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Digital Entrepreneurship and Performance of the Insurance Industry Sector in Kenya

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Abstract

The insurance industry in Kenya has become very competitive due to the shrinking demand of noncompulsory insurance products and negative perception by the general public. To ensure improved organization performance, insurance companies have to adopt the use of technology like use of mobile technology, information communication technology platforms, information systems, online services platforms, electronic advertising and risk analysis. This study therefore sought to assess the effect digital entrepreneurship on performance of insurance companies in Kenya. The study was guided by the following specific objectives; to assess the effects of Technological Evolution on performance of insurance companies in Kenya, to establish the effects of digital business processes on performance of insurance companies in Kenya, to determine the effects of marketing technology on performance of insurance companies in Kenya, and to find out the effects of e-procurement transformation on performance of insurance companies in Kenya. The study was anchored on diffusion of innovation theory, dynamic capabilities theory, evaluation theory, and value chain theory. This study used a descriptive research design. The unit of analysis was the 55 insurance companies in Kenya while the unit of observation was top management employees. The study adopted census technique. The study selected a pilot group of 10 middle level managers from the target population. Data collected was both quantitative and qualitative in nature. Data analysis was done with use of SPSS version 25 and presented using percentages, tabulations, among other techniques. The qualitative data analysis was done by use of content analysis and was presented in prose form. The study employed a multivariate regression model to study the relationship between the dependent variable and independent variable. The study concludes that technological evolution has a positive and significant influence on performance of insurance companies in Kenya and that digital business processes has a positive and significant influence on performance of insurance companies in Kenya. Further, the study concludes that marketing technology has a positive and significant influence on performance of insurance companies in Kenya and that e-procurement transformation has a positive and significant influence on performance of insurance companies in Kenya. This study therefore recommends that the management of insurance companies in Kenya should ensure the embrace the latest technology to facilitate organization performance. In addition, the management of insurance companies in Kenya should ensure adoption of digital marketing strategies to market their products hence improving their market share.

Keywords: *Digital Entrepreneurship, Performance, Insurance*

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1.0 Background of the Study

The economic performance and innovation success of countries has increasingly depended on digital technology developments (Konig, Ungerer, Baltes, & Terzidis, 2019). Digitalization is broadly associated with the changes that relate to big data analytics, the adoption of digital technologies, and an increase in their utilization (Parviainen, Kääriäinen, Tihinen, & Teppola, 2017). The emergence of digital platforms and associated ecosystems has led to a new and potentially important context for entrepreneurship that is digital entrepreneurship (Nambisan, 2017). According to Davidson and Vaast (2019), digital entrepreneurship is generally defined as the pursuit of business or economic opportunities based on the use of digital technologies. There is a growing interest in digital entrepreneurship since it is considered to be the ultimate and contemporary trend in entrepreneurship development due to the rapid development of digital technologies and the emerging digital economy (Hafezieh, Akhavan, & Eshraghian, 2017).

Fueled by FinTech investments and InsurTech startups, insurance has become a hotbed of digital innovation (Lundvall, 2019). In response, insurers must embrace change and rethink business models to move towards a compliant, secure and digitally-enabled operating model to enhance customer, employee, partner and other stakeholder experiences (Steiner, 2020). New digital tools and capabilities help streamline new product development, digital experiences and the transformation of key functions from marketing, distribution, underwriting and claims to finance and accounting. According to Butzlaff (2020), those who fully embrace digital transformation can achieve significant competitive advantages by meeting tomorrow's customer needs — driving operational agility to respond to changing marketplace expectations. To succeed, insurers must understand what's possible and take decisive action to deliver value now and ignite long-term growth (Erdland, 2017).

Digital technologies may however not only result in business opportunities; they may also, simultaneously, be disruptive and cause new vulnerability spaces (Dong, 2019; Rachinger, Rauter, Müller, Vorraber, & Schirgi, 2019). This is particularly true since, within the reframing of business models, digital technologies have an impact on the various levels of the innovation system (see the Innovation System Conception section), reshaping industry competition and networking patterns within this system (Ardolino, Rapaccini, Saccani, Gaiardelli, Crespi, & Ruggeri, 2018). Furthermore, the integration of digitalization in business processes implicates not only internal changes related to new organizational management strategies and entrepreneurial processes. External system conditions (e.g., institutional influence, new market tendencies, changes in competitive advantages) as well as social attitudes (e.g., digital trust, technology adoption) also have a significant effect (Dong, 2019). This study therefore seeks to assess the effect digital entrepreneurship has on performance of insurance companies in Kenya.

1.1 Statement of the Problem

The insurance industry in Kenya has become very competitive due to the shrinking demand of noncompulsory insurance products and negative perception by the general public. Their performance remains low with the overall insurance penetration at 2.93% in 2018 down from 3.44% in 2017 (AKI, 2018). The Kenyan insurance market experienced a lower growth rate during the 2020 first quarter under review compared to that recorded in the first quarter of 2019. Insurance premiums during the first quarter of 2020 registered a year-on-year growth of 9.6% while a 16.4% year-on-year growth was registered in the first quarter of 2019 (IRA, 2021).

