Influence of Digital Technologies on Performance of Manufacturing Firms in Kericho County, Kenya.

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Abstract
Automation is an important factor for organizations sustainable competitive advantage and financial performance. Many changes and increasingly turbulent environments have characterized the manufacturing industry in Kenya. Thus, many large manufacturing firms have adopted automation strategies to enhance their performance. Despite the adoption, many manufacturing firms in Kenya are experiencing performance challenges with many reporting profit warnings due to challenges in the operating environment. Therefore, the study sought to establish the influence of digital technologies on performance of manufacturing firms in Kericho County, Kenya. The study was guided by technology acceptance theory. The study adopted a descriptive survey design. The target population was 28 manufacturing firms registered with KAM as at June 2020. Based on an accessible population of 4,429 employees, a sample of 366 respondents was selected using Yamane's 1967 formulae as well as stratified and simple random sampling. The main data collection instrument was a questionnaire. The researcher tested content validity using expert judgment while reliability was tested using Cronbach's alpha. Data was analyzed using both descriptive and inferential statistics. In descriptive statistics the study used frequencies, mean and standard deviation while in inferential statistics the study used multiple regressions. Finally, the results were presented in form of tables. The study findings indicated that digital technologies (β=.374, p<0.05) had significant and positive influence on performance of Manufacturing Firms in Kericho county. The study concludes that digital technologies have a significant and positive effect on performance of Manufacturing Firms in Kericho County. The study recommends that manufacturing firms should continuously engage in digital technologies to enhance their performance and achieve competitive advantage.

Key Words.
Automation Strategies, Digital technology and Firm's performance.

I.   Introduction

The manufacturing industry is a chief source of growth. The future of manufacturing industry depends on how well these firms are able to plan their finances in a turbulent environment (Omesa, 2015). Most countries that are major players in the global economy have transformed the structures of their economies by developing a strong and virile manufacturing sector (Chalotra, 2013). In view of this, the importance of manufacturing sector contributions to the growth of an economy cannot be over-emphasized (Kouser, Bano, Azeem & Hassan, 2012).

Manufacturing sector remains crucial to the drive for rapid industrialization and economic growth in all countries of the world. Manufacturing in economic sense means the process of converting raw materials, components or parts into finished goods that meet consumer's expectations or specifications (Agbeja, Adelalaiu & Olufeni, 2015). Manufacturing sector simply includes production of food, chemicals, textile, machines and equipment (Web-finance, 2014). The sector is reputed to be an important engine for growth and antidote for unemployment, a creator of wealth and the threshold for sustainable development. It is argued that firms grow in many ways and that a firm's growth pattern is related to age, size and profitability (Delmar, Davidson & Gartner 2013).

Performance of manufacturing firms can be considered in terms of financial and non-financial measures. Organizational performance of manufacturing firms is usually expressed as a function of internal and external determinants. The internal determinants originate from firms; that is, the balance sheets and/or profit and loss accounts and therefore could be termed micro -specific determinants of performance. The external determinants are variables that are not related to firm's management but reflect the economic and legal environment that affects the operation and performance (Banafa, Muturi & Ngugi, 2015).

Agbenyo, Danquah and Shuangshuang (2018) assert that managerial performance-maximization hypothesis under market competition proposes that growth and profit are in a competitive relationship with each other, which suggests the possibility that growth victimizes profit for the fact that managerial objective of a firm is to maximize growth rather than profit. Profits are necessary for survival in the long run; long-term profitability is derived from the relations between cost and revenue. Firm's performance is an indicator of the overall financial health of an organization and its ability to create value to its shareholders.

Financial performance indicators include but not limited to return on equity, revenue from operations, after tax profits, operating income, return on assets and cash flows (Agbeja, Adelalaiu & Olufeni, 2015). Different factors have been used by researchers to measure financial performance, such as; liquid assets to total assets, fixed assets to total assets; total borrowed funds to total assets, market concentration; the market size; labor productivity, capital productivity, the cost to-income ratio and product quality (Ahmad, 2011). Non-financial indicators include such company's measures as owner's satisfaction, global success ratings, goals achievement, and other indicators (Rauch, 2014). This study focuses on the performance; financial and non-financial aspects in the manufacturing industry.

