Effect of Process Innovations on Performance of Small and Medium Manufacturing Enterprises in Nairobi County, Kenya

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Abstract

Small and medium-sized businesses (SMEs) must establish and maintain competitiveness in order to contribute effectively to economic development. The purpose of this study is to determine how process innovations affect the performance of small and medium-sized manufacturing firms in Nairobi County, Kenya. The study was based on the Resource-Based and Diffusion-Based Theories of Innovation. The research was conducted using a positivist approach and an explanatory research design. A representative sample of 254 managers or owner managers from manufacturing SMEs registered with the Kenya Association of Manufacturers was selected using a stratified random sampling technique. Data was gathered through the use of a structured questionnaire. The research used qualitative and quantitative data from many sources to compile its findings. To ensure the questionnaire's validity and reliability, pre-testing was conducted. Before choosing the most appropriate analytical model, the collected data was compared to the assumptions of various analytical models. Data were analyzed using descriptive and inferential statistics. There was no influence of the independent variable on the dependent variable. According to the regression model, process innovations account for 47.2% of the variance in firm performance (R2 =.472). Between process innovations and firm performance, there was a significant positive relationship (2=0.558, p0.05). Each step forward in process innovation resulted in a boost to firm performance. According to the study, process innovation has a significant impact on the performance of small and medium-sized manufacturing firms. When small and medium-sized manufacturing firms increased their use of process innovations, their performance increased proportionately. To improve their performance, small- to medium-sized manufacturing enterprises' management should place a greater emphasis on process innovation. Processes within these organizations should be optimized to increase efficiency and effectiveness, which will result in increased market share and decreased operational costs.

Keywords: Process, Innovations, performance, small and medium, manufacturing, enterprises

INTRODUCTION

The term "firm performance" refers to the results obtained by a business in pursuing its internal and external goals (Lin et al., 2008). Growth (Dobbs and Hamilton, 2006; Wolff and Pett, 2006), survival, success, and competitiveness are all terms used to describe performance. Additionally, firms' performance is determined by their strategies. Different firms pursue distinct performance strategies (Collins and Porras, 2000); as a result, a firm's performance is tightly coupled to its strategy (Short et al., 2007).

Owiti (2014) defines firm performance as an organization's capacity to fulfill its mission through sound management, strong governance, and a persistent commitment to results. Obiwuro, Okwu, Akpa, and Nwakwere (2011) define firm performance as the comparison of an enterprise's profit, market share, and product quality to that of other enterprises in the same industry. Neely (2013) asserts that performance refers to the action, the results of the action, and the triumph of the outcome when compared to some standard. Thus, Kaplan and Norton (2012) defined performance as a collection of factors that describe the process by which an infinite number of outcomes and results are achieved.

Theory, research, and management all point to the importance of company performance (Venkatraman and Ramanujam, 2016). The theoretical perspective examines the impact of strategies on performance, whereas the practical lens examines the many constructs used to measure performance (Mintzberg and Lampel, 2009). Venkatraman and Ramanujam (2016) assert that the management perspective analyses managers' daily decisions. Despite this relevance, research on performance remains unclear, with methodological flaws, ignoring organizational features in performance correlations, and inappropriate model application cited as causes (Mugambi and K'Obonyo, 2017).

Performance measurement is one of the most difficult topics in strategic management. SME performance in manufacturing is still poor. Despite the fact that MSEs contributed 14.2 percent to manufacturing value-added, micro and small enterprises (MSEs) account for two-thirds (67 percent) of manufacturing firms (KIPPRA, 2013). This low performance is projected to cause economic development to be delayed, as envisioned by the Vision 2030 strategy plan, which encourages innovation and technological advancements.

Innovative ways assist businesses in expanding into new markets, increasing their market share, and gaining a competitive advantage over their competitors (Walter 2015; Alex 2014). To introduce to the market a new product or service with features or intended uses that are either entirely new or greatly improved over what is now available (Moses et al, 2012). A company's and its competitors' invention uniqueness can be classified into four categories: innovations that are unique only to the company, inventions that are new to the country, and innovations that are world firsts (Moses et al, 2012). This is a tool for increasing the efficiency of an organization. Companies that want to innovate processes may do so by using new technology, purchasing new equipment, training employees, and reorganizing processes. "The introduction of a novel or significantly improved manufacturing or distribution technique," according to the Oslo Manual (OECD, 2005).