Information communication technologies have profoundly changed the strategic context (Grossman *et al.,* 2018). To ensure improved organization performance, insurance companies have to adopt the use of technology like use of mobile technology, information communication technology platforms, information systems, online services platforms, electronic advertising and risk analysis (Schmidt, Drews & Schirmer, 2017). Insurance companies may use digital entrepreneurship strategies to deliver greater value to their customers and gain competitive advantage (Kachroo & Majumdar, 2017).
Empirical studies done include; Letting (2016) studied the relationship between technology and competitive advantage the case of vegetables and animal oils and fats manufacturers in Kenya; Waruingi, (2017) studied on the extent of information communication technology strategy to business strategy for companies quoted at the NSE; Maina (2017) researched on the relationship between technology strategy and competitive performance in the telephony industry in Kenya. There is limited empirical evidence on the relationship between technologies from the entrepreneurial perspective and performance of insurance companies in Kenya. It is therefore against this background that this research study sought to establish the effect digital entrepreneurship on performance of insurance companies in Kenya.

1.2 Objectives of the Study

i. To assess the effects of Technological Evolution on performance of insurance companies in Kenya.
ii. To establish the effects of digital business processes on performance of insurance companies in Kenya.
iii. To determine the effects of marketing technology on performance of insurance companies in Kenya.
iv. To find out the effects of e-procurement transformation on performance of insurance companies in Kenya.

2.1 Theoretical Review

The study was anchored on the Diffusion of Innovation Theory, Dynamic Capabilities Theory, Evaluation Theory and the Value Chain Theory.

2.1.1 Diffusion of Innovation Theory

Diffusion of Innovation Theory was discovered by Rogers in 1962 expounds how an idea can be communicated over time and spreads through the population or social system. Diffusion can be described as the process which evolution spreads and is accepted in the society. Many factors interact to influence the spread or diffusion of technology (Rogers, 1995). It involves communicating the idea, the time it takes to spread and the nature of the environment it is introduced. It goes farther to expound and investigate how the various factors interact, facilitate the new evolutions and the effects of the invention. This inculcates a culture in people and adopts the idea or product over time. Over the years diffusion theory has been used extensively both in technology and economics. More theories have been derived out of diffusion to explain spread of various evolutions in the society. In Information technology, the use of developer based theory and adopter based theory (Surry, 1997).

Further Rodgers explains the adoption using the rate of adoption theory that defines how evolutions diffuse to form a pattern that is S shaped curve. It identifies how the idea follows a path from inception at a slow gradual growth before exploding into rapid growth (Rogers,

1995). Diffusion theory is further supported by theory of perceived attributes that explains the potential of evolutions adopters judge based on five attributes of invention. They comprise of relative advantage, compatibility, observability, complexity and lastly triability. Surry supports this perception which plays a major role in the adoption of technologies in the society (Gheysari et al., 2016). This theory is relevant to this study in understanding technology in evolutions and performance of insurance companies.

2.1.2 Dynamic Capabilities Theory

This theory underpins the fact that dynamic capabilities grants a firm the ability to decisively create, extend or modify its resource base as they are about transformation. To manage this change, the organization uses processes hence the complex link between dynamic capabilities and the processes. Dynamic capability can be attributed to as the organization's capacity to craft new capabilities and renew its resource base within and outside so as to fit in the developing business environment (Teece, 1997) Competitive environments are changing rapidly, resulting in high levels of improbability. Incremental and far reaching business process changes are the central tasks of BPM hence the ability to practice such BPM initiatives successfully is an important organizational attribute.

This implies that BPM projects should be ongoing projects aimed at improving business processes (Trkman 2010). An organization outshines another by using its dynamic capabilities to position its assets in the most appropriate manner for the prevalent state. Although competitors may replicate the organizations dynamic capabilities, it is not easy to replicate the resources you have to handle with neither dynamic capabilities nor the permutation of the duo. Nonetheless, Plattfaut et al. (2011) states that BPM capabilities are created when their desire for continued existence and are obtained through leaning and replication. This implies that firms ought to call for replication of some of the abilities amongst each other. To achieve that competitive edge, dynamic capabilities are desirable, though not ample on their own (Eisenhardt & Martin, 2015). Firms are placed under intense pressure (in the short term) to reduce costs, since the impact of dynamic capabilities can only be appraised retrospectively. Zollo and Winter (2002) and Winter (2003) warn that the sustenance of dynamic capabilities can be costly, and an extemporary move could cost less. On the contrary, the cost of an extemporary move basically wanes should there be no issues to resolve (Winter 2003).

2.1.3 Evaluation Theory

The evaluation theory is based on the premise that non-traditional techniques have to be used to guide property decisions (Wang & Wolverton, 2016). In this regard, appraisal techniques have to factor all avenues to ensure that the interests of all players within the industry are catered for. The opinion of land valuers and property valuers in this regard is quite significant. According to Perez (2011) the future growth rates within the real estate industry will be correlated to planned purchases by consumers. He believes that the impact of digitalization on marketing in the real estate will be more felt in the future (Perez, 2017). As a consequence, decisions concerning real estate have to be all inclusive and this allows the industry not to be monopolized by certain forces that are geared towards protecting vested interests.

In summary, the evaluation theory helps to create balance within the insurance industry so that players can use the digital marketing tools appropriately. For instance, digital platforms can help marketers to move beyond the limits of the market which demands that sellers have to

compare prices with what competitors are offering. Besides, the theories help modern players within the real estate industry not to ignore the role of traditional brokers, valuers and agents who can offer stability in an otherwise virtual business environment that can easily be infiltrated by rogue and anonymous dealers. The quest for the inclusion of all players in the industry in accordance to the evaluation theory signifies that the future prospect of the industry is dependent on digital as well as non-digital platforms. This theory helps in understanding how marketing technology affects performance of insurance companies in Kenya since it postulates that digital marketing platforms have transformed the insurance industry to the extent that the traditional roles of agents and brokers are being bypassed.

