International Journal of
Entrepreneurship
(IJE)

Effect Of Innovation On The Performance Of Small And Medium Enterprises In Kenya

Beth Mukiri Kimathi, Elegwa Mukulu and Romanus Odhiambo

AJP

International Journal of Entrepreneurship
ISSN 2520-0153 (Online)
Vol.2, Issue 1 pp 15- 28, 2019
www.ajpojournals.org

EFFECT OF INNOVATION ON THE PERFORMANCE OF SMALL AND MEDIUM ENTERPRISES IN KENYA

[1]Beth Mukiri Kimathi
College of Human Resource Development
Jomo Kenyatta University of Agriculture and Technology
Corresponding Author's Email: bmukiri@gmail.com

[2]Elegwa Mukulu
College of Human Resource Development
Jomo Kenyatta University of Agriculture and Technology

[2]Romanus Odhiambo
Meru University of Science and Technology

Abstract

Purpose: The focus of the research was to measure the entrepreneurs' innovation and how this attribute contribute to the performance of an SME.

Methodology: The study adopted survey research design focusing on a population of 268,100 licensed small and medium enterprises in Nairobi County in Kenya, from which a sample of 400 firms were selected through a multi-stage probability sampling method where stratified sampling method was used first and then simple random sampling from the strata for the 17 constituencies under the Nairobi county. Quantitative data was collected using questionnaires and analyzed using Statistical Package for Social Science (SPSS) and Microsoft Excel. The study tested the research hypothesis on whether innovation had a significant effect on performance of small and medium size enterprises in Kenya.

Results: The regression results established that innovation had positive and significant effect of performance of small and medium size enterprises in Kenya. Based on these findings a unit increase in innovations would results to increase in performance of small and medium size enterprises in Kenya. The study also concluded that adoption of latest innovations in product production, process improvement and marketing process differentiated high performing and sustainable SMEs from the rest.

Unique contribution to theory, practice and policy: The study recommends that SMEs managers and owners should invest more in e-commerce which include buying or selling through the Internet to reduce the transactions cost and cost associated with keeping inventory.

Keywords: *Innovation, Kenya, SMEs and Entrepreneurs*

1.0 BACKGROUND INFORMATION

Small and Medium enterprises are recognized world over as the catalyst by which global economies are built. Their importance in Kenya is reflected in the Economic Survey 2014 which showed that 80 per cent of the 800,000 jobs created were in the informal sector that is dominated by SMEs. They are the undisputed foundation of economic diversification and expansion, contributing immensely towards a positive socio-economic impact within the country (Karen, 2015). Generally, majority of Kenyan investors initiate micro, small and medium enterprises. The small enterprises employ from 10 to 49 workers, and medium enterprises are able to engage from 50 to 99 workers (Njeru, 2012). The mindset of the entrepreneur determines the business success in today's competitive market (McGrath & MacMillan, 2000).

The important roles SMEs play in the economy of every nation has continued to be crucial in diversifying the sources of national income, in improving the competitiveness and economic development and in contributing to the flexibility and resilience of economies (Harrigan, Ramsey & Ibbotson, 2011). Such roles include: entrepreneurship, innovation, productivity, competition, job creation, diversification, earning and growth in many economies of the world (Gilmore, Galbraith & Mulvenna, 2013).

Small and medium enterprises make important contributions to development of any countries, of the 350 million industrial-commercial units with over two billion staff currently working in the world, more than 90% of them are small and medium enterprises (Al-Swidi & Al-Hosam, 2012). According to the Organization for Economic Cooperation and Development (OECD), SMEs represent more than 95% of enterprises and ensure 60-70% of the jobs. Formal SMEs contribute up to 45 percent of total employment and up to 33 percent of national income Gross Domestic Product (GDP) in emerging economies (Moshe, 2012).

In Europe, they are defined as having manpower fewer than 250 employees and United States define them with employees less than 500 (Natarajan & Wyrick, 2011). The contribution of SMEs in developed countries is also very important and it considered as the main source of employment and income generation (Oladapo & Onyeaso, 2012; Ong & Ismail, 2012). Similarly, the SMEs also has critical role in developing countries. In developing countries, a significant proportion of population is directly or indirectly dependent upon the SMEs. Therefore, the contribution of SMEs is highly recognized at the global level and this has alerted authorities around the world to give more focus on SMEs (Shelley, 2004).

The future of Africa development lies to a large extent in the hands of its indigenous SMEs. These are the firms that will create most of the private sector jobs that a rapidly growing labor force is craving. These are the firms that will meet surging African demand for products and services. These are the firms where local entrepreneurial talent will grow and realize it self. And these are the firms that will become the future champions of African industry.