It is acknowledged that process innovations can lower unit production or delivery costs while enhancing quality and developing or delivering new items (OECD 2005). It comprises new or improved accounting, purchasing, maintenance, and computing processes, equipment, and software, as well as new or improved hardware. The use of new or improved information and communication technology can increase the efficiency or quality of a support operation by a significant margin (OECD, 2005).

For Akyos (2006), innovation is defined as a process innovation is defined as a fresh manufacturing strategy According to zdemir and ner (2006), process innovation is the process of altering how work is done. The term "process innovation" refers to the changes brought about by new information and communication technologies, according to Keizer et al. (2002). Process innovation, according to Davenport (1993),

is a novel way of doing things that is not yet widely accepted. Acuner (2000) defines process innovation as an integrated method that encompasses interfunctional and manufacturing process innovation (Günay, 2007). Process innovation is defined as a method that incorporates interfunctional and manufacturing process innovation.

Process innovation, according to Polder et al. (2010), involves significantly enhancing logistical and manufacturing procedures, or supporting operations such as purchasing and maintenance. According to Adner and Levinthal (2001), corporations innovate processes to create new products. Olson et al. (1995) admit that corporations innovate processes to reduce production costs. According to Ettlie and Reza (1992), organizations adopt innovative procedures to compete and please customers. For example, they (1992) claim that process innovation in manufacturing enterprises can boost productivity (Ul Hassan et al., 2013).

In both emerging and industrialized nations, small and medium-sized manufacturing enterprises (SME's) are vital for economic progress. Asieh (2015) and Wanjau (2010) describe a formalized formalized formalized formalized (Asieh, 2015). Their significance goes beyond simply adding value; it also includes the creation of jobs and the stimulation of innovation to promote long-term, sustainable growth. According to the United Nations Industrial Development Organization (2013), SMEs in the manufacturing sector were struggling to grow as a result of the global financial crisis in 2009, which resulted in developing countries becoming the main engine in the growth of global manufacturing.

In the United States SME's represent an overwhelming majority of businesses and account for almost half of the GDP (Kiprem, Peng & Pollard, 2011). The United States Small Business Administration (2012) reported that SMME's created two-thirds of all new jobs and invested more than half of all technological and innovation products. Similarly in Thailand, the largest number of businesses was comprised of SMME's. According to Ahu (2015), the catalytic roles of SMMEs and cottage enterprises have been demonstrated in a variety of economies around the world, including Japan, South Korea, Malaysia, Zambia, and India.

According to Klynveld Peat Goerelder (KPMG) International 2015, China's GDP growth slowed from 2013 to 2014 to 74 percent, owing in part to the tough manufacturing climate. The manufacturing sector in South Africa contributed significantly to its economy but its importance declined from 19% in 1993 to 17% in 2012. The contribution to GDP was 13.9% lower than that of the service sector which stood at 73% (Tarboda, 2015). The newly industrialized countries such as South Korea, Malaysia and Taiwan experienced development and economic growth because they accorded SMEs the right conditions to flourish (Nafukho, Machuma & Muyia, 2009).

The East African Community is made up of the countries of Kenya, Uganda, Tanzania, Rwanda, and Burundi (EAC) (EAC, 2010). It has expanded the market for manufacturing enterprises and influenced their performance. Firms used to operate in the home market have challenges in regional integration. The problems were growing competition, lower manufacturing and marketing costs, a wider market, and increased regionalization pressure (Wiklund & Shepherd, 2005).

Regionally, Tanzanias manufacturing SMEs continued to lag behind than those of the other countries in the region in terms of quantity and quality of the industrial goods that were produced and exported due to its reliance on agricultural sector. In Uganda SMMEs have been struggling and experienced a slow growth below the Sub-Saharan

Average (ROU, 2010). The sector‘s contribution to the Uganda ‘s GDP lagged behind than that of the other countries such as Kenya, Rwanda and Burundi (KIPPRA, 2014).

In Kenya, Economic Recovery Strategy (ERS) estimated that 500,000 jobs would be created annually with 88% of those generated by SMES (KIPPRA, 2014). Christian and Alexander (2013) observed that SMMEs generated new jobs in the economy and new products and services that facilitated economic growth. The economic impact of SMME’s can be measured by their contribution to output, innovations, employment, income investments, exports and their economic indicators (Jochen, 2014). In Kenya SMME’s employ 74% of the labour force and contribute over 18% of the countrys GDP. In addition, more than 90% of business comes from this sector and this makes up 30% of total employments (Ndalira, 2013).