Many organizations adopt various strategies to enhance performance. Among them is the automation of the production process to reduce the need for human labor. In the current competitive business environment, automation plays a fundamental role in daily operations (Mckinsey Global Institute, 2017). According to Wright (2018), automation refers to the process of allocating activities to a machine or system to perform. Billings (2017) defines automation as a system or method in which many of the processes of production are automatically controlled by autonomous machines or electronic devices. According to Sarter and Woods (2015) automation refers to a wide variety of systems that differ with respect to their capabilities and design features. Therefore, automation strategies refer to the process of using machines by manufacturing firms in the production of goods and services to reduce the need for human labor. This is measured by digital technologies, ICT infrastructure, smart applications and digital marketing.

Currently, automation strategies are developing rapidly all over the world. Recently, the use of automated strategies involves mistake proofing, replacement of service interface and control of delivery processes. For the betterment of the future and as a country, the manufacturing sector and services sectors have to comply with this phenomenon. Information is the lifeblood of organization. It is vital to collect accurate and complete information for all market sectors and industries (Mwangi 2014).

In the United States of America (USA), manufacturing is the largest sector. It produces 18.2 percent of the world's goods; thus forming an essential component of its gross domestic product. In 2018, it contributed to 2.33 trillion US dollars that drove 11.6 percent of U.S economic output (US Bureau of Economic Analysis, 2018). It is through automation strategies that the profitability position of the manufacturing concerns have improved with the help of strong financial control devices such as capital structure and liquidity practices (Patro & Arpita, 2011). Automation strategy has a great influence on the advancement of rapidly growing firms along the globalization process, the more efficient strategic automation, the higher the profitability (Dawson, 2013).

In Africa the manufacturing industry, is an extraordinarily important sector of overall economy (David, 2014). The African continent and many of the countries have been classified as efficient cost producers in world terms. However, trade in the manufacturing sector is somewhat skewed. This skewness in statistics results basically from the large quantities of imports into West Africa (Nigeria in particular), imports which largely revolve around refined raw materials (Obado, 2013). Despite the acknowledged importance and a lot of attention on automation strategies among researchers, academicians, practitioners and policy makers, there is still little automation strategies among African manufacturing firms, attempts to define the term has resulted in widely varying definitions and conceptualizations (Johannsen, Olsen& Lumpkin, 2001; Afuah, 2013).

Kenya's manufacturing sector is the third largest sector contributing 9.6 per cent of Kenya's GDP serving both the local market and exports to the East and Central Africa region (KNBS, 2019). The sector employs about 2.3 Million people in both formal and informal sectors. The sector is loosely classified into twelve (12) sub-categories based on the raw materials the companies import and or the products they manufacture. The individual firms are organized under the membership of Kenya Association of Manufacturers (KAM) to give them a platform for negotiating common positions with the relevant government authorities (Business Intelligence, 2011).

Many changes and an increasingly turbulent environment have characterized the manufacturing industry in Kenya. Thus, many large manufacturing firms have relocated or restructured their operations opting to serve the local market through operating from low-cost manufacturing areas such as Egypt, South Africa and India therefore resulting in job losses. This is an indication that many manufacturing firms in Kenya are experiencing performance challenges with many reporting profit warnings due to challenges in the operating environment (Mwangi, 2014).