2.1.4 Value Chain Theory

The theory of value chain was founded by Michael Porter in 1985 (Christopher, 1992). To better understand the activities through which a firm develops a competitive advantage and creates shareholder value, it is useful to separate the business system into a series of value-generating activities referred to as the value chain. In his 1985 book Competitive Advantage, Michael Porter introduced a generic value chain model that comprises a sequence of activities found to be common to a wide range of firms (Christopher, 1992).

A value chain disaggregates a firm into its strategically relevant activities in order to understand the behavior of costs and the existing and potential source of differentiation. Porter's value chain consists of a set of activities that are performed to design, produce and market, deliver and support its product. Porter distinguishes between primary activities covering inbound logistics, operations, outbound logistics, marketing and sales, service in the core value chain creating directly value and support activities including procurement, technology development, human resource management and firm infrastructure. Porter formulates the general strategies for the value chain of cost leadership and differentiation to reach competitive advantage (Porter, 1985). These cross-value chain strategies established a principle that competitive advantage can be reached only by managing the entire value chain as a whole including all involved functions.

In an increasingly complex world of globalized trade with extended lead times and greater risk, the integration in the supply chain will require supporting information systems and technology. The growth of the internet and technologies which enable real time information sharing such as inter-connected ERP systems, web-based EDI, electronic portals and online order processing systems, can potentially support the building of closer links with customers, suppliers and third-party vendors such as logistics service providers. In practice however, the progress towards such supply chain integration between firms has often been stalled by factors such as rival cultures, information technology deficiencies, lack of process alignment and other organizational legacies (Akkermans et al., 1999). Hence whilst this new technology offers much promise, examples of its success in transforming supply chain practice are still relatively few in number.

For this study the Value chain theory implies that those firms that adopt E-procurement are able to gain from the growth of the internet and technologies which enable real-time information sharing such as inter-connected ERP systems, web-based EDI, electronic portals between buyers and suppliers and online order processing systems which supports the building of closer links with customers, suppliers and third-party vendors such as logistics service

providers. It will be used in this study to explain the effects of procurement transformation on performance of insurance companies in Kenya.

2.2 Empirical Review

According to Atkinson (2013) empirical research is based on observed and measured phenomena and derives knowledge from actual experience rather than from theory or belief. The following are the empirical reviews in relation to the variables of the study.

2.2.1 Technological Evolution and Performance

Gunday et al. (2019) delved the link amongst different kind of evolutions and how they impact on performance. An explanatory design was utilized to study 185 manufacturing firms in Turkey. A theoretical basis was tested empirically to identify associations amidst evolutions and performance. Panel form of data was used and the results depicted that evolutions was positively associated to OP. Ndesaulwa and Kikula (2016) explored the effect that evolution had on SMEs performance in Tanzania with the help of a survey design. A population of 500 sampled SMEs in Dar es Salaam was studied and both raw and published sources of data were used. A regression equation was employed for testing the connection amid evolutions and SMEs' performance while descriptive statistics was used in analysing the trend of the variables. Innovation and performance were found to have a positive connection. These studies have limited themselves to manufacturing firms and SMEs. The current study is focusing on insurance firms.

Salim and Sulaiman (2017) assessed the link between evolutions and performance of Malaysian-Based ICT firms a survey was done involving 100 ICT firms in Malaysia. Quantitative and qualitative forms of research were executed with the help of raw and published data sources. It was concluded that evolutions enhanced business and firm performance. This study was done in another context- (Asia and ICT sector) as opposed to the local setting.

Kiragu (2016) explored the effect that evolutions had on OP of insurance firms in Kenya, a cross-sectional and descriptive research designs were adopted. A census survey involving all the 49 insurance firms, a primary and secondary data sources were gathered. Descriptive analysis and regression were to analyze data. The results depicted that process evolutions was a popular form of evolutions adopted by the insurance firms. This study was conducted three years ago, considering the environment changes very fast; some of the evolutions and technologies used three years ago are not applicable today for example purchase of insurance cover using mobile phones.

Partha (2016) looked at the impact of information technology on insurance sector with special reference to the life insurance corporation of India. Considering various needs and requirements of the customers as well as their awareness about the information technology and various information technology enabled services, the insurance companies are dedicatedly trying to gain the maximum utilization of the information technology in their business operation in most efficient and effective way with the help of their strong technology savvy manpower in the competitive market. In the present perspective, the researcher in this paper wanted to study the impact of the modern technology namely information technology on the insurance sector with special reference to the Life Insurance Corporation of India (LICI) in

Burdwan district, West Bengal. In this study, accepted 221 usable responses were considered as the sample size and statistical package SPSS 16 was used to perform the analyses.

Chege and Njoroge (2016) established the influence of technology on strategy and organizational success: a case of Kenya Power and Lighting Company. The research design for this study was a descriptive research design. Descriptive research describes the situations and seeks to establish whether a relationship exists between two variables, which in this case is technology vis-à-vis strategy. The target population of this study was the entire organization of Kenya Power seeing that the strategy that was used in the research was that of a case study. The research used probability sampling and in particular complex random sampling technique. The data collection instrument that was used in the research was a structured questionnaire. The results and findings of this research was that technology has little effect on strategy in organizations or departments where technology is at the heart of the operations. However it influences the management of technology which in turn has a significant influence on strategy. Technology significantly affects the strategy of organizations or departments where it performs a support role. It makes the business processes more efficient with greater output but that does not mean that without technology the organization or department cannot operate.

2.2.2 Digital Business Processes and Performance

Kemal, Yasin, and Zafer (2018) studied the effects of BPR on productivity and performance by conducting firm level analysis. The objective of the study was to empirically examine the effect of BPR on firm productivity and performance. Data was used spanning between 2007 and 2018. The findings showed that, return-on-assets drop significantly during the project initiation year. Moreover, it was found out that, performance and productivity measures improve in a decreasing manner after project initiation, suggesting that BPR positively affects firms' performance.

