

IMPACT OF E-COMMERCE INNOVATIONS AND STRATEGIES AS COMPETITIVE BUSINESS MODELS IN KENYAN SMES

WAGAH CLARENCE MWAGA¹

DR. JANE OMWENGA²

Post Graduate Diploma in Entrepreneurship, Jomo Kenyatta University of Agriculture and Technology, Kenya¹

Supervisor, Jomo Kenyatta University of Agriculture and Technology, Kenya²

ABSTRACT: This study identifies and examines factors affecting customer loyalty in e-retail environment. This research examines e-commerce and identifies convenient shopping experience as a strategy that can be used to improve service offering to attract and retain customers. Thus, it is useful for businesses to understand the differences between e-commerce and traditional methods of business to enable them identify the new internet-based opportunities that might better satisfy the unique needs and desires of their customers. A qualitative research design was used. Primary data being the main source of data for this study was gathered by use of questionnaires and interviews. The researcher collected data through questionnaires to examine how e-retailing improves customers shopping experience. The researchers administered one hundred and fifty questionnaires (150) through hand delivery and web-based methods. The group of respondents comprised of working class people, credit card holders and students from who live within and on the outskirts of Nairobi. These respondents were randomly selected and contacted. Out of the one hundred and fifty people contacted, seventy (70) respondents returned completed questionnaires. This represents 47% response rate from the questionnaire. Purposive sampling was used to obtain the sample frame. Data was analyzed by SPSS and presented by tables and charts. The study established that the SME sector was characterized by young owners/managers (with majority being less than 45 years) mostly male, with at least high school/technical education. The sector was also characterized by firms with significant levels of ICT capacity, which increased with firm size. The major environmental factors of the MSME sector in the context of e-commerce adoption were that a greater proportion of the small and medium enterprises experienced the effect of customer pressure, competitive intensity, and supplier pressure. The analysis of technological and organizational factors indicated that e-commerce was associated with better relative advantage, innovation complexity, trainability, compatibility, observe-ability, and security/confidentiality. The level of significance of the factors for innovation adoption increased with increasing firm size. The study also found that e-commerce adoption was significantly affected by supplier pressure, sector of business operation, market focus, competition intensity, and customer pressure. The results showed integrating the business profile with technological and environmental factors resulted in no change to the direction of the influence of position in the firm, age, and gender variables on e-commerce adoption. Regarding the effect of interaction of the technological factors, the results showed that there was no change in the direction of the influence of perceived relative advantage, complexity, and security/confidentiality, but the direction of influence of trainability, observe-ability, and compatibility changed from direct to inverse. Finally, the findings revealed that, due to interaction of the variables, there was no change in the direction of the effect of supplier pressure, sector of business operation, competition intensity, and customer pressure.

Keywords: E-Commerce, Online Merchants, Online Transactions, ICT

1. INTRODUCTION

The internet provides new ways for customers to shop for their needs. Internet technology is available almost everywhere worldwide and using the internet for information is already the number one reason customers' state for being online. Internet technology allows products and services to be offered on a scale never possible before: a potential global market with a variety of choices that is simply not possible with limited physical floor space (Cunningham, 2000). E-retailers can now serve their customers twenty-four hours a day with variety of products and services at reduced price (Walsh & Godfrey, 2000). Though there are potential business benefits arising from the usage of Internet, successful e-retailing still face numerous challenges such as: improved customer service, increased competition and increased cost of website and content management.

While these remain an important managerial challenge, there is also a changing wave of customers growing expectation for continuous improved products and service offering. Retail businesses should therefore take advantage of internet opportunities and

build enduring customer-retailer relationship for a sustained customer loyalty. More personalized service that satisfies customers need can be developed and deployed into e-commerce environment (Windham & Orton, 2000).

Research and development in the information and communications technologies (ICT) sector is consistently making new headways and developing new products that render previous ones obsolete, and trying to keep up with the ever-changing environment is an increasing concern of developing countries. There is now sufficient and growing evidence that enterprises gain substantially from e-business. Fast productivity growth in industrialized countries has been largely attributed to the widespread application of ICT, creating millions of new jobs and billions of dollars in savings.

The advancement of the internet and the consequent development of electronic commerce have resulted in a dynamic operating environment where business transactions are conducted over the internet. Internet transactions are a critical element of e-commerce as business transactions such as buying and selling of products and services and communication are conducted over the internet (Janita & Chong, 2013). According to Lawrence & Tar (2010), internet transactions provide great opportunities for businesses in terms of gaining access to markets across the globe and a driver of the economy a developing country such as Kenya. The adoption of internet transactions has significantly supported the growth of businesses and holds a promise in the reduction of costs and improvements in the operational efficiency.

Due to internet transactions, relationships between the business and its customers have become closer. Electronic commerce has significantly increased interactivity within the economy and this extends even to small firms that hope to reach out to the entire world. Online transactions have increased the ability of people to communicate as well as to carry out business in virtually any location and at any time and this has eroded the geographic as well as economic boundaries.

According to UNCTAD (2016), e-commerce readiness varies by region. Just over a fifth of the population in Africa uses the Internet compared to two thirds in Western Asia. While Western Asia and transition economies fare well on most indicators, credit card availability is average. Overall, Asia needs to boost Internet penetration, which currently stands at just over a third of the population, as well as the number of secure servers. In Latin America and the Caribbean, the main barriers appear to be low credit card penetration and relatively poor postal reliability. Africa ranks the lowest in all the indicators. Unless there is improvement in the underlying transaction and logistics processes, African online shopping is likely to remain confined to wealthier populations in urban areas.

In Kenya however, the situation is steadily improving. Over time and with the increased penetration of the mobile ecosystem, a new subset of e-commerce has come up. M-Commerce, which stands for Mobile Commerce, refers to the commercial transactions being conducted over cellular and mobile devices. M-commerce has created new opportunities such as the ability to purchase physical goods in a mobile online store or through mobile applications that interact closely with the physical store's point-of-sale system. This is an advantageous mechanism for commerce as it bypasses the checkout process, which includes queuing, and physically waiting to order and purchase goods.

Mobile Payments also known as mobile money, generally refer to payment services that are operated under financial regulation and performed from or via a mobile device (Ignacio & Radcliffe, 2010). These mobile payments can be integrated into the e-commerce and m-commerce platforms to provide a convenient mechanism to pay for the good and services on the online platforms. The combination of widespread cellular communication and the ability to transfer money instantly, securely, and inexpensively are together leading to enormous changes in the organization of economic activities countrywide.

According to the Communications Authority of Kenya, the Kenya's e-commerce market was worth around Ksh.4.3 billion in 2014. But with internet penetration of 82.6% and 35.5 million users, Kenya is one of the African countries best placed for a digital commerce explosion. Ksh.3billion in mobile transactions already takes place in the country each day, according to statistics from the Communications Authority. Most digital transactions in Kenya will take place via smartphones and mobile broadband because of low fixed-line and PC penetration. However, the mobile experience has improved dramatically in recent years and it has become simple and enjoyable to shop from a smartphone. With mobile money providers like M-PESA now adding APIs for smartphones to their products, they are opening up a range of new m-commerce applications and services.

This is particularly significant given the low penetration of credit and debit cards in Kenya – a factor that has inhibited e-commerce. Kenyans excluded from the formal banking system have lacked safe, easy and convenient ways to pay and be paid. According to the Financial Access National Survey of 2006, 38% of people didn't use any form of financial service; formal, semi-formal or informal prior to the launch of M-PESA while only 19% of the population had access to formal financial services. Another significant factor is the Communications Authority of Kenya's commitment to creating a robust national address system in the short to medium term. Up until now, the lack of an efficient address system has made it difficult for couriers to deliver goods bought online to their customers' hands.

