Exploration of Adoption of Information Communication Technology by Tourist Camps in Maasai Mara, Narok County, Kenya

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ABSTRACT

The use of ICT in service and hospitality industry is intended to enhance delivery of goods and services in a timely and less costly manner. In consideration of ICT as one of the driving forces of globalization, it may deliver unique opportunities by mitigating on vice such as poaching eradication, terrorism, and poor service delivery, access to information, connectivity as well as access to new markets. The importance of ICT to the economic development has long been recognized and yet tourist camps in Maasai Mara seem to be low in its adoption and use compared to other sectors or within the same sector elsewhere. The purpose of this study therefore was to explore ICT adoption by the Tourist Camps in Maasai Mara. This study was guided by three specific objectives. First is to establish Financial Resources that influences adoption of ICT by the tourist camps in Maasai Mara. Secondly is to determine infrastructural resources that influence adoption of ICT by the Tourist Camps in Maasai Mara. Thirdly is to investigate human resources and adoption of ICT by the Tourist Camps in Maasai Mara. The research utilized descriptive design and was limited to a population of 520 camps in from the Eight Conservancies in Maasai Mara, Narok County. The camps in the study includes both seasonal and permanent Camps. The study adopted a stratified random sampling where the population was grouped into stratus according to status that the camps belong to. The study utilized a formula that was proposed by Mugenda and Mugenda where ten percent of camps were taken from each stratum and their manager used as a respondent to constitute a study sample size of 520 respondents. In this regard, the respondents were the managers of these camps. The study utilized primary data that was gathered using semi structured questionnaire that contained open as well as closed-ended questions. Content validity of the data collection instrument was assessed by the researcher and the supervisor reviewing the items and adopting it from a similar study. On the other hand, the reliability was assessed by use of Chronbach's alpha coefficient test. The investigator administered questionnaires to the respondents and in cases where the respondent was not available, drop and pick later method was adopted. The study used descriptive statistics in the analysis of the data, which included mean, standard deviation and distribution tables. The presentation of the results was done in various forms, including charts, graphs, and tables. The findings of the study indicated that the independent variables (Financial Resources, infrastructure, and Human Resources) were significant and that there was an association between them and ICT adoption (the dependent variable). The value of adjusted R squared in the final model shows that the percentage of variation of the adoption of ICT can be explained by the combination of the three variables. The research established that there was a significant effect of Financial Resources, infrastructure, Human Resources on ICT adoption by the Tourist Camps in Maasai Mara. Both empirical and statistical evidence proved that a relationship existed between these variables and ICT adoption by the Tourist Camps in Maasai Mara. The study recommends to the institutional infrastructure that supports adoption of information communication technology by the tourist camps.

Key Words: *Financial Resources, Infrastructural Resources, Human Resources, Adoption of Information Communication Technology, Tourist Camps in Maasai Mara*

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1. Introduction

Adoption of Information Communication Technologies ICT in today's world has led to efficient and effective application of IT systems in the global market. According to Morales, (2009) use of technology as a strategic component for developing and growing business operations more so in the tourism industry has been of great importance. Interestingly, the adoption of Information Communication Technology comes as a result of disruptive nature that everyone has to cope with in the world. (World Bank Report 2012). According to the International Federation for IT and Travel & Tourism (IFITT, 2013) depicts that the tourist sector in the global economy has grown immensely employing many people in the system directly or indirectly. The International Labour Organization (ILO, 2010) accounts that over a third of the total workforce in the global service industries work in tourism sector. From the underlying assumptions, it is generally considered that technology is the driving force towards the growth of tourism sector (Ansah, Blankson, & Kontoh, 2012). Evidently, the application of technology as a management strategy in the tourist camps has been found to be un-proportional citing on the factors that tourist attraction camps ought to be in their natural ecosystem set up (Hoontraku & Sahadev, 2007) mostly in the third world countries. This is ironical to the most developed countries that view tourist sites to have effective and advanced communication devices plus installing sophisticated ICT to appeal in the international market. Notwithstanding that the role of ICT in tourist camps is recognized by several researchers and international bodies including International Labor Organization. Eze, (2013, Mihalic & Buhalis, 2013; Islam & Khang, 2011) defines that the application of technology strategy in business results to more effective business operations, process value addition and customer satisfaction which gives any business a competitive advantage in the market.

The application of technology in present business environment is regarded as one of the greatest breakthrough in the political, economic, social, technological and legal PESTEL environment. This has shaped all the sectors of the economy, from hospitality, agricultural, transport, manufacturing, banking and security. Evidently, the innovation of the mobile money transfer known as MPESA is backed as one of the success stories on how technology is changing the business landscape, the adoption of such models of technological innovation are now the key pillars for job creation and economic growth (Morales, 2009). In today's world, technology comes along with distinctive features that are for generalized use and tailor made. This plays a vital role in the level adoption of information communication technology by specific users who are the vendors, clients and system developers Keen and Mackintosh, (2001). Vast majority of business organization are finding it very impactful to adopt and cope with new trends in the technological sphere. This has been exemplified by the influence of social media such as Facebook, Twitter, Instagram, WhatsApp and many others. According to Weill and Ross, (2004)

defines that an appropriate IT system enhances processing of instant information that is genuine and transparent among the users. This helps to meet the organization goals and objectives as well as develop a working plan that adds value to the operation of institutions.

Kenya is among the top countries that are rated on best tourist destination with one of the great wonders of the world, the beast migration that catches the attention of local and international news. Due to the widely application of the technology, there is also need to adopt and use ICT strategy by the tourist camps in Maasai Mara in order to promote on their competitiveness in the global and Kenyan market. Tourist Camps and Lodges as well as hotel industry have received credit for their contribution in the development and growth of numerous economies in the world (Ross, (2004) Studies have shown that the role of these ventures in economic growth of countries especially in developing countries of Africa cannot be underestimated. According to Ross, (2004) Hotels represent over 50% of all employment opportunities and business enterprises in developed countries. A large number of 18 studies in Africa on Hotels have also shown that they have created a large number of employment opportunities.

