

Information Quality, Information Systems Support Capability and Performance of Hotels in Nairobi, Kenya

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Abstract

The economic uncertainty and technology change requires service organizations to accelerate the replacement of information systems and add new capabilities that improve customer service and enhance their performance. The purpose of this study was to establish the effect of information systems support capabilities on hotel performance in Nairobi Kenya using information quality as a moderator. The study adopted a survey design and a questionnaire was used to collect data. The sample consisted of 324 respondents picked from senior employees of hotels. The collected data were analyzed by using Pearson correlation and hierarchical regression analysis. The results indicate that information support capabilities have a positive and significant effect on hotels performance. Further, information quality has a positive moderating effect on the relationship between information support capabilities and hotel performance. The study recommended that service organization and especially hoteliers need to improve the information systems support systems and enhance the quality of information because they are significant factors affecting the performance of hotels. The findings made a contribution to theory by modeling and empirically testing the interrelation between information systems support capabilities information quality and organizational performance. This study contributes to Resource Based View (RBV) especially the role information resources on enhancing organizational performance using data from Kenya.

Keywords: Information support capability, Information quality, Service quality management, Organizational performance, IT support management

Introduction

Providing excellent information and support on information systems capability in pursuance of performance is the most important and challenging issue facing the contemporary service industry (Hung et al., 2003). There has been a vast amount of studies that empirically investigated the relationship between these concepts, reporting significant influence that information system capability exerts on performance.

Quality is defined in terms of quality excellence, quality as value, quality as meeting customers' expectations and quality as conformity to specifications posits Reeves and Bednar (1994). Reeves and Bednar adds that Information system (IS), is framework of quality. According to Barney, (1991) the organizational resources and capabilities are the main elements that differentiate an organization from others and make the firm matchless. Barney (1991) adds that resources such as information, knowledge, firm attributes, organizational processes, assets and capabilities empower the firm to formulate and implement effective and efficient strategies. Feeny and Willcocks (1998) argue that core IS capabilities are those that are needed to endure challenges in the exploitation of IT that a company must successfully address over time and that a company must retain the core IS capabilities for strategically positioning itself in the dynamic market environment. Performance is the heart of strategic thinking of every manager of hotels gearing towards defining and measuring performance (Nzuve & Nyaega, 2011). One of the important questions facing business sector has been why some hotels perform outstandingly well while others fail and this has influenced a study on the drivers of organizational performance, observes (Iravo, Ongori and Munene 2013) and this made the researcher focus on what drives outstanding performance in some hotels. (Moullin 2007) asserts that performance measurement is one of the tools which accelerate firms in terms of monitoring performance, identifying the areas that need attention, enhancing motivation, improving communication and strengthening accountability. An organization requires adjusting itself to be in line with the information systems capabilities in order to gain competitive advantage confirms (Donaldson, 2006). It is reasoned that for an organization to be successful it has to record high returns and identify performance drivers from the top to the bottom of the organization.

Hotel services are considered as one of the most important and high customer contact services in the tourism industry (Shahin & Samea, 2010). Service quality management and improvement are the most critical factors in today's hotels' business. Hotels are intermediaries who bear the responsibility of satisfying customers by providing quality tourism service in terms of quality information to the tourists. It is therefore crucial to develop an understanding of the success of hotel business in the Kenyan context and

the systems capabilities that accelerate this performance. Besides the numerous studies on performance, linkages, there is scarcity of empirical and conceptual studies on hotel performance in Kenyan specifically, inadequate information quality and the relationship between information systems support capability and performance.

Performance therefore as defined above is affected by a number of factors, all of which should be taken into account when managing, measuring, modifying and rewarding performance (Armstrong & Baron, 1998). One of the factors is information quality and systems support capability and how this information is managed. There are various concepts in measuring performance, such as sales per employee, export sales, growth rates of sales, total assets, total employment, operation profit ratio, turnover and return on investment (Kemp *et al.*, 2003). Further, according to (Yusuf, 2002), alternative measures of performance may be different, depending on the size and type of firm or its ownership.

Considerable research has been conducted on information systems and firm performance, as these concepts have been recognized as playing an important role for company's success in competitive market (Oh and Parks, 1997; Nadiri and Hussain, 2005). Information is a notoriously difficult concept to pin down. It is often suggested that we live today in an information age or an information society. For business organizations and governments, the use they make of information is critical to their success, to controlling their operations and achieving their goals. In particular, information is produced and used for decision making denotes Cornford, M. Shaikh, (2013).

Previous studies on hotel performance cover factors, operation strategies, labor turnover and wastage, influence and drivers affecting hotel performance in Kenya. This means that there are studies on performance of hotels done by Jane Kemunto Ongori, Dr. Mike Iravo, Dr. Charles Elijah Munene (2013), on factors affecting performance of hotels and restaurants in Kenya, Operation strategy and performance in the hotel industry done by Ng'ang'a Anne Wangui, (2013), Assessment of labor turnover and wastage by Kung'u Samson Kuria (2011) and Effect of Strategic Management Drivers on the performance of the hotel industry (Jean Mutindi Mzera Uzel, 2015). The bottom line for these studies was to look at drivers a factors that affect performance of hotels.

The majority of hotels use traditional profitability measures for performance evaluation (Mia and Patier, 2001; Atkinson and Brown, 2001; Haktanir and Harris, 2005; Pavlatos and Paggios, 2007). (Jagels & Ralston, 2007) assert that without management's understanding of quality of information being provided, management's effectiveness on decision effectiveness will be greatly reduced asserts Jagel *et al.*, (2007).