Problem Statement

Manufacturing plays a key role in the growth of economies. Sustained growth of the manufacturing sector increases a country's competitiveness, generates employment and enhances efficiency in use of resources (Economic Survey, 2020). Firms in the manufacturing industry in Kenya are operating in an increasingly competitive, highly regulated, and a very dynamic market. Over the years the performance of these manufacturing firms has been declining despite doing everything within their means to improve performance (KPMG-KAM Survey, 2020). As such, they have to formulate strategies to ensure their survival (Otieno, Bwisa & Kihoro, 2012). Thus, many manufacturing firms such as Colgate Palmolive, Reckitt Benckiser, Cadbury Kenya Bridgestone, Devki Steel and Procter & Gamble have relocated or restructured their operations opting to serve the local market through operating from low-cost manufacturing areas such as Egypt, South Africa and India therefore resulting in job losses (Nyabiage & Kapchanga, 2014). This is an indication that many manufacturing firms in Kenya are experiencing performance challenges with many reporting profit warnings due to challenges in the operating environment (RoK, 2015). The impact of the COVID-19 pandemic in Kenya was heavily felt, output by the manufacturing sector contracted by 3.2 percent in 2020 Q3 and 3.9 percent in 2020 Q2 compared to a growth of 2.9 percent in 2020 Q1. There was an increasing need for employees to work from home to avert spread of the pandemic (KPMG-KAM Survey, 2020). Hence, digital technologies are considered a critical requirement for the growth and profitability of organizations since it enhances remote working. It also has a considerable impact on corporate performance by producing an improved market position that conveys competitive advantage and superior performance (Walker, 2021). Therefore, this study seeks to find out the influence of automation strategies on performance of Manufacturing Firms in Kericho County.

Research Hypotheses

H₁: Digital technologies have a significant influence on performance of Manufacturing Firms in Kericho County.

Theoretical Framework
Technology Acceptance Theory

Technology Acceptance theory by Davis, (1989), will guide this study focusing on the technological issues (Davis, 1989) advances the Technology Acceptance Model (TAM). This model relates the individuals' behavioral intentions towards IT use. It suggested that, the actual behavior of a person is determined by his behavioral intention to use, which is in turn influenced by user's attitude toward and perceived usefulness of the technology. However, attitude and perceived usefulness are both determined by ease of use. Adopting the TAM model requires the understanding of end-user's requirements regarding usefulness and user friendliness (Pedersen, Leif, Methlie & Thorbjornsen, 2002). From this model, usefulness and user friendliness affect users' attitudes towards any service. Davis (1993) suggests that it is important to value user requirements based on perceived usefulness and the user friendliness of the technology rather than other objective measures.

Wang, Wang, Lin and Tang (2003) were interested to identify the factors that determine acceptance of internet banking by the users. According to the Technology Acceptance Model (TAM), perceived ease of use and perceived usefulness constructs are believed to be fundamental in determining the acceptance and use of various Information Technology (IT). These beliefs may not fully explain the user's behavior toward newly emerging IT, such as cashless payment. Using the TAM as a theoretical framework, Wang *et al*. (2003) introduces "perceived credibility" as a new factor that reflects the user's security and privacy concerns in the acceptance of IT.

Shafeek (2011) in a study tried to evaluate the acceptance of eLearning systems by teachers by using TAM. He developed a new model based on TAM called online shopping acceptance model to study online shopping behavior. Pavlou (2003) developed a model to predict the acceptance of e-commerce by adding new variables trust and perceived risk. According to the model developed by Pikkarainen et al. (2004) to understand the acceptance of online banking in Finland, perceived usefulness and information on online banking plays a very important role. He suggested a model that specifies that the acceptance pattern and role of internet self-efficacy play an important role in e-service adoption.

Ervasti and Helaakoski (2010) developed a model based on TAM and TPB to understand mobile service adoption which states that perceived usefulness is the strongest factor in adoption. Muller Seitz *et al*. (2009) used the Technology Acceptance Model with security concern to understand acceptance of Radio Frequency Identification (RFID).

This theory is useful to the study because the acceptance of digital technology is a function of the user's feelings about the system and its perceived benefits, thus automation strategy must be accepted by the users (Benbasat and Barki 2007). Criticism of this model is directed to its inclination to the technological/technical aspects of the technology in question ignoring other factors such as social aspect of the users. In practice, constraints such as limited ability, time, environmental or organizational limits and

unconscious habits will limit the freedom to act. This theory will help understand the effects of automation adoption in manufacturing firms in Kericho County.