With growing competition and increased level of customer demand for quality products and services, the internet and internet related activities has become an important field of study for both researchers and practitioners. A study of e-commerce literature is conducted and used to develop framework that describes customer loyalty as an important element of successful e-retailing. One of the challenges for retailers is to understand the new technologies and to ascertain how to use them to ensure customer loyalty. For e-retailers to survive in this new environment, the internet, a constant improved e-retail approach will be required to improve quality of customer service. Improved customer service creates a foundation for customers' loyalty that leads to repeat patronage. This study identifies and examines factors affecting customer loyalty in e-retail environment. This research examines e-commerce and identifies convenient shopping experience as a strategy that can be used to improve service offering to attract and retain customers. Thus, it is useful for businesses to understand the differences between e-commerce and traditional methods of business to enable them identify the new internet-based opportunities that might better satisfy the unique needs and desires of their customers.

2. LITERATURE REVIEW

2.1 E-Retailing and Customer Loyalty

In e-retailing, because a company website represents the brand and stands as a substitute for the traditional shop, customer loyalty depends, even in the first instance, on the website's performance. Judgement about performance will be based on its usefulness and more specifically on its impact on service quality, during and after purchase. The interrelationships among loyalty, trust, and relationship have been well established in marketing and service management literature (Berry, 1995; Berry and Parasuraman, 1991; Foster and Cadogan, 2000; Graham, 1999; Kandampully, 1997).

Customer loyalty is essential for all businesses, especially for e-commerce ventures that seek to strengthen their brand image. Building customer loyalty is vital to the success of the e-retailer because, without loyal customers, even the most effective business model will fail, and the business will eventually try to satisfy the whims of only price-sensitive customers (Reichheld & Schefter, 2000).

Reichheld and Schefter (2000) further explain that attracting and retaining a larger number of customers requires e-commerce businesses to remain devotedly customer centric, as e-customers continue to demand more from their internet experiences and have many more opportunities to migrate to other sources of supply, based upon easily available price comparison information. Competitive pressures of new electronic markets in improving customer loyalty, and meeting up with customers' demand would force businesses to join the market, irrespective of their willingness to do so. The question is no longer whether to deploy the internet, but how to deploy it profitably. However, the disastrous experiences of new internet-based businesses in the "dot-com" period have proven that the pressures to join in are no guarantee of success (Porter, 2001).

In recent years, an increasing number of e-commerce businesses have specialized in selling service products such as airline seats and hotel room nights. As service intermediaries, these businesses have successfully gained the interest and patronage of customers because they are able to offer substantial benefits to the customers through e-retailing, such as product choices, convenience, and value for money (Foster & Cadogan, 2000).

To maintain this relationship, the e-commerce business continues to find ways to build the customer's commitment and loyalty. For example, when Amazon planned to introduce their music store they asked customers to help create it. They asked customers to provide reviews on a number of CDs and videos. When Amazon.com finally opened the doors of its music store, they already had a potentially loyal customer base. This was a store created by customers for them; it was natural that they would start shopping there. Customers, who recognize that an offering is targeted at them, or when they have a hand in its creation, are more likely to return (Walsh & Godfrey, 2000). The explosive growth of usage of the internet provides a great number of potential customers to e-commerce businesses.

When an e-commerce business deploys its website as a source of information and service interaction for its customers, research indicates that it will discover that customers will tell them exactly what they want and need with great precision. Such businesses will probably learn, to their dismay, that in order to satisfy their customers need they will have to do major work on their existing systems. In the long run, customers will prefer to do business with companies that put the customer's needs first.

2.2 The Emergence of E-Commerce

Some years earlier, Rayport and Sviokla (1994) had noted that business transactions were already occurring in both traditional and web-based channels. These authors were writing at a time when the internet was barely known and were already thinking about the consequences. In technology-based business channels transactions occur "on screen" in an electronic environment, rather than as physical interactions "over the counter".

E-commerce impacts directly on marketing, as the record of published work shows - some of the earliest experience with e-commerce revealed that not everyone will be interested. Berry (1995) reported that in moving to e-commerce, businesses must first identify the potential customers interested in working with that technology. Although technically a company website in principle has the capacity to serve an unlimited number of users, not everyone will be attracted. Strategically, it is important to identify the specific market segment that the website will attract and can be directed to serve its customers. In this pattern of evolving experience, it becomes clear that the emergence of e-commerce dramatically raises the significance of competition between businesses, and forces businesses to adapt continuously to new market situations (Mellahi & Johnson, 2000).

The growth of e-commerce has attracted considerable recent attention within all business spheres. Increasingly, traditional retail businesses have also begun to utilize the opportunities offered by trading activities through the Internet. As different regions of the world take e-commerce in different ways and at different rates, it is interesting to contemplate how quickly the United States (US) population has adopted the Internet and it is easy to understand why. Historically, the US has been a country in which new technologies are assimilated fairly rapidly, given the relative lack of economic constraints and the manufacturing realities of the time (Burt & Sparks, 2003).

Windham and Orton (2000) further explains that the US is the source of most internet technologies and it is not surprising that it should be in the lead in their application. The internet reached as many Americans in the first six years as telephones did in four decades. Everyday internet access is becoming available to a growing percentage of the US population (Windham & Orton, 2000). These authors argue that of all the wealthier economies in the USA, Asia and Europe, more than half the combined population has internet access and it is inevitable that more consumers will choose to make purchases through the internet as access becomes more widespread.

The increasing importance of e-commerce was apparent in a large study conducted by researchers at the Georgia Institute of Technology (Provost, 2000). It was found that electronic commerce was taking off both in terms of the number of users shopping as well as the total amount people were spending via internet based transactions. Provost (2000) also found that through the connectivity provided by the internet, the range of goods and services offered can be extended. It is feasible for retailers to sell millions of products via their websites as the technology brings buyers and sellers together regardless of their geographical location. Clearly, electronic commerce brings new forms of market to e-customers and e-retailers, partly out of new ways to do business, but originally because of the technologies that are now in use.

2.3 Extent of E-Commerce Adoption

Despite the perceived business value of ecommerce adoption, e-commerce is not as widespread as it should. According to the Communication Authority of Kenya (CAK), e-commerce remains relatively low in Kenya despite good internet connectivity and high uptake of mobile payment services. The CAK identified some factors that is says stifle uptake of e-commerce, namely: high custom duty and taxes paid on imports, inadequate cyber security systems to allow merchants verify the identity of their customers and manage potential fraudulent usage and a lack of reliable, low-cost delivery services and system to enable consumers return unwanted or defective items. The CAK estimates the value of e-commerce in Kenya at KSh4.3 billion compared to South Africa's KSh54 billion while in Egypt and Morocco it is about KSh17 billion and KSh9.6 billion respectively.

The total duty and tax paid for incoming items amounts to almost 50% of the value of an item. These are some of the areas that need to be addressed to increase the uptake of e-commerce in the country. The authority through the Information Communications and Technology (ICT) ministry will be engaging the government on customs and taxes for low valued e-commerce items, with a view of lowering the duties and taxes currently charged. Looking at the improved internet connectivity, this resulted in an increase of the number of users to 22.3 million in 2014.

The increased numbers and preference by the youths to access information on their mobile phones has opened a window for investors in the retail industry, newspaper and book publishers as well as in the hospitality industry such as fast food outlets to leverage on technology to drive increased sales and customer loyalty.

