

Influence of Technological Readiness on the Performance of E-Businesses in Kenya

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Abstract

The purpose of this study was to investigate the effect of technological readiness on the performance of e-business in Kenya. The study was anchored on the resource-based view theory and it adopted a positivist philosophical worldview and limited itself to quantitative methods. The study population was 112 registered e-business companies in Nairobi and the units of analysis were the 336 management-level employees of the companies. The study adopted the use of questionnaires to acquire data from respondents. The study used the census sampling technique where all the 112 registered e-business companies in Nairobi were included in the study. Both descriptive and inferential statistics were used to analyze the data. Means and standard deviations were generated from the descriptive statistical analysis and regression analysis was among the inferential statistics used in the study. The study findings established that technological readiness had a significant influence on the financial performance of e-businesses in Nairobi Kenya ($\beta = 0.300$, $p < 0.05$). Thus, the study concludes that technological preparedness was vital for the performance of e-business in Nairobi Kenya. The study, therefore, recommends that e-business leaders ensure their platforms develop features to enable customers to compare different product prices and have diversified offerings providing discounted prices and premium prices with added features and improved services.

Key Words: E-Businesses, Performance, Technological Readiness.

Introduction

Several reasons, including technological advancements, globalization, environmental concerns, and changes in consumer requirements, are causing the business landscape of the twenty-first century to be complex and dynamic (Santoro et al., 2021). Organizations must therefore develop new business strategies and strategic capabilities to compete successfully in the market since traditional business practices may not be the most effective in this climate (Abazeed & Ahmad, 2020). For organizations to thrive in the current cutthroat climate, Wimelius et al. (2021) claim that they must be technologically ready and internalize key technological capabilities. Organizations in today's climate need to improve their performance while reducing costs, enhancing quality, and distinguishing the products they provide to clients to engage in effective competition. According to Verhoef et al. (2021), the success of a business today, through improved performance, is greatly influenced by its

technological readiness. Performance is the driving factor for any firm's existence, according to Al-Nimer et al. (2021).

According to the Resource-Based View (RBV) theory, a firm's capacity to gain a competitive edge and perform well will be based on the resources and capabilities available to the organization (Donnellan & Rutledge, 2019). Besides, Ghonim et al. (2022) indicate that for businesses to compete successfully, they need to have technological readiness which indicates the firm's propensity to embrace and use new technologies for accomplishing goals.

Information Technology (IT) is one of the resources that come to help organizations in today's competitive climate as organizations are to survive ineluctably to acquire competitive advantage (Sani et al., 2021). Technological preparedness or readiness has been indicated to influence the capacity of organizations to utilize IT and enhance their performance and sustainable competitive advantage. The technological readiness of an organization is indicated by the level of IT competence of its employees and its commitment to IT security. An organization with IT readiness has employees who are optimistic and ready for technology and they adopt and utilize new technologies to accomplish their objectives in both individual functions as well as in teams. Optimism, inventiveness, competence, and security are the four components of technological preparedness as indicated by Abdul and Mohd (2018). Optimism and invention are the first two stages in being technologically prepared, and then the organization builds competence and security to ensure that it taps disruptions and advancements in technology for its gain and sustained competitive advantage (Rahnavard et al., 2019). When the organization has IT security and competence, it puts itself in a position to utilize technology for its advancement and thus enhance its performance.