II.   Literature Review
Digital technologies and performance of Manufacturing Firms

Maria-Luz, José-María, Sánchez-López, and EloisaDiaz-Garrido (2019) did a study on the influence of servitization and digitalization on manufacturing firms' performance in Spain. Hypothesis testing was conducted using data on 828 Spanish industrial firms. Linear regression models were built to capture the effect of each variable on firm performance and the type of interaction between the variables. The findings indicated that Servitization and digitalization are positively related to firm performance. Digitalization positively mediates the relationship between servitization and firm performance. The mediating effect of digitalization contributes to differentiating between the direct and indirect effects of servitization on firm performance. This study however only dealt with manufacturing companies in Spain while this study was done in the Kenyan setting.

Veeraiyan, Thangavelu and Alakiyamanavalan (2014) conducted a study of the effect of modernization of tea collecting to improve the efficiency and quality in India. The researchers analyzed the biochemical parameters of the tea harvested by machines and those manually harvested. They found that the use of integrated tea harvesting system accomplishes ideal creation, quality and benefit in south Indian tea ventures. The researchers found out that mechanical harvesting that can harvest tender shoots of tea could just be accomplished by raising the culling stature at unequivocal interims. This study was however specific to tea manufacturing companies while the current study included all manufacturing firms in Kericho County.

Yingi, Dai and Cui (2020) did a study on the impact of digital technologies on economic and environmental performance in the context of industry: A moderated mediation model using a survey of Chinese manufacturing firms. The study adopted an empirical analysis and indicates that digital supply chain platforms mediate the effects of digital technologies on both economic and environmental performance and that the mediating effects are enhanced under a high degree of environmental dynamism. This study offers an enhanced understanding of the performance implications of digital technologies and provides managerial insights into how to promote economic and environmental sustainability in the era of Industry. However, this study left gaps since it was done with regard to an economic and environmental performance while the current study was on general firm performance.

Nyoike (2018) did a study on the influence of innovation practices on the performance of Small and Medium Manufacturing Enterprises (SMMEs) in Kenya. A self-administered, semi-structured questionnaire was used to collect the data. The questionnaire was pre-tested to ensure its validity and reliability. The study collected both qualitative and quantitative data. Qualitative data was analyzed using content analysis while quantitative data was analyzed by descriptive and inferential analysis. The regression analysis model was developed to establish the relationship between the dependent and the independent variables. Data was presented, from which inferences were made as well as the conclusion and recommendations. The study found out that commercialization, organizational structure, Research and Development and creativity were all individually significant predictors of firm's performance. The results also revealed that entrepreneurial orientation significantly moderated the relationship between innovation practices and firm's performance. This study recommends that factors associated with innovation practices need to be enhanced by including them in the vision and mission statements as they have the greatest impact on firm's performance. This study also left gaps since it was done among Small and Medium Manufacturing Enterprises (SMMEs) in Kenya.

Research Design

The study adopted a descriptive survey research design. The design provided the opportunity for full, rich and deep descriptions of the participants' perceptions and also useful in identifying the standards against which the existing conditions can be compared. Descriptive survey studies assist in sourcing pertinent and clear information about a known phenomenon and at times draw valid general conclusions from this factual information at hand as asserted by Gall and Borg (2012). The target population for this study was 28 manufacturing firms in Kericho County, Kenya. Accessible population consists of all the individuals who realistically could be included in the sample (Salkind, 2010), for this study, the accessible population were 4,429 employees drawn from manufacturing firms in Kericho County.

The researcher employed Yamane's (1967) formula to determine the sample size. The sample size was determined based on 5% margin of error/ level of precision and 95% level of confidence. Based on an accessible population of 4,429 employees, a sample of 366 respondents was arrived at. Stratified random sampling with a proportional allocation of each stratum was used to obtain a representative sample in this study. The firms were stratified based on their sector. In addition, the study adopted simple random sampling to select the respondents from the strata. This was adopted because in random sampling, each item in the population has a probability of

the selection same as any other item in the population. Stratified random sampling is used for data that is heterogeneous.