Although Small and Medium Manufacturing Enterprises (SMMEs) accounted for 70% of Kenya‘s manufacturing sector (KIPPRA, 2014), their performance dropped from 5.6% in 2013 to 3.4% in 2014 (RoK, 2015). As stated previously, the manufacturing industry in Kenya has encountered major hurdles. Its contribution to GDP has decreased dramatically, raising concerns about premature deindustrialization. Despite SMEs’ significant contribution to GDP in Kenya they were still not performing as expected. This is the reason why in 2014, a number of SMMEs in Kenya: meat and meat products processing firms, leather shoes, industrial gas, t-shirts and knitted fabrics, and shoe polish among others all posted negative performance resulting to low sales turnover and profitability (RoK, 2015). If such failures are not checked, they may lead to lowering of GDP due to low productivity and consequently low sales turnover and profit margins for many firms thus resulting to poor performance.

The challenges facing SMEs may partly be addressed by innovation practices as they are suggested as key drivers of economic performance and growth of small firms (Rosenbunch, Brinckman & Bauch, 2011; Chiara Daniela & Analisa, 2015). In 2011, Wanjiku (2011) conducted research on industrial innovation in the face of intense competition from Chinese imports, although the study did not particularly examine innovative processes. Ndalira (2013) investigated the effects of several types of innovation on the growth of small and medium-sized enterprises (SMEs) in Kenya, butdid not particularly investigate innovation practices in the manufacturing sector. A study carried out by Ong’olo and Awino (2013) concentrated on comparing the SME’s and devolved Government and the challenges that the SMEs’ were faced with due to the changes in regulatory procedures.

The influence of process innovation on firm performance

Technical design, research and development, manufacturing, administration, and commercial operations are all part of the process. A new or enhanced technique, process, or system, according to Oke and colleagues (2007), is considered to be process innovation. For example, innovation in technology, skill, technique, system, and procedure utilized to convert input into output are all examples of what is meant by innovation (Zhuang et al., 1999). Process innovation should be emphasized as the core distinguishing competency of a company in order to get a competitive edge in the manufacturing industry. More precisely, such innovation aids in the expansion of businesses (Morone and Testa, 2008). A study conducted by Varis and Littunen (2010) on SMEs in Finland found that process innovation increases the performance of the organization.

A study conducted by Anderson (2009) found a statistically significant relationship between new technology and firm performance. Researchers Ar and Baki (2011) have

confirmed that product and process innovation have a positive impact on corporate performance.

According to Schumpeter (1934) the introduction of a new method of production that has not yet been proven in the industrial setting. Process innovation is the reengineering and improvement of the internal functioning and capabilities of business processes, which is also known as process reengineering and improvement (Sidek & Rosli, 2013). These processes include manufacturing, engineering, management, and marketing. Customers' expectations, preferences, and needs are all part of it (Sidek & Rosli, 2013).

Process innovation involves rethinking an entire process or improving a valuable process segment (Hervas, Ripoll & Boronat, 2014). Process innovation seeks to increase productivity or reduce costs. This approach can help organizations reduce process costs, improve quality, and other business objectives (Torfing & Triantafillou, 2016). Knowledge-based innovations may lead to modifications in equipment or manufacturing processes or a mix of these modifications. Von Krogh, Netland, and Wörter (2018) found that process innovation helps to retain product functioning while cutting production costs.

According to Susanne (2015), process innovation refers to new service introductions or incremental improvements to existing services. While process innovation can occur in the service sector, it is not required. Manufacturing firms looking to expand their supply portfolio with value added services can also provide new and improved services. Similarly, process innovation lacks the tangible nature of product innovation. Services may be highly customized to meet the needs of many stakeholders. They believe a creative team runs an innovative business.

Managers who value creativity know the value of a creative team and invest in their development. Effective innovation training programs inspire employees to think of new ways to improve processes and increase productivity. According to Dooren, Bouckaert, and Halligan (2015), business performance measures an organization's ability to innovate, as well as the impact of doing so. Performance, service delivery, economic value, satisfaction, and trust are all affected by innovation activity (Berman, 2015).