The United States (US) is the largest e-commerce market in the world with a \$819 billion turnover in 2021. Although the bulk of e-commerce transactions occur in developed markets (particularly in the United States, the United Kingdom, Northern Ireland, and Japan), developing countries have started to catch up recently, led by those in Asia where many have become important buyers and sellers of goods and services online (Ahlstrom et al., 2020). For example, the People's Republic of China (PRC) now has the largest B2C (Business-to-Consumer) market in the world, surpassing the United States. Aside from the PRC, Indonesia and India are also expected to show the fastest growth in this market segment. As a result, the combined share of Asia (and Oceania) in the world's B2C market was projected to further increase to 39% in 2023 from 28% in 2013 (Alhazemi et al., 2020). Developing countries have generally exhibited low rates of basic internet usage, but the growth rate has been high (UNCTAD, 2019). The rapid growth in internet connectivity has led to consumers and producers seeing the advantages of e-commerce with convenience forming the major enticing factor for online businesses, for instance in Nigeria and Kenya (Grandon & Pearson, 2014). One of the developing countries that have experienced a steady increase in e-commerce adoption in Africa is Nigeria. Beginning with about 2 e-commerce platforms about a decade ago, Nigeria had over 175 of these platforms as of 2021 (Chiemeke & Ewuekpae, 2021).

Kenya has witnessed an increase in the number of online shopping portals like Kilimall, Jiji Kenya, Cheki, Rupu, Pigiame, and Jumia among others (Mlelwa, 2021). However, Kivuva (2021) observed that only 13% of Kenyans use e-commerce platforms to buy and sell products. The report also indicated that due to widely fragmented marketplaces, high delivery costs, and a lack of clearly identified buildings and streets that cause supply chain hurdles, the rate of adoption of online marketplaces in Kenya remains low. Besides, Raja (2022) indicated that only 20% of the online shopping portals in Kenya have returned a profit consistently over the past 5 years to 2021. To realize the full benefits of e-business,

organizations in developing countries especially Kenya providing e-commerce platforms should enhance their technological readiness which has been indicated as vital for the performance of e-commerce businesses (Alsalam, 2020; Abazeed & Ahmad, 2020; Ghonim et al., 2022).

Statement of the Problem

E-commerce in Kenya is a growing industry that generated \$3,562 million in sales in 2021, with a user penetration of about 40.3%, but projected to grow to 53.6% by 2025 (Raja, 2022). However, Kivuva (2021) indicated that the rate of adoption of online marketplaces in Kenya continues to be low owing to highly fragmented marketplaces, high delivery costs, and a lack of properly marked buildings and streets that generate supply chain bottlenecks. In addition, Raja (2022) reported that only 20% of Kenya's online shopping sites have consistently generated a profit during the previous five years until 2021. For instance, Jumia, the online market leader in Kenya by 2021, had been operating at a loss since launching in 2012 (McCain, 2021). Specifically, Jumia reported a loss of €33.7 million in 2021, a 24% reduction over the losses it had in 2020. Kilimall, Masoko, Jiji, and Sky Garden are some of the larger online retail sites that struggle to produce a profit, with Kilimall reporting a return on assets of -12% in 2021 (Raja, 2022). This poor performance by online shopping platforms can slow down the adoption of e-commerce in Kenya and reduce the contribution of e-commerce to the country's GDP if left unchecked.

Organizations in developing nations, especially Kenya, that provide e-commerce platforms should identify and utilize technology readiness, which has been identified as essential for e-commerce businesses, to fully reap the benefits of e-business (Alsalam, 2020; Abazeed & Ahmad, 2020; Ghonim et al., 2022). The influence of technology readiness on organizational performance has been explored by authors such as Caldwell (2012) and the findings were that technology readiness for change has a positive and significant effect on firm performance. Besides, Molla and Licker (2015) determined that technology readiness which is a managers' perception and evaluation of the degree to which they believe that their organizations have awareness, resources, commitment, and governance to adopt e-business is highly beneficial for performance. However, such studies were conducted outside Kenya and the findings may not be generalizable to the Kenyan context.

Study Hypothesis

The study tested the following null hypothesis:

H₀: Technological readiness has no statistically significant effect on the performance of e-businesses in Kenya.