The main research instruments that were used in the study were questionnaires and document analysis as explained below. This study collected primary data using closed-ended questionnaires. Questionnaires are resourceful data collection instruments, which enabled the researcher to know what was required and how to measure the variables of concern as suggested by Sekaran (2013). Document analysis was also used in this study. Document analysis is the systematic examination of financial documents.

Both descriptive and inferential statistics was used for data analysis. Descriptive statistics included, mean, frequency, percentages, variance and standard deviation. These tools were used to describe and determine the respondent's degree of agreement or disagreement with various statements under each variable (Mugenda & Mugenda, 2011). Inferential statistics included linear regression analysis which was used to assess the association between automation and performance of manufacturing firms. A p value ≤ 0.05 will be used to test hypothesis where significant association exists. Regression measures the causal relationship between one dependent and one independent variable. Multiple regression analysis measures the effects of multiple independent variables on one dependent variable.

III.   Results and Discussion.
Digital technologies and performance of Manufacturing Firms
Respondents were required to indicate their level of agreement on effect of digital technologies on performance of Manufacturing Firms in Kericho County as presented in Table 1.0.

Table 1.0: Digital technologies and performance

n=294	Mean	Std. Deviation	Skewness	Kurtosis
Manufacturing firms have adopted the use of mobile networks which enables improved productivity and flexibility while reducing costs and downtime associated with unscheduled maintenance	4.02	0.83	-0.48	-0.39
Using cloud computing improves processes and creates closer connections with customers	4.10	0.95	-0.74	-0.48
The use of machine learning gives manufacturing firms the opportunity to introduce rigorous quality management and control	4.06	0.92	-0.87	0.04
The use of digital technologies offers flexible tariff /service creation' and 'streamlining of customer processes	3.75	1.24	-0.91	-0.25
Internet of Things (IoT) enables manufacturing firms connect and exchange data with other devices and systems to enhance performance	4.02	0.87	-0.60	-0.32
Digital technologies	**3.96**	**0.76**	**-0.90**	**0.29**

Source: Research Data (2021)

Table 1.0, illustrates the responses attained for the item which sought to know the status of digital technologies and its effect on organizational performance. The findings indicated that manufacturing firms have adopted the use of mobile networks which enables improved productivity and flexibility while reducing costs and downtime associated with unscheduled maintenance (mean = 4.1, SD = 0.95). Consequently, the employees indicated that using cloud computing improves processes and creates closer connections with customers (mean = 4.06, SD = 0.92).

Besides, the use of machine learning gives manufacturing firms the opportunity to introduce rigorous quality management and control (mean = 4.02, SD = 0.827). Also, the use of digital technologies offers flexible tariff /service creation' and 'streamlining of customer processes (mean = 4.02, SD = 0.87). Further, Internet of Things (IoT) enables manufacturing firms connect and exchange data with other devices and systems to enhance performance (mean = 3.93, SD = 1.00). This implies that majority of the employees affirmed that the organizational use of digital technology is efficient thus helping in enhancing manufacturing firms performance. Therefore the overall, findings on digital technologies summed up to a mean of 3.96, standard deviation 0.76, skewness -0.9 and kurtosis 0.29. María-Luz, José-María, Sánchez-López, and EloísaDíaz-Garrido (2019) indicated that Servitization and digitalization are positively related to firm performance. Digitalization positively mediates the relationship between servitization and firm performance.

Performance of Manufacturing Firms
Lastly, the study sought to find out the influence of digital technologies on performance of Manufacturing Firms. The findings are presented in Table 2.0.