Information Communication Technology (ICT) is defined as the collection of all technologies that enhance efficient and effective communication of information to the involved shareholders in an organization. ICT helps in communication processes, assists in data capturing, processing and transmitting information electronically. It therefore identifies itself as a key tool for any business willing to compete and remain in the modern economy. A competitive enterprise will need ICT to gather, sort, retrieve, process and transmit information. This may also assist economies in accessing information and knowledge to accelerate growth and reduce transaction cost. It also empowers an enterprise. Some commonly used ICT in the developing nations include Radio, TV and print media (Parliamentary Office of Science and Technology, 2006). Modern ICT, for example, programming, cell phones and related applications, for example, voice over the web have turned out to be accessible to numerous nations worldwide as of late. Nonetheless, the fastest development is in cell phone use (Parliamentary Office of Science and Technology, 2006).

The selection of ICT is essential to cordiality part as ICT has turned into a noteworthy impetus and empowering influence of hierarchical change (Hazbo et al., 2008). This alludes to the manner in which organizations convey, work together, and lead exchanges with their clients, providers and wholesalers by means of the web and the capacity for nearby lodgings to take an interest in the computerized economy (Golding, 2008). Golding contends that lodgings have the chance to accomplish an upper hand from advances in ICT through development, promoting, productivity increases, better quality and client responsiveness. Likewise, Levy, Powell and Yetton (2002) discovered some proof to show that nearby inns can act proactively in connection to ICT use. ICT has become part and parcel to many organizations. This is largely articulated to the role that ICT plays in tourism and tourist camps. Key important role function is that it directly enhances access to site information by the individual tourists and the operators of tourist camps whichever place on the globe they are located. This has been demystified by the integration of IT system to business processes to come up with real time information and virtual touring and business management Bethapudi, (2013). Over the decade, ICT has been and continues to exist in a dynamic business environment. This brings in the competitive edge to those tourist camps that are fully in the system. In addition, ICT is becoming one of the main drivers of business operation in terms of helping to meet customer expectations, matching global

standard in service provision, changing work related activities and gaining access to global market in equal proportion as depicted by Shi, Alastair& Kevin, (2006).

In modern days, ICT is regarded as one of the strongest influencer of organizational goals in short run and long run given its timely and solid impact. Technology acts as a disruptive in the market places impacting heavily on the financial, operational and human resource structure in an industry set up. Beaudry and Pinsonneault, (2010). Tourist Camps in Maasai Mara are mostly frequented by local and international tourists all over the continent, through the adoption of proper ICT models has led to a meaningful promise to hospitality shareholders. The applicability of the system gives a visualized range of a complete business set up. The managers and security personnel can track customer's background information in a multifaceted approach, this is to enhance security threat that may be posed by some tourists given that Kenya is experiencing terror alert from Al-Shabaab militia. Use of the appropriate ICT system that has ease of use, useful and user friendly with positive attitude helps organizations to meet on their diverse objectives in the business more so the hospitality industry (Gallivan&Srite, 2005). Recently, the implementation of ICT system in large, medium and small sized firms is gaining momentum as a result of Kenya becoming more industrialized. These organizations are dealing with very many activities that call for selective synergy in data management and effective application of ICT to facilitate internal and external processes in the business operations. However, majority of the Hotels are in the Larger Mara Triangle which is (31%) of all the camps in maasai mara, Naboisho (16%), Olare (15%) Olchorro (9%). These camps in the county face almost similar challenges to other Hotels in other parts of the world. In order to prepare for the global market and avert competition, hotels in Maasai Mara Narok County continually engage in activities that improve their efficiency and performance (Gallivan&Srite, 2005). Although a few Camps in this county have adopted ICT, majority of them have not yet adopted ICT. Owing to the numerous benefits related to the adoption and utilization of ICT, challenges such as poor ICT infrastructure in the county may have affected adoption and utilization of ICT by these camps.

2. Statement of the Problem

The use of ICT in service and hospitality industry is intended to enhance delivery of goods and services in a timely and less costly manner. In consideration of ICT as one of the driving forces of globalization, it may deliver unique opportunities by mitigating on vice such as poaching eradication that has been rampant in Kenya, access to information, connectivity and access to new markets. (IFPRI, 2001). Whereas there has been growth in the use of ICT by large enterprises in the hospitality industry to gain a competitive edge, Oparanya (2009) state that ICT integration in different Sectors and institutions is very low and requires investigation to identify the obstacles. Utilization of ICT in rural based business projects remains an issue of concern to researchers, government and project stakeholders to date (Haiser, 2004). ICT adoption and use by these camps is critical for their development and survival especially now that the world has become a global village. World Bank Report (2011) indicate a low ICT adoption and use by hotels and service industry in the rural areas limited to telephony while use of computers and especially e-commerce remains low (Seno, 2017) Seno also indicates that above 80% of Tourist Camps in Maasai Mara have not fully embraced the use of ICT as a business tool yet they hold a lot of potential in improving access to information and market share as well as boosting business and reducing insecurity (Seno, 2017). There is a significant role of ICT adoption by business enterprises in socio- economic development. A Report by the World Bank indicate a low ICT adoption and use by hotels, limited to telephony, while use of computers and especially e-

commerce remains low (World Bank Report, 2001). ICT components are rarely used by small enterprises as business tool, yet they hold a lot of potential in improving access to information and market share, (Mansell & When 2008). This study therefore was to investigate the effect of strategic resources on adoption of ICT by tourist camps in Maasai Mara Game reserve, Narok County, Kenya thereby filling in the knowledge gap. The knowledge on the effect of adoption of ICT will provide information necessary to enhance adoption through policy intervention, awareness, creation among other measures. The benefits of ICT to the industry will translate into positive results in the country's economic development (Mansell & When 2008). The ICT adoption rate by Hotels rural Kenya is therefore, comparatively low at 15%. Despite the importance placed on ICT, a report by the ICT department of Narok County Government showed that out of over 520 camps in Maasai Mara, less than 14% have adopted ICT (ICT Department, 2018). This scenario shows that the adoption level of ICT by these camps in the county is still low, and therefore, there must be a reason why the adoption rate has remained low. Based on this background, this study sought to explore on ICT Adoption by tourist camps in Maasai Mara, Narok County Kenya.