Improved marketing is perceived to be the most important business value of e-commerce followed by better customer service and improved communication respectively. The other perceived benefits are new business opportunities, cost reduction and efficiency. More recent research suggests that SMEs have been relatively slow to adopt e-commerce. Consequently, large firms are most dominant and more pervasive than small and medium sized firms as far as e-commerce is concerned (Daniel & Grimshaw, 2002). Also, there is limited usage of internet technologies by medium sized firms (Arnott & Bridgewater, 2002). The authors tested the level by which small and medium enterprises are using the internet and they found that the majority of the firms were using the internet for information provision rather than interactive, relation-building or transactional facilities. They also found that smaller firms were using significantly fewer internet tools than their larger counterparts.

The organizational context can motivate or inhibit the adoption of e-commerce. The perception of management towards the benefits of e-commerce is an overriding factor in its adoption (MacGregor, Waugh, & Bunker, 1996). When looking at inhibitors to e-

commerce in SMEs, the ignorance about e-commerce benefits inhibits its adoption (Jones, Beynon-Davis, & Muir, 2003). Researchers agree with this position on e-commerce and the competitiveness of small enterprises in Melbourne, stating that knowledge and awareness about the benefits of e-commerce motivates small businesses to adopt increasingly sophisticated e-commerce solutions (Castleman & Chin, 2002). Perceived complexity plays a role in the motivation or inhibition of e-commerce adoption by small and medium enterprises. Complexity is also a major inhibitor of the adoption of e-commerce. Conversely, research shows a strong link between management attitudes towards e-commerce and the level of e-commerce adoption. The characteristics of senior management play an important part in the level of e-commerce adoption (Al-Qirim, 2003). The involvement and interest of senior management in e-commerce initiatives would lead to the deployment of additional resources devoted to e-commerce implementation (Al-Qirim, 2003).

Issues considered by SMEs to be strategically important have been assessed. Issues of marketing, leadership and waste reduction have been given highest priority, while supplier development, financial management, time to market and supply chain management have a medium priority. Perhaps unsurprisingly, the lowest priority was given to technology, research and development and customer management – all closely related to e-commerce. The alignment of e-commerce with the organization's strategy and processes needs to be present for an organization to adopt e-commerce. Small businesses reported that the adoption of an e-commerce solution was inhibited when not aligned with the organization's strategy and processes (Love, Irani, Li, Cheng, & Tse, 2001). The e-commerce solution has to be applicable to the organization to motivate adoption, hence the need for alignment between e-commerce and the strategic context of the firm.

In further research, e-commerce adoption by several hundred SMEs was analyzed and found that fewer than 15% had a formal documented e-commerce strategy which is a limiting factor in adoption (Meckel, Walters, Greenwood, & Baugh, 2004a). It is not just knowledge about e-commerce, but that it is also important for SMEs to gain knowledge about how e-commerce affects the firm and its environment. Over-reliance on third parties to provide knowledge and expertise would make redundant the need to acquire knowledge, with the firm's learning and strategy development processes being hijacked by external parties. There is pressure for SMEs to conform to industry standards or to a competitor's level of technology.

A majority of SMEs would decide to implement e-commerce if the level of adoption in the industry was high enough (Castleman & Chin, 2002). E-commerce adopters do so to keep up with the times and with shifts in industry practices (Castleman & Chin, 2002). This is consistent with the theory of critical mass, which states that adoption in an industry would be self-sustaining once a certain level of adoption is reached (Markus, 1987). Adoption would take place in the organization if a high level of adoption occurred in the industry (Castleman & Chin, 2002). Another reason to adopt e-commerce is for SMEs to gain a strategic edge over competitors. Being in a strategic alliance affects the barriers to adopting e-commerce due to the fact that a strategic alliance would provide the organization with more technical and business knowledge about e-commerce. A useful guide to risks and rewards of e-commerce for small and medium enterprises produced by Computer Weekly (King, 2004) suggests that the level of risk and reward can be accessed through a combination of four factors namely revenue, reputation, strategic importance and regulatory compliance.

2.4 Role of Strategy in E-Commerce Adoption

Most firms surveyed do not have a specific e-commerce strategy in place which explains the low levels of adoption since businesses lack a formal plan to guide e-commerce development. According to (Doherty, Ellis-Chadwick, & Hart, 2003), companies that do not have a formally defined and coherent e-commerce strategy are less likely to use higher levels of internet services. In further research, researchers (Meckel, Walters, Greenwood, & Baugh, 2004) analyzed e-commerce adoption by several hundred SMEs and found that fewer than 15% had formal, documented e-commerce strategies which are a limiting factor in adoption.

Although the internet is a unique marketplace, the same principles of strategy and business apply. Successful e-commerce strategies involve using the internet to leverage and strengthen existing business rather than destroy existing business, and to use the internet to provide products and services that competitors cannot copy in the short-term and that means developing unique products, proprietary content, distinguishing processes like Amazon's one-click shopping concept, and personalized or customized services and products (Porter, 2001). Adopting a strategy of cost competition means a business has discovered some unique set of business processes or resources that other firms cannot obtain in the marketplace. E-commerce offers some new ways to compete on cost. Firms can lower the cost of order entry by having a single order entry system worldwide; and leverage richness, interactivity, and personalization by creating customer profiles online and treating each individual customer differently without the use of an expensive sales force that performed these functions in the past. The firms can also leverage the information density of the web by providing customers with detailed information on products, without maintaining expensive catalogs (Laudon & Traver, 2009).

There are further two other generic business strategies; scope and focus (Laudon & Traver, 2009). A scope strategy is a strategy to compete in all markets around the globe, rather than merely in local, regional, or national markets. The internet's global reach, universal standards, and ubiquity can certainly be leveraged to assist businesses attain a global presence and become global competitors. On the other hand, a focus strategy is a strategy to compete within a narrow market or product segment. This is a specialization strategy with the goal of becoming the premier provider in a narrow market. E-commerce offers capabilities for a focus strategy. For example, firms can leverage the web's rich interactive features to create highly focused messages to different market

segments; the information intensity of the web makes it possible to focus e-mail and other marketing campaigns on small market segments; personalization and related customization means the same products can be customized and personalized to fulfill the very focused needs of specific market segments and consumers.

2.5 Organizational Factors

The empirical results supporting the influence of organizational characteristics suggest that the determinants of e-commerce adoption are employees' knowledge of e-commerce (Scupola, 2008) and the size of the enterprise (Zhu & Kraemer, 2005). These results are dissimilar to findings reported by Joen (2006) with regard to the employees' knowledge of e-commerce and to reported results by Vilaseca-Requena (2007) with respect to the resources of the enterprise.

Huy (2012), in a study on the significance of organizational determinants as factors of adoption also found that employees' knowledge of e-commerce, size of the enterprise, and attitudes of managers towards innovation were positive and statistically significant. Other findings also confirm the positive relationship between the attitudes of managers towards innovation and adoption (Al-Qirim, 2007), but the relationship is not significant regarding knowledge of the new information technologies of e-commerce.

According to Dubelaar (2005), the level of education of the owner/manager has a positive and significant relationship with the likelihood of adopting an innovation. Similarly, Ramdani *et al.* (2009) found that lack of knowledge was the main barrier to the use of e-commerce and ICT among MSMEs. Chang and Tung (2006) found that the CEO's knowledge of technology has a significant relationship with e-commerce adoption among MSMEs. Nguyen (2009) also found a statistically significant relationship between the status of e-commerce in the SMEs and the perception of lack of knowledge as a barrier. These results support the view that having adequate education level by the owners or managers of MSMEs alone is not a necessary condition for such firms to adopt e-commerce, but they must also have relevant knowledge in ICT use.