Table 2.0: Descriptive Results on Performance of Manufacturing Firms

n=294	Mean	Std. Deviation	Skewness	Kurtosis
Our firm has a trend of increasing sales from the previous years	3.96	0.63	-0.10	-0.08
Our firm has always met its profits projections	4.02	0.69	-0.51	1.16
Our firm adopts efficient automation strategies in improving its return on investment	4.10	0.76	-0.96	2.08
Our firm adopts automation strategies to enhance profitability	4.06	0.71	-0.79	2.34
Our firm adopts automation strategies to enhance product quality	3.99	0.77	-0.55	0.95
Performance	4.02	0.52	-0.42	0.52

Source: Research Data, (2021)

In this regard, the study looked at the prevailing status of manufacturing firm performance as illustrated in table 2.0. The study findings indicated that employees agreed that their firm has a trend of increasing sales from the previous years and was supported (mean = 3.96, SD = 0.63). Additionally, the employees agreed firm has always met its profits projections (mean = 4.02, SD = 0.69). Also, the firm adopts efficient digital technologies in improving its return on investment (mean = 4.10, SD = 0.76). Further, employees agreed that firm adopts digital technologies to enhance profitability (mean = 4.06, SD = 0.71). Lastly, employees agreed that firm adopts digital technologies to enhance product quality (mean = 3.99, SD = 0.77). This implies that, majority of the respondents pointed out that the digital technologies adopted by the manufacturing firms led to improved performance. Overall, the items on performance realized a mean of 4.02, standard deviation of 0.8, skewness -0.39 and kurtosis -0.06. This finding is consistent to other findings such as by Agbenyo, Danquah and Shuangshuang (2018) assert that managerial performance-maximization hypothesis under market competition proposes that growth and profit are in a competitive relationship with each other, which suggests the possibility that growth victimizes profit for the fact that managerial objective of a firm is to maximize growth rather than profit.

Document Analysis

Table 3.0 below presents statistical findings on financial performance of Manufacturing Firms in Kericho County in the last four years.

Table 3.0: Performance of Manufacturing Firms

Performance	2020/2021	2019/2020	2018/2019	2017/2018
Return on assets	184.36	143.12	158.14	133.04
Return on investments	178.32	105.3	133.12	98.36
Return on Equity	197.02	96.58	123.99	85.36

Source: Research data, (2021)

An analysis of organizational performance revealed most of the Manufacturing Firms in Kericho County registered a positive trend on market share increasing from 40.22% in the financial year 2017/18 to 53.4% in the year 2018/19. The same trend is also observed on return on assets where the lowest 133.04% was recorded in the year 2017/18 and the highest values recorded 184.36% in the year 2020/21. Results also show that return on equity improved from 85.36 in the year 2017/18 to 197.02 in the year 2020/21. This implies that Financial performance of the manufacturing firms have been on the increase though at a slower rate.

Correlation Analysis

Correlation analysis was done in order to check whether there was an association between variables. Pearson product moment correlation coefficient (r) was used to aid in establishing correlation between the study variables of interest. Correlation coefficient shows the magnitude and direction of the relationship between the study variables. The study examined the effect of digital technologies on performance of Manufacturing Firms in Kericho County and the results shown in Table 4.0 indicated that digital technologies had positive high correlation to performance of manufacturing firms in Kericho County with ($r=0.785$, $p< 0.05$). This implies that digital technologies positively enhance performance of manufacturing firms in Kericho County.

From the study it should be noted, Table 4.0 was at 99% level of confidence (significant at 0.01 level (2-tailed), since a unit change in digital technologies leads to 0.785 change in performance of manufacturing

firms in Kericho County, This concurs to the findings by Klammer (2013) who stated that manufacturing firms adopting digital technologies in Kericho County had better than average firm financial performance.

Table 4.0: Correlation Analysis

		Digital technologies	ICT Infrastructure	Smart Application	Digital marketing	Performance
Digital technologies	Pearson Correlation	1			.	.
	Sig. (2-tailed)				.	
	Sig. (2-tailed)	.000	.000	.000		
Performance	Pearson Correlation	.785**	.915**	.829**	.859**	1
	Sig. (2-tailed)	.000	.000	.000	.000	1