3. Research objectives

To explore on ICT Adoption by tourist camps in Maasai Mara, Narok County Kenya.

The research was guided by the following specific research objectives:-

- i. To establish Financial Resources that influences adoption of ICT by the tourist camps in Maasai Mara Game Reserve.
- ii. To establish the effects of Infrastructural Resources on adoption of ICT by tourist camps in Maasai Mara Game reserve, Narok County in Kenya.
- iii. To establish the effect of Human Resources on adoption of Information and Communication Technology by tourist camps in Maasai Mara Game reserve, Narok County, Kenya.

4. Theoretical Review

This involves defining concepts and discussing existing theories used in this research. The hypothetical audit shows the profundity of our comprehension of the speculations and their center thoughts that identify with the subject of the exploration and furthermore the more extensive fields of learning in examination of powers impacting ICT appropriation and use by the vacationer camps in Maasai Mara. Theoretical review is used to regulate the scope of important data by concentrating on specific variables and defining the specific opinions or framework that the researcher took in making the analysis and interpreting the data or information gathered, understanding the variables and the concepts according to the provided definitions, and creating an understanding by relating certain approaches to the attached theories in the studies.

4.1 Technology Acceptance Model (TAM)

According to Fred Davies, (2009) the technology acceptance model (TAM) is an ICT theory that shows how users come to accept and use a technology. The model suggests that when users are presented with a new technology, a number of factors influence their decision about how and when they will use it, this factors includes, Perceived usefulness (PU) – This was defined by Fred Davis as "the degree to which a person believes that using a particular system would

enhance job performance; and Perceived ease-of-use (PEOU) – Davis defined this as "the degree to which a person believes that using a particular system would be free from effort. This model speculates that Technology utilization is specifically dictated by social expectation to the utilization, which is thus impacted by clients' attitude towards utilizing the Technology and the apparent helpfulness of the Technology. Attitudes and perceived convenience are additionally influenced by its usability. Perceived Usefulness (PU) can be depicted as how much an individual trusts that using a system will manufacture his or her movement execution. The perceived ease of use (PEOU) depicts to how much an individual trusts that using the structure will be free of effort (Davis et al., 2009). Seen comfort explicitly impacts desire to use, and saw convenience has a backhanded effect through seen helpfulness and furthermore frame of mind regarding conduct aim.

TAM is generally acknowledged as an essential commitment in the investigation of reception of web innovations and particularly in the administration business. The model gives a proposal that at whatever point clients are given another innovation, there are various variables that affect their choices in transit and when they will make utilization of it, remarkably: Perceived Usefulness (PU) – can be depicted as the dimension or degree to which an individual acknowledges that creation utilization of a specific framework would conceivably upgrade his or her activity ", the Perceived Ease of Use (PEOU) is characterized as "the dimensions to which an individual trusts that using a specific framework would be free from any exertion" (Davis, 1989) just as the User's Attitude. Therefore, this model is a useful model for this research paper because it gives an overview of ICT adoption as well as the consumers' perception of the technology. Research has indicated that ICT adoption is influenced by various factors, such as infrastructure and financial resources. (Taylor & Todd, 2005). Sabouri & Zulkiffi (2012) argued that in organization that has limited resources, adoption of ICT is unlikely because they may not have resource power to put down the infrastructure requirement for ICT adoption. In this light therefore, it is proper to argue that management of such establishments may fail to adopt ICT. Ghobakhlo et al (2012) stated that in several organizations, employees who are not technologically placed and well trained as competence technological survey individuals may resist such developments. This model is therefore important to this project as it explains in depth how ICT infrastructure as a resource as well as ICT human resources and skills may influence ICT adoption by tourist camps in Maasai Mara, Narok county Kenya and therefore this model has been placed to be the main that this study is based on.

4.2 Innovation Diffusion Theory by Rodgers

The theory postulates on the application of technology based models and platform by users and their behaviors towards new technology. Rogers' development dissemination hypothesis characterizes a thought as a training or thing that is viewed as new by an individual or another unit of gathering, while scattering is the system by which headway is bestowed through explicit channels after some time among the people from a social structure (Rogers, 2005). Through these definitions, diffusion of innovation is achieved in the way a social framework or system acknowledges and starts to utilize and embrace a thought or an innovation. Roger further expresses that coming up next are the attributes of any advancement: Relative advantage - this is how much the headway or advancement is viewed as being unrivaled than the training it outperforms similarity, how much grasping the improvement is great with what people do, multifaceted nature, how much an improvement is viewed as commonly difficult to appreciate and use, primer limit, how much an advancement or development may be investigated,

distinctive roads in regards to on a confined preface before making a choice (or expulsion) decision, and the capacity of being watched, how much the delayed consequences of a development are discernible to other people (Rogers, 2005).

Early Adopters are progressively obliged with the points of confinement of the social system. Rogers (2005) battled that since early adopters will undoubtedly hold compelling positions in the social system, distinctive people come to them to get direction or information about the development or progression. This fits well into individuals like Michael Joseph, James Mwangi, William Ole Ntimama and Dr. Bitange Ndemo. Early Majority, Rogers (2003) declared that, in spite of the way that the early lion's share or overwhelming has a better than average connection or correspondence with various people from the social structure, they don't have the situation of power that early adopters have. Nevertheless, their social frameworks are so far basic in the improvement spread process. Most of the tourist camps in Maasai Mara are said to be in deliberate adopting the innovations that resemble the early majority, the late majority includes a third of all the members of social system who are known to wait until the time most of their peers have adopted the innovation. Even though they may be skeptical about the innovation and its outcomes, economic demands or necessities coupled with peer pressure may force them to adopt any kind of innovation that has been developed. Laggards have been known to have traditional view and they are known to be more skeptical when it comes to the matters to deal with innovations and change agents than the modern or late majority.