Lun (2012) found that organizational size, which is an indicator of the level of operational resources of the company, is positively and significantly related to e-commerce adoption. This is in line with earlier studies by, for example, Zhu and Kraemer (2002) and Adeyeye (2008). On ICT skills and experience by employees, Sparling *et al.* (2007) found that the higher the level of ICT skills, the higher the likelihood that a firm will adopt e-commerce. That is, previous IT experience has been observed to be an important factor influencing the success of e-commerce adoption. Filiatrault and Huy (2006) found a significant relationship between types of business (governmental, local, or foreign organization; characteristics of products; and number of product categories) and the likelihood of e-commerce adoption.

2.6 Environmental Factors

Huy (2012) found a positive correlation between e-commerce adoption and the manager's perception of the intensity of competition, support of industry pressure, supplier and buyer behaviour, and sector of business operations. These findings conform to those of prior studies by Al-Qirim (2007) but are inconsistent with those of Joen (2006) and Vilaseca-Requena (2007). It has widely been argued that the industry in which the firm operates influences the adoption of information systems, including e-commerce innovations. Service industries, retail industries, and the manufacturing industry were the key sectors that demonstrated a significant relationship with innovation adoption. The authors further established that usage of information systems varies not only across sectors but also within the constituent sub-sectors.

The role of market scope as a predictor of the adoption of e-commerce can be explained from two main perspectives. Firstly, internal coordination costs increase as firms expand their market reach due to increased administrative complexity and information processing. Secondly, external costs (search costs and inventory holding costs) would also increase with market scope; that is, when firms expand their market reach, they incur search costs, which include searching for consumers, trading partners, and distributors. Arguably, firms that serve broader markets are more likely to adopt e-commerce, thus SMEs with greater market scope are more likely to adopt e-commerce.

Vilaseca-Requena (2007) has also established that there is a positive and significant relationship between competitive pressure and the adoption of e-commerce. The plausible argument for this observation is that if the innovation directly affects the competition, then the adopter will have an incentive to take up the technology. According to Vilaseca-Requena (2007), the greater the competitive pressure the more likely that SMEs will adopt e-commerce. There is also evidence that the growth of third-party information systems support has a significant influence on the likelihood of e-commerce adoption whereby the greater the external support, the more likely they will be adopted by SMEs.

Porter (2008) has suggested that the adoption of IT will change the competitive environment in three ways: through changing the structure of the industry, changing the rules of competition, and giving businesses new methods by which to gain competitive advantage over the competition. According to Sandy and Graham (2007), intensity of competition is associated with the degree of e-commerce adoption and that competitive pressure is a critical factor influencing the extent of e-commerce adoption among SMEs.

In contrast, Pan and Jang (2008) found that competition has very little influence on the adoption of new technologies or e-commerce in small enterprises. But a study by Thomas and Simmons (2010) produced contrary results. A relationship also exists between the intensity of competition in an industry and the degree of adoption of electronic commerce. According to Kinyanjui and McCormick (2002), ensuring competition and entry opportunities for other market players, particularly smaller ones, must be an on-going policy priority. Intensity of competition is measured by the number of competitors in a given sub-sector category.

Regarding information intensity, SMEs in a more information-intensive environment are more likely to adopt e-commerce technology (Pavic, 2007). For instance, these authors found that MSMEs in service-oriented industries are more likely to have higher information content in their products and services in comparison to SMEs in manufacturing-oriented industries. Hence, MSMEs that are oriented to the service industry are more likely to adopt e-commerce technology. Al-Qirim (2007), who investigated the impact of information intensity on the adoption of e-commerce among MSMEs, found that the information intensity was influenced by the adoption of the technology.

2.7 Technological Factors

The decision to adopt a technology according to Cupolas (2009) is not only dependent on what is available on the market, but also on how the new technologies match with those that a firm already possesses. The key factors characterizing such technologies include attributes such as relative advantage (perceived innovation benefits and impact), compatibility (both technical and organizational), and complexity (ease of use or learning e-commerce).

Regarding relative advantage, Joen (2006) found that the extent of perception of the characteristics of the technology as measured by time saving and effort (To & Ngai, 2007), economic profitability, cost reduction, and production increase has a significant influence on e-commerce adoption. In contrast, Huy (2012) found that perceived relative advantage does not seem to play an important role in influencing the adoption of e-commerce by SMEs.

Compatibility has been found to be a significant determinant of adoption because it deals with perception of the importance of the innovation in performing various tasks presently and in future. For instance, if e-commerce is compatible with the traditional way of performing various activities of a business enterprises, with the existing values and mentality of the professionals, and with different communication parts involving day-to-day operations and their future development, then a higher rate of adoption will occur. Grandon and Pearson (2004) also found that compatibility with a firm's culture and values was a statistically significant determinant of e-commerce adoption, a result that is also in line with studies by To and Ngai (2007). The implication of this observation is that the management of the MSMEs considers compatibility of the innovation as an important pre-requisite for technology adoption.

Ratten and Ratten (2007) found a significant relationship between perceived observability and the adoption of e-commerce implying that the various beneficial operations of e-commerce may influence the decision by SMEs to adopt the technology. Confidentiality and security have been discussed broadly both in academia and practice. Confidentiality is defined as the ability to control and manage information about oneself, while security refers to the ability to protect against potential threats. From the consumers' standpoint, security is the ability to protect consumers' information from information fraud and theft in the online banking business (Hua, 2009).

Since the year 2000, online services security has become gradually noticeable as a critical issue, particularly, after a number of well-publicized attacks on prominent Internet sites. Due to such attacks, companies endeavour to base their e-commerce adoption decisions on the innovation's security and confidentiality. Therefore, heightened security concerns could stop potential damages ensuing from insecure transactions, hacking, or poor access control to important data. Hesson and Alameed (2007) and Belkhamza and Wafa (2009) found that security and confidentiality issues and the system risks of e-commerce are the major determinants of adoption behaviour.

A number of studies, for example, Lee (2011) and Maha and Aqeela (2012) found a significant relationship between trailability and e-commerce adoption or intention to use. Trailability is defined as the degree to which an innovation could be tried out on a limited basis (Rogers, 2003). In other words, the test drive of an innovation is provided by the technology's trailability and its ease of use. Trailability offers a chance for customers to evaluate an innovation such as e-commerce and its benefits. Thus, opportunities which allow latent adopters to have prior experience with a new innovation or product would reduce their fears and uncertainties. In addition, when a new idea or innovation is trailable, any doubt or vagueness associated it will be dispelled and hence an increase in the level of confidence in its use.

According to Rogers (2003), complexity is the degree of difficulty associated with understanding and learning how to use an innovation. Grandon and Pearson (2004) and Mahazir and Mohd (2012) found that perceived complexity is a vital factor influencing the decision to adopt e-commerce and that the likelihood of adoption of the innovation is inversely related to the perceived complexity variable especially amongst the MSMEs. The introduction of new technology might require the employees to develop new skills in order to use the technology. Rogers (2003) contends that the new technology can be intimidating, particularly if it requires change in the existing businesses practices or acquisition of new skills. The measurement of perceived complexity or ease of use can be in the context of how e-commerce can be easily controlled, the degree of flawlessness, reasonableness, and adaptability to changes, user

friendliness, and how easy it is for one to become skillful in using e-commerce.

The literature reviewed so far suggests that the available theories of adoption of innovation focus mainly on organizational, technological, and environmental contexts. It is also evident from the literature that a number of studies have attempted to address the determinants of adoption from different perspectives. Alam and Ali (2011), for example, attempted to gain a deeper understanding of the factors that influence the adoption and usage of ICT by SMEs in Malaysia. They found that ICT provides numerous opportunities for MSMEs to compete equally with large corporations.