Literature Review

Theoretical Review

This study was anchored on the RBV theory of the firm by Wernerfelt (1984) which focuses on the internal analysis of the differences in firm resources and explains how those differences can be a source of organizational performance. Thus, RBV views firms as holding tangible assets such as cash, land, and equipment or intangible assets such as technical skills and competencies, brand recognition, licences, company logos, and goodwill (Caves, 2017). Further, Barney (1991) contends that performance is a function of the bundle of unique

resources and capabilities owned and controlled by the firm. Capabilities are defined as the abilities of firms to organize and reconfigure resources in unique and successful ways to establish a competitive advantage.

Dynamic capabilities are the prevailing organizational and strategic routines through which managers modify their resource base by acquiring, shedding, integrating, and recombining them to generate new value-creating strategies (Teece et al., 1997). According to Barney (1991), an important precept of RBV is that for a resource to become a factor of sustained competitive advantage, it should be valuable; rare or scarce; inimitable or imperfectly tradable; and non-substitutable or difficult to imitate (VRIN). This study considered technological readiness indicated by a firm's technology competence and technology security as intangible VRIN resources that could lead to attaining high organizational performance and sustaining a competitive advantage.

Empirical Review

Technology readiness as an organization-level construct refers to organizational members' shared resolve to implement technical changes (technical change commitment) and shared belief in their collective capability to do so (technical efficacy) (Kumar & Sushil, 2013). Caldwell (2012) did a study on technology readiness and 150 managers from 50 private companies made up the sample size. A systematic questionnaire was used to gather the information. The study found that when technology readiness for change is high, organizational members are more likely to initiate change, exert greater effort, exhibit greater persistence, and display more cooperative behaviour. This study confirmed the hypothesis that technology readiness for change has a positive and significant effect on firm performance. Molla and Licker (2015) carried out a study within the context of developing countries to determine the impact of technology readiness on firm performance. The authors developed a perceived e-readiness model that identified many of the relevant contextual and organizational factors that might affect e-business adoption in developing countries. The model included two major constructs that measure both perceived organizational e-readiness and perceived external e-readiness. Another study by Mehrtens et al. (2012) investigated the influence of technology competence and how it affects organizational performance and found that perceived benefits, technology readiness, and external pressures were the key determinant factors for organizational performance.

Seyal and Rahim (2010) did a study on the impact of technology readiness and firm performance on eighty-six Bruneian e-business SMEs. The study used regression analysis and found that technology readiness is a significant factor that determines the performance of e-business companies. Another similar study by Sutanonpaiboon and Pearson (2014) on 155 managers and owners of Thai SMEs developed a model of factors such as technology readiness that led to the perceived strategic value that finally determined the e-business performance. Besides, Powell (1997) conducted a study on information technology as a competitive advantage and the role of human e-business and technology resources. The study found a significant relationship between Information Technology (IT) and the effectiveness of human resources. Zhu et al. (2004) in their study on information technology payoff in e-business environments used 612 firms across 10 countries as their target population. The study found that technology readiness emerges as the strongest factor in e-business value while IT competence significantly contributes to a firm's performance.

Grandon and Pearson (2014) conducted their study on electronic commerce adoption which was an empirical study of Small and Medium Enterprises (SMEs) in the US. The sample size

for the study was 116 respondents from the SMEs. The study used an internet survey to get a response from top managers and owners of SMEs. From the findings of the study, IT competence had a bearing on a firm's performance.

Another study by Zhu et al. (2014) examined the influence of technological context in terms of IT infrastructure and IT expertise and the organizational context in terms of organizational capability and expected benefits of e-business. The targeted population consisted of 163 IT executives in large Taiwanese firms and the results revealed that IT infrastructure, IT expertise, expected benefits of e-business, and competitive pressure, are important factors shaping e-business diffusion and performance. Moreover, IT proficiency and business success were studied by Crawford et al. (2011) in a study that used 50 private e-business businesses as its sample size. The study's correlational analysis results revealed that the firm's IT expertise is seen as supplying the fuel from which organizational capabilities may be promptly ignited, which in turn indirectly influences the firm's performance and competitive potential.

