of autocorrelation hence an OLS regression model was suitable.

TABLE 14

Durbin Watson Test of Autocorrelation

Durbin-Watson
1.973

4.8 Regression Analysis

To establish the effect of information communication technology, specifically on e-marketing, e-transactions platforms, customer relationship management systems and financial management systems on the financial performance of hospitality firms in Kenya a multiple regression model was adopted. The estimation of the regression model has model summary, ANOVA and model coefficients. The results are presented and explained in the sub sections that follow. The model summary results as presented in Table 15.

The results showed that the four factors that is Financial Management Systems, E-Customer Relationship Management, E-transactions and E-marketing had a strong correlation with financial performance of level 4- and 5-star hotels in Kenya (R = 0.768). This implies that the four factors are strong predictors of financial performance of level 4- and 5-star hotels in Kenya.

The R-square indicates the change in the dependent variable (financial performance of level 4- and 5-star hotels in Kenya) explained by the four independent variables (Financial Management Systems, E-Customer Relationship Management, E-transactions and E-marketing). The R-square value also called coefficient of determination was 0.59 in this study. This implies that up to 59 percent of the variation in financial performance of level 4- and 5-star hotels in Kenya is explained by the four factors. The remaining percentage, that is, 41 percent, is explained by other factors other than the four which opens up a chance for future interrogation.

TABLE 15

Regression Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.768	0.59	0.572	0.2482
Predictors: (Constant), Financial Management Systems, E-Customer Relationship Management, E-transactions, E-marketing			

In order to establish the significance of the regression model used, Analysis of Variance (ANOVA) was used. ANOVA indicates the deviation of the predicted regression model from the actual regression model. The ANOVA results are presented in Table 16. The F statistic value was significant ($F = 32.425$, P-Value = $0.000 < 0.05$) which implies that the overall regression model to establish the effect of information communication technology, specifically on e-marketing, e-transactions platforms, customer relationship management systems and financial management systems on the financial performance of hospitality firms in Kenya was a good fit / significant.

TABLE 16

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	7.992	4	1.998	32.425	.000
Residual	5.545	90	0.062		
Total	13.537	94			
Dependent Variable: Financial Performance					
Predictors: (Constant), Financial Management Systems, E-Customer Relationship Management, E-transactions, E-marketing					

To establish the beta coefficients, constant and their significance, the regression coefficient results were established in Table 4.14. The study established the model significance using both P values as well as critical t values. For the p-values, a variable had a significant effect on financial performance of level 4- and 5-star hotels if the value was less than 0.05 and critical t value was greater than absolute 1.96. In such a case, the null hypothesis was rejected. The regression model coefficients are presented in Table 17.

Table 17

Regression Model Coefficients

	Unstandardized Coefficients		**Standardized Coefficients**		
	B	**Std. Error**	**Beta**	**t**	**Sig.**
(Constant)	0.885	0.301		2.943	0.004
E-marketing	0.193	0.062	0.256	3.089	0.003
E-transactions	0.318	0.058	0.439	5.472	0.000
E-Customer Relationship Management	0.152	0.051	0.209	2.998	0.004
Financial Management Systems	0.118	0.051	0.172	2.326	0.022
Dependent Variable: Financial Performance					

The resulting Regression Equation was as shown below:

$Y = 0.885 + 0.193\ X_1 + 0.318\ X_2 + 0.152X_3 + 0.118X_4$

Where:

Y = Financial Performance of Firms in the Hospitality Industry

X1 = e-marketing

X2 = e-transactions

X_3 = e-Customer Relationship Management

X_4= e-Financial Management

The regression model indicates that other factors (e-marketing, e-transactions platforms, customer relationship management systems) held constant at zero, the financial performance of hospitality firms in Kenya is positive at 0.885. However, with introduction of information communication technology (e-marketing, e-transactions platforms, customer relationship management systems), the financial performance of hospitality firms in Kenya improves significantly. The findings guided achievement of the following hypotheses.

H_{01}: e-marketing has no significant effect on financial performance of hospitality firms in Kenya

The results in Table 17 indicate that e-marketing has a positive and significant effect on financial performance of level 4- and 5-star hotels in Kenya (B = 0.193; t = 3.089, > 1.96, = P-Value = 0.003, < 0.05). Since the p-value was less than 0.05, the null hypothesis was rejected and hence it was concluded that e-marketing has a positive and significant effect on financial performance of level 4- and 5-star hotels in Kenya. This implies that a unit increase in adoption of e-marketing practices (Facebook, Instagram, twitter, LinkedIn, mobile apps and websites) by level 4- and 5-star hotels in Kenya would lead to a significant improvement in their financial performance by 0.193 units.