Škrinjar et al. (2018) analyzed and empirically tested the impact of business process orientation on the overall organizational performance. Their empirical research was conducted in 2005 on a sample of 203 companies in Slovenia and 202 companies in Croatia, each with more than 50 employees. Before testing the whole model, the exploratory factor analysis confirmed the impact of business processes on the financial and non-financial performance. The financial performance construct was measured by using ROA and added value per employee, while the nonfinancial performance construct was measured by indicators grouped into four scales. The authors statistically confirmed a strong and significant impact of business processes and process organization on financial and non-financial performance. A significant indirect impact of process organization on financial performance through non-financial performance was proved, as well.

Alzoubi and Khafajy (2018) researched on the impact of business process management on business performance superiority. The objective of this study was to measure the impact of business process management on organization's business performance superiority. The study adopted the approach of business processes management life cycle as a basis for detecting the idea of superiority. The sample included (89) managers, and their opinions and responses were used to describe (process identification and design, process modeling and documentation, process monitoring and controlling, and process optimization , in addition to describe the dimensions of business performance superiority, operational and competitive. Multiple regression analysis method was used to test the idea of the study model, to highlight the

contribution of business process management to interpretation of organization's business performance superiority. Sustained superiority requires organization managers to support business processes orientation financially and morally within the business entrepreneurship window, under uncertainty environment, characterized by risk and changeable as future perspective of the value of organization's business performance superiority.

Kabiru, Mohamed and Norlena (2016) studied the critical success factors for business process management for small and medium banks in Nigeria, conducting a questionnaire on banks. The finding from the study showed that, there is a significant relationship among information technology investment, personnel commitment, volume financial activities and overall organizational performance. Okafor and Okeke-Ezeanyanwu (2018) investigated the effect of business process reengineering on organizational performance of rice production firms in South-East Nigeria, using the survey research design. Authors employed multiple regression analysis and found that, the adoption of new technology and processes have positive significant effect on the performance of rice producing firms in South-East, while presence of process owners at production interfaces have negative significant effect. Based on the findings, the study concluded that, if rice production firms in South East Nigeria want to improve performance, attention should be given to the business process reengineering technique.

Buh, Kovacic and Stemberger (2015) undertook a study on critical success factors for different stages of business process management adoption using a case study in economic research. The study established that well-articulated plan of the BPM project was vital as it helps the organization recognize the expected benefits. It further revealed that top management support and involvement and entitlement of employees' resulting from a rise in customer centrism are important. The firm should place their customers' first place and top management should be responsive to process problems and the need for enhancement. The company should also be open to changes which are critical in BPM adoption. They concluded that managers must identify the organization's critical success factor and thus focus their efforts to overseeing them.

2.2.3 Marketing Technology and Performance

Alghamdi and Bach (2018) researched on technological factors to improve performance of marketing strategy. The purpose of the study was to offer a review of literature on how information and communications technology is developing and improving marketing practices and strategies. Technology has changed so much about the way people all over the world deal with each other – be it in business, politics, education, or in socialization. Internet has been the source of information. The internet has allowed wide and extensive collaboration. It also promotes innovation. As the internet progresses, the prices are also decreasing and it becomes greatly friendly to the users. It has changed the way businesses operate nowadays. The increasing rate of competition in the marketplace has changed the company orientations. The paper used a theoretical modeling on past and current sources on the implementation of information and communication technology in marketing practice. It focused on modeling the factors identifies in the marketing communication framework model, by looking at communication factors and variables affected by the use of technology. The model demonstrated that technology has a positive impact on marketing strategy where it is integrated with marketing elements of positioning, selection of target segments, segmenting the market, understanding consumer behavior, managing sales, managing marketing campaigns, and understanding the market.

According to Fill (2017), mobile phones provide another logical platform for marketers to channel targeted text (sms) messages to millions of users. Additionally, video technology is 26 beginning to allow TV programme transmission through mobile phones creating other advertisement opportunities. For example Kim Fay East Africa Limited sends its users information about its current promotional activities thus giving them up to date information that motivates consumers to purchase more of the company's services. Mobile Marketer (2010) said that brands and marketers can use the mobile channel to increase their brand affinity, recognition and customer loyalty. The attraction to mobile is the channel's ability to acquire new customers, increase customer loyalty and generate brand awareness and affinity to monetize content and the fact that it lets marketers provide convenience to consumers.

Cross and Daniel (2018) researched on the effects of marketing strategies on organizational performance. The purpose of this study is to investigate the effects of Marketing Strategies on Organizational Performance; A Study of Nigeria Bottling Company Kaduna, including Production strategy, pricing strategy, promotion strategy and place strategy, that eventually influences Marketing strategies on performance. Marketing strategy has been a focus of organizations and a tool for attaining overall firm performance. Our study contributes to the existing study of marketing strategy by supporting a relationship between marketing strategy factors and overall firm performance. Deduction from existing literature enabled a construction of a conceptual model that explains overall firm performance. Promotion, pricing, distribution, and product standardization and adaptation have an impact on sales, customer and financial performance of firms. The study suggests that the impact is mediated by marketing strategy implementation success.