Small and medium enterprises play a significant role creating employment opportunities to a large proportion of Kenyans more than any other sector. Approximately 720,000 (86%) new jobs were created in the informal SME sector in 2015 as compared to 120,000 (14%) in the formal sector the same year. SMEs created 3.7 Million in 1999 which grew to 12.6

million in 2015. The value of the SME's output is estimated at Ksh 3,371.7 billion against national output of Ksh 9,971.4 representing a contribution of 33.8 per cent in 2015. In terms of gross value added, the SMEs are estimated to have contributed Ksh 1,780.0 billion compared to Ksh 5,668.2 billion for the whole economy (Kenya National Bureau of Statistics, 2016).

A total of 2.2 million SMEs were closed in Kenya in the last five years, 2016 inclusive and on average, businesses were closed at the age of 3.8 years (Kenya National Bureau of Statistics, 2016). The dilemma then is what causes these SMEs to close shop. Some scholars have argued that the death of SMEs is because of the perceived mindset of its owners identified as one of the major causes of SMEs failure rates. Others have said entrepreneurial mindset is an important success factor for SMEs without which a business will fail (Nieman, 2006; Dhliwayo & Vuuren, 2007; Alasadi & Sabbagh, 2015; Tyoapine, Teddy, James & Ringim, 2016; Ngek, 2012). However, the results obtained in previous research on entrepreneurial mindset are far from conclusive and there is need to progress research to add knowledge in this area.

According to Rukevwe (2015) business performance is related to the ability of the business to gain profit and growth in order to achieve its general strategic objectives. Firm's innovation performance depends on the opportunities provided by their external environment. This implies that SMEs becomes very competitive in an emerging market when they give importance to innovative activities that build their reputation in the market environment (Weerasiri, Zhengang, & Perera, 2012). Essentially, the key reason for innovativeness is the desire of firms to obtain increased business performance and increased competitive edge (Kimandu, 2016).

The importance of innovation is described by Roberts and Amit (2003) as a means leading to a competitive advantage and superior profitability. Beaver (2002) believes that innovation is an essential element for economic progress of a country and competitiveness of an industry. Innovation plays an important role not only for large firms, but also for SMEs (Jong & Vermeulen, 2006). Sandvik and Sandvik (2003) argue that innovation is one of the most important competitive weapons and generally seen as a business's core value capability. Innovation is also considered as an effective way to improve the productivity of a business due to the resource constraint issue facing a business. Bakar and Ahmad (2010) add that the capability in product and business innovation is crucial for a firm to exploit new opportunities and to gain competitive advantage.

2.0 LITERATURE REVIEW

2.1 Theoretical Review

According to Cantwell and Santangelo (2000) the most widely known theory of innovation is that of Schumpeter (1934). Kurz (2008) notes that one of the best-known contributors to the theory of entrepreneurship has been Joseph Schumpeter, Schumpeter (1942) regarded the entrepreneur as a mould maker who is the driving force of industrial innovation and an innovator whose role was crucial in economic development. For him, the entrepreneur was a person who created new ways of fulfilling currently unsatisfied needs. Individuals introducing new combinations evidence the very special quality of entrepreneurship, a quality that is and should be distinguished from other aspects of the business role such as risk-taking and management (Reisman, 2004).

In one of his later studies, Schumpeter (1965) defined an entrepreneur as an idea man and a man of action who possesses the ability to inspire others, and who does not accept boundaries of structured situations. He is a catalyst of change that is instrumental in discovering new opportunities, which makes for the uniqueness of the entrepreneurial function. Schumpeter (1934) in his book, *The Theory of Economic Development*, originally written in 1912, identified the entrepreneur as an individual who introduces new combinations that is innovation to the economy.

In his theory of business cycles, Schumpeter explains that innovations come in swarms that are the initial innovator is followed by a bunch of imitators which results in an economic boom and that period of innovation and lack of innovation are the main causes for the business cycle (Verspagen, 2005). For Schumpeter, an entrepreneur is not only an innovator but also a leader. Since the main characteristic of an entrepreneur is innovation and leadership, Schumpeter's entrepreneur does not necessarily start his own business and does not have risk taking as one of his functions (Reisman, 2004). In the context of this research, the Schumpeterian theory on innovation brings out the link between innovation and performance of SMEs especially in relation to profits. Innovation is one of the independent variables under entrepreneurial mindset which was studied under this study; hence the Schumpeterian theory on innovation created the foundation in understanding the variable.