As the most limited or localized group of the social system, their interpersonal connections or links are mainly made up of other members of the social system coming from the same category or group of people. To add on this, they do not take up the roles of leadership. Owing to the fact that they have limited resources together with lack of awareness concerning innovations, they would first of all want to ensure that an innovation works or performs the tasks it was meant for effectively before they can make up their minds. Thus, we can conclude that the laggards have been known to make their decisions after observing if it was successfully adopted by other players in the social system previously. This is a real case that explains the background of this theory and the subsequent fear of Camps in adopting ICT in their functions. Therefore, this theory has indicated that the internal as well as external environment of an organization may hinder the adoption of ICT due to government policy, poor infrastructure and financial Resources availability to purchase and install the ICT framework. As such, the theory will help to assess the effect of financial security and ICT infrastructure on ICT adoption by the Tourist Camps in Maasai Mara.

Additionally, Environmental factors such as technology support how the organization financial resources and other processes while determining the swiftness of technology adoption by enterprises. The availability of technology of financial resources affects the way technology is implemented. This theory is considered to be the most suited for this study because it highlights the major issues that this research study intends explore (Oliveira & Martins, 2011). Researches have shown that many firms and organizations are afraid of adopting ICT because of the financial implications and other general cost associated with its implementation. This is the real case that explains the background of this theory and the subsequent fear of hotels and other hospitality industry in adopting ICT in their functions, therefore, this theory has indicated that the internal as well as the external environment of an organization may hinder the adoption of ICT due to poor infrastructure, financial resources of an organization especially cost of acquisition, implementation, and maintenance as well as general employee preparedness. As such

the theory will help to explore in details the effects of financial resources and adoption of ICT by the tourist camps in maasai mara, Narok County Kenya.

4.3 General Theory of Task-Technology Fit

Goodhue and Thompson (2005) explored the relationship that exists between data innovation and personal performance, with the desire for avowing the presumption that utilization and assignment innovation fit together are in a place of clarifying its effect (data innovation) on execution than just the use, specifically the required use circumstances. As per an examination by Goodhue and Thompson (2005), they proposed a careful development to-execution demonstrate that included the characteristics of advancement, errands and individuals as illustrative components for development use and individual execution. A less troublesome version of the model was then attempted tentatively, barring solitary customer characteristics from the examination. Goodhue (2005) made and attempted a model that recognized errand innovation fit reliant on embraced needs and system characteristics. Undertaking innovation fit was viewed as how much advancement convenience coordinated the necessities of the assignments together with individual capacities. It was anyway expected that customers can viably evaluate undertaking advancement fit and that a higher fit would at last outcome in better execution. Goodhue (2005) in like manner wanted to exhibit that (client saw) assignment innovation fit was an unrivaled marker of the estimation of a data framework than different types of assessing clients like the dimensions of fulfillment and convenience. From the perspective of ICT, this theoretical model theorizes an individualized subjective norms and attitude mediates the effects of how the adoption will fit the organization's existing operational framework. One would argue that this theory well explains the technological factors as a determinant of ICT adoption. From the management point of view, the theory suggest that cost and other financial resources of an organization should be considered including relative advantage and fit as well as risks associated with the going concerns of an organization. This theory therefore will help in great concerns in explaining the relationship of technological factors and the adoption of ICT by the tourist camps in maasai Mara, Narok county Kenya.

5. Empirical Review

This section discusses various studies that have tackled diverse factors or elements as well as variables influencing adoption of ICT including Financial Resources and adoption of ICT, Infrastructural Resources and adoption as well as ICT Human resources, skills and training and adoption of ICT elucidating and reviewing also on various studies that have explored these factors in depth. Research indicates that the use and integration of ICT into business or any entity has revolutionized the way things are normally done .these types of changes that must affect the corporate culture of doing things are not easily implemented at all times. Researchers say that it can take several years before a simple technology is widely accepted. There has been arguments and rightly so, that the use of ICT has diverse effect on when it comes to information technology costs and has severe financial implications (Gulbakar, 2007). Additionally, it has been argued that most corporate management is so fearful of this ICT cost. Cost associated with new ICT systems have always been known to be high. (Ouma 2010) it is noted with concern that ICT ranges from technologies that can be acquired or implemented as a standalone systems to those that are shared over a network. The issue of purchase, importation and installation cost, maintenance, employee training expenses as well as all other related expenses and logistics is what has been seen as holding most camps back.

A study conducted by Laudon(2003) indicated that most financial banks in developing countries have lost a considerable sum of money over 100 million to ICT related loans and other non-performing loans due to system and ICT breakdown caused by poor system's specifications.

According to Melville, (2004) deliberate actions by people whether insiders or outsiders pose a serious financial threat to the acquired ICT systems this is specifically to enable them benefit through repair and maintenance expenses. Melville notes that although some of these damages of ICT systems may be accidental or normal general wear and tear, the damage can be detrimental to the financial position of an organization. However, other damages may be caused by pure malfunctioning of the ICT systems which could cause real havoc in the enterprise running of daily activities leading to huge losses hence affecting financial position of an organization. (Laudon, 2007). Greenwood (2007) says that vital money related assets assume an imperative job in gathering and conglomerating reserve funds and after that redistributing it for beneficial purposes. A created monetary market is obviously basic for the ICT reception is an economy driven by modern innovation. Specifically, the estimation of funding ventures is particularly imperative as it accounts start-up activities, which will in general dominantly use new advancements and thoughts. Value markets speak to the second critical channel for financing the ICT appropriation.

Notwithstanding, as in some other developing markets (EM), the money related market in Kenya was not all around created to fund ICT ventures. Sound administration and viable oversight which realize trust in monetary assets is basic to the achievement of such undertakings, subsequently their capability to goad development in the business. ICT frameworks and especially broadcast communications frameworks are extravagant and require tremendous capital expense to send. As indicated by Gilles (2002), all the factors and expenses associated with system implementation should have been budgeted for or else this will greatly affect how the decision making processes of an organization in relation to ICT will be affected. Gareth Mitchell (2009) describes ICT infrastructure as the facilitating foundation of information technological capabilities that are shared and depended on by business. Ruble (2007) notes that ICT infrastructure as the technological foundation of basic data, communication and computer systems. He adds that ICT infrastructural resources as the technology structure guiding the business to satisfy its management and business needs. Ryle, (2008) describes the ICT infrastructure as a set of ICT resources which ensures the feasibility of innovation and the ongoing enhancement of IT systems. Although it is typically claimed that ICT investment are cost effective, the ongoing decline in the prices of ICT , the entire process including skills acquisition, development, maintenance, upgrading , hardware, and software is still high (Gle 2007).