Maina (2017) researched on the effect of digital marketing tools on performance of businesses in real estate sector in Nairobi County. The study employed descriptive research design. The questionnaires were used by the researcher as an instrument of collecting primary data. The target population included real estate investors. These included 145 employees, who represented the total number of employees found in Real estate investors, from the real estate in Kenya (Nairobi County). A simple random sampling technique was used to select a sample size of 145 real estate investors. Descriptive statistics and regression inferential statistics were used for analysis with the help of SPSS program. Tables were used in data presentation. The study found out that the probability value of 0.000 indicates that the regression relationship was significant in determining how email marketing, web solutions, mobile marketing and social media affect firm performance. From the ANOVA table, the independent variables were statistically significant predicting the dependent variable since adjusted R square was 0.883 implying that email marketing, web solutions, mobile marketing and social media explains 88.3% variation in Firm performance. The study concluded that web solutions affect the performance of the company greatly and positively, that social media affects performance of the business positively, that mobile marketing affect performance of the business in a very great extent and that email marketing affect performance significantly and greatly.

2.2.4 -eProcurement Transformation and Performance

Ilhan and Rahim (2020) researched on understanding digital transformation of procurement through E-Procurement Systems Implementation: business partner relationship perspective. E-procurement systems require a rigorous implementation process for attracting their acceptance within buying organizations and generating benefits. However, despite a rich body of literature on e-procurement systems, little is known on how buying organizations generally implement

their e-procurement system. Even though an important role is played by the procurement function, limited studies have been reported to explain the details of the activities undertaken by buying organizations for implementing an e-procurement system, and in what ways those activities are influenced. To address these gaps, this chapter proposes an association between the type of business relationship a buying organization intends to maintain with its suppliers when deciding to implement an e-procurement system, and the e-procurement implementation process it follows. The chapter further presents empirical evidence in support of one particular type of business relationship by analysing the e-procurement system implementation experience of an Australian organization.

Benn (2015) focused on strategic purchasing, supply management practices and buyer performance improvement in UK manufacturing organizations where strategic purchasing was found to have an indirect, significant effect on improving buyer performance, acting through supplier integration. Strategic purchasing also had a significant effect on the use of socialization mechanisms, but not on supplier responsiveness. Nutakor (2016) on challenges with the implementation of sustainable procurement practices in the mining industry in western region of Ghana found challenges such as ICT difficulties, innovation, remuneration and increased cost, regulation and governance, inadequate funding, consumer perception, among others were very critical challenges inhibiting sustainable procurement practices. The study made some key findings that competitive bidding was rather practiced as compared to sole sourcing and that also there was not enough awareness and knowledge in the area of Sustainable Procurement.

Mueni (2018) focused on the influence of strategic procurement practices on performance of parastatals in Kenya Airport Authority and established that 66.9% of the total variability in the performance of Kenya Airport Authority could be explained by strategic outsourcing, inventory management, reverse logistics, and knowledge management. However, inventory management did not contribute significantly to performance of parastatals in Kenya. Okong'o (2016) focused on the influence of strategic procurement on the performance of Kenya Power Company Limited and established strategic procurement had a positive impact on the performance of public enterprises; such as reduced costs, improvements in quality of goods and services in the organization.

Kiarie (2017) studied the influence of supplier relationship management practices on operational performance of large manufacturing organizations in Kenya. The study acknowledged the utilization of t test and descriptive research design whereas the populace comprised of 594 recorded fabricating firms in Kenya agreeing to the Kenya Affiliation of Producers. The study concluded that in fact SRM hones had a bearing on the operational 15 execution of expansive fabricating organizations. The by and large execution of organizations within the fabricating segment in Kenya was influenced by way in which providers are overseen by the different organizations. The supplier relationship hones among the fabricating businesses in Kenya had partially adopted recorded procedures/rule/guidelines within the way in which they associated with providers this has in turn influenced the way in which they oversee provider determination, assessment, division and advancement since the discoveries show that they did not have a clear way in which these hones where being taken care of in their firm. Also, a great relationship with the provider is able to spare on transactional costs such as those that may result from delayed deliveries, poor quality materials or spare parts and lack of flexibility.

Osir (2016) studied the role of procurement information systems appropriation on performance in state organizations in Kenya: a case of Kenya Utalii College. T test was conducted to decide the statistical significance between the independent factors and dependent variable. The study uncovered that state organizations have received e-tendering, e-award, e-ordering and e-invoicing to a few degree in arrange to improve their acquirement execution. The t test conducted uncovered that the particular acquirement data frameworks strategies embraced had a noteworthy impact on the acquirement execution of state organizations. Results appear that the usage of procurement information systems had enhanced performance later a long time, but state organizations in Kenya have still not however embraced and utilized acquirement data systems to its full potential.

3.0 Research Methodology

This study used a descriptive research design. In this study the unit of analysis was the 55 insurance companies in Kenya according to AKI (2021) while the unit of observation was top management employees. The target population for this study was therefore 55 top management employees from the 55 insurance companies in Kenya. The sampling frame was the list of 55 insurance companies in Kenya (IRA, 2021). Due to the small size of population, census is used where study population constitutes the sample size. Therefore the study carried out a census of all 55 insurance companies in Kenya. The study utilized primary data collected through questionnaires. A pilot study was conducted to establish the reliability and validity of the questionnaire.

Data collected was both quantitative and qualitative in nature. Analysis was done quantitatively and qualitatively by use of descriptive statistics. Data analysis was done with use of SPSS version 25 and presented using percentages, tabulations, among other techniques. Tables were used to summarize responses for further analysis and facilitate comparison. The study employed a multivariate regression model to study the relationship between the dependent variable and independent variable. The regression model was as follows: -

$Y= \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$
Where: Y=dependent variable or response (Performance of Insurance Company)
β_0 is Intercept coefficient ,
β_1, β_2, β_3 and β_4 are coefficients of the model.
X_1 is Technological Evolution,
X_2 is Digital Business Processes,
X_3 is Marketing Technology,
X_4 is e-Procurement transformation,
and e is error term representing omitted variables.