Information systems support is an ability of structures put in place to support business processes as defined by Ravichandran (2005). A basic premise is that a firm's performance can be explained by how effective the firm is in using IS Support to support and enhance its core competencies and firm performance, Ravichandran and Chalermasak (2005). Mutual coherence between IS priorities and initiatives and firm strategies is necessary to effectively prioritize IT activities and channel IS support resources toward areas of strategic importance to the firm asserts Porter (1985) which ensures performance.

Black and Porter (1996) particularly emphasize that information technologies facilitate the availability of information in enabling the performance assessment systems for continuous improvement. Marchand, Kettinger and Rollins (2000) have recently elaborated the link between IT/IS and firm performance. Based on a large sample survey of global firms, they concluded that three sets of factors explained these firms' continued success with the deployment of IT: (i) the quality of their information technology management practices (e.g., integrating IT into key operational and managerial processes), (ii) their ability to develop appropriate information management processes for sensing, gathering, organizing, and disseminating information, and (iii) their ability to instill desired information behaviors and values (e.g., proactiveness, sharing, integrity).

Change has been welcomed by a number of scholars who are of the view that change programs in organizations such as hotels largely depend on an organization's resources e.g. human, information (Jackson and Schuler, 2000; Weigl, Hartmann, Jahns, and Darkow 2008). They have indeed postulated Organizational Development and change programs as part of an organization's internal systems, including quality of information and system capabilities

The objective of this research was to determine the moderating role of information quality on the relationship between information systems support capability on performance of hotels in Nairobi, Kenya.

Resource-Based View (RBV)

The Resource-Based View (RBV) is an economic tool used to determine the strategic resources available to an organization. It attempts to explain how organizations build sustainable levels of competitive advantage and is based on the fundamental principle that the basis for a competitive advantage of a firm lies primarily in the application of the bundle of valuable resources at the firm's disposal Wernerfelt, (1984). RBT of the firm rendered that a firm delivers added value through the development of the organizations capabilities which are rare, hard to imitate and hard to substitute resources. This theory asserts that a firm gains sustainable

competitive advantage when it implements strategies and capabilities which cannot be copied by competitors.

Resources that qualify to be sources of competitive advantage must be rare, strategic, inimitable, non-substitutable, appropriate and immobile (Ling & Jaw, 2011). The RBV of the firm has emphasized the importance of choosing capabilities whose tasks include identifying, developing and deploying core capabilities to maximize profits. This theory has contributed to the development of the theory of competitive advantage. The theory states that a firm is able to perform better when it combines its unique resources/systems to drive all the areas of the organization (David, 2009). Hotels can combine their unique, valuable, imitable, rare, and not substitutable resources to meet and exceed their customer expectations.

The RBT of the firm links the internal capabilities of the organization to strategy formulation to achieve competitive advantage (Njuguna, 2009). The theory views the firm as an interconnectivity of resources and capabilities which may be tangible or intangible. Hotels are therefore charged with the responsibility of investing in unique capabilities that will differentiate them from their competitors and help them accelerate their performance (Wang & Ahmed, 2007). Ravichandran et al., (2005) examines how information systems, (IS) resources and capabilities affect firm performance and indicates that a basic premise is that a firm's performance can be explained by how effective the firm is in IS to support and enhance its core competencies. In contrast to past studies that have implicitly assumed that IS assets could have direct effects on firm performance, the study by Ravichandran et al., (2005) draws from the resource complementarity arguments and posits that it is the targeted use of IS assets that is likely to be rent-yielding. Despite significant work in this study, the need to examine the IS-firm performance relationship exists for two reasons. First, although studies have found that IS affects firm performance, the underlying mechanisms by which IS relates to firm performance remain under examined in both the IS and the management literatures. IT innovations have the potential to alter a range of strategic and industry factors such as cost positions, scale economies, and power relations with buyers and suppliers, and thereby provide competitive advantage.

Organizations that do not have strong IS functional capabilities might find it difficult to initiate and sustain innovative projects targeted at enhancing the firm's core competencies, or in providing reliable IS services that might be critical for smooth business operations. The results support proposition that an organization's ability to use IT to support its core competencies is dependent on IS functional capabilities, which, in turn, are dependent on the nature of human, technology, and relationship resources of the IT department. The study by Ravichandran et al., (2005) drew from the

resource-based theory posit that intangible IS resources and IS functional capabilities are critical determinants of how IT is deployed in the organization, which in turn can affect firm performance.

Performance

Organizations' success refers to the attainment of the expected results, outcomes, or realization of the set objectives and hence organization performance. Performance is a complex and dynamic concept which has been conceptualized in two ways namely the drivers of performance and the results of performance (Olsen, 2008). It is concerned with the overall productivity in an organization in terms of stock turnover, customers, profitability, organizational growth, and image and market share and a consequent of accomplished strategy implementation Arthur et al., (2010).

Firm performance has been measured as competitive advantage and strategic value (Mahmood and Soon, 1991; Sethi and King, 1994), market value, organizational efficiency and effectiveness, and capacity utilization (Barua et al., 1995). IT resources create economic value by increasing operational efficiencies and creating competitive advantage, asserts Melville et al., 2004; Rai et al., 2006 Performance represents the firm-level benefits received by an organization because of IS applications. The organizational impact of IT is realized through business performance (Brynjolfsson and Hitt, 1996; Kohli and Devaraj, 2003; Kearns and Lederer, 2004; Osei-Bryson and Ko, 2004; Rai et al., 2006), which leads to business value (Barua et al., 1995; Mukhopadhyay et al., 1995; Tallon et al., 2000; Lee, 2001; Melville et al., 2004).