In a continuous BBC impart of the program, Digital Planet, Gareth Mitchell (2009) elaborates the exercises to refresh Internet access for a couple of African countries. As African business visionaries progressively pronounce their aim to put resources into ICT, broadly organized activities to design, set strategy and create aggregate acquiring techniques are asked. Composing individually in worldwide and American settings, Ameil (2006) and Davis, (2007) alert against pondering the "advanced partition" in straightforward terms of ICT and programming. They have recommended that Managers and firm proprietors need to consider the full extent of assets essential for successful ICT coordination. Different methodologies have been utilized in various

nations as motivations for organizations to end up all around associated with information systems in spite of the fact that the Internet is recognized as an essential wellspring of ICT. Ryle (2008) report from Indonesia, that social qualities and existing infrastructural requirements can repress the execution of ICT Adoption. An investment in ICT may be considered as an added cost and supporting considerable implementation of ICT is a challenge and many organization and systems in developing countries experience. Research has indicated that many firms even in developed countries have had problems adopting ICT because of the cost of hardware as well as software infrastructure (Kinuthia, 2008)

Because of cultural structure human and technological factors are always critical to facilitating ICT adoption. The insufficiency of such resources causes difficulties for firms to adopt ICT. Mokaya (2012) showed that the costs of ICT adoption are commonly regarded as being high by upcoming establishments. Specific costs related to ICT adoption are mostly initial acquisition technological equipment, cost related to development of the systems, among other important operational platforms. Mokaya (2012). The literature recognizes the lack of knowledge and awareness by human resources personnel of an organization as one of the important obstacles to its ICT adoption. As indicated by review done by Farrell (2007), an expected distinctive ICT-related preparing and expert advancement projects, activities, and courses are in progress in Africa. From that point forward, extra national and provincial staff proficient advancement programs have developed. It is hard to appraise the quantities of staff with access to ICT and who have been prepared in their utilization for use and administration conveyance. Most nations reviewed have had some interest in building up the limit of representatives to utilize ICT as an administration conveyance asset through both in-benefit and pre-benefit programs. Most representatives - preparing programs in Africa include the improvement of fundamental ICT aptitudes, now and then as an end in itself, in spite of the fact that now and again these incorporate the use of ICT as a learning apparatus for individual from staff. Worker preparing frequently includes one-off, point drive, momentary preparing programs that plan to create explicit abilities of ICT staff, however which don't really consent to proficient guidelines of competency advancement.

The role that human capital plays in monetary development is greatly recognized. Different observational investigations have discovered that human capital is decidedly related with GDP development rates. In spite of the fact that framework has regularly been viewed as the principle obstruction to crossing over the Digital Divide, look into proposes that reasonableness and worker competency improvement are similarly essential variables. To gauge the general capacity of people to access and utilize ICTs, one needs to go past the customary spotlight on media transmission foundation, for example, cell phones and settled phone lines. Research has additionally demonstrated that Internet utilize is firmly connected to preparing of HR. Thompson (1998) says that there is significance of inserting ICT all through HR trainings in a way that reflects "innovation over the-programs" systems suggested for successful preparing. Earlier examination has prescribed that the far reaching and reliable use of such constructivist approaches as electronic portfolios, shared workspace, and experience based research in representative preparing point to consistently hoisting show and dynamically historic following utilization of ICT in invitingness affiliations.

Barak (2006) questions the amplexity of HR making arrangements for the productive utilization of ICT in step by step advantage movement errands. In a Norwegian setting, Krumsvik (2006) assumed that contemporary open and political help for ICT use, Hotels has not been composed

by organization transport results. Krumsvik offers a couple of possible circumstances for a logically beneficial pathway forward. ICT ought to be better made as a vehicle for the persistent enhancement and support of people from staff. Toward the day's end, ICT systems should be embedded in everyone's ventures that arrangement HR to facilitate ICT into their own step by step works out. A few Staff Members just as the clients have been found to have inadequate abilities and specialized learning in managing ICT developments, which has brought about opposition in the execution of ICT activities in Service industry (Zerriffi, 2010). Many firms in Kenya lack technologically qualified staff for spearheading ICT adoption (Farrel 2007) Several researchers suggest that employee's skills adequacy, beliefs and attitude affect successful adoption of ICT in enterprises. Barrck (2007) notes that the rapid pace associated with technology development is an implication that enterprises need personnel and this is a relevant obstacle to ICT adoption. He further argues that one of the key reasons for the failure of organization to adopt ICT is the lack of internal expertise.

According to various studies including the one done by Bagozzi, Davis and Warshaw (2015), adoption of ICT has been found to introduce numerous benefits for an organisation. The increasing level of demand for information and communication technological products in Kenya demonstrates the levels of infiltration of ICT in Kenya. The benefits associated with the adoption of information technology include reduced costs, increased efficiency, reduced errors, and access to new operational technology (Arce, (2005). Information communication technology plays an important role in the functioning of an organization. The use of ICT at organizational level ranges from personal to mainframe computers, simple applications such as word processors to sophisticated systems that play an important role in organizations (Ghobakhloo *et al.*, 2011). Recent research has established some of the factors that affect ICT adoption by firms in the hospitality sector, which include ICT Financial Resources, ICT infrastructure, Human resources and their degree of ICT skills (Waema (2009)). A research done by Mentzas (2001) indicated that most Hotels in rural areas in developing countries have not adopted ICT. Further research done by Doherty et al (2002)), showed that the adoption rate of ICT in Kenyan rural firms remained low at only 15%

6. Conceptual Framework

The conceptual framework gives a clear understanding and holistic view of the independent variables that influence ICT adoption by Tourist camps in Maasai Mara Narok County as discussed in the empirical review section. These variables are Financial Resources, Infrastructures, and Human Resources. The dependent variable of the study was adoption of ICT.