E-commerce is a critical part of business strategy for most adopters as it provides an advantage in new business opportunities, customer service, and cost reduction, efficiency, and new product development, access to international markets, marketing and communications. Furthermore, while some SMEs have not adopted e-commerce, generally there is a positive perception of the business value of e-commerce. A meaningful impact on the industry structure is to be expected if the level of adoption in the industry attains the critical mass threshold. Firms should strive to achieve this critical threshold. The government/policy makers should make policies that are enterprise friendly by reducing costs of trading using e-commerce.

3. METHODOLOGY

This research began with a wide-ranging literature review. This also included a review of documents of various organizations involved with e-commerce such as the Communications Authority of Kenya. From this review, previous work was identified and also evidence of research design and methodology was found. The collection of primary research data proceeded in two stages, using a qualitative research design and a quantitative research design. Questionnaires (quantitative) and personal interviews (qualitative) were used as instruments for data collection to locate where quality of service can be improved to ensure customer loyalty and reveal the overall impact of the internet in the e-commerce environment. The use of questionnaires and personal interviews also helped to identify where stability in the retail environment could be enhanced to ensure that an effective e-retail benefits are gained.

The researcher collected data through questionnaires to examine how e-retailing improves customers shopping experience. The survey method was considered useful for this particular project because it carries good and accurate study of the population surveyed (Saunders, Lewis & Thornhill, 2003). Identifying the needs of e-customers with a view to satisfying them is important to e-retailers. The survey method through the design of questionnaire has generated useful empirical data that can be used to develop appropriate e-retail strategies. It is also convenient to generate comparative data that is used to analyze dependent variables. While case study method requires long period of time in the field and emphasize detailed observational evidence, the survey method can generate quick data (Jones & Smith, 2001) cited in Saunders et al. (2003). Convenient shopping is an important element for e-shoppers, investigating this through survey questionnaires provides the basis for this research.

One hundred and fifty respondents were targeted for the completion of the questionnaire and these respondents are expected to be able to read and understand the questions, computer literates and internet users. Therefore, the implications of age, literacy level and visual ability were taken into consideration (Denscombe, 2003). Areas that were investigated include the quality of goods and services available to e-customers, customers' satisfaction and profitability. These areas of enquiry were derived from the research domain. Denscombe (2003) states that the premise of using a questionnaire is that it can be used generate the right information from the respondent. The reason for using this method is to ensure that varieties of data and sources used are relevant to a broader spectrum of e-commerce businesses, particularly those involved in e-retailing.

Interviews were chosen for the investigation of management viewpoints because of the uncertainty of the outcome (there views could not be anticipated so as to design a questionnaire) and because they were few in number. The interview sample was made up of seven e-commerce and e-business professionals whose experiences are based upon work in South Africa and the United States. The professional e-retail experience of the respondents ranges from three to ten years. The respondents were required to participate in a 45-minute semi-structured interview. The researcher had a list of themes and questions to be covered. During the interview, the extent to which the respondent understands the questions were determined (Denscombe, 2003). The objective of the interviews was to help reveal how e-retail businesses ensure customer loyalty in the e-commerce environment.

The population of this study was derived from different business entities i.e.: restaurants, pharmacies, clothes stores, delivery/distribution companies, grocery stores, coffee shops, supermarkets and electronics shops, whose operations are deemed to require e-commerce integration to achieve maximum efficiency in the present economic environment. The researcher administered one hundred and fifty questionnaires (150) through hand delivery and web-based methods. The group of respondents comprised of working class people, credit card holders and students from who live within and on the outskirts of Nairobi.

These respondents were randomly selected and contacted. Out of the one hundred and fifty people contacted, seventy (70) respondents returned completed questionnaires. This represents 47% response rate from the questionnaire. This success rate was achieved because the questionnaires were administered electronically. Respondents see this as more convenient, user friendly and less time consuming than the manual process.

Purposive sampling involves the researcher specifying the characteristics of the population of interest and locates the individuals with those particular characteristics (Johnson and Christensen, 2010). In this study, purposive sampling shall be used to obtain the sample frame. This will involve consciously choosing a selection of the population that will fit the criteria of the study. The objective is to identify companies for in-depth examination governed by what is relevant to the study.

After selecting and finalizing the tools for data collection, the researcher contacted the firms under investigation personally for taking prior permission from the respective businesses for collecting the necessary data. Subsequently, the investigator discussed in detail about his investigation with managers of the respective businesses and sought the permission from them for collecting the necessary data and explained about the nature and purpose of the study. Good rapport with the owners and consumers of concerned businesses was established to do the assignment carefully. Before assigning the task, instructions of each test used in the study were made clear. In order to giving responses to the questions free and frankly, honestly and sincerely, they made aware there are no right or wrong answers to these questions and their persona would not be affected as it was only an exercise for research purpose and their responses would be kept strictly confidential. Each session of testing ended with a vote of thanks to the subjects concerned.

The pilot phase of this study was conducted within the Nairobi Central Business District because of easy access and facilities in terms of transport and communication and the geographical location provides an overview of socio-economic, demographic and educational characteristics of the larger Nairobi region. A total of seventeen business owners/managers and twenty-five consumers participated in the pilot phase. Selection procedures were based on convenience, but care was taken to ensure that participants represented the various dimensions that are important to the study in terms of age, gender, professional qualifications, experience and geographical location.

Various techniques were employed for the researcher to gain a more in- depth understanding of retailers' and consumers' experiences and perceptions towards e-commerce. This included conducting interviews with key informants, reviewing secondary data and conducting open and closed response questionnaires to both retailers and consumers. First, data reduction allowed the researcher to sharpen, sort, focus, and organize the data to enable conclusions to be drawn. Second, data verification enabled the display of data in reduced form making it possible to draw conclusions/verify results. The review of the literature, comments from questionnaire respondents, the comments of the interviewees and the resulting findings are all analyzed and interwoven in the next chapter.

4. RESEARCH FINDINGS, SUMMARY, RECOMMENDATIONS AND AREAS FOR FURTHER RESEARCH

4.2 Research Findings

4.2.1 The demographics of the e-retail companies

The first demographic question asked was how many employees the company has. Three of the respondents indicated that their company has fewer than 20 employees, two companies have more than 50 employees and two companies also have more than 500 employees. This question was asked to ascertain the size of the company - small, small-medium or large.

Small sized e-retail businesses are financially limited and their service and product offerings are also limited. This could be a hindrance for such business in implementing the best business strategy for the growth of the business. Strategies such acquiring a greater market share or improving service quality through the introduction of various technologies and functionalities for an effective customer shopping experience. Large or medium sized businesses have more advantage of offering a complete service online, e.g. payment and delivery.

Each of these businesses was asked how long they have been in business: 14% of the e-retail businesses have been in business for the period of 2 to 4 years. 43% have been in business for a period of 5 to 7 years, 14% - 8 to 10 years and 28% more than 10 years. These e-retailers that have been in business for 4 years or less did not see e-retailing contributing a high or fairly high percentage towards the company's overall profit margin. This is result of not being in the business for longer to help monitor and determine the growth.

In the finding, 43% of the businesses interviewed incorporated e-retailing at the initial stage of their business model development, 29% at the middle stage and 29% at a later stage. Businesses that incorporated e-retailing earlier or at an initial stage had the benefit of acquiring more market share. They were able to achieve that by listening to their customers' complaints, satisfying their needs and improve service quality. Some of these early adopters also failed initially because an existing e-retail business model was not available rather they had to create one and try it out. E-retailers that included e-retailing at the middle or later stage had the privilege to learn from the doom of other companies and try not to repeat same failed model.