The organization's significant improvement in efficiency, effectiveness, and quality results in innovation performance (Spekle & Verbeeten, 2014). Also, innovation performance can be viewed as a set of indicators used to assess the achievement of broad and specific innovation goals. The main goals are to improve efficiency, quality, and user satisfaction. Among the goals may be addressing social issues, adhering to new laws, and improving (Bloch & Bugge, 2013). Innovative ideas can simplify administration, speed service delivery, improve user satisfaction and employee satisfaction, as well as reduce costs (Rasul & Rogger, 2017).

Ravichandran (2018) contends that truly innovative companies have a strong IT infrastructure that facilitates information flow. A system like this ensures seamless information sharing and access to ideas, resulting in increased collaboration and engagement. Innovative companies have seamless systems and processes that support creativity at every stage. A production manager can't improve product design if the finance department won't fund the process. Unsupported IT infrastructure means that an IT manager cannot integrate a collaborative system into business applications. To make your ideas a reality, all of your processes and systems must work together.

According to Acosta, Popa, and Marqués (2016), executives should solicit new ideas from all levels within and outside the organization.

All management must be visible and supportive of business leadership and innovation implementation. When customer satisfaction drives innovation, business growth comes naturally from repeat customers, new customers, and referrals (Simon & Yaya, 2012). Happy customers motivate employees, and the value spreads to the community and society. According to Geissdoerfer, Vladimirova, and Evans (2018), too many first-time innovations never get a second look, and die an expensive death. Others suffer from analysis paralysis and never meet real customers.

According to scholars in the past strategic innovation practices has no impact on the performance of the SME (Pooja & Singh, 2009). However, Mwania and Muganda (2011) in a study arrived at a conclusion that innovation contributed significantly on the performance of the other major organization. Strategic innovation practices studies have been carried out in the Kenya however most of studies have concentrated on the larger organizations such commercial banks (Juma *et al.*, 2014).

METHODOLOGY

A positivistic approach was utilized in this study. Positivistic research was appropriate because it relied on hard-to-change numbers and mathematical equations to collect primary data. The study used this paradigm to avoid including the researcher's personal opinions. The paradigm encourages the use of numbers to support claims.

A research design is a plan for gathering and interpreting information (Bryman & Bell, 2011). The current study employed an explanatory approach in order to get fresh insights into the interactions between research variables (Robson, 2002). In explanatory research, inferential statistics were utilized to determine the associations between variables (Hair et al., 2006). The study focused on SME members of the Kenya Association of Manufacturers (KAM, 2017). KAM has 752 manufacturing firms registered as of June 2017. The sector contributes 10% of the national GDP and employs over 2 million people. Buyers, investors, and the Kenyan government are among the stakeholders. Owners/managers of targeted manufacturing SMEs were the target respondents.

This is a list of elements from which the sample is taken (Cooper & Schindler, 2011). The study used the Kenya Association of Manufacturers' 2017 KAM directory for manufacturing SMEs. KAM categorised the firms by size. KIPPRA (2013) estimated that 70% of Kenyan manufacturing firms were SME. This study used proportional stratified random sampling to obtain a representative sample. In random sampling, each item in the population has the same chance of being chosen. Heterogeneous data require stratified random sampling. In this case, the population is subdivided into sub-groups with common characteristics (Zukmund, 2012)

Gall and Borg (2012) posited that at least 30% of the population is adequate to form the sample size. Hill (2012) suggested that at least 10% sample size of the population is adequate for a research study, while for a small population, 20% constitute a sample. The sample for this study was determined using the sample table developed by Krejcie and Morgan in 1970. The population for this study was between 700 and 800 and therefore the sample size at 95% confidence level was (248+260)/2=254 representing 34% of the population which was based on the following Krejcie and Morgan. The simple random stratified sampling is represented in the Table 1.

Table 1: The Sample Size

Sector	Population	Sample size (Unit of analysis)	Manager/ Owners (Unit of observation)
Chemical & Allied	79	27	27
Energy, Electricals & Electronics	45	15	15
Fresh Produce	11	4	4
Food & Beverages	187	63	63
Leather & Footwear	9	3	3
Metal & Allied	83	28	28
Motor Vehicle & Accessories	51	17	17
Paper & Board	74	25	25
Pharmaceuticals & Medical Equipment	24	8	8
Plastics & Rubber	77	26	26
Textile & Apparels	64	22	22
Timber, Wood & Furniture	19	6	6
Building, Construction & Mining	29	10	10
Total	752	254	254

A questionnaire was used to collect primary data from respondents. The basic data for this investigation were gathered using a standardized questionnaire. It was determined to use questionnaires since they were composed of a series of precise, quick questions that were either directly asked by the interviewer or answered independently by the respondents (Cooper & Schindler, 2011).