Figure 1 Conceptual Framework

Author (2019)

7. Research Methodology

This research adopted descriptive research design. Descriptive design was suitable for this research because it helped to respond to the questions of the present going concerns and described the nature of the current conditions of the phenomenon under study. More so, the descriptive design helped in describing the characteristics, attitude and behavior of the subject under study. Besides, the descriptive design explored and explained as well as added more value on the research topic. This research targeted the 520 Tourists camps in 8 Conservancies in maasai mara within Narok County as documented by the county government (2018). The respondents were the managers and the owners of the camps/hotels and restaurants. The Tourist camps in maasai mara narok County fall under various conservancies such as Naboisho, Olare, Mara, Olosheti, Olchorro, Olkinyei, among others, their status of either being seasonal and those that are permanent makes them more heterogeneous. The stratified random sampling was utilized to take care of the heterogeneity of the population. The categorization of strata was guided by the category of their

conservancy and their operating status of each camp that they fall. After the strata were in place, the research then utilised Mugenda and Mugenda (2003) formula whereby a 10% of the population in each stratum was used. Simple random sampling was utilised to select participants from each strata. The questionnaires were given to manager/owner of these camps.

This study utilized a questionnaire with relevant, unambiguous, and clear questions to collect primary data. The research used semi-structured questionnaires where the respondents selected answers that reflected their views in closed questions, as well as, give their opinions in the open-ended questions. The rationale for using semi-structured questionnaire was that the researcher was able to gather standardized responses for meaningful comparison as well as get respondent's opinions on the variables of the study. Second, closed questions provided data that could easily be coded, computerized, and analyzed as it collected quantitative data. On the other hand, the open-ended questions allowed the researcher to gather qualitative data. The qualitative data which was produced from open-ended questions was categorized according to the study objectives and described in narrative form. The quantitative data was analyzed using inferential and descriptive statistics. The researcher performed the analysis of the data assisted by the statistical Package for Social Sciences (SPSS) version 21 by conducting various statistical tests. The findings of the analysis were presented utilizing graphs, pie charts, and tables. The descriptive statistics included measures of relative frequencies, standard deviation (measure of variability), the mean (measure of central tendency) and frequency distribution tables. The inferential statistics comprised of a linear regression model. This model was utilized to determine the effect of the independent variables on the dependent variable. The form that multiple linear regression equation was $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \varepsilon$, $Y =$ Adoption of ICT by Tourist Camps, $X_1 =$ ICT Financial Resources, $X_2 =$ Infrastructural Resources, $X_3 =$ Human Resources, while β_1 , β_2 , and β_3 are the regression coefficient and ε is the error term.

8. Data Analysis Results

The regression analysis method was used to come up with an explanation of the factors that influence ICT adoption by Tourist camps in Maasai Mara Narok County Kenya; the analysis was done with the use of SPSS analysis tool. The model equation is as shown below. $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \varepsilon$ Where $Y =$ Adoption of ICT by Tourist Camps $X_1 =$ Financial Resources $X_2 =$ Infrastructure $X_3 =$ Human Resources while $\varepsilon =$ Error term.

Table 1: Regression Analysis Coefficients Results

	Coefficient	St error	T stat	P- value
Intercept	0.6095	0.07	2.175	0.000
X1 (Financial Resources	0.068	0.11	4.024	0.0045
X2 Infrastructure	0.667	0.173	5.602	0.004
X3 (Human Resources)	0.348	0.280	1.624	0.000

Source Survey data 2019

The coefficients for the three individual factors influencing adoption of ICT by Tourist camps are presented in Table 1. ICT Financial Resources ($p=0.0045$), Infrastructure ($p=0.004$), and Human Resources ($p=0.000$) showed that all the four predictor variables were significant factors

that affected the adoption of ICT by the Tourist Camps in Maasai Mara. From the results, a unit increase in Financial Resources would result in an increase in ICT adoption by Tourist Camps in Maasai Mara. ICT Financial Resources is a significant determinant of ICT adoption as shown by the p-value of 0.0045.

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std Error of the Estimate
1	.872	.8360	.702	0.34012

Source Survey data 2019

The value of the adjusted R squared in the final model (.702) shows that the 70.2 percent of variation of the adoption of ICT can be explained by the combination of the three variables; financial resources, infrastructure as well as Human Resources. The remaining 29.8 percent account for the unexplained variance, which means 29.8 percent of variability has not been accounted for.

9. Conclusion

The study concludes that there is a positive and adequate significant relationship between Financial Resources and ICT and adoption ICT by Tourist Camps. This implies that a unit increase in Financial Resources would significantly increase adoption of ICT by the Tourist Camps. The Infrastructures and competence Human Resources to handle and use various ICT equipment's in the Tourist Camps play a great role in influencing adoption of ICT. Financial Resources, Infrastructure and Human Resources should be strengthened to encompass more areas, more involvement on it have significant effect as strategic resources influencing adoption of information communication technology by the tourist camps in Maasai Mara game reserve. Further, the study postulated that Financial Resources, Infrastructure, Human Resources have significant effect as strategic resources influencing adoption of information communication technology by the tourist camps in Maasai Mara.

10. Recommendations

The study makes the following recommendations about adoption of information communication technology by the tourist camps in Maasai Mara. The recommendations are consistent with the literature review. The study recommends that the institutional infrastructure that supports adoption of information communication technology by the tourist camps. This was involved restructuring the laws, offering advanced training to the respondents' who handle ICT directly. In addition, the public institutions charged with dealing with ICT training should be reformed to enable them carry out their duties effectively.