H_{02}: e-transactions platforms have no significant effect on financial performance of hospitality firms in Kenya

The results also showed that e-transaction has a positive and significant effect on financial performance of level 4- and 5-star hotels in Kenya (B = 0.318; t = 5.472, > 1.96, = P-Value = 0.000, < 0.05). Since the p-value was less than 0.05, the null hypothesis was

rejected and hence it was concluded that e-transactions has a positive and significant effect on financial performance of level 4- and 5-star hotels in Kenya. This implies that a unit increase in adoption of e-transactions practices (credit cards, debit cards, pay pal, mobile payment services and master cards) by level 4- and 5-star hotels in Kenya would lead to a significant improvement in their financial performance by 0.318 units.

H_{03}: Customer Relationship Management Systems has no significant effect on financial performance of hospitality firms in Kenya

The results also demonstrated that customer relationship management systems have a positive and significant effect on financial performance of level 4- and 5-star hotels in Kenya (B = 0.152; t = 2.998, > 1.96, = P-Value = 0.004, < 0.05). Since the p-value was less than 0.05, the null hypothesis was rejected and hence it was concluded that customer relationship management systems have a positive and significant effect on financial performance of level 4- and 5-star hotels in Kenya. This implies that a unit increase in adoption of customer relationship management practices (online call centers to handle complains, social platforms to handle complains, online room bookings, online book confirmation) by level 4- and 5-star hotels in Kenya would lead to a significant improvement in their financial performance by 0.152 units.

H_{04}: Financial Management Systems has no significant effect on financial performance of hospitality firms in Kenya

It was also shown that financial management systems have a positive and significant effect on financial performance of level 4- and 5-star hotels in Kenya (B = 0.118; t = 2.326, > 1.96, = P-Value = 0.022, < 0.05). Since the p-value was less than 0.05, the null hypothesis was rejected and hence it was concluded that financial management systems have a positive

and significant effect on financial performance of level 4- and 5-star hotels in Kenya. This implies that a unit increase in the use of financial management systems (electronic forensic analysis, accounting packages to manage accounts, internal control systems, real time room bookings) by level 4- and 5-star hotels in Kenya would lead to a significant improvement in their financial performance by 0.118 units.

Table 4.15 Summary of Research Hypothesis

No.	Research Hypothesis	Beta Coefficient	P- Value and t-statistic	Decision
1	e-marketing has no significant effect on financial performance of hospitality firms in Kenya	B = 0.193	(t = 3.089, > 1.96, = P-Value = 0.003, < 0.05).	e-marketing has a positive and significant effect on financial performance of hospitality firms in Kenya
2	e-transactions platforms have no significant effect on financial performance of hospitality firms in Kenya	B = 0.318	(t = 5.472, > 1.96, = P-Value = 0.000, < 0.05)	e-transactions platforms have a positive and significant effect on financial performance of hospitality firms in Kenya
3	Customer Relationship Management Systems has no significant effect on financial performance of hospitality firms in Kenya	B = 0.152	(t = 2.998, > 1.96, = P-Value = 0.004, < 0.05).	Customer Relationship Management Systems have a positive and significant effect on financial performance of hospitality firms in Kenya
4	Financial Management Systems has no significant effect on financial performance of hospitality firms in Kenya	B = 0.118	(t = 2.326, > 1.96, = P-Value = 0.022, < 0.05)	Financial Management Systems has a positive and significant effect on financial performance of hospitality firms in Kenya

4.9 Qualitative Results

The open-ended questions that is whether the extent to which the hotels have adopted technology is satisfactory as well as how beneficial technology adoption has been to them. The summary of the thematic analysis is presented in Table 18.