Venkatraman & Ramanujam (1986) indicated that business performance is broad concept encompassing both financial performance and operational performance indicators. In an uncertain and challenging environment, the firm's capability to better utilize their limited resources and capabilities can be a source of competitiveness. Competition in the global economy has intensified the importance of discovering the capabilities of sustainable performance. Performance may be measured by both quantitative and qualitative methods. (Helgesen, Nettet & Voldsund, 2009) have said that performance measures based on mere financial indicators are not enough so non-economic indicators including market share, product development, or production efficiency are used for business performance. There seems to be a general agreement that performance in an organization context refers to the quality of process or end product with both quantity or quality considerations (Postma & Zwart, 2001). This study used performance measures such as hotel success, profits, market share, and productivity, quality of service/products, hotel growth, service quality, organizational image, and

hotel growth. Richard et. al., (2009) states that non-financial measures are better performance indicators in the service industry than financial measures.

Fwaya (2006) depicts that the only worthy performance measure is market share performance because of its value to shareholders, executives and the market. This measure is an indicator of organizational success and sustainability because it is the reason for the existence of firms. Research for business enabler and drivers no longer restricted to tangible components/factors but has extended its boundaries and included intangibles. Performance may be measured by both quantitative and qualitative. Richard et. al., (2009) states that non-financial measures are better performance indicators in the service industry than financial measures. Al bento et al., (2014), reaffirms that performance measurement represents one cornerstone of business excellence. Business excellence models not only promote the use of performance measures but also enquire whether performance measurement systems are designed in a way that reflects the overall strategy and ensures the system is effective in monitoring, communicating, and propelling performance. Some theories providing different frameworks and reference models for measuring performance include the balanced scorecard approach (BSC), key performance indicators (KPI), the economic value-added approach (EVA), activity-based costing (ABC), and total quality management (TQM). Performance therefore cannot stand alone and their information quality provided in hotels and support systems enhance hotel performance.

Information systems support capability

According to Barney, (1991) the organizational resources and capabilities are the main elements that differentiate an organization from others and make the firm matchless. Barney (1991) adds that resources such as information, knowledge, firm attributes, organizational processes, assets and capabilities empower the firm to formulate and implement effective and efficient strategies. Feeny and Willcocks (1998) argue that core IS capabilities are those that are needed to endure challenges in the exploitation of IT that a company must successfully address over time and that a company must retain the core IS capabilities for strategically positioning itself in the dynamic market environment. An information system is an organized set of components for collecting, transmitting, and storing, and processing data in order to deliver information for action. From this description therefore, it is critical to point that in business firms and other organizations, information is necessary for both operations and management.

The rapid and fast growth of the Internet, intranets, extranets and other interconnected global networks in the 1990s playfully and dramatically changed the capabilities of information systems in business. Internet-based

and web-enabled enterprise and global electronic business and commerce systems are becoming common place in the operations and management of today's business enterprises. These systems require information systems capabilities to support the processes (David, 2011). (Todd, 2013) asserts that customer information system (CIS) is a vital component of the meter-to-cash (M2C) value chain for electric utilities. It is the glue that binds the consumption and metering process to payments, collections and other downstream processes that affect a company's top line. The system must be able to support the latest smart grid innovations, distributed generation, net metering, time-of-use tariffs and the resulting complex billing calculations as well as provide support for the most popular payment methods e.g. credit cards, billing systems more conventional methods such as mail-in payments and should be flexible enough to accommodate differential tariffs, contracts and easy-to-configure systems to ensure that there is a high uptake rate for tailored to different customer segments adds Todd, (2013). Firms might lose customers not because the customer is not satisfied with the service provided, but because the firm does not offer functionalities and system capabilities that aid in retention, such as hassle-free and continuous payment options, integrated and automated outbound dialing features for payment failures, past due payments and credit card expiration, (David, 2011).

The support capabilities should have instantaneous updates to account, bill and payment information to provide customers and customer service agents with up-to-date, real-time information on bill and usage data, account status, payment details, in hotels industry. In addition, the system should easily integrate with other internal systems (such as outbound dialer applications, general ledger), as well as external systems (such as credit monitoring and reporting agencies, sales tax directories). System and Process Support – It is highly desirable to have an efficient support and grievance redress mechanism to investigate and resolve billing queries and empower customer service agents to resolve customer queries without escalation, and with the greatest degree of customer satisfaction, (David, 2011)

Systems support capabilities should offer customer self-service for the most used processes – thus diverting costly operational resources from the most common customer billing processes and requests. These processes might include changes to billing cycles and frequency, bill re-mailing, bill estimates and analytics, bill dates, bill format and bill delivery method. It is clear from this literature by (Todd, 2013) that systems capabilities must make calculated moves to maximize the return on investments from hoteliers and their clients. IT solution providers, system integrators and product vendors can also play a vital role in educating capabilities as to a suitable implementation approach and roadmap that best suit the hotel's business goals and transformation strategy, (Todd, 2013). The author continues to

confirm that through experience, firms achieve their business objectives, overcome growth constraints and mitigate risk with minimal disruption to business-as-usual operations — all by adopting a phased approach to customer information systems transformation and by focusing on defined and well understood objectives, ensuring executive involvement, effective communication and change management procedures is key.

In short, (Todd 2013) concludes that all stakeholders, customers, the regulator, the government, the implementer and the solution vendor will need to work together to ensure that the customer experience is enhanced with information systems capabilities in order to remain competitive and profitable while pursuing customer information systems initiatives and innovations. (Harri & Marja 2009), said that despite the fact that attitudinal theories from social psychology have been quite extensively applied to the study of user intentions and behavior, these theories have been developed for predicting user acceptance of the information technology rather than for providing systematic analysis and design methods for developing persuasive software solutions. Interactive information technology designed for changing users' attitudes or behavior is known as persuasive technology (Fogg, 2003). Persuasive systems may be defined as “computerized software or information systems designed to reinforce, change or shape attitudes or behaviors or both without using coercion or deception (Oinas & Harjuma 2008).