2.2 Empirical Review

According to Rukevwe (2015) business performance is related to the ability of the business to gain profit and growth in order to achieve its general strategic objectives. Firm's innovation performance depends on the opportunities provided by their external environment. The importance of innovation is described by Roberts and Amit (2003) as a means leading to a competitive advantage and superior profitability. Beaver (2002) believes that innovation is an essential element for economic progress of a country and competitiveness of an industry.

Innovation plays an important role not only for large firms, but also for SMEs (Jong & Vermeulen, 2006). Sandvik and Sandvik (2003) argue that innovation is one of the most important competitive weapons and generally seen as a business's core value capability. Innovation is also considered as an effective way to improve the productivity of a business due to the resource constraint issue facing a business. Bakar and Ahmad (2010) add that the capability in product and business innovation is crucial for a firm to exploit new opportunities and to gain competitive advantage.

McAdam and Keogh (2004) investigated the relationship between firms' performance and its familiarity with innovation and research. It was found that; outlook of firms towards innovations has high score in the competitive environments so as to gain higher competitive lead. Through an integrated innovation-performance analysis carried out by Yahya, Marwan and Muna (2013) on 184 manufacturing firms operating in Turkey, the effect of organizational, product, process and marketing innovation was explored on different aspects of firm performance-innovation, production, market and financial. The results showed an evidence of a positive relationship of innovations on firms' performance.

3.0 RESEARCH METHODOLOGY

The study adopted descriptive research design through survey research using both quantitative and qualitative approaches. According to Aggarwal (2008) descriptive

research is devoted to the gathering of information about prevailing conditions or situations for the purpose of description and interpretation. A positivistic philosophy approach was adopted in this study. Positivists believe that reality is stable and can be observed and described from an objective viewpoint (Levin, 1988), that is without interfering with the phenomena being studied.

The target population of this study comprises all licensed small and medium enterprises in Nairobi County, Kenya which are estimated to be 268,100 in number. This target population was from the 17 constituencies under the Nairobi county that is, Westlands, Dagoretti North, Dagoretti South, Langata, Kibra, Roysambu, Kasarani, Ruaraka, Embakasi South, Embakasi North, Embakasi Central, Embakasi East, Embakasi West, Makadara, Kamukunji, Starehe and Mathare (Kenya National Bureau of Statistics, 2016).

This study applied multi-stage probability sampling method. In the first stage stratified sampling method was used to divide the SMEs into 13 strata according to SME sectors with each sector forming a stratum. In the second stage, a simple random sampling method was used to select representative samples from each sector. This allows equal probability of all individuals in the defined population to be selected as a member of the sample (Kombo & Tromp, 2006). This sample is calculated using the formula developed by Cochran (1963) as cited by Singh and Masaku (2014) used was selected. This formula is used to calculate the sample sizes where the population was large. The sample size was therefore 400 SMEs randomly selected from various sectors.

In this study, a questionnaire was the most appropriate tool. The questionnaires contained both closed-ended questions and few open-ended questions to encourage higher response rate. Open-ended questions provided the respondents with a chance to express their own personal opinions beyond the researcher's hypothesized position. These questions helped in enriching the qualitative methodology effectively. The use of questionnaires also makes it possible for descriptive, correlation and inferential statistical analysis. The Likert type of questions enabled the respondents to answer the questions easily. In addition, these allowed the researcher to carry out the quantitative approach effectively with the use of statistics for data.

The data analysis included both descriptive and inferential statistics. The ordinary least square regression analysis was used to determine the relationship that the independent variables had with the dependent variable. To test the linear relationship between the innovation and performance of the SMEs, Spearman's rho correlation was used. The hypotheses were tested from the regression model output where: H_{01}: $\beta i > 0$ (I = 1, 2, 3.....6) versus H_{aI}: $\beta i > 0$ The regression output provides t values and corresponding p values. If P value < 0.005 then H_{o1} was rejected which implies that X1 has a significant positive relationship with Y. The research tested the following research hypothesis;

H_a: *There is significant positive effect of innovation on the performance of small and medium enterprises in Kenya.*

$Y = \beta_0 + \beta_1 X_1 + \varepsilon$

Where: Y is the performance of the SMEs

β_0= Is a constant which represents the performance of SMEs when the independent variable under consideration are zero

X_1= Innovation Index

International Journal of Entrepreneurship
ISSN 2520-0153 (Online)
Vol.2, Issue 1 pp 15- 28, 2019
www.ajpojournals.org

β_1, represent the coefficient of X_1

ε represents the error term.