Conceptual Framework

The conceptual framework that guided the study is provided in Figure 1. The independent variable is technology readiness which is the degree of information technology (IT) proficiency among an organization's workforce and its dedication to safeguarding IT infrastructure. An organization that exhibits IT readiness is characterized by employees who possess a positive outlook and are well-prepared to embrace technological advancements. They effectively integrate and leverage new technologies to achieve their objectives, both at the individual level and within IT teams. Abdul and Mohd (2018) have identified four key elements of technological readiness, namely optimism, inventiveness, competence, and security. According to Rahnavard et al. (2019), the initial phases of technological readiness involve cultivating a positive outlook and fostering innovation. Subsequently, organizations must develop proficiency and establish safeguards to effectively leverage technological disruptions and advancements, thereby securing a lasting competitive edge. An organization that possesses IT security and proficiency is better equipped to leverage technology for its progress. Organizational performance was the dependent variable in this study. The actual output or outcomes of an organization as compared to its expected outputs make up organizational performance. Kuzic et al. (2013) indicated that organizational performance encompasses three specific areas of firms' outcome namely, financial performance (profits, return on assets, return on investment), performance of the product market, including the market share and sales, as well as customer satisfaction. This study used financial performance and customer satisfaction measures of performance to incorporate financial and non-financial measures of performance (Caves, 2017).

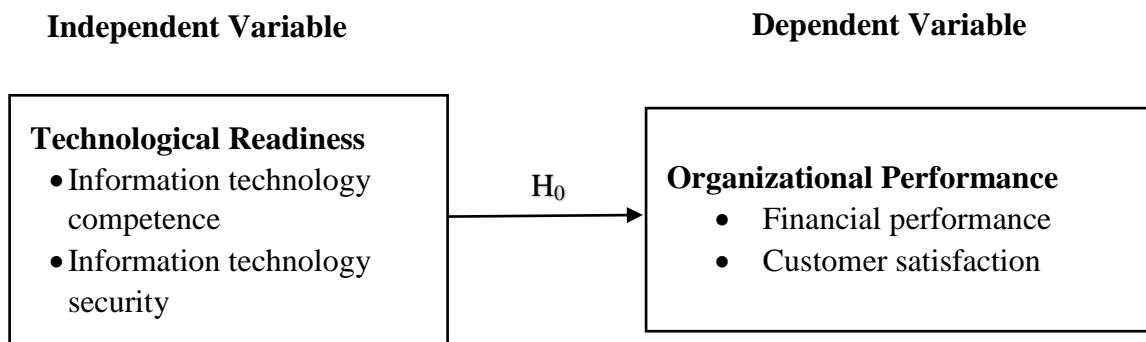


Figure 1. Conceptual Framework

Methodology

This study followed the positivism philosophy that involves working with an observable social reality to produce law-like generalizations, with the emphasis being on a highly structured methodology to facilitate replication (Saunders et al., 2016). The study used a statistical approach since it focused on senior managers from many different e-businesses in Kenya as the target respondents, and made inferences based on the sample. Thus, this study was a quantitative cross-sectional study that applied a descriptive correlational design. The target population of the study was 336 managers from 112 registered e-business companies in Nairobi (Kenya Business Directory, 2021).

This study used a census and included all 336 managers from 112 registered e-business companies in Nairobi. The study applied a structured questionnaire which was pretested for reliability and validity to gather primary data. The drop-and-pick-later method as well as electronic administration (Google Forms) were applied to administer the questionnaire.

The gathered data was analyzed using descriptive statistics such as percentages, frequencies, means, and standard deviations, while ordinary least squares linear regression was utilized to examine the influence of technology readiness on performance.