4.2.2 E-RETAIL IMPACT

According to one of the interviewees, e-retailing has impacted on their company's general business activities. They had to implement new strategies and processes in their shops and made sure they worked. They also had to develop new competencies, such as managing the unfamiliar issues that arise from partnerships. The experience of outsourcing partnerships with delivery companies, IT service providers and call centre operators all presented new challenges to the business. These findings have helped to have an overview e-retail companies views on the following; reasons for moving into e-retail business, the experience and products and services offered, impact of e-retailing on existing traditional shop, E-commerce managers' view on customer loyalty and the impact of e-retailing on business strategy.

4.2.3 Reasons for moving into e-retailing

Respondents were then asked what led to the move into e-retailing, 29% said that it was to increase sales, 43% said it was to improve customer relations by providing better service, 43% said that the decision was driven by competition while 14% responded that it was a new concept introduced to help reduce overhead costs. In this question, the respondents could choose more than one option and could also add any additional reason. Competition was one of these reasons and another was because e-retailing is a global thing, said one of the respondents. Figure 4.1 provides explanation on why companies embark on e-retailing and it is leadership in what they do over their competitors.

The main focuses for the research were evident in the response of the e-retailers and this includes; improved product and service quality, customer loyalty and increased market share and profitability. Improving customer relations and loyalty through improvement of service quality is seen as great importance to the business. Increase in sales was rated as less important.

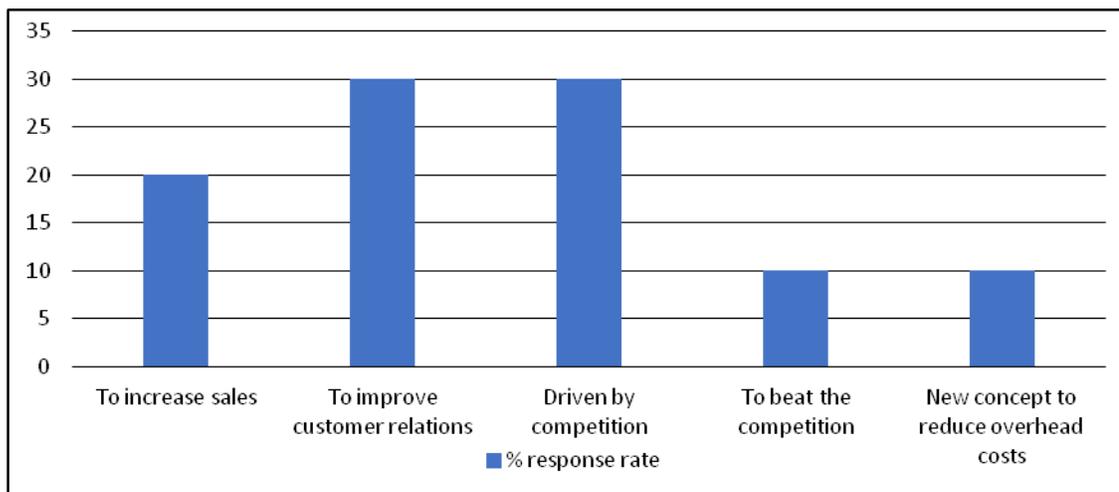


Figure 4.1: What has led to the move into e-retailing

4.2.4 The experience and products and services offered

The experience according to one of the respondents has been complex, difficult, painful, challenging and exciting. One of the respondents continues; "It's a very difficult marketing invention. The advantages from our company's perspective are that we already set our own rules and set our own brand. Also, people understand the brand. The disadvantage is that the brand has already been created in terms of it being something that we dare not break. So, in whatever we do, we have to consider the fact that our company is in question and we also have to be exceedingly careful in whatever decisions we are taking". The table 4.1 lists all the products and services offered by e-retailers interviewed and the right-hand column is the proportion of responding companies.

Table 4.1: Products and services offered by e-retailers

Products and services offered	Proportion of respondents
Computer Hardware	43%
Computer software	14%
Books	29%
Travel	14%
Music, video (CO's, OVO's, audio)	43%
Domestic & kitchen	43%
News	14%
Tickets	14%

Toys/gifts	29%
Banking	14%
Entertainment	43%
Arts & craft	14%
All retail related products e.g. what you find in supermarkets	29%

The purpose of the above question is to compare the retailer's choice of products and services with the customers' wants and needs. In order for e-retailers to maximum benefit from e-retailing, there is a need to identify the needs of their customer and make provision for it.

4.2.5 Impact of e-retailing on existing traditional shop

Furthermore, the respondents were asked if they have an existing traditional shop. 43% of the businesses have traditional shops while 57% said that they only operate online. Those e-retailers who have traditional shops were asked the effect of e-retailing on their company's traditional shop. 43% of the interviewees believe that e-retailing does not have much impact on their traditional shop. At the initial stage, the concern was that e-retailing would take away substantial part of the traditional shop's trade but it did not. The 57% that does not have traditional shops responded 'no effect'. However, there were fears that employees might lose their jobs in the shops due to this, but job losses have proved to be negligible, according to e-retailers who have traditional shops.

4.2.6 E-commerce managers' view on customer loyalty

When respondents were probed to obtain their opinion on their customers' shopping experience, most of the respondents felt that people see shopping as an experience and a way of socializing and not just buying goods.

Customers buy emergency goods from the Internet and still go out on weekends to do weekly or monthly shopping. This is part of socializing and not just shopping. Customers who order via the Internet also shop at the traditional shop.

One of the respondents illustrated further, when customers purchase from the internet or traditional shop, the data about what they buy is linked to the company loyalty card, so the company knows who their customers are irrespective of the channel the customer uses. If the customer logs onto the company website through a home computer or PDA, their favourite or recently purchased items will be listed whether they bought in a store or online. The company has extended this card membership system to every person that walks into the shop. After a period of time customers who have accumulated points will be rewarded with a voucher based on how much they have spent in the shop. The company uses this method to track other noncard carriers, at the same time retaining the existing customers and attracting new ones.

All the e-retail respondents mentioned improved customer service as one of the ways e-retailers could maintain customer loyalty. These respondents recommend that e-retailers must leverage customer information for the effective management of customer relationships on the Internet. Such strategy, according to the e-retailers interviewed suggests something much more radical than the basic e-commerce approach adopted by many e-retail businesses at the moment. It calls for a re-engineering of processes and structures focused around key customer groups, rather than product or service divisions. It also implies cross-functional, team working. As Siegel (2000) puts it, the customer-led company has a broad interface across which all employees can get to know their customers. Employees invite customers in to collaborate on new products, support systems, and methodologies. Facilitating those interactions will take new communication skills, new tools, and the ability to move people in and out of product teams easily. In order for e-retailers to attract a higher percentage of e-customers, they will need to take their (e-customers) suggestions into consideration in order to attract new ones as well as retain loyal customers.

4.2.7 Impact of e-retailing on business strategy

The entire e-retail managers noted that e-retailing has provided them with an opportunity to maintain a global reach and to promote their services to a wider audience. 43% believe that e-retailing helped them to increase the company profit margin, 57% felt e-retailing has provided them with worldwide visibility and 71% believed e-retailing has assisted them in maintaining the company's accessibility to customers. 43% mentioned that e-retailing enabled them to incorporate targeted marketing, shorten transaction times (better customer service) and reduce manpower. 29% of the respondents stated that e-retailing helps the company to manage its franchise stores in different regions.