TABLE 18

Summary of Qualitative Results

Question	Summary of the Main themes
Do you think the extent to which your company has adopted technology in marketing is satisfactory?	Majority of the respondents felt that their hotels have made effort in adoption of technology in e-marketing. There was however a feeling that the same can be improved further.
How beneficial has e-marketing been to the company?	Most of the respondents felt that adoption of technology in marketing has opened up an avenue to reach out to the outside world more and increased the inflow of international visitors hence more revenue.
Do you think the various e-payment platforms adopted by your company are satisfactory?	Majority of the respondents felt that their hotels have made effort in adoption of technology in payment systems in line with the current modern practices and technological demands. There was however a feeling that the same can be improved further in line with other international hotels of the same level.
How beneficial have e-transactions been to the company?	Most of the respondents felt that adoption of technology in payment has made it cost effective, faster and more secure. It has also increased bookings since many guests are able to make payments even without physical interaction.
Do you think the extent to which your company has adopted customer relationship management systems is satisfactory? Explain	Most of the respondents felt that their hotels have made effort in adoption of technology in customer relationship management systems in line with the current modern practices and technological demands. There was however a feeling that the same can be improved further in line with other international hotels of the same level.
How beneficial has the use of customer relationship management systems been to the company?	Majority of the respondents felt that adoption of technology in customer relationship management systems has fastened the speed of handling complains, increased more bookings since customer complains can be handled faster as well as reduced complains.
Do you think the extent to which your company has adopted technology in financial management is satisfactory?	Most of the respondents felt that their hotels have made effort in adoption of technology in financial management systems in line with the current modern practices and technological demands. There was however a feeling that the same can be improved further in line with other international hotels of the same level.
How beneficial have financial management systems been to the company?	Majority of the respondents felt that adoption of technology in financial management systems has reduced accounts receivable period, increased efficient collection, enhanced efficient management of funds and improved revenue while reducing costs. Besides, it has also reduced fraud.

4.9 Chapter Summary

The description of the analysis and results as well as the presentation and explanation has been presented in this chapter. The chapter has indicated the results of the descriptive and

inferential statistics. Tables as well as figures were used to present the findings of the study. The results showed that an increase in the adoption of e-marketing practices (Facebook, Instagram, twitter, LinkedIn, mobile apps and websites) by level 4- and 5-star hotels in Kenya would lead to a significant improvement in their financial performance. It was also shown that an increase in the adoption of e-transactions practices (credit cards, debit cards, pay pal, mobile payment services and master cards) by level 4- and 5-star hotels in Kenya would lead to a significant improvement in their financial performance.

The results further indicated that an increase in the adoption of e-customer relationship management practices (online call centers to handle complains, social platforms to handle complains, online room bookings, online book confirmation) by level 4- and 5-star hotels in Kenya would lead to a significant improvement in their financial performance. In addition, it was shown that an increase in the adoption of financial management systems (electronic forensic analysis, accounting packages to manage accounts, internal control systems, real time room bookings) by level 4- and 5-star hotels in Kenya would lead to a significant improvement in their financial performance.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The study established the effect of information communication technology on financial performance of hospitality firms in Kenya. The specific focus of the study was to establish the effect of e-marketing on financial performance of hospitality firms in Kenya, determine the effect of e-transactions on financial performance of hospitality firms in Kenya, assess the effect of e-customer relationship management on financial performance of hospitality firms in Kenya and determine the effect of real time financial management on financial performance of hospitality firms in Kenya. A summary of the study findings, conclusions, recommendations as well as areas for further research are all covered in this chapter. In the summary of the findings, discussions of the findings are also presented whereby comparison with other studies is made.

5.2 Summary of the Findings

To achieve the study objectives, the study collected primary data from the IT and finance managers of level 4- and 5-star hotels in Kenya. The study used primary data obtained from the firms to conduct both descriptive and inferential analyses. The data was analyzed by both descriptive and inferential analysis methods, which is mean, Pearson correlation and regression analysis. The findings are summarized in this section. The section also accompanies discussion of the results per objective.

5.2.1 E-marketing and financial performance of hospitality firms

The first objective of the study was to establish the effect of e-marketing on financial performance of hospitality firms in Kenya. Descriptive findings indicated adoption of e-marketing practices (Facebook, Instagram, twitter, LinkedIn, mobile apps and websites) by level 4- and 5-star hotels in Kenya to a high extent. Correlation results indicated that e-marketing is positively and significantly associated with financial performance of level 4- and 5-star hotels in Kenya. Regression results confirmed that an increase in the adoption of e-marketing practices (Facebook, Instagram, twitter, LinkedIn, mobile apps and websites) by level 4- and 5-star hotels in Kenya would lead to a significant improvement in their financial performance.