4.0 Findings and Discussions

This section discusses the data analysis as well as the interpretation of the findings. The main objective of this study was to assess the effect digital entrepreneurship has on performance of insurance companies in Kenya.

4.1 Response Rate

The researcher distributed 55 questionnaires to the respondents during data collection process and 51 were fully filled and returned to the researcher thus making a response rate of 92.7%. Kothari (2012) argues that a response rate which is more than 50% is considered adequate

while excellent response rate is usually above 70%. This implies that the response rate in this research is good for making conclusions as well as recommendations.

4.2 Descriptive Statistics

This section discusses the level of agreement on various statements relating to digital entrepreneurship and performance of insurance companies in Kenya. A 5 point Likert scale was used where 1 symbolized strongly disagree, 2 symbolized disagree, 3 symbolized neutral, 4 symbolized agree and 5 symbolized strongly agree.

4.2.1 Technological Evolution and Performance of Insurance Companies

From the results in Table 1, the respondents agreed that technological evolution has helped improve the quality of current products. This is shown by a mean of 3.958 (std. dv = 0.636).As shown by a mean of 3.930 (std. dv = 0.972), the respondents agreed that Adoption of technology has helped with the development of improved products leading to improved ease of use for customers and increase customer satisfaction. Further, with a mean of 3.872 (std. dv = 1.005), the respondents agreed that innovations in technology has decreased the cost of current products.

The participants agreed that the company has developed improved products with components and materials totally differing from current ones. This is shown by a mean of 3.852 (std. dv = 0.608). As shown in the results, the respondents agreed that additional product features has improved value addition. This is shown by a mean of 3.773 (std. dv = 0.983). The respondents further agreed that product innovation has resulted to long-term growth of the business. This is shown by a mean of 3.721 (std. dv = 0.897). The respondents also agreed that process innovation has led to business process re-engineering. This is shown by a mean of 3.673 (std. dv = 0.897).

Table 1: Technological Evolution and Performance of Insurance Companies

	Mean	**Std. Deviation**
Technological Evolution has helped improve the quality of current products	3.958	0.636
Adoption of technology has helped with the development of improved products leading to improved ease of use for customers and increase customer satisfaction	3.930	0.972
Innovations in technology has decreased the cost of current products	3.872	1.005
The company has developed improved products with components and materials totally differing from current ones	3.852	0.608
Additional product features has improved value addition	3.773	0.983
Product innovation has resulted to long-term growth of the business	3.721	0.897
Process innovation has led to business process re-engineering	3.673	0.897
Aggregate	**3.864**	**0.819**

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4.2.2 Digital Business Processes and Performance of Insurance Companies

From the results in Table 2, the respondents agreed that top management support in assessing the existing business processes. This is shown by a mean of 4.255 (std. dv = 0.839). As shown by a mean of 4.242 (std. dv = 0.898), the respondents agreed that there is quantity and quality of information for modeling the new business processes. Further, with a mean of 4.115 (std. dv = 0.112), the respondents agreed that there is quantity and quality of information to assess existing business processes.

The participants agreed that the company has an understanding the concept of business process management (BPM) and its potential impact on business results (by employees). This is shown by a mean of 4.158 (std. dv = 0.969). As shown in the results, the respondents agreed that Top management provide support in modelling new business processes. This is shown by a mean of 3.973 (std. dv = 0.983). The respondents further agreed that the company present incentive to change the existing or introduce new processes because of customer demands or increase in quality. This is shown by a mean of 3.897 (std. dv = 0.897). The respondents also agreed that the need to implement modern information technology present incentive to change the existing or to introduce new processes. This is shown by a mean of 3.786 (std. dv = 0.987).

Table 2: Digital Business Processes and Performance of Insurance Companies

	Mean	Std. Deviation
Top management support in assessing the existing business processes	4.255	0.839
There is quantity and quality of information for modeling the new business processes	4.242	0.898
There is quantity and quality of information to assess existing business processes	4.115	0.112
The company has an understanding the concept of business process management (BPM) and its potential impact on business results (by employees)	4.158	0.969
Top management provide support in modeling new business processes	3.973	0.983
The company present incentive to change the existing or introduce new processes because of customer demands or increase in quality	3.897	0.897
The need to implement modern information technology present incentive to change the existing or to introduce new processes	3.786	0.987
Aggregate	**3.965**	**0.598**

4.2.3 Marketing Technology and Performance of Insurance Companies

From the results shown in Table 3, the respondents agreed that their company has all times connectivity through website. This is shown by a mean of 3.970 (std. dv = 0.984). As shown by a mean of 3.909 (std. dv = 0.859), the respondents agreed that in their company, there is ability to quickly access information through use of search engines. Further, with a mean of 3.827 (std. dv = 0.935), the respondents agreed that social media promotes their company by providing customers with personalized, location-and time-sensitive information using interactive wireless media.

The participants agreed that the use of digital marketing has enhanced the ability to maintain current customers and at the same time attract new customers. This is shown by a mean of 3.918 (std. dv = 0.928). As shown in the results, the respondents agreed that there is increased

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ease of communication through digital platforms. This is shown by a mean of 3.833 (std. dv = 0.751). The respondents further agreed that it has become much easier to manage company's data because most marketing is done digitally. This is shown by a mean of 3.742 (std. dv = 0.898). The respondents also agreed that use of digital marketing enhance customer relationship management. This is shown by a mean of 3.698 (std. dv = 0.897).