Results

The study distributed 336 questionnaires to the sampled respondents and 284 managers responded to the questionnaire giving a response rate of 84.5%. The results showed that 20.8% of the study participants were chief marketing officers, 18% were IT officers, 14.1% were chief technology officers and 12.7% were operation directors. CEOs were 5.3% and a similar percentage (5.3%) were HR directors. Moreover, 47.2% of the study participants were aged between 26 and 40 years while 45.4% were aged between 41 and 55 years. Besides, 66.2% of the study participants were male while 33.8% were female. The results of the study also showed that 46.8% of the study participants had been employed in the e-businesses for a period between 4 and 6 years while 29.6% had been employed for three years or less. On education, the majority of study participants (55.6%) had undergraduate degrees while only 3.2% had doctorate degrees. Further, 39.8% of study respondents indicated that their e-businesses had less than 50 employees while 33.5% indicated that their e-businesses had between 50 and 100 employees.

Descriptive Analysis for Technological Readiness

Several statements on technological readiness were provided and study participants were requested to indicate how much they agreed or disagreed with the statements concerning their e-businesses. The responses were rated on a Likert scale from 1 to 5 (strongly disagree to strongly agree). Means (M) and standard deviations (SD) were employed in the study to analyze the answers. The findings are summarized in Table 1.

Table 1. Descriptive Statistics for Technological Readiness

Statement on Technological Readiness	M	SD
This business regularly trains its staff on IT and emerging issues	4.07	0.885
Employees in this business are committed to enhancing their technology capabilities	4.30	0.747
Employees in this business are enthusiastic about new technologies	4.33	0.934
The firm utilizes modern technology in its activities and operations	4.39	0.817
This business encourages employees to participate in new technological projects in the workplace.	4.34	0.792
The firm has adequate safeguards to deal with potential cyberattacks	4.32	0.882
The business has systems to guarantee the confidentiality of customer information	4.36	0.677
The business has adequate safeguards to ensure all business and client data is free from the risk of improper erasure or modification	4.31	0.840
All employees in the firm are properly trained in IT security	4.25	0.889
This business has invested heavily in cyber-security.	4.35	0.736

The study's results shown in Table 1 indicate that the participants agreed that companies use current technology in their operations and activities ($M = 4.39$, $SD = 0.817$) and that they have procedures in place to protect the privacy of their customers ($M = 4.36$, $SD = 0.677$). Moreover, the study findings demonstrate that respondents agreed that the businesses have invested heavily in cyber-security ($M = 4.35$, $SD = 0.736$) and further agreed that the businesses encourage employees to participate in new technological projects in the workplace ($M = 4.34$, $SD = 0.792$). Additionally, the study findings show that study participants agreed that employees in e-businesses are enthusiastic about new technologies ($M = 4.33$, $SD = 0.934$).

The study findings provided in Table 4.11 further indicate that respondents agreed with the statement that the firms have adequate safeguards to deal with potential cyberattacks ($M = 4.32$, $SD = 0.882$) and also agreed that the e-businesses have adequate safeguards to ensure all businesses and client data is free from risk of improper erasure or modification ($M = 4.31$, $SD = 0.840$). Furthermore, findings show that the study participants agreed that employees in the e-businesses are committed to enhancing their technology capabilities ($M = 4.30$, $SD = 0.747$) and likewise agreed that all employees in the firms are properly trained on IT security ($M = 4.25$, $SD = 0.889$). Additionally, the study participants agreed that the e-businesses regularly train their staff on IT and emerging issues ($M = 4.07$, $SD = 0.885$). These findings imply that according to the study participants, the e-businesses had best practices on IT security and IT competence that ensured that their employees had requisite IT competence and customer data was secured.

Descriptive Analysis for Performance

The study participants were provided with statements on performance on a scale of 1 to 5 (strongly disagree to strongly agree). Financial performance and customer satisfaction were used as the measures of performance. The responses from the study participants were analyzed using means (M) and standard deviations (SD) and the findings are summarized in Table 2.