4.0 RESULTS AND DISCUSSIONS

4.1 Response Rate

In this study a response rate of 84% (335 out of 400) was obtained as shown in Figure 1. This response rate was considered to be high based on the proposition of Babbie (2004) who argued that a response rate of above 50% is adequate for a descriptive study. The response was attributed to readily available SMEs, managers and owners at the time of the study. The regions targeted by the study are crowded by SMEs who showed great interest in the study.

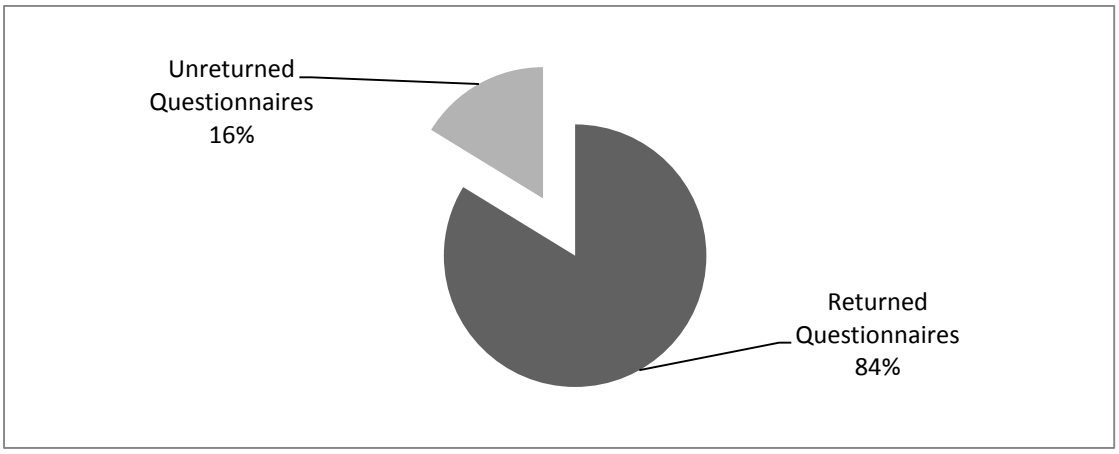

Figure 1: Response Rate

This section shows the distribution of the SMEs that responded to the questionnaires by their sectors. The results shows that 49% of the SMEs operated in service sectors, 35% were from wholesale and retail, 7% were from manufacturing sector, 4% were from real estate while 5% from others sectors. The finding implied that large percentage of the SMEs within the study area operated in service and wholesale and retail sectors (see Figure 2). These findings could be justified on the basis that the service sectors is not capital intensive hence attract many startups that in most case lack capital. Wholesale and retail sectors are easy to manage since they do not involve production and in most cases manufacturers offers products on credit and are paid later. The findings further implied that sectors that are less capital intensive attract many SMEs compared to those that are capital intensive such as manufacturing and real estate sector.

International Journal of Entrepreneurship
ISSN 2520-0153 (Online)
Vol.2, Issue 1 pp 15- 28, 2019
www.ajpojournals.org

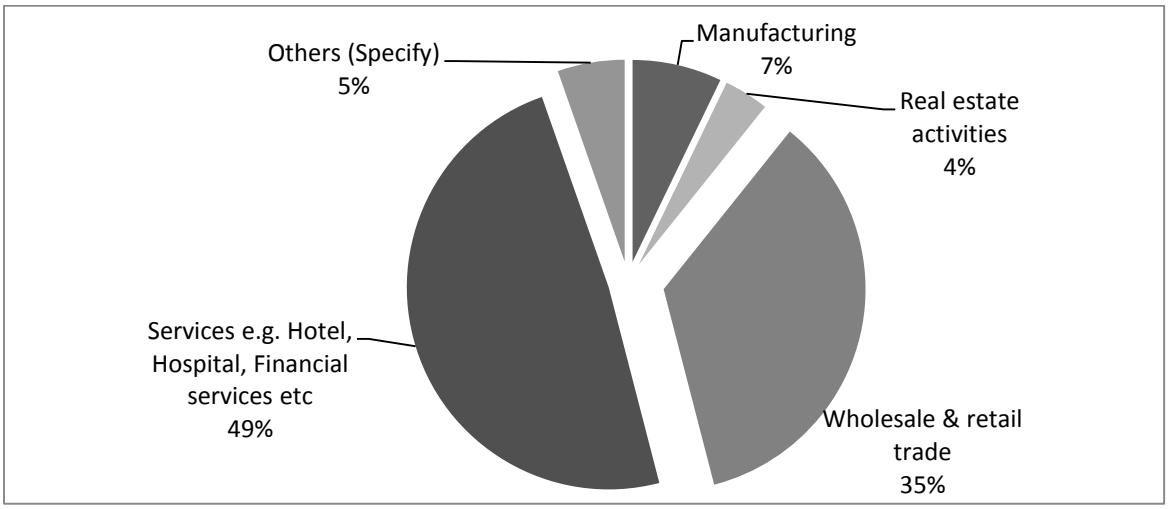

Figure 2: Response Rate Based on the Sectors

4.2 Background Information of Small and Medium Enterprises

The subsection presents the findings on the background information on the business. These include legal structure, years of operations, number of employees in yours business, current total market value of the business (Kshs) and current annual turnover/annual sales (Kshs) of the business (see Table 1).