Table 3: Marketing Technology and Performance of Insurance Companies

	Mean	Std. Deviation
Our company has all times connectivity through website	3.970	0.984
In our company, there is ability to quickly access information through use of search engines.	3.909	0.859
Social media promotes our company by providing customers with personalized, location-and time-sensitive information using interactive wireless media	3.827	0.935
The use of digital marketing has enhanced the ability to maintain current customers and at the same time attract new customers	3.918	0.928
There is increased ease of communication through digital platforms	3.833	0.751
It has become much easier to manage company's data because most marketing is done digitally	3.742	0.898
Use of digital marketing enhance customer relationship management	3.698	0.897
Aggregate	**4.025**	**0.851**

4.2.4 E-Procurement Transformation and Performance of Insurance Companies

From the results in Table 4, the respondents agreed that automated process enables inventory manager to quickly see which products have reached this reorder level. This is shown by a mean of 3.988 (std. dv = 1.064). As shown by a mean of 3.979 (std. dv = 1.158), the respondents agreed that minimizes inventory carrying costs as electronic information enables better decisions on reorder quantities. Further, with a mean of 4.955 (std. dv = 0.902), the respondents agreed that when supplier relationship management is well done, it will result in the development and connecting of the customers.

The participants agreed that data analytics provides proper evaluation of supplier's abilities before undertaking a decision to source products or services. This is shown by a mean of 3.888 (std. dv = 1.010). As shown in the results, the respondents agreed that through collaboration platforms, there has been improvement of internal customer satisfaction. This is shown by a mean of 3.830 (std. dv = 0.935). The respondents further agreed that procurement information systems helps their company better understand a potential supplier's culture by improving transparency. This is shown by a mean of 3.675 (std. dv = 0.897). The respondents also agreed that procurement information systems provide easy and real time information sharing to and from the market. This is shown by a mean of 3.675 (std. dv = 0.897).

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Table 4: E-Procurement Transformation and Performance of Insurance Companies

	Mean	Std. Deviation
Automated process enables inventory manager to quickly see which products have reached this reorder level.	3.988	1.064
Minimizes inventory carrying costs as electronic information enables better decisions on reorder quantities.	3.979	1.158
When supplier relationship management is well done, it will result in the development and connecting of the customers	4.955	0.902
Data analytics provides proper evaluation of supplier's abilities before undertaking a decision to source products or services	3.888	1.010
Through collaboration platforms, there has been improvement of internal customer satisfaction	3.830	0.935
Procurement information systems helps our company better understand a potential supplier's culture by improving transparency	3.789	0.987
Procurement information systems provide easy and real time information sharing to and from the market.	3.675	0.897
Aggregate	**3.874**	**0.987**

4.2.5 Performance of Insurance Companies in Kenya

From the results in Table 5 below, the respondents agreed that sales volume has improved over the years. This is shown by a mean of 3.955 (std. dv = 0.902). As shown by a mean of 3.888 (std. dv = 0.810), the respondents agreed that profitability of the organization has been improving over the years. Further, with a mean of 3.827 (std. dv = 0.786), the respondents agreed that customer satisfaction index has greatly improved over the years. The respondents also agreed that quality of service has significantly improved. This is shown by a mean of 3.730 (std. dv = 0.935).

Table 5: Performance of Insurance Companies in Kenya

	Mean	Std. Deviation
Sales Volume has improved over the years	3.955	0.902
Profitability of the organization has been improving over the years	3.888	0.810
Customer satisfaction index has greatly improved over the years	3.827	0.786
Quality of service has significantly improved	3.730	0.935
Aggregate	**3.814**	**0.892**

4.3 Inferential Statistics

Inferential statistics such as correlation analysis and regression analysis were used to assess the relationships between the independent variables (Technological Evolution, digital business processes, marketing technology and e-procurement transformation) and the dependent variable (performance of insurance companies in Kenya.

4.3.1 Correlation Analysis

This research adopted Pearson correlation analysis determine how the dependent variable (performance of insurance companies in Kenya) relates with the independent variables (Technological Evolution, digital business processes, marketing technology and e-procurement transformation). The findings were as depicted in Table 6.

From the results, there was a very strong relationship between Technological Evolution and performance of insurance companies in Kenya (r = 0.821, p value =0.002). The relationship was significant since the p value 0.002 was less than 0.05 (significant level). The findings are in line with the findings of Gunday *et al.* (2019) who indicated that there is a very strong relationship between Technological Evolution and firm performance.

Moreover, there was a very strong relationship between digital business processes and the performance of insurance companies in Kenya (r = 0.831, p value =0.001). The relationship was significant since the p value 0.001 was less than 0.05 (significant level). The findings are in line with the findings of Kemal, Yasin, and Zafer (2018) who indicated that there is a very strong relationship between digital business processes and firm performance.

Further, there was a very strong relationship between marketing technology and the performance of insurance companies in Kenya (r = 0.829, p value =0.003). The relationship was significant since the p value 0.003 was less than 0.05 (significant level). The findings are in line with the findings of Alghamdi and Bach (2018) who indicated that there is a very strong relationship between marketing technology and firm performance.

The results also revealed that there was a very strong relationship between e-procurement transformation and performance of insurance companies in Kenya (r = 0.815, p value =0.001). The relationship was significant since the p value 0.001 was less than 0.05 (significant level). The findings are in line with the findings of Ilhan and Rahim (2020) who indicated that there is a very strong relationship between e-procurement transformation and firm performance.