References

- Acharya, B. (2010). Questionnaire Design. Nepal: University Grants Commission. African Population and Health Research Center (2015, December 17). Retrieved from How Much Is Spent on HealthCare In Kenya And Where Does The Money Come From? http://aphrc.org/how_much_is_spent_is
- Agarwal, R., & Prasad, J. (2013). *Decision sciences*. The role of innovation characteristics and perceived voluntaries in the acceptance of information technologies, 28(3)

- Allison, I.K. (1999). Information systems professionals' development: A work-based learning model. *Journal of Continuing Professional Development*, 2(3),86-92.
- Amin, M (2005) Social science research: *Conception, Methodology and analysis*. Kampala: Makerere University Printers.
- Ansah, A. K., Blankson, S. V., &Kontoh, M. (2012).The use of information and communication Technologies (ICT) in front office operations of chain hotels in Ghana.*International Journal of Advanced Computer*
- Arendt, L. (2013). *Journal of Systems and Information Technology*. Barriers to ICT adoption inSMEs: how to bridge the digital divide? 10(2), 93 108. Retrieved from <http://dx.doi.org/10.1108/13287260810897738>
- Beaudry, A. &Pinsonneault, A. (2010). The other side of acceptance: Studying the direct and indirect effects of emotions on information technology use. *MIS Quarterly*, 34(4), 689- 710. Bethapudi, A (2013). *Journal of applied economics and business, Vol1, issue 4 – December 2013, pp. 67-79*
- Beckinsale, M., & Ram, M. (2010). Environment and Planning C: Government and Policy. Delivering ICT to ethnic minority businesses: an action research approach, 24 (6), 847-867.
- Braun, P. (2003) SME networks: Clustering for regional innovation purposes. A paper for the small enterprise association of Australia and New Zealand] 6th annual conference, Ballarat, 28 September. I October,2003.
- Bridging the IT Adoption Gap for Physician Practices: An Action Research Study on Electronic Health Records, 24, 15-28.doi:10.1080/10580530601036786
- Bukachi, F., & Walsh, P. (2012).Chest 132.Information Technology for health in developing countries 1624 1630.
- Burns, R. &Koponen G., (2003) ...*Introduction to research methods*, 4th Ed. New South Wales: Pearson Education.
- Calman , N., Kitson, K., & Hauser , D. (2010). Using information technology to improve health quality and safety in community health centers.Prog Common HealthPartners, 83 89.
- Cayla, G., Cohen, S. &Guigon, D. (2005) WJMAX an efficient tool to bridge the digital divide. WIMAX Forum, November 2005.
- Challenges in procurement and use of donated medical-equipment: study of a selected referral hospital in Tanzania, 3(4), 1-8.
- Christenson, P. (2010, January 4). ICT Definition.Retrieved from Tech Terms. <http://techterms.com>
- Cohen, Louis; Lawrence, Manion and Morrison, Keith (2000).*Research Methods in Education* (5 th Ed.). London.
- Computers Helping People with Special Needs. Springer Berlin Heidelberg, 2006.480-487
- Conrad, P., & Schneider, J. W. (2011). From badness to sickness: Temple Univ Pr. Deviance and medicalization.
- Cooper, D. R. & Schindler, P.S. (2003). *Business Research Methods. 10th Edition*, Singapore: McGraw-Hill.
- Cooper, D.R. & Schindler, P.S. (2000), *Business Research methods*, 7'h edition, New York: Irwin McGraw-Hill,
- Cragg, P.B. (2002). Benchmarking information technology practices in small firms. *European Journal of information systems*, 11:267-282.
- Dash, N.K. (2005). Research Paradigms in Education: Towards a Resolution. *Journal of Indian*
- Davenport, T. H. (2013). Process innovation: re-engineering work through information technology. Harvard Business Press. *Education* 19(2), pp1-6.
- Davidson, E., &Heslinga, D. (2013).Information Systems Management.
- Davis F.D., (2002), Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, Vol. 13, no 3, p.329-340.

- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), pp. 319–340.
- Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management Science*, 35(8), pp. 982–1003.
- Dixon, T., Thompson, B. & McAllister, P. (2002). The value of ICT for SMEs in the UK: a critical literature review, Report for small business service research Programme , The college of Estate management.
- Doig, L. (2000). Making e-commerce affordable. *Australian CPA*, 70(6).
- Drury, P. (2015). The e health agenda for developing countries. *World Hospitals and Health Services* 38 40.
- Eze, A. A. (2013). *Management practice in an organization*. Available Online. Retrieved March 25th, 2015, from <http://www.aiu.edu/applications>
- Frank, E. Z., Shiv, K. T., & Faustin, K. K. (2012, October). *Researchers World*.
- Gallivan, M., & Srite, M. (2005). Information technology and culture: Identifying fragmentary and holistic perspectives of culture. *Information and Organization*, 15(4), 295-338.
- Gatero, D. G. (2010). Utilization of ICTs for Accessing Health Information by Medical Professionals in Kenya: A Case Study of Kenyatta National Hospital. *Journal of Health Informatics in Developing Countries*, 1-29.
- Goodhue, D.L., & Thompson, R.L. (1995) "*Task-Technology Fit and Individual Performance*," *MIS Quarterly* 19 (2) 213-236.
- Hazbo, S., Arnela, C. & Chun-yan, H. (2008) ICT adoption model of Chinese EMEs. *International journal of business research*, 44 (2008), 161-165.
- Healy, M., & Perry, C. (2000). Comprehensive criteria to judge validity and reliability of qualitative research with in the realism paradigm. *Qualitative Market Research – An International Journal*, 3(3), 118-126.
- Hoontrakul, P. & Sahadev, S. (2007). ICT Adoption Propensity in the hotel industry: An Empirical study. *International Marketing Conference on Marketing & Society*.
- IEA.(2009). International Energy Agency. *World Energy Outlook*
- Ihua, U.B. (2009) SMEs Key Failure-Factors: a comparison between the United Kingdom and Nigeria. *Journal of social sciences*, 18 (3), 199-207.
- International Federation for IT and Travel & Tourism [IFITT].(2013). *Information and communication technologies in tourism*. Retrieved April 15th, 2013, from <http://www.ifitt.org>
- International Labour Organization (ILO). (2010). *Developments and challenges in the hospitality and tourism sector*. Geneva: ILO Sectoral Activities Programme.
- Islam, N., & Khang, D. B. (2011). Does ICT adoption enhance hotel performance? *Journal of Hospitality and Tourism Technology*, 2(1), 34 – 49.
- ITU. (2016). Trends in Telecommunication Reform: Regulatory Incentives to Achieve Digital Opportunities. Retrieved from International Telecommunication Union: Publications Hao & Chow, 2004).
- Keen P., and Mackintosh R. (2001). "The Freedom Economy: Gaining the M-Commerce Edge in the Era of the Wireless Internet". New York, Osborne/McGraw-Hill
- Kenya ICT strategic paper for economic growth (2006). Ministry of information and Communication, Kenya.
- Kenya ICT strategic paper for economic growth (2006) Ministry of information and Communication, Kenya.
- Kenyanya, J. (2015). Issues affecting healthcare in Kenya and Sub-Saharan Africa. *Health Management Systems*, 41-58.
- Kim, Y. G., Eves, A., & Scarles, C. (2013). Empirical verification of a conceptual model of local food consumption at a tourist destination. *International Journal of Hospitality Management*, 33, 484-489.