Table 2. Descriptive Statistics for Performance

Statements on financial performance	M	SD
The profits for our business have increased over the past three years	4.32	0.758
Our business sales continued to grow over the past three years	4.39	0.636
Our business share of the market has increased over the past three years	3.31	0.939
The business has continued attracting new suppliers and retailers	4.19	0.971
The financial performance of the business surpasses the average for the sector	3.24	0.880
Statements on customer satisfaction		
This firm's customer rating has improved consistently	4.14	0.792
The business ensures on-time delivery for customers	4.19	0.695
The services of this business surpass customer expectations most of the time	4.33	0.858
Our customers are very loyal to our business	4.34	0.628
The business has a customer-centric culture that seeks to always meet the needs of customers	4.27	0.608

Based on the findings in Table 2, the study participants agreed that their business' sales continued to grow over the past three years ($M = 4.39$, $SD = 0.636$) and also agreed that the profits for their e-businesses had increased over the preceding three years ($M = 4.32$, $SD = 0.758$). Additionally, respondents agreed that their businesses had continued attracting new suppliers and retailers ($M = 4.19$, $SD = 0.971$). However, the study participants were neutral to the statements that the e-businesses' share of the market had increased over the past three years ($M = 3.31$, $SD = 0.939$) and were also neutral that the financial performance of the e-businesses surpasses the average for the sector ($M = 3.24$, $SD = 0.880$). Moreover, respondents agreed that their customers were very loyal to their e-businesses ($M = 4.34$, $SD = 0.628$) and also agreed that the services of their e-businesses surpassed customer expectations most of the time ($M = 4.33$, $SD = 0.858$). Besides, study participants agreed that the businesses had a customer-centric culture that seeks to always meet the needs of customers ($M = 4.27$, $SD = 0.608$) and further agreed that the businesses ensure on-time delivery for customers ($M = 4.19$, $SD = 0.695$).

Additionally, study participants agreed that the firms' customer rating has improved consistently ($M = 4.14$, $SD = 0.792$). The findings imply that the e-businesses included in the study experienced increased profits over the preceding three years, experienced growth in sales, and continued to attract more retailers and suppliers. However, since the study was on the whole e-business sector, there was an insignificant change in the average market share, and performance of each e-business compared to the sector. Further, the findings implied that the respondents rated their e-businesses highly regarding their service to their customers in terms of ratings, on-time delivery, meeting and exceeding customer expectations, customer retention, and having a customer-centric culture.

Regression of Technological Readiness on Performance

The study undertook a regression analysis of technological readiness on the performance of e-businesses in Nairobi, Kenya. This was undertaken after regression assumptions on linearity, normality, and heteroscedasticity were tested and met. The following was the null hypothesis:

H_0 : Technological readiness has no significant effect on the performance of e-businesses.

Table 3 presents the summary results concerning the relationship between technological readiness and the performance of e-businesses in Nairobi, Kenya, including the correlation coefficient (R), the R-squared, and the adjusted r-squared.

Table 3. Model Summary for Technological Readiness and Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.401	.161	.158	.39474

a. Predictors: (Constant), Technological readiness

b. Dependent Variable: Performance

According to the study's results in Table 3, there is a linear relationship between technological readiness and the performance of e-businesses in Nairobi Kenya ($r = 0.401$). Besides, the findings indicated that the r squared was 0.161 indicating that 16.1% of the variation in the performance of e-businesses in Nairobi, Kenya can be explained by technological readiness. The value of r squared was low since the model only considered one variable whereas the performance of e-businesses can be explained by numerous factors.

To evaluate the model's relevance and its predictive power, the authors also ran the ANOVA test. Table 4 provides a summary of the findings.

Table 4. ANOVA for the Technological Readiness and Performance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.430	1	8.430	54.098	.000
	Residual	43.942	282	.156		
	Total	52.371	283			

a. Predictors: (Constant), Technological readiness

b. Dependent Variable: Performance

Table 4 presents the findings which indicate that the computed f -value was statistically significant ($F = 54.098$, $P < 0.05$). This is an indication that the model was a good fit for the data and that technological readiness had a significant influence on the financial performance of e-businesses in Nairobi, Kenya. This demonstrates how well the model matched the data.