**. Correlation is significant at the 0.01 level (2-tailed).
b. Listwise N=294

Table 5.0: Hypothesis testing

Unstandardized Coefficients			Standardized Coefficients				Collinearity Statistics
	B	Std. Error	Beta	T	Sig.		ToleranceVIF
(Constant)		0.696	0.194		3.590	0.000	
Digital Technology		0.265	0.051	0.374	5.191	0.000		0.3073.254

A Dependent Variable: Performance

Source: Research Data, (2021)

The hypothesis of the study stated that digital technologies have a significant effect on performance of Manufacturing Firms in Kericho County. The study findings in Table 4.0 showed that digital technologies had coefficients of estimate which was significant (β = 0.265; p< 0.05) thus we accept the alternate hypothesis and conclude that digital technologies has a positive and significant effect on performance of Manufacturing Firms in Kericho County. This suggests that there is up to 0.265-unit increase in performance of Manufacturing Firms in Kericho County for each unit increase in adoption of digital technologies. Also, the effect of digital technology is more than the effect attributed to the error, this is indicated by the t-test value =5.191

IV. Discussion of the Findings

Concerning the effect of digital technologies on performance of Manufacturing Firms in Kericho County, the findings indicated that majority of the employees affirmed that the organizational use of digital technology is efficient thus helping in enhancing manufacturing firms performance. Therefore in overall, the findings on digital technologies summed up to a mean of 3.96, standard deviation 0.76, skewness -0.9 and kurtosis 0.29. In addition, it was indicated that digital technologies had coefficients of estimate which was significant basing on (β = 0.265; p< 0.05) thus we accept the alternate hypothesis and conclude that digital technologies has a positive and significant effect on performance of Manufacturing Firms in Kericho County. This suggests that there is up to 0.374-unit increase in performance of Manufacturing Firms in Kericho County for each unit increase in adoption of digital technologies.

Interpretation of Findings

Concerning the effect of digital technologies on performance of Manufacturing Firms in Kericho County, the findings indicated that majority of the employees affirmed that the organizational use of digital technology is efficient thus helping in enhancing manufacturing firms performance. In addition, it was indicated that digital technologies had coefficients of estimate which was significant basing on a positive and significant effect on performance of Manufacturing Firms in Kericho County. This concurs to the findings by Maria-Luz, José-Maria, Sánchez-Lopez, and EloisaDiaz-Garrido (2019) who indicated that Servitization and digitalization are positively related to firm performance. This study offers an enhanced understanding of the performance implications of digital technologies and provides managerial insights into how to promote economic and environmental sustainability in the era of industrialization.

V. Summary of Findings

Concerning the effect of digital technologies on performance of Manufacturing Firms in Kericho County, the findings indicated that majority of the employees affirmed that the organizational use of digital technology is efficient thus helping in enhancing manufacturing firms performance. In addition, the study findings indicated that digital technologies had coefficients of estimate which was significant basing on a positive and significant effect on performance of Manufacturing Firms in Kericho County.

VI. Conclusions

The study concludes that manufacturing firms that have adopted the use of mobile networks, Using cloud, machine learning and Internet of Things (IoT) enables them connect and exchange data with other devices and systems to enhance performance. Therefore digital technologies had coefficients of estimate which was significant basing on a positive and significant effect on performance of Manufacturing Firms in Kericho County.

Recommendations based on findings

The study recommends that manufacturing firms should continuously engage in digital technologies to enhance the competitive advantage it possesses against other players in the manufacturing sector. This can be achieved by conducting research on the best strategies among its users and non-users to identify technologies that can be introduced into their organization.

Recommendations for Further Studies

Arising from some of the implications and limitations of the study, recommendations for further research are made. While this study successfully examined the conceptualized framework of digital technologies and firm performance. It has also presented a rich prospect for other areas to be researched in future. In terms of industry, the study was only confined to the manufacturing sector. It would however be useful to carry out similar study across heterogeneous industries. Future research should therefore expand to other industries and contexts because digital technologies vary according to sector and country. Future research may re-examine the conceptual model used in this research with a larger sample size so that the outcome can be generalized to a larger population. Besides, future studies may focus on the moderating effect of different variables on the relationship between digital technologies and firm performance.

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