Five of the respondents were of the opinion that the administration costs have increased. Two respondents were unsure. These five respondents have established that the focus changed and the marketing department became the driving force followed by sales and IT. In these cases, a totally new division was established where they had to implement a number of new functions to accommodate e-retailing. These had to do with IT systems and links to back end systems. It was also stated that in this shift to a new paradigm there is a need for faster decision making, more flexibility and empowerment, and old habits had to be unlearned. One respondent stressed that their initial model, which was to implement e-retailing within the existing infrastructure, was a mistake. Operationally they had to

change their strategy in order to facilitate order taking and credit verification, and the delivery procedure had to be speeded up. New analytical procedures also had to be implemented to track performance.

However, one of the respondents felt that the buying of large bulky goods on the Internet requires high delivery cost, and this means that the cost of delivery is disproportionately high compared to the value of the goods. This is why people who are leaders in Internet retailing are those who deal in goods such as books, records, flowers; things that do not require special delivery arrangements. The respondents were then asked what they understand their customers' needs to be, and to rate them, in order of importance. The question was asked to compare the e-retailers' responses with e-customers responses.

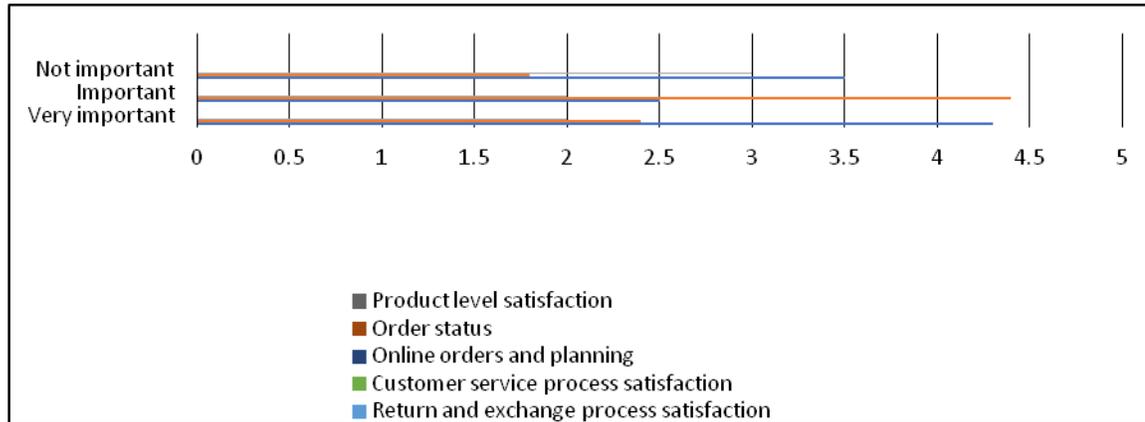


Fig 4.2 E-retailers understanding of customer needs

The chart shows that all the respondents' rated product-level satisfaction and order status as very important to customers while interest in new potential products/services and tools to better manage their business as least important. All the respondents agree that moving their business online has attracted more customers for them. However, they suggest that in order to continue attracting new customers when trading over the Internet they need to be able to provide 'service, service, and service'. The respondents all admitted that they have not begun to achieve that yet. However, they need to continue finding new ways to cater for their customer needs and maintain service quality. One of the biggest problems identified by two of the respondents is being out of stock. This puts the company in a situation where they have to try to second guess what the customers would want that is in stock. As an e-retail company the first thing, according to the respondents, is to make sure that the company does not run out of stock.

The advantages of e-retail business introduction from one of the respondent's perspective were that they already have the brand and also people understand the brand. The following were also identified by the respondents as the benefits of e-retailing to their company;

Table 4.2: Benefits of e-retailing

Benefits	% of Responses
Extending customer reach	100
Promoting our services to a wider audience	100
Increasing company profit margin	43
Providing customers with convenience	43
Worldwide visibility	29
Accessibility of company to customer	71

The disadvantage according to one of the respondents is that the brand has already been created in terms of it being something that they dare not break. In other words, in everything they do, they have to consider the fact that the company is in question. They also have to be exceedingly careful in whatever decisions the business takes so that it does not crumble which would result in the 82C site needing to start from scratch again.

4.2.8 E-CUSTOMER SURVEY RESULTS

4.2.8.1 The demographics of e-customers

E-customers were asked to indicate their gender, age, occupation, area of residence, approximate income and the highest qualification they have obtained. The objective of these questions is to group the respondents into various categories. This will be used to identify the factors that influence each respondent's usage of the internet and the possibility of becoming an e-customer. The table below shows the sections of the demographics used in the questionnaire and the percentage responses.

Table: 4.3: Demographics, category and response rate

Demographic	Category	% Response
Gender	Male	46
	Female	54
Age	18-30	40
	31-45	38
	46-60	18
Occupation	Student	38
	Officer	12
	Professional worker	50
Area of residence	Major city	54
	City	32
	Town	14
Approximate income (Ksh. '000)	10-20	38
	21-50	36
	51-100	18
	Above 100	8

The table clearly indicates that more females use the Internet compared to males and the age of Internet users that responded ranges from 18 to 60 years. The age result has proven that age is not such a factor that determines a user's capability of utilizing the Internet. 70% of the respondents are professionals in the occupation category. This could be linked to how often they utilize the Internet, the medium and mode (Laptop or desktop and ADSL - *Asymmetric Digital Subscriber*, 3G - *Third Generation connection* or Wi-Fi - *Wireless Fidelity connection*) of accessing the Internet, their financial status (10001-20000 Ksh.) as well as having a better opportunity of becoming an e-customer. This category of respondents has greater opportunity of engaging in e shopping at some stage.

4.2.8.2 E-customers reasons for using the Internet

E-customers were asked to indicate factors that affect their decision in accessing the Internet. E-customers were allowed to choose more than one option. This question was posed to find out if shopping will stand as the main reason for using the internet.

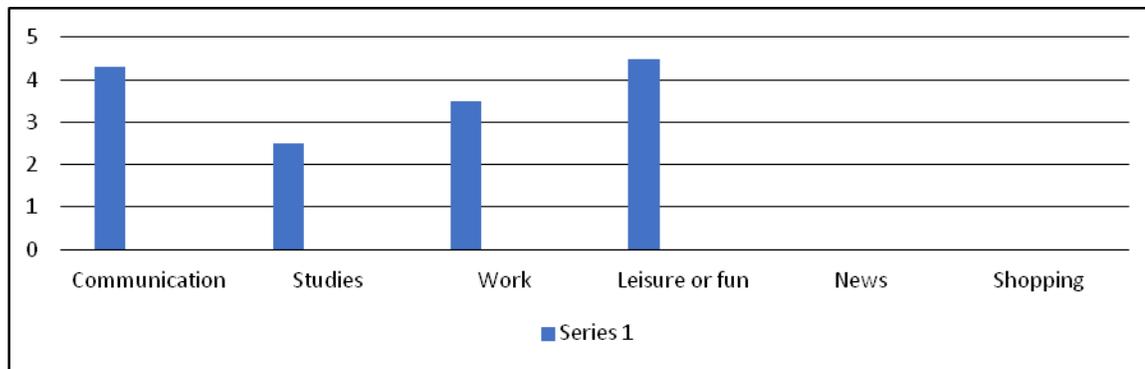


Fig 4.3 Reasons for using the internet. (Respondents may choose more than one option)

The graph shows that the Internet as a convenient means of shopping has the lowest rating with 27%. This shows that respondents use the Internet for other purposes and more than for shopping. The questionnaire results also show that respondents utilize the services offered by companies on the Internet such as news (65%), general interest in browsing or for fun/leisure (67%). The respondents use the Internet more for work purposes (90%) and for communication (82%). These two reasons were the most highly rated.