Competitive information systems (CIS) are multifaceted services that contribute to organizational decision making by providing information services in the traditional sense, but also, and more particularly, by collecting and analyzing data from primary sources. The continuous systematic CIS provides intelligence information, exists within an organization's other information systems, and must be supported by all levels of an organization, (Bonnie, 2000). A competitive intelligence or business intelligence (BI) system is the organizational process for systematically collecting, processing, analyzing, and distributing to decision maker's information about an organization's external environment. Such a systematic process organizes the flow of critical information and focuses it on operational and strategic issues and decisions assert Bonnie. All these are information systems support that contributes greatly to hotel performance.

IT managed support services can encompass many things (Allan 2012) whereby managed service is one that is completely handled end-to-end by a solution provider. By setting up a Help Desk system and support, engineers proactively monitor the network from the provider network operations centre and fix problems before they become critical issues, often before clients even realize anything is wrong (Allan, 2012). All the solutions that are effective and fast mean the way to success. Electronic check-in can

be done either by mobile phone or by an Apple watch. Distribution channels play a very serious role in the hospitality sector. How to increase revenue and same time decrease the costs is the question here.

Cloud computing is a powerful technology to perform massive-scale and complex computing to secure companies information and has become a powerful architecture to perform complex large-scale computing tasks and span a range of IT functions from storage and computation to database and application services. It eliminates the need to maintain expensive computing hardware, dedicated space, and software, confirms Ibrahim, et al 2015). Cloud computing is one of the most significant shifts in modern ICT and service for enterprise applications and has become a powerful architecture to perform large-scale and complex computing. The advantages of cloud computing include virtualized resources, parallel processing, security, and data service integration with scalable data storage. Cloud computing can not only minimize the cost and restriction for automation and computerization by individuals and enterprises but can also provide reduced infrastructure maintenance cost, efficient management, and user access. Cloud computing promises reliable software, hardware, which is delivered over the Internet and remote data centers declares (Ibrahim et al., 2015).

This review by Ibrahim covered volume, scalability, availability, data integrity, data protection, data transformation, data quality/heterogeneity, privacy and legal/regulatory issues, data access, and governance and also the key issues in big data in clouds were highlighted. In the future, significant challenges and issues must be addressed by the academia and industry. Researchers, practitioners, and social science scholars should collaborate to ensure the long-term success for information systems support capability in a cloud computing environment and to collectively explore new territories asserts (Ibrahim et al., 2015). These information systems provide opportunities that allow businesses across all industries to gain real-time business insights (Ibrahim et al., 2015).

Online consumer reviews as a form of electronic word of mouth (eWOM) and are experiencing massive growth (Brown, Broderick, & Lee, 2007) and are one of the most relied on sources of information for choosing holiday destinations (Murphy, Mascardo, & Benckendorff, 2007). Research shows that consumers are willing to have faith in this eWOM to provide them with information on which to base their perceptions of firms and subsequently their purchasing decisions (Hennig-Thurau et al., 2004; Li & Bernoff, 2008). Common platforms for travelers to share their travel experiences include online review websites such as TripAdvisor, Yahoo! Travel, Iggogo, and Lonely planet (Lee, Law, & Murphy, 2011).

Information Quality

There are various definitions for information quality provided by reviewing literature; however, Gustavsson & Jonsson, (2008) defines information quality as concept of 'fitness for use'. Further, there is an abundance of attributes and dimensions that have been identified in the literature that explain information quality in more measurable terms. According to Gustavsson, & Jonsson (2008) the attributes of information quality are complete, concise, reliable, timely valid, accessible, appropriate amount, credible relevant, up to date and understandable. Quality management is important in any establishment since it enhances and supports organization's performance and profitability in the long run. Subsequently, quality has been a focus of many successful establishments all over the world, drawing the attention of scholars and researchers alike. Most establishments nowadays place emphasis on quality as witnessed by the rise in the number of businesses applying for quality certification such as the ISO 9001 Standard, the Quality Management Systems (QMS).

(DeLone and McLean, 1992) asserts that Information quality is the outputs the information system produces, which can be in the form of reports or online screens. Nelson et al. (2005) have used the constructs of accuracy, completeness, currency, and format for information quality; the additional construct used by these authors – format – is related to the presentation layout of information outputs Huh et al. (1990) define four dimensions of information quality: accuracy, completeness, consistency, and currency. Accuracy is agreement with an attribute about a real world entity, a value stored in another database, or the result of an arithmetic computation. Completeness is to be defined with respect to some specific application, and it refers to whether all of the data relevant to that application are present. While consistency refers to an absence of conflict between two datasets, currency refers to up-to-date information. Researchers have used a variety of attributes for information quality.

Due to new technologies, and changes in guest behavior, consumers' satisfaction is everything, but not easy. In her article Judit recommends that one of the most important priorities is to be able to provide the most up-to-date information to our customers. In addition, guests can use their mobile phones as the key to the hotel room. The guests use a Web Booking Engine, check in systems, availability of rooms, and to the author this is a real time marketing gimmick. According to Judit (2014), that tourism is very information-intensive and information is often dubbed the "life-blood" or "cement" of the industry which holds together the different producers within the travel industry - airlines, tour operators, travel agencies, attractions, car rental, cruise lines, and other supplies, (Zhenhua,2000).

Sharing low quality information that is void of the above attributes will likely not benefit organization (Huang, Lau, & Mak, 2003). Stvilia, B., Gasser, L., Twidale, M.B., Smith, L.C. (2007) assert that for firms' processes that depend on information, the quality of information is one of the key determinants of the quality of their decisions and actions. Such view is also shared by others, for example: Najjar (2002) connects IQ to service quality in the banking industry, Miller (2005) links IQ with firm's market share, Rossin (2007) associates IQ with the performance characteristics of supply chains, whereas Vanden (2008) emphasizes the significance of IQ in determining option prices. While information is important, the significance of its impact on performance depends on the quality of the shared information (e.g., information usefulness, information accuracy, information accessibility). (Li et al., 2006). For instance, shared information that is not useful, accurate, or easily accessible provides no benefit to supply chain participants (Huanget al., 2003).