These findings are consistent with that of Kotler (2010) who interrogated the marketing strategies being adopted by firms in the tourism industry in Europe and established that most of the hotels used ICT in marketing (e-marketing) and relied on websites, apps advertisement and promotions and social media such as Twitter, Facebook and Google to get more customers. In the long run, it improves their financial performance. The findings also agree with that of a study by Njeri (2017) who determines the adoption of e-marketing in the hospitality industry in Kenya and how it influenced the performance of those targeted firms and revealed that e-marketing improved the financial performance of the tours and travel firms through reducing the costs of operations. In addition, the findings are consistent with that of Abdi (2014) who conducted a descriptive interrogation of the link between e-marketing strategy and profitability of tour firms in Kenya and demonstrated that higher revenues were realized through wide internet marketing approaches since the influx of customers increased.

5.2.2 E-transactions and financial performance of hospitality firms

The second objective of the study was to determine the effect of e-transactions on financial performance of hospitality firms in Kenya. Descriptive findings showed adoption of e-transactions practices (credit cards, debit cards, pay pal, mobile payment services and master cards) by level 4- and 5-star hotels in Kenya to a high extent. Correlation results showed that e-transactions are positively and significantly associated with financial performance of level 4- and 5-star hotels in Kenya. Regression results indicated that an increase in the adoption of e-transactions practices (credit cards, debit cards, pay pal, mobile payment services and master cards) by level 4- and 5-star hotels in Kenya would lead to a significant improvement in their financial performance.

The findings are consistent with that of a study by Sathye (2012) conducted in Australia aimed at establishing the adoption of e-transactions such as mobile payments by businesses and how it has affected their financial performance of firms and showed that it improved financial performance significantly. Similarly, the findings agree with that of Makongoro (2014) who interrogated the extent of adoption of internet transactions by businesses in Tanzania and showed that it improved financial performance. The findings are consistent with that of local studies such as a study by Mbogo (2010) which focused on interrogating the extent of adoption of e-payment platforms by businesses and its impact on the financial performance of the SMEs in Kenya and showed that it improved accounts receivables as well as the overall financial performance of the businesses.

5.2.3 Customer relationship management and financial performance of hospitality firms

The third objective of the study was to assess the effect of e-customer relationship management on financial performance of hospitality firms in Kenya. The descriptive findings showed adoption of e-customer relationship management practices (online call centers to handle complains, social platforms to handle complains, online room bookings, online book confirmation) by level 4- and 5-star hotels in Kenya to a high extent. The Pearson correlation results established that e-customer relationship management is positively and significantly associated with financial performance of level 4- and 5-star hotels in Kenya. This was confirmed by the regression results that an increase in the adoption of e-customer relationship management practices (online call centers to handle complains, social platforms to handle complains, online room bookings, online book confirmation) by level 4- and 5-star hotels in Kenya would lead to a significant improvement in their financial performance.

The findings are consistent with that of a study by Haislip and Richardson (2017) which interrogated how adoption of Customer Relationship Management influenced firm performance and showed that it improved sales, profits, cash flow from operations and customer satisfaction. Similarly, the findings agree with that of a study by Al-Dmour, Algharabat, Khawaja and Al-Dmour (2019) which linked e-CRM among Jordanian firms through a survey design and established that its impact was resourceful to both financial and non-financial measures. The findings further agree with that of a local study by Lodiong (2015) which focused on the extent of adoption of CRM systems by firms in the financial sector in Kenya and showed that it had a significant improvement in their customer retention rate and financial performance in the long run.

5.2.4 Financial management systems and financial performance of hospitality firms

The fourth objective of the study was to determine the effect of real time financial management systems on financial performance of hospitality firms in Kenya. The descriptive findings indicated adoption of financial management systems (electronic forensic analysis, accounting packages to manage accounts, internal control systems, real time room bookings) by level 4- and 5-star hotels in Kenya to a high extent. The Pearson correlation results showed that financial management systems are positively and significantly associated with financial performance of level 4- and 5-star hotels in Kenya. The multiple regression results indicated that an increase in the adoption of financial management systems (electronic forensic analysis, accounting packages to manage accounts, internal control systems, real time room bookings) by level 4- and 5-star hotels in Kenya would lead to a significant improvement in their financial performance.