Most of the respondents noted several other reasons why they do not purchase from the Internet: unfamiliar vendor, not enough information, lack of socialization with customers, and a preference for human contact as opposed to a computer. These e-customers gave suggestions on how e-commerce businesses could improve their websites to enable them to keep coming back to the site for transactions. These suggestions included; to expand range of products (46% respondents), to expand availability of products (12% respondents), to improve provisions of security and privacy (20% respondents), to reduce high cost of total purchase (10% respondents), to improve ease of use of the site (20% respondents) and to make websites easier to find (16% respondents). In the discussion of the interview results, two of the e-retail businesses interviewed focused on improving the speed of the website rather

than the layout. When compared to e-customers suggestions listed above, it is evident that to improve speed aligns with ease of use of the company website.

4.3 Summary of Findings

Several empirical studies have investigated the effect of organizational, environmental, and technological factors on e-commerce adoption. Many of these studies, however, are concentrated in developing countries or they have invariably produced conflicting results as discussed in chapter one. Although, these studies attest to the fact that key organizational, environmental, and technological factors influence e-commerce adoption by different magnitudes, few have attempted to demonstrate the effects of these factors against the background of existing SME environment. This study, therefore, was conducted to investigate the impact of key determinants of the e-commerce adoption in order to identify and analyze strategic challenges of e-commerce in the SME sector in Kenya.

The specific objectives of the study were i) analyze the use of internet technology in ensuring convenient e-commerce experiences; ii) examine the effect of the determinants of e-commerce adoption among Kenya's MSMEs; and iii) investigate the effect of the interaction of the various determinants for improved e-commerce service delivery. Primary data were collected from a sample of SMEs operating in Nairobi, Kenya. In order to address the first objective of analyzing the e-commerce environment within Kenya's SMEs sector, the study derived factors characterizing the e-commerce environment in the context of firm size. On organizational factors, the results revealed that the SME sector was characterized by young owners/managers (with majority being less than 45 years) mostly male, with at least high school/technical education. The sector was also characterized by firms with significant levels of ICT capacity, which increased with firm size.

The major environmental factors of the MSME sector in the context of e-commerce adoption were that a greater proportion of the small and medium enterprises experienced the effect of customer pressure, competitive intensity, and supplier pressure. The analysis of technological and organizational factors indicated that e-commerce was associated with better relative advantage, innovation complexity, trailability, compatibility, observability, and security/confidentiality. The level of significance of the factors for innovation adoption increased with increasing firm size.

The second objective of the study was to identify and analyze the effect of the strategic challenges of e-commerce. The study found the existence of a significant relationship between e-commerce adoption and owner/ manager's age, level of education, gender, age of firm, firm size, and ICT capacity. The study also found that e-commerce adoption was significantly affected by supplier pressure, sector of business operation, market focus, competition intensity, and customer pressure. The study further showed, with regard to technological factors, that there was a significant relationship (directly and inversely) between e-commerce adoption and perceived compatibility, perceived complexity, perceived observability, perceived trailability, and perceived security/confidentiality.

The third objective of the study was to investigate the effect of the interaction of the various determinants for improved e-commerce service delivery. The objective of the analysis was to determine the effect of the interaction of the various factors on the significance of the coefficients and direction of the influence of independent variables. The results showed integrating the business profile with technological and environmental factors resulted in no change to the direction of the influence of position in the firm, age, and gender variables on e-commerce adoption.

Regarding the effect of interaction of the technological factors, the results showed that there was no change in the direction of the influence of perceived relative advantage, complexity, and security/confidentiality, but the direction of influence of trailability, observability, and compatibility changed from direct to inverse. Finally, the findings revealed that, due to interaction of the variables, there was no change in the direction of the effect of supplier pressure, sector of business operation, competition intensity, and customer pressure. The study, however, showed an improvement in the statistical significance of the sector of business operation, competition intensity, and customer pressure.

4.4 Recommendations

4.4.1 Product and Service Quality

The delivery of accurate product information on the Internet and timeous response to customer's query are seen as crucial to e-customers. Therefore, to ensure that customer loyalty is achieved and sustained e-retailers should present accurate product information on the website regularly. Poor site management by e-retailers as evident in the survey results shows that e-customers are not satisfied with old data. Overcoming this requires commitment to content management culture that present a formidable shopping experience that guarantee customer loyalty. If the e-retailing opportunity is to be sustainable, profitable and useful to e-customers, there should be more aggressive development and deployment of effective and efficient e-retail strategy that address the many challenges experienced by retailers. A disappointing situation can be avoided by ensuring that e-retail transactions are reliable at all times to avoid the out-of-stock scenario usually experienced.

4.4.2 Customer Satisfaction and Loyalty

Customer loyalty is a critical component for a successful e-retail business. This has been evident in the literature review section where most experts argue that satisfied customer will remain loyal despite alternative product and service offers from competitors. Having loyal customers suggest that companies can reduce operating costs; get extra business from referrals (have lower customer-acquisition costs). It can also lead to increased product penetration; high profit due to initial absorption of costs and premium pricing opportunities. While these factor amount to real e-retail benefit, they also have limitations in terms of appropriate strategies that can meet set objectives. This study shows how limited small retailers are in terms of resources needed to deliver successful retail business operation.

It is argued in chapter two that the reduced product prices and improved service quality is an incentive that attract customers. Retaining these customers require up-to-date product and service information delivered timely on retail website. The reliance on high quality product and service by customers are accompanied by expectations of high level satisfaction that come with such products. E-retailing is a formidable tool that is used to keep in touch with customers more frequently at a cost-effective rate. It is also a management strategy that can be used by the retailers to keep their customers in check at all times.

Cost saving are realized by managing old customer more than seeking new market and new market opportunity with internet. The lack of understanding of customers need and taste can impede the development of appropriate strategy and improvement in the retail business operation becomes a costly exercise. This is why the researcher employs the survey method to understand the unique challenges facing e-retailers, study the strength and analyze these against the opportunities of e-retailing.

4.4.3 Improved Market Share and Profitability

Improved e-retail technique for products and services enhances the possibility of the business gaining market share and increased profit. Displaying products in three-dimensional view using technologies such as immersive video or virtual reality further enhances the functionality of an e-retail site. The enhanced website enables customers to interact and experience products from various dimensions that are suitable to various market segments. This additional functionality can generate additional revenue stream for the e-retailer. Improve market share and profitability resulting from innovative strategy leads to e-retail business success. Therefore, innovative strategy development that recognizes improved product and service quality are relevant component of this study. The impact of internet technology on strategy development and deployment are useful determinant of customer loyalty. Customers will now have the leverage of understanding offers of quality product and services before making purchase decision. The survey of e-customers shows high customer preference for e-retailers to expand range of products and services. These features are important factors for customers who rely heavily on useful and reliable product and service information for decision making purpose.

Good e-retail sites should address the above concerns and provide necessary assurance to customers to guarantee repeat purchase. The technologies necessary to perform these tasks are available today. Therefore, attracting new customers and retaining old ones should lead to increased profitability. From survey data three of the e-retail business respondents acknowledged the many problems of e-retailing. Overcoming these problems require adequate understanding of customers' needs and developing innovative strategy to satisfy them. While the impact of internet technology on retail business is positive the many challenges of ensuring customer loyalty remain a strategic issue. Further research that investigates the impact of management strategy on e-retail business operation is recommended. The objectives set out in this study is to understand the impact of Internet technology on e-retailing and how this understanding can be used to develop and deploy solutions that improves the quality of products and services. It is also imperative from this that increases in market share and profit will result from sustained customer loyalty.

4.5 Areas of Further Research

This study sought to assess e-commerce adoption among Kenya's MSMEs in Nairobi. Due to this limitation, it is recommended that further research be undertaken in the context of Kenya's SMEs to enable the actual performance of the firms to be determined as a function of the extent of e-commerce adoption.

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