While it is broadly recognized that quality information plays a critical role in the success of firms (Choo, 1996; Daft and Lengel, 1986; Porter and Millar, 1985), any information acquired by decision-makers will deliver little impact on firm performance if it is not actually utilized in the making of decisions (Davenport and Beers, 1995; Diamantopoulos and Souchon, 1999). Researchers increasingly claim that leveraging such performance benefits depends less on possessing the technology and more on the ability to best utilize the information in decision-making processes (Davenport and Beers, 1995; Diamantopoulos and Souchon, 1999; Rindfleisch and Moorman, 2001). Hotel manager should recognize that employees are more likely to engage in utilizing information when its quality and the quality of the system itself meet employees' information needs, (Xu et al., 2013).

Relationship between information systems support capability and information quality on performance

Sethi and King (1994) established a system i.e. Competitive Advantage Provided by an Information Technology Capability Application (CAPITA) for IT capability impact based on the extent to which an IT application provides competitive advantage to the organization and hence defined it at the level of competitive strategy. Based on the Porter model of competitive advantage, the authors developed an instrument that includes five variables: efficiency (ability to produce products at a lower price), functionality (ability to provide differentiation and customer service to customers), threat (impact on bargaining power of customers and suppliers, which are affected by switching and searching costs), pre-emptiveness (first mover effects and barriers to competitors), and synergy (integration with business goals and strategy). Using a process-oriented model, Tallon et al.

(2000) developed an instrument for firm impact in terms of business value of IT on various business activities within the value chain. The dimensions used by these authors are process planning and support, supplier relations, production and operations, product and service enhancement, sales and marketing support, and customer relations. The above dimensions were intended to span all value chain activities on the premise that IT impacts both primary and secondary activities of a value chain management.

The increasing competitive pressure as a result of technological development, globalization, changing customer demand has led to survival challenges of many firms in the developing countries and demanded for improvement in quality of information to customer service and speed to enhance profitability performance and cost reduction asserts Kabiru, Mohd & Norlena Hasnan, (2015). Barua et al. (1995) noted that the impact of information systems use occurs in stages, which begins at the operational level and ends at the aggregate level such as overall firm performance. This view is also consistent with Bradley, Pridmore, and Byrd (2006) who suggested that information systems use first impacts the lower level operations which leads to higher levels of aggregate performance such as overall firm performance.

Lack of supportive and compatible Information Systems (IS) infrastructure (i.e., low IS infrastructure capability) can lead to a variety of integration and operation problems that inhibit the organizations from effectively improving quality of information (Gunasekaran & Ngai, 2004). Thus, IT/IS infrastructure capability being critical to timely and effective improvement in quality of shared information (Iacovou, Benbasat, & Dexter, 1995; Premkumar & Ramamurthy, 1995; Premkumar et al., 1994). A review of Inter-organizational systems (IOS) literature reviews that IS infrastructure capability are among the most cited antecedents of IOS use success in many literatures write up e.g. the results of studies by Craighead, Patterson, Roth, and Segars (2006) and Premkumar, Ramamurthy, and Nilakanta (1994) show significant relationship.

Managers of best performing hotels willingly provided reliable information and disclosed strengths and weakness of their organizations as compared to the other managers posits Kabiru et al (2015). An extensive body of IS capabilities literature agrees that IS capabilities are resources to facilitate an effective collection and utilization of information (e.g. Bharadwaj, 2000). Floyd *et al.* (1990) stress that I.T capabilities enhance service reliability, reduce transaction errors and increase consistency in performance. The effect of IS capability on firm performance has not been explicitly explained, that remains inconclusive in the sector in general, unlike in the manufacturing sector (Brynjolfsson, 1993). Thus, the search of organizational performance and competitive advantage, should not

dependent on a particular management technique but multiple management initiatives that are important for survival and success.

While information is important, the significance of its impact on performance depends on the quality of the information (Li et al., 2006). Mason-Jones and Towill (1997) note the importance of timeliness in information sharing. They explain that information loses its value, meaning, and relevance over time. Timely information sharing allows a firm to quickly learn the dynamics by promptly sensing the changes in the threats and opportunities confronting their own firm and their partners. This capability allows firms to improve performance by promptly developing better mechanisms to deal with these changes. To keep information alive demands a set of ongoing activities, both organizational and technical. That is, information lives longer than people, organizations and tools asserts Checkland & Holwell 1999.

Hotels ranked highly for sustained excellence in terms of provision of superior services and financial performances have a culture focused on quality performance and meeting customer needs and other stakeholders. Successful companies have quality plans characterized with high quality goals and specific methods for implementation, (Kotler and Amstrong, 2008). They are customer and market focused and addresses ways of collecting relevant information through a variety of tools such as market surveys and focus groups (Kotler and Amstrong, 2008). Attention to employee performance, information technology and system capabilities is the main strength that helped hotels achieve superior performance (Evans and Lindsay, 2011).

(Pearce, 2011) asserts that to ensure that hotels provide services of high quality managers need the right information so that right decisions can be made to improve current situation. Arthur et al (2008) argues that competent, trained and well informed employees with the right attitude to offer prompt and reliable services with the help of modern equipments and system capabilities can be a source of competitive advantage and success to organizations.