Compared to other studies, these findings are consistent with that of Zhu, Kraemer and Xu, (2010) who interrogated the impact of ICT adoption on the growth and profitability of SMEs and revealed that the use of financial management, increased productivity and reduced costs. The findings are also consistent with that of a study by Matikiti, Afolabi and Smith (2012) which focused on establishing how the use of technology in financial management and marketing has impacted South African hospitality players and showed that the impact has been positive and significant. Similarly, the findings are also consistent with that of a study by Erambo, Mulwa, Aketch, Sangoro and Muchibi (2016) which linked the use of IT in financial management and its impact among Busia town SMEs and showed that it improved financial performance of the SMEs significantly.

5.3 Conclusions of the Study

The study concludes that an increase in the adoption of e-marketing practices (Facebook, Instagram, twitter, LinkedIn, mobile apps and websites) by level 4- and 5-star hotels in Kenya would lead to a significant improvement in their financial performance. Another conclusion is that an increase in the adoption of e-transactions practices (credit cards, debit cards, pay pal, mobile payment services and master cards) by level 4- and 5-star hotels in Kenya would lead to a significant improvement in their financial performance.

The study further concludes that an increase in the adoption of e-customer relationship management practices (online call centers to handle complains, social platforms to handle complains, online room bookings, online book confirmation) by level 4- and 5-star hotels in Kenya would lead to a significant improvement in their financial performance. In addition, the study concludes that an increase in the adoption of financial management systems (electronic forensic analysis, accounting packages to manage accounts, internal control systems, real time room bookings) by level 4- and 5-star hotels in Kenya would lead to a significant improvement in their financial performance.

5.4 Recommendations for Policy Implication

Based on the findings that e-marketing is positively and significantly associated with financial performance of level 4- and 5-star hotels in Kenya, the study recommends the management of hotels in Kenya, both level 4, 5 and others to aggressively invest in e-marketing practices (Facebook, Instagram, twitter, LinkedIn, mobile apps and websites) if they intend to significantly improve their financial performance.

Given the findings that e-transactions are positively and significantly associated with financial performance of level 4- and 5-star hotels in Kenya, the study recommends the management of hotels in Kenya, both level 4, 5 and others to aggressively invest in adoption of e-transactions practices (credit cards, debit cards, pay pal, mobile payment services and master cards) in order to significantly boost their financial performance.

Since it was established that e-customer relationship management is positively and significantly associated with financial performance of level 4- and 5-star hotels in Kenya, the study recommends the management of hotels in Kenya, both level 4, 5 and others to aggressively invest in adoption of e-customer relationship management practices (online call centers to handle complains, social platforms to handle complains, online room bookings, online book confirmation) in order to realize a significant improvement in their financial performance.

Based on the findings that financial management systems are positively and significantly associated with financial performance of level 4- and 5-star hotels in Kenya, the study recommends the management of hotels in Kenya, both level 4, 5 and others to aggressively invest in adoption of financial management systems (electronic forensic analysis, accounting packages to manage accounts, internal control systems, real time room bookings) so that they can have a significant improvement in their financial performance.

5.5 Limitations of the Study

The study was limited to the hospitality firms in Kenya. Even though firms in the hospitality sector are many, the findings of this study may not be generalised to other firms. The researcher experienced challenges during data collection period. However, they were assured that the study findings would be used for only academic purposes and not any other purpose.

5.6 Areas for further Study

The study was delimited to the effect of information communication technology on financial performance of hospitality firms in Kenya narrowing down to e-marketing, e-transactions, e-customer relationship management and real time financial management. Since these are not the only areas where technology can be employed among these hotels, the study recommends future studies to consider a look at other areas such as e-warehousing and e-inventory control.

The study was also delimited to 3- and 4-star hotels only. This opens up an avenue for future interrogation on a wider scope by inclusion of other levels of hotels such as 2 and 3 as well as other players in the hotel industry. The other studies can interrogate whether adoption of technology by other players such as tour firms and concierge services can significantly influence their financial performance.

The hospitality industry faces a lot of challenges which may range from stiff competition, political instability, terrorism which leads to travel advisory among others. This study did not control for such environments and thus, there is a need for future studies to consider moderating these conditions in order to establish the true picture of the link between technology adoption and financial performance.