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Table 6: Correlation Coefficients

		Organization Performance	Technological Evolution	Digital Business Processes	Marketing Technology	E-Procurement Transformation
Organization Performance	Pearson Correlation	1.000				
	Sig. (2-tailed)					
Technological Evolution	Pearson Correlation	.821**	1.000			
	Sig. (2-tailed)	.002				
Digital Business Processes	Pearson Correlation	.831**	.297	1.000		
	Sig. (2-tailed)	.001	.060			
Marketing Technology	Pearson Correlation	.829**	.382	.281	1.000	
	Sig. (2-tailed)	.003	.070	.076		
E-Procurement Transformation	Pearson Correlation	.815**	.199	.195	.280	1.000
	Sig. (2-tailed)	.001	.079	.081	.091	

**. Correlation is significant at the 0.01 level (2-tailed)

4.3.2 Regression Analysis

The model summary was used to explain the variation in the dependent variable that could be explained by the independent variables. The r-squared for the relationship between the independent variables and the dependent variable was 0.861. This implied that 86.1% of the variation in the dependent variable (performance of insurance companies in Kenya) could be explained by independent variables (Technological Evolution, digital business processes, marketing technology and e-procurement transformation).

Table 7: **Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.928[a]	.861	.862	.10321

a. Predictors: (Constant), Technological Evolution, digital business processes, marketing technology and e-procurement transformation

The ANOVA was used to determine whether the model was a good fit for the data. F calculated was 765.98 while the F critical was 2.450. The p value was 0.002. Since the F-calculated was greater than the F-critical and the p value 0.002 was less than 0.05, the model was considered as a good fit for the data. Therefore, the model can be used to predict the influence of Technological Evolution, digital business processes, marketing technology and e-procurement transformation on performance of insurance companies in Kenya.

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Table 8: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	102.028	4	25.507	303.29	.002[b]
	Residual	3.868	46	.0841		
	Total	105.895	50			

a. Dependent Variable: Performance of insurance companies in Kenya
b. Predictors: (Constant), Technological Evolution, digital business processes, marketing technology and e-procurement transformation

The regression model was as follows:

$$Y = 0.345 + 0.390X_1 + 0.382X_2 + 0.334X_3 + 0.328X_4$$

According to the results, adopting technological evolution has a significant effect on performance of insurance companies in Kenya β_1=0.390, p value= 0.000). The relationship was considered significant since the p value 0.000 was less than the significant level of 0.05. The findings are in line with the findings of Gunday *et al.* (2019) who indicated that there is a very strong relationship between Technological Evolution and firm performance

The results also revealed that digital business processes has a significant effect on performance of insurance companies in Kenya β_2=0.382, p value= 0.001). The relationship was considered significant since the p value 0.001 was less than the significant level of 0.05. The findings are in line with the findings of Kemal, Yasin, and Zafer (2018) who indicated that there is a very strong relationship between digital business processes and firm performance.

Furthermore, the results revealed that marketing technology has a significant effect on performance of insurance companies in Kenya β_3=0.334, p value= 0.003). The relationship was considered significant since the p value 0.003 was less than the significant level of 0.05. The findings are in line with the findings of Alghamdi and Bach (2018) who indicated that there is a very strong relationship between marketing technology and firm performance.

In addition, the results revealed that e-procurement transformation has a significant effect on performance of insurance companies in Kenya β_4=0.328, p value= 0.002). The relationship was considered significant since the p value 0.002 was less than the significant level of 0.05. The findings are in line with the findings of Ilhan and Rahim, (2020) who indicated that there is a very strong relationship between e-procurement transformation and firm performance.

Table 1: Regression Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.345	0.089		3.876	0.002
Technological Evolution	0.390	0.097	0.398	4.021	0.000
Digital Business Processes	0.382	0.097	0.389	3.938	0.001
Marketing Technology	0.334	0.094	0.34	3.553	0.003
E-Procurement Transformation	0.328	0.091	0.319	3.604	0.002

5.0 Conclusions

The study concludes that technological evolution has a positive and significant influence on performance of insurance companies in Kenya. Findings revealed that scalable business technologies, lower cost structures, upgraded operation procedures influence performance of insurance companies in Kenya.

In addition, the study concludes that digital business processes has a positive and significant influence on performance of insurance companies in Kenya. Findings revealed that integrated technologies and infrastructure, integrated workflows and integrated communication influence performance of insurance companies in Kenya.

Further, the study concludes that marketing technology has a positive and significant influence on performance of insurance companies in Kenya. Findings revealed that digital marketing channels, data management platforms and marketing automation and intelligence influence performance of insurance companies in Kenya.

The study also concludes that e-procurement transformation has a positive and significant influence on performance of insurance companies in Kenya. Findings revealed that automated Systems, data analytics and insights and collaboration platforms influence performance of insurance companies in Kenya.

6.0 Recommendations

The study findings revealed that technological evolution has a positive and significant influence on performance of insurance companies in Kenya. This study therefore recommends that the management of insurance companies in Kenya should ensure the embrace the latest technology to facilitate organization performance.

In addition, the study findings revealed that digital business processes has a positive and significant influence on performance of insurance companies in Kenya. This study therefore recommends that the management of insurance companies in Kenya should ensure the integration of latest infrastructure and usage of digital communication strategies.

Further, the study findings revealed that marketing technology has a positive and significant influence on performance of insurance companies in Kenya. This study therefore recommends that the management of insurance companies in Kenya should ensure adoption of digital marketing strategies to market their products hence improving their market share.

The study also revealed that e-procurement transformation has a positive and significant influence on performance of insurance companies in Kenya. This study therefore recommends that the management of insurance companies in Kenya should ensure put into consideration automated Systems, data analytics and insights and collaboration platforms when embracing e-procurement transformation.

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