To establish the extent of the influence of technological readiness on the performance of e-businesses in Nairobi Kenya, the regression coefficients, the t values, and the significance values were developed. Table 5 provides a summary of the study results.

Table 5. Regression Coefficients for Technological Readiness and Performance

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.962	.178		16.658	.000
Technology readiness	.300	.041	.401	7.355	.000

a. Predictors: (Constant), Technological readiness

b. Dependent Variable: Financial performance

The study results provided in Table 4.18 led to the following regression model:

$$\text{Performance} = 2.962 + 0.300 (\text{Technological readiness}) + \varepsilon$$

The results in Table 5 and the regression equation demonstrate that the coefficient of technological readiness ($\beta = 0.300$) was positive and significant at the 5% level of significance ($p = 0.000$). Accordingly, the implication is that a unit change in technological readiness would result in a corresponding change of 0.3 in the financial performance of e-businesses in Nairobi, Kenya. The null hypothesis that technological readiness has no statistically significant influence on the performance of e-businesses in Nairobi, Kenya was therefore rejected at a 5% level of significance.

Discussion of Findings

The study findings determined that technological readiness had a significant influence on the performance of e-businesses in Nairobi, Kenya. The findings support the Resource-Based View (RBV) theory by Wernerfeldt (1984) which considers firms in terms of their resources and not their product markets and developed economic tools to measure the impact of a firm's resources on its profitability. According to the RBV, this study considered technological readiness as a resource that was the internal source of strategic competitive advantage and improved financial performance and customer satisfaction. The findings also concur with the observations of Barney (2003) that an organization is a broader set of resources and the continuous growth of an organization necessitates the exploitation of existing resources and the development of new ones to enable it to attain its performance objectives.

The study findings that technological readiness had a significant influence on the performance of e-businesses in Nairobi, Kenya agreed with the study by Caldwell (2012) that when technology readiness for change is high, organizational members are more likely to initiate change, exert greater effort, exhibit greater persistence, and display more cooperative behavior.

This study confirmed the hypothesis that technology readiness for change has a positive and significant effect on firm performance. Another study by Molla and Licker (2015) had similar findings to the findings in this study that within the context of developing countries technology readiness has a positive effect on firm performance. Besides, the findings from the current study also concur with the findings by Mehrtenset al. (2012) who conducted a study on organizational performance and found that perceived benefits, technology readiness, and external pressures were the key determinants factors for organizational performance. Besides, Seyal and Rahim (2010) had similar findings to the findings in this study that

technology readiness is a significant factor that determines the performance of e-business companies.

The study findings that technology readiness has a significant influence on the performance of e-businesses agree with the findings by Kumar and Sushil (2013) that technology readiness for change varies as a function of how much members of an organization value the change and how favorably they appraise three key determinants of implementation capability task demands, resource availability, and situational factors. The findings from this study that technology competence affects e-business performance agree with Zhu et al. (2004) that IT competence has a significant effect on the performance of e-business firms.

Conclusion and Recommendations

The study results established that technological readiness has a significant and positive influence on the performance of e-businesses in Nairobi, Kenya. The study thus concludes that technological preparedness was vital for the performance of e-business in Nairobi Kenya. The study further concludes that the vital technological readiness aspects include IT competence and IT security which are indicated by using current technology in their activities and operations, having procedures in place to protect the privacy of their customers, and extensively investing in cyber-security.

To enhance technological preparedness in e-business, the study recommends that the management of e-businesses encourage staff members to become involved in cutting-edge technology initiatives at work, to invest in new technology, and to have sufficient defenses against possible cyberattacks. Besides, management of e-businesses should ensure that their e-businesses have sufficient defenses against the possibility of incorrect deletion or alteration of all customer and company data, improve technological skills in their firms, and provide all employees in the companies with the necessary IT security training.

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