Lastly, it is common sense that technology is not the only determining factor of financial performance in the hotel industry. As a result, other studies can seek to find out what other factors affect financial performance in this industry given that the four interrogated, account for up to 59 percent of the variation in financial performance of the level 4 and 5 star hotels in Kenya.

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Appendix I: Introduction Letter

Dear respondent,

I am a student of KCA conducting a study in partial fulfillment of school requirements. My topic is **EFFECT OF INFORMATION COMMUNICATION TECHNOLOGY ON FINANCIAL PERFORMANCE OF HOSPITALITY FIRMS IN KENYA.**

The hotel is part of my sample and I would like you to provide information regarding the above-mentioned topic.

This is an academic exercise and the information will be confidentially handled.

Your assistance will be appreciated.

Yours Faithfully,

James Mwakiremba

Appendix II : Questionnaire

Section A: General Information

1. Highest Level of Education

Postgraduate [ ]

Undergraduate [ ]

Diploma [ ]

2. Position

Finance Manager [ ]

IT Manager [ ]

3. Work Experience

Below 1 Year [ ]

Between 2 and 3 [ ]

Between 4 and 5 [ ]

More than 5 [ ]

This section establishes the extent to which various ICT practices have been adopted. Please use a scale of 5 = Very High Extent; 4 = High Extent; 3= Moderate Extent; 2 = Low Extent and 1 = Very Low Extent.

Section B: e-marketing

4. Please tick the extent of adoption of the following e-marketing practices

No	Statements	5	4	3	2	1
a)	The company has invested in the use of social platforms (Facebook) to market its products and services					
b)	The company has invested in the use of social platforms (Instagram) to market its products and services					
c)	The company has invested in the use of social platforms (Twitter) to market its products and services					
d)	The company has invested in the use of social platforms (LinkedIn) to market its products and services					
e)	The company has invested in the use of mobile apps to market its products and services					
f)	The company has invested in the use of websites to market its products and services					

5. Do you think the extent to which your company has adopted technology in marketing is satisfactory? Explain

……

……

……

6. How beneficial has e-marketing been to the company?

……

……

……

Section C: e-transactions

7. Please tick the extent of adoption of the following e-transactions practices

No	Statements	5	4	3	2	1
a)	The company has adopted platform for payment using credit cards					
b)	The company has adopted platform for payment using debit cards					
c)	The company has adopted platform for payment using pay pal					
d)	The company has adopted platform for payment using mobile payment services					
e)	The company has adopted platform for payment using master cards					

8. Do you think the various e-payment platforms adopted by your company are satisfactory?

Explain

……

……

……

9. How beneficial have e-transactions been to the company?

……

……

……

Section D: Customer Relationship Management Systems

10. Please tick the extent of adoption of the following CRM systems

No	Statements	5	4	3	2	1
a)	The company has invested in online call centers to respond to customer complaints					
b)	The company has invested in social platforms to respond to customer complains					
c)	The company has invested in online room booking systems					
d)	The company has invested in online book confirmation and cancelation systems					

11. Do you think the extent to which your company has adopted customer relationship management systems is satisfactory? Explain

……

……

……

12. How beneficial has the use of customer relationship management systems been to the company?

……

……

……

Section E: Financial Management Systems

13. Please tick the extent of adoption of the following financial management systems

No	Statements	5	4	3	2	1
a)	The company has adopted the use of technology in forensic analysis					
b)	The company has invested in the use of accounting packages to enhance financial management					
c)	The company has invested in the use of real time internal control systems					
d)	The company has invested in the use of real time room billing systems					

14. Do you think the extent to which your company has adopted technology in financial management is satisfactory? Explain

……

……

……

15. How beneficial have financial management systems been to the company?

……

……

……

Section F: Financial Performance

16. Please tick the extent of agreement with the following statements on financial performance

No	Statements	5	4	3	2	1
a)	Market share has been increasing over the years					
b)	Sales have been on an upward trend over the years					
c)	Revenue has been increasing over the years					
d)	Returns on capital has been increasing over the years					

17. Kindly indicate the trends in the financial performance (Growth in sales revenue) for the last five years)

Year / Percentage Change	**Reduced by more than 50%**	**Reduced by less than 50%**	**Increased by less than 50%**	**Increased by more than 50%**
2018				
2017				
2016				
2015				
2014				