Prior to conducting a survey, every feature of the questionnaire as a survey instrument was pilot tested (Malhotra et al, 2010). The pilot study used 10% of the sample size (Bryman, 2012), and hence used 25 respondents. The pilot study was done in Uasin Gishu County among registered SMMEs.

The degree to which a measuring device consistently produces the same result when employed is referred to as its dependability (Abbot & McKinney, 2013). Using internal consistency was chosen because it was more stable (Bryman, 2012; Cooper & Schindler, 2011). Internal consistency was calculated using Cronbach's alpha. Pallant (2010), states that the Cronbach's alpha value should be more than 0.7.

Validity is a term that refers to the extent to which the results of data analysis accurately represent the topic under investigation (Zikmund 2012). The construct validity approach was applied in this investigation. The four categories of validity are internal validity, statistical conclusion validity, construct validity, and external validity (Drost, 2011). According to Drost (2011), there are two approaches to determine the content validity of instruments or tests: by asking a series of questions concerning the instruments or tests and by soliciting the opinion of expert judges in the field.

Data processing involves editing, classifying, and tabulating obtained data in preparation for analysis (Kothari, 2010). Coding and classification were used to facilitate data analysis. Data entry transformed the primary method's acquired data into a format suitable for display and modification.

The use of both closed-end and open-ended questionnaires aided in the collection of quantitative and qualitative data. To examine quantitative data, the descriptive statistics method was used, in which data were scored using frequencies and percentages. This was achieved using the computer software Statistical Package for Social Sciences (SPSS) version 26.0. Furthermore, SPSS contributed in the development of frequency tables for descriptive analysis. Inferential statistics were performed using correlation and regression analysis.

Throughout the research project, ethical standards were followed. Moi University provided the researcher with an introduction letter authorizing him to do study. The researcher guaranteed respondents of the confidentiality of information provided in the instruments, stating that they were being used solely for academic purposes and that all mentioned work was properly recognized. These measurements increased respondents' willingness and objectivity. The data obtained were stored in a manner that did not reveal the respondents' identities.

RESULTS

Descriptive Statistics for Firm performance

The primary objective of this study was to determine respondents' perceptions of small and medium-sized manufacturing firms (SMEs) performance. Six statements were used to assess the performance of SMSMF, with responses elicited using a five-point likert scale, as given in Table 2. The data indicate that all claims describing the performance of SMEs had a mean greater than 3.25. This indicated that respondents considered the performance of SMEs to be average. The overall skewness was -0.720 and the kurtosis was 0.783, indicating that the value distribution is non-normal. The aggregate mean score for the six statements used to explain firm performance was 3.31, with a standard deviation of 0.701, showing that respondents agreed on the performance of SMEs. This indicates that respondents judged the performance of SMEs as average.

Table 2 Descriptive statistics of Firm performance

Variable	Mean	Std. Deviation	Skewness	Kurtosis
FP1	3.32	1.086	-.246	-.694
FP2	3.38	1.147	-.209	-.562
FP3	3.25	.815	.072	.060
FP4	3.30	.968	-.338	-.344
FP5	3.29	.899	-.265	.384
FP6	3.31	.847	-.521	.579
Mean	**3.3081**	**.70105**	**-.720**	**.783**

Descriptive Statistics for Process innovation

The study sought the respondent’s views on process innovation in SMEs using 6 statements and their responses elicited on a 5-point likert scale, shown in Table 3. From the findings that all the statements representing process innovation had a mean of above 3.07. This showed that the respondents rated product innovation in SMEs average. The overall skewness was 0.027 and kurtosis was -0.081, indicating that the distribution of values deviates from the mean. From the 6 statements used to explain process innovation had an overall mean score of 3.24 and a standard deviation of 0.862, indicating that respondents agreed in process innovation small and medium manufacturing enterprises. This implies that process innovation in SMEs was rated highly among the respondents.