- Kirby, D. & Turner, M. (1993). IT and the small retail business. *International journal of Retail and Distribution management*, 21 (7), 20-27.
- Kothari, .C. R. (2004), *Research Methodology: Methods and Techniques*, 2nd Edition, New Age
- Kunda, D. & Brooks, L. (2000) Assessing important factors that support component-based development in developing countries. *Information technology for development*, 9 (2000), 123-139.
- Kuteyi, D. (2009). Poor funding, bane of SMEs. *Punch Newspaper*, 8 April 2009.
- Lauder, G. and Westhall, A. (1997). Small firms online. *Commissions on public policy and British Business*. Lim, T. M., (2006), Outstanding to Ensure successful ICT systems implementation and maintenance.
- Lymer, A. (1997). The internet and small business: a study of impacts. Fifth European conference on information system
- MacGreor. (1996). Attitudes of small business to the implementation and use of IT: are we basing EDI design initiatives for small business on Myth? 9th International EDI-IOS conference.
- Mansell, R. & When, V. (1998) knowledge societies: Information technology for sustainable development. United nation commission on science and technology for development, oxford university press.
- Matlay, H. & Addis, M. (2003) Adoption of ICT and e-commerce in small businesses: an HEI based consultancy perspective. *Journal of small business and enterprise development*, 10 (3), 321-335.
- Mehling, M. (1998). Small businesses are eager to sell wares on the web. *Computer reseller News*, 794, 87-94
- Mihalic, T. & Buhalis, D. (2013). ICT as a new competitive advantage factor – case of small transitional hotel sector. *Economic and Business Review*, 14(1), 33–56.
- Mihalic, T. & Buhalis, D. (2013). ICT as a new competitive advantage factor—case of small transitional hotel sector. *Economic and Business Review*, 15(1), 33-56.
- Millerand F., Giroux L. ET Proulx S., (2001). The culture technique, appropriation cognitive in technology information and communication, *Actes du colloque international ICUST*, Paris.
- Mugenda, A.G. (2008). *Social Science Research: Theory and Principles*. Nairobi: Arts Press.
- Mugenda, O.M., & Mugenda, A.G. (2003). *Research Methods, Quantitative and Qualitative Analysis-African Center for Technology Studies*. Nairobi: Applied Research and Training Services (ACTS).
- Mugo, D. M. (2014). *International Journal of Arts and Commerce*. Determinants of Electronic Health in Developing Countries, 3(3), 49-60.
- Mwamure, A. N. (2013). *Effect of information and communications technology supported operations on service quality at the department of immigration, Kenya* (Doctoral dissertation, University of Nairobi).
- Ngechu, (2004). *Understanding the Research Process and Methods: An introduction to Research Methods* Nairobi, Acts Press.
- Nyella, E., & Mndeme, M. (2010). *Electronic Journal of Information Systems in Developing Countries*. Power Tensions in Health Information System Integration in Developing Countries: The Need for Distributed Control., 43(4), 1-19.
- Organization for economic co-operation and development (OECD) (2000) The Bologna charter on SME policies.
- Parliamentary office of science and technology (2006) ICT in developing countries. *Postnote*. March 2006, No 261.
- Porter, L., & Tanner, S. (Eds.). (2012). *Assessing business excellence. Routledge. Science and Applications*, 3(3), 72 - 77.
- Premkumar and Ramamurthy (1995), Crook and Kumar (1998), Beatty et al, (2001) and Tarafdar and Vaidya (2006),
- Premkumar, G., & Roberts, M. (1999). Adoption of new information technologies in rural small business, *Omega*, 27 (4) 467-484.
- Rogers E., (2003). *Diffusion of Innovation*, 5th Edition, Free Press, New-York

- Seethamraju, R. (2012). Business process management: a missing link in business education. *Business Process Management Journal*, 18(3), 532-547.
- Serenko, A., and Bontis, N. (2004). A Model of User Adoption of Mobile Portals.
- Shi, Fangmin, Alastair Gale, and Kevin Purdy 2006. "Helping people with IT device control by eye gaze." Spectrum (1997). Moving into the information society, HMSO, London.
- Taylor, S., & Todd, P. (1995). Understanding information technology usage: A test of competing models. *Information Systems Research*, 6(2), pp. 144–176
- Teijlingen, E. R., & Hundley, V. (2001). The importance of pilot studies. *Social Research Update*.
- Thong, J. e. Yap, (1996). Information technology adoption by small business: An empirical study, In *Diffusion and adoption of information technology*, ed. K. Kautz and J. Pries, pp. 160-175.
- Thong, J.Y.L (1999) an integrated model of information systems adoption in small businesses. *Journal of management information systems*, 15 (4), 1870214.
- Trochim, W. M. (2000). *The research methods knowledge base*. Retrieved November 13, 2003, from <http://www.socialresearchmethods.net/kb/>
- Venkatesh, V., Morris, M. G., Davis, G. B. & Davis, F.D. (2003). User Acceptance of Information Technology: Towards a Unified View, *MIS Quarterly*, 27(3), 425-478.61.
- Vinig, T., Blocq, R., Braafhart, J. & Laufer, J. (1998). Developing a Successful Information and Communication technology industry: The role of venture capital, knowledge and the government, Prima Vera working paper series (98-01), Universities van Amsterdam
- Wade, R.H. (2002) Bridging the digital divide: new route to development or new form of dependency? *Global Governance*, 8 (4), 443-66
- Woherem, E. (1993) *Information technology in Africa: Challenges and opportunities*, ACTS Press, Africa Centre for Technology Studies, Nairobi, Kenya.

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