Research Methodology

This research employed a survey to obtain data on the moderating influence of information quality on the relationship between information systems support capability and the hotel performance. Descriptive and explanatory research (quantitative) designs were utilized in this study. This study adopted a positivist research philosophy. Cohen and Crabtree (2006), Bryman (2001) and Levin (1997) argued that a positivist approach to research is based on knowledge gained from “positive” verification of observable experience rather than introspection or intuition.

The research was carried out in Nairobi, largest city and capital city of Kenya which houses the majority of rated hotels. The target population comprised of 3-5 star hotels with a total of 9,208 staff in Nairobi County from which a sample of 384 respondents was acquired. The sample size comprised of senior level management, middle level management, supervisors and general employees at the hotels. The study used a structured questionnaire with a 5-point Likert scale. The questionnaire was developed by building on the previous research basis in order to ensure content validity. The measurement of the reliability and the validity of a data instrument helped the researcher to gauge the goodness of the variables of measurement (Sekaran and Bougie, 2010). Reliability was measured using Cronbach's Alpha coefficient. The closer Cronbach's alpha is to 1, the higher the internal consistency (Sekaran, 2006). Sekaran further argued that reliability of a measure indicates the extent to which it is without bias and hence ensures consistent measurement across time and across the various items in the instrument. If the Cronbach's alpha is above 0.7 the instrument is reliable.

Data collected was first edited, formatted and organized for coding into the Statistical Package for Social Sciences (SPSS) data viable table. Data was analyzed by use of descriptive and inferential statistics.

Study Results And Findings

This paper sought to determine the moderating role of Information Quality on the relationship between IS Support and Performance of Hotels in Nairobi Kenya. This section highlighted and discussed the results and the findings based on the analysis done on the data collected from respondents.

This research employed a survey to obtain data on the moderating influence of information quality on the relationship between IS support and hotel performance. The self administered questionnaires were used to collect data from the respondents. The research was carried out in Nairobi, largest city and capital city of Kenya which houses the majority of rated hotels. Three hundred and twenty four (324) questionnaires were obtained out of an anticipated maximum number of Three hundred and eighty four (384) translating to 83.35%.

Test on Reliability

From Table 1, all the variables had a reliability coefficient that was above the threshold of .7 (Hair *et al.*, 2010).

Table 1: Reliability Statistics

Variable	Cronbach's Alpha	N of Items
Hotel Performance	.807	6
IS Support	.908	13
Information Quality	.925	15

Descriptive Statistics

The researcher carried out descriptive statistics on the dependent variable (hotel Performance), moderating variable (Information Quality) and the independent variable (IS Support). The findings were summarized in Table 2, Table 3 and Table 4 respectively.

From the Table 2 it is clear that the median and mode lay within the agreement area which according to the 5-point likert scale was 4. Therefore, it is observed that the respondents agreed with the statement on the dependent variable which imply that there was improved performance in the sampled hotels.

Table 2: Descriptive statistics on the dependent variable

	Mean	Median	Mode	Std. Deviation	Skewness	Kurtosis
We have bought new products and services to the market faster than our competitors	3.59	4.00	4	1.008	-.556	-.095
The success rates of our new products and services have been very high.	3.64	4.00	4	1.099	-.632	-.274
Our productivity has exceeded that of our competitors	3.67	4.00	4	.979	-.513	-.330
Our profit has exceeded that of our competitors	3.43	4.00	4	1.089	-.503	-.371
Our financial performance has been outstanding	3.66	4.00	4	.958	-.592	-.091
Our financial performance has exceeded that of our competitors	3.67	4.00	4	1.050	-.673	-.044
<i>N = 324</i>						

Table 3 shows that most of the median and mode scores lay within the agreement area which according to the 5-point likert scale was 4. Therefore, it is observed that the respondents agreed with the statement on the moderating variable.

Table 3: Descriptive Statistics of Information Quality

	Mean	Median	Mode	Std. Deviation	Skewness	Kurtosis
Accessibility	3.64	4.00	4	1.021	-.635	.003
Appropriate amount	3.45	4.00	4	1.138	-.411	-.621
Believability	3.53	4.00	4	1.212	-.455	-.711
Completeness	3.57	4.00	4	1.118	-.688	-.177
Concise	3.77	4.00	4	.970	-.763	.381
Consistent	3.76	4.00	4	.994	-.624	-.082
Representation	3.80	4.00	4	.918	-.680	.386
Ease of operation	3.76	4.00	4	1.003	-.807	.367
Free-of-error	3.69	4.00	4	.981	-.604	.163
Interpretability	3.72	4.00	4	.976	-.539	-.087
Objectivity	3.67	4.00	4	1.129	-.804	-.009
Relevancy	4.02	4.00	4	.892	-.965	1.038
Security	4.03	4.00	4	.963	-1.066	1.017
Timeliness	3.99	4.00	4	.957	-.892	.516
Understandability	4.09	4.00	5	.916	-.913	.549

N = 324

From Table 4 the median and mode scores were within the agreement area which according to the 5-point likert scale was 4. Therefore, it is observed that the respondents agreed with the statement on the independent variable (IS Support).