Table 3: Descriptive statistics of Process innovation

Variable	Mean	Std. Deviation	Skewness	Kurtosis
PS1	3.27	1.111	-.197	-.493
PS2	3.07	1.024	-.033	-.556
PS3	3.24	1.134	-.085	-.411
PS4	3.30	1.028	-.021	-.118
PS5	3.18	.980	.010	.051
PS6	3.42	1.110	-.538	-.255
	3.2445	**.86217**	**.027**	**-.081**

Process innovation has no significant effect on performance of small and medium manufacturing enterprises in Nairobi County

Hypothesis H_0 postulated that process innovations has no significant effect on performance of small and medium manufacturing enterprises in Nairobi County. To test the hypothesis, a regression of process innovations variable and firm performance variable was conducted. This hypothesis was rejected H_0 if $p<0.05$ or do not reject if otherwise. From the regression model, (R^2 = .472) shows that process innovations account for 47.2% variation in firm performance. The model summary on Table 4 reveals that process innovations had a direct influence that accounted for 47.2% of the variance in firm performance. The actual variance accounted for was 46.9% (Adjusted R^2 = 0.469) in the firm performance.

Table 4: Model Summary on Process innovations and firm performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.687[a]	.472	.469	.51063

a. Predictors: (Constant), Process
b. Dependent Variable: Performance

Analysis of Variance on Process innovations and firm performance

The analysis of variance was used to determine whether the model was statistically significant in predicting the outcome, as demonstrated in (Table 5). The regression model included process innovation as a predictor ($F(1,242)= 216.028$, $p =0.000$). The ANOVA results show the statistical validity of the conceived regression model for process innovation and business performance. This demonstrates that process innovations have a large impact on corporate performance.

Table 5: ANOVA on Process innovations and firm performance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	56.328	1	56.328	216.028	.000[b]
	Residual	63.100	242	.261		
	Total	119.427	243			

a. Dependent Variable: Performance
b. Predictors: (Constant), Process

Process innovations and firm performance Coefficients

The β coefficient for process innovations as independent variable was generated from the model, in order to test the hypotheses under study. The t-test was used to determine whether or not process innovations as a predictor contributed significantly to the model. Table 6 summarizes the estimated -values and the predictor's contribution to the model.

Table 6: Process innovations and firm performance Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.496	.128		11.732	.000
	Process	.558	.038	.687	14.698	.000

a. Dependent Variable: Performance

From the findings β-values was significant and the process innovations as the predictor was making a significant contribution to the model. The β-value for process innovations had a positive coefficient, depicting positive relationship with firm performance as summarized in the model as:

$Y = 1.496+0.558X + \varepsilon$ …… Equation 2
Where: Y = Firm performance, X = Process innovations, ε = error term

The hypothesis of the study was that there is no statistically significant relationship between process innovations and firm performance. The study revealed a statistically significant positive correlation between process innovations and corporate performance (1=0.558, 0.05). As a result, increasing the number of process innovations per unit resulted in an increase in the company's performance. Because the null hypothesis (Ho) had a p value less than 0.05, it was rejected as wrong. As a result, we may conclude that process innovations had a key role in the company's success.

This showed that for every increase in the process innovations, there was a corresponding improvement in firm performance. This is consistent with Hervas, Ripoll, and Boronat (2014)'s assertion that process innovation entails reimagining a full end-to-end process or dramatically improving a valuable process segment. The basic objective of process innovation is to greatly increase productivity or to drastically reduce expenses.

According to Olsen and Hkansson (2017), an innovative business is led by a creative team. Services may be extensively customized to the client's/demands customer's and may involve a variety of different stakeholders. The findings corroborate Dooren, Bouckaert, and Halligan (2015) in that business performance is defined as the measurement of an organization's activities that result in an innovation, which also includes the organization's capabilities and the impact of the innovation.

The regression model indicates that process innovations explain for 47.2 percent of the variation in company performance (R2 =.472). The ANOVA results show the statistical validity of the conceived regression model for process innovation and business performance. A substantial positive link existed between process innovations and firm performance (1=0.558, p0.05). The null hypothesis (Ho) was rejected. This showed that for every increase in the process innovations, there was a corresponding improvement in firm performance. The process innovations had a significant effect on firm performance.

CONCLUSION

The study revealed that process innovation has a considerable impact on the performance of small and medium-sized manufacturing firms. Each time small and medium manufacturing businesses increased their use of process innovations, their performance improved proportionately.

RECOMMENDATIONS

Management of small-medium manufacturing enterprises should put greater emphasis on process innovation to improve their performance. These companies' processes should be improved to increase market share and minimize expenses. Also, small-medium manufacturing enterprises should keep exploring new technologies, as they are vital to efficient and effective marketing methods.

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