Table 4: Descriptive Statistics on IS Support

	Mean	Median	Mode	Std. Deviation	Skewness	Kurtosis
Identifying groups of customers whose needs are not being met	3.42	4.00	4	1.097	-.367	-.552
Determining customer requirements (i.e. products, pricing, and quality).	3.41	4.00	4	1.167	-.497	-.596
Reengineering business process.	3.48	4.00	4	1.144	-.557	-.408
Enhancing business process flexibility.	3.35	4.00	4	1.271	-.508	-.721
Integrating the firm's supply chain	3.57	4.00	4	1.128	-.511	-.517
Integrating internal business units	3.73	4.00	4	.978	-.445	-.434
Increasing the speed of logistic activities	3.79	4.00	4	.940	-.500	-.280
Developing new products/services	3.65	4.00	4	.928	-.650	.314
Improving the speed	3.60	4.00	4	1.026	-.459	-.235

of product/service development						
Increasing the speed of products/service delivery	3.74	4.00	4	.989	-.599	.143
Increase the speed of responding to business opportunities/threats.	3.85	4.00	4	.925	-.539	-.166
Identify new market segments	3.89	4.00	4	.936	-.580	-.283
Redefining the scope of our business	3.68	4.00	4	.958	-.390	-.306
<i>N = 324</i>						

Correlation between hotel Performance, Information Quality and IS Support

The study sought to establish whether there was a correlation between hotel Performance and Information Quality, as well as hotel Performance and IS Support. The findings were summarized in Table 5. From the table, a positive correlation coefficient of .464 existed between hotel Performance and Information Quality, while hotel Performance and IS Support had a positive correlation of .537.

Table 5: Correlation coefficient between Firm Performance, IS Support and Information Quality

Correlations			
	Firm Performance	IS Support	Information Quality
Firm Performance	1	.537**	.464**
IS Support	.537**	1	.748**
Information Quality	.464**	.748**	1
Pearson Correlation Sig. (2-tailed) = .000			
N = 324			
**. Correlation is significant at the 0.01 level (2-tailed).			

Regression Analysis to determine the effect of Information Quality on the relationship between IS Support and Firm Performance

The researcher sought to establish whether Information Quality had a moderating influence on the relationship between IS Support and Firm Performance. Therefore, the researchers carried out hierarchical regression analysis whereby in the first model, Information Quality was not included while it was added in the second model. The findings are presented in Table 6, Table 7 and Table 8. From the Model Summary Table 6, the Adjusted R Square changes positively from .287 (without Information Quality) to .293 (with Information Quality). Therefore, Information Quality has a moderating influence on the relationship between IS Support and Firm Performance.

Table 6: Model Summary Table of IS Support and Firm Performance with Information Quality moderating

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.537 ^a	.289	.287	3.732
2	.546 ^b	.298	.293	3.715
a. Predictors: (Constant), IS Support				
b. Predictors: (Constant), IS Support, X2(IS Support x Information Quality)				

Anova Table 7 shows that both models are statistically significant since the p-value is less than the threshold of .05 (Sig. = .000). Also, the null hypothesis that Information Quality does not have a statistically significant moderating influence on the relationship between IS Support and Firm Performance is rejected and instead the alternative hypothesis that there is a statistically significant moderating influence of Information Quality on the relationship between IS Support and Firm Performance is accepted.

Table 7: Anova Table of IS Support and Firm Performance moderated by Information Quality

ANOVA ^a						
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1821.209	1	1821.209	130.731	.000 ^b
	Residual	4485.764	322	13.931		
	Total	6306.972	323			
2	Regression	1877.910	2	938.955	68.052	.000 ^c
	Residual	4429.063	321	13.798		
	Total	6306.972	323			
a. Dependent Variable: Firm Performance						
b. Predictors: (Constant), IS Support						
c. Predictors: (Constant), IS Support, X2(IS Support x Information Quality)						

The coefficients Table 8 shows that for every unit increase in the dependent variable (Hotel Performance), both IS Support and the interaction term X2 (IS Support x Information Quality) make a positive statistically significant contribution to the model. Since the beta coefficient of X2 is significantly different from zero then information quality was said to have a moderating effect in the relationship between IS Support and Hotel Performance.

Table 8: Coefficient Table of IS Support and Firm Performance moderated by Information Quality

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	9.684	1.068		9.072	.000
	IS Support	3.300	.289	.537	11.434	.000
2	(Constant)	9.086	1.103		8.240	.000
	IS Support	3.384	.290	.551	11.660	.000
	IQ	.395	.195	.096	2.027	.043

a. Dependent Variable: Firm Performance

Summary of results and findings

The researcher sought to establish whether information quality had any influence on the relationship between IS Support and Hotel Performance. Hierarchical moderated multiple regression analysis revealed that the Adjusted R Square changed positively from .287 (without Information Quality) to .293 (with Information Quality) (Table 6) implying that there was 0.6% increase as result of the moderating influence of Information Quality. Analysis of variance (Table 7) showed that both models were statistically significant. In addition, the null hypothesis that Information Quality did not have any moderating influence on the relationship between IS Support and Hotel Performance was rejected and instead the alternative hypothesis was accepted. The beta Coefficients (Table 8) showed that Information Quality had a statistically significant moderating influence on the relationship between IS Support and Hotel Performance.

Conclusion

From this study it is affirmed from the research by Ravichadran et al., (2005) that RBV is an economic tool used to determine the strategic resources to an organization. The RBV theory of the firm has emphasizes on the importance of choosing capabilities whose tasks include identifying, developing and deploying core capabilities to maximize profits; the theory also contributed to the development of the theory of competitive advantage. The study findings also concur with findings by (David, 2009) that a firm is able to perform better when it combines its unique resources/systems to drive all the areas of the organization. In addition, the study found that RBV of the firm links the internal capabilities of the organization to strategy formulation to achieve competitive advantage as confirmed by (Njuguna, 2009). Ravichadran et al., (2005) draws from the resource complementarity arguments and posits that it is the targeted use of IS assets that is likely to be rent-yielding. IT innovations have the potential to alter a range of strategic and industry factors such as cost positions, scale economies, and power

relations with buyers and suppliers, and thereby provide competitive advantage. Organizations that do not have strong IS functional capabilities might find it difficult to initiate and sustain innovative projects targeted at enhancing the firm's core competencies, or in providing reliable IS services that might be critical for smooth business operations.

The results support proposition that an organization's ability to use IT to support its core competencies is dependent on IS functional capabilities, which, in turn, are dependent on the nature of human, technology, and relationship resources of the IT department. IT capability is a multidimensional measure, it is important to determine which aspects of IT capability are critical to organizations to help managers to devise effective IS capability improvement strategies and drivers with which scarce resources can be allocated more effectively. Our research explores the linkage between IQ, IS system support capability, and hotel performance. Our results indicate that, overall, IS support capability have a significant positive influence on performance. Likewise, IQ has significant include on hotel performance either directly or indirectly.

Information quality has been largely neglected in organizations, which partially contributes to the discounted return from firms' investment on their information systems. In order to fully reap the benefits from a firm's deployed information systems, Marinagi, Trivellas and Reklitis (2015) proposed that top management team of the firm should pay more attention to the quality of the information their information systems generate. From the foregoing, the researcher sought to establish whether Information Quality had any influence on the relationship between IS Support and Hotel Performance. From the findings that Adjusted R Square changed positively by 0.6% and that the change was statistically significant, as result of the moderating influence of Information Quality, the researchers concluded that Information Quality had a statistically significant moderating influence on the relationship between IS Support and Hotel Performance. Information quality can serve as a measure to the effectiveness and efficiency of the deployed information systems. It can tell if the information systems are doing what they are supposed to do i.e. generating high quality information, (Jagels & Ralston, 2007).

This study concurs with the fact that a majority agreed that the performance of the hotel has been outstanding and successful. The results obtained from this study conquer with (Donaldson, 2006) who stated that an organization requires to adjust itself to be in line with the changes in order to gain competitive advantage. Black and Porter (1996) observed that information technologies facilitate the availability of information in enabling the performance assessment systems for continuous improvement. (Jagels & Ralston, 2007) assert that without management's understanding of the

information being provided, management's effectiveness will be greatly reduced.

In each of the questions relating to the IQ as a moderating variable, there was a clear indication that a majority of the respondents either agreed or strongly agreed with the statement that IQ was an integral part of the performance of hotels in Nairobi, Kenya. Change has been welcomed by a number of scholars who are of the view that change programs in organizations such as hotels largely depend on an organization's resources e.g. human, information systems (Jackson and Schuler, 2000; Weigl, Hartmann, Jahns, and Darkow 2008). Bosse, Robert and Harrison (2009) identified performance as a dependent variable in organizational studies. Due to new technologies, and changes in guest behavior, consumers' satisfaction is everything, but not easy. In his article (Judith, 2014) recommends that one of the most important priorities is to be able to provide the most relevant information to customers and this conquers with a majority of the respondents who were in agreement about information relevancy. In addition, guests can use their mobile phones as the key to the hotel room. The guests use a Web Booking Engine, check in systems, availability of rooms, and to the author this is a real time marketing gimmick. (Judith, 2014), adds that tourism is very information-intensive and information is often dubbed the "life-blood" or "cement" of the industry which holds together the different producers within the travel industry - airlines, tour operators, travel agencies, attractions, car rental, cruise lines, and other supplies, (Zhenhua,2000). (Judith, 2014) recommends that one of the most important priorities is to be able to provide the most up-to date/relevant information to customers which agrees with the findings of this study where a majority agreed that information should be up to date and timely.

The rapid and fast growth of the Internet, intranets, extranets and other interconnected global networks in the 1990s playfully and dramatically changed the capabilities of information systems in business. This result concurs with (Iravo, Ongori and Munene 2013) who observed one important questions lingering in business sector has been why some hotels perform outstandingly while others fail which influenced a study on the drivers of organizational performance, citing information systems support as a driver for service performance. A study by (Oh and Parks, 1997; Nadiri and Hussain, 2005) concluded that information systems concepts are recognized as playing an important role for company's success in competitive market and firm performance.

This study also concurs with (Todd, 2013) who asserts that the information system must be able to support the latest smart grid innovations, distributed generation, net metering, time-of-use tariffs and the resulting complex billing calculations as well as provide support for the most popular

payment methods in service organization. It is therefore clear from his literature by (Todd, 2013) that systems capabilities must make calculated moves to maximize the return on investments from hoteliers and their clients. Todd, 2013 concluded through experience that, firms achieve their business objectives, overcome growth constraints and mitigate risk with minimal disruption to business-as-usual operations — all by adopting a phased approach to customer information systems transformation and by focusing on defined and well understood objectives, ensuring executive involvement and effective communication. From the findings it's confirmed from what (Bonnie, 2000) concluded that Electronic delivery media extend beyond the established external information databases; crucial to their success are systems of access to internal information and to internally developed information systems.

Recommendations

It was noted that IS capabilities are the main elements that differentiate an organization from others and make the firm matchless. IS is a support systems capability empowering hotels to formulate and implement effective and efficient strategies and goals which adds value to their businesses. Therefore, the IS capabilities are needed to endure challenges in the exploitation of IT that a company must successfully address over time and that a company must retain the IS capabilities for strategically positioning itself in the dynamic market environment.

Based on the findings and conclusion that there is a significant positive moderating influence of Information Quality on the relationship between IS Support capability and Hotel Performance, the researchers recommend that firms take into deep consideration the quality of information they make available to their customers as well as their potential customers. Further during study, it was noted that some hotels did not emphasize on use of information system support capabilities and information which has quality elements to enhance customer satisfaction culminating into hotel performance.

Overall, the authors suggest that hoteliers should take a more proactive approach to the implementation and maintenance of information system capabilities which are the main elements that differentiate an organization from others and make the firm matchless. Therefore, the IS capabilities are needed to endure challenges in the exploitation of IT that a company must successfully address over time and that a company must retain the IS capabilities for strategically positioning itself in the dynamic market environment. Finally, the study recommends that further in-depth studies should be undertaken for each of information systems capabilities

and information quality elements that elevate hotel performance to higher heights.

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