Table 1: Background Inf4ormation on the Business

	Category	Frequency	Percent (%)
Legal Structure	Sole proprietorship	217	64.8
	Partnership	49	14.6
	Limited company	69	20.6
	Total	**335**	**100**
Years of Operation	0-5 yrs.	214	63.9
	6-10 yrs.	79	23.6
	11-20 yrs.	36	10.7
	20 yrs. & above	6	1.8
	Total	**335**	**100**
Number of employees in your business	Less than 10	278	83
	11-40	48	14.3
	41-70	6	1.8
	71-100	3	0.9
	Total	**335**	**100**
Current total market value of the Business (Kshs)	Less than 500,000	208	62.1
	500,000 – 1,000,000	58	17.3
	1,000,001-2,000,000	6	1.8

International Journal of Entrepreneurship
ISSN 2520-0153 (Online)
Vol.2, Issue 1 pp 15- 28, 2019
www.ajpojournals.org

	Category	Frequency	Percent (%)
	2,000,001-3,000,000	12	3.6
	Above 5,000,000	51	15.2
	Total	**335**	**100**
Current annual turnover/annual sales (Kshs) of the business	0-5 Million	229	68%
	6-10 Million	33	10%
	11-20 Million	25	7%
	21-50 Million	23	7%
	51-100 Million	15	4%
	101-200 Million	10	3%
	Total	**335**	**100**

4.3 Innovations Use among Small and Medium Enterprises

This section analysed the effect of innovation on the performance of small and medium size enterprises in Nairobi. The study sought to establish whether innovations in terms of product innovation, process innovation and business model innovation (see Table 2).

The findings showed that 38.0% of the SMEs had adopted internet banking services, 74.4% had adopted mobile platforms of payments such Mpesa paybill among others. The level of adoption of e-commerce was very low as indicated by 20.4% who had adopted e-buying and selling. The finding further indicates that majority (61.1%) of the SMEs had adopted social media marketing which was a common trends among small business. The level of adoption of accounting software, Human resources management systems, bulk SMS marketing and customer information data storage systems was very low among the study population (see Table 2).

The study findings implied that majority of the SMEs had innovated in digital payment services and marketing services but were yet to innovate in financial and human resources management. These findings can be explained by the small nature of majority of the SMEs that had few employees which didn't require human resource management systems. The findings further showed that majority of the employees were taking advantage of the rapid growth in the use of social media to market their product and services and reach wide range of customers.

The study finding supports the study results of Weerasiri, Zhengang and Perera (2012) who also posited that SMEs becomes very competitive in an emerging market when they give importance to innovative activities that build their reputation in the market environment. Sandvik and Sandvik (2003) similarly argued that innovation is one of the most important competitive weapons and generally seen as a business's core value capability.

Bakar and Ahmad (2010) added that the capability in product and business innovation is crucial for a firm to exploit new opportunities and to gain competitive advantage. The findings of this study and those of the previous studies analysed reveals that innovation adoption among SMEs was a recipe for improved SME performance.

Table 2: Types of Innovation Used by Small and Medium Enterprises

	Yes	No

Internet banking services	38.0%	62.0%
Mobile platforms to collect revenue (Paybill, Lipa na Mpesa, Eazzy Pay etc.)	74.4%	25.6%
E-commerce i.e. buying or selling through (Jumia, Kilimall, OLX, Masoko etc.)	20.4%	79.6%
Social Media marketing (Face book, Twitter, LinkedIn, Instagram, WhatsApp)	61.1%	38.9%
Accounting software e.g. QuickBooks, Sage, SAP etc	24.1%	75.9%
Human Resources Management Systems e.g. Perpay, HRMS etc	18.7%	81.3%
Bulk SMS marketing	16.6%	83.4%
Customer information data storage system e.g. East African Data Handlers, Safaricom etc	19.6%	80.4%

This section presents the findings on the descriptive results on level of innovation among the small and medium size enterprise in Nairobi County. On the product innovation, the study asked the respondents whether they had introduced new products/services or improvements on existing products/services in the last 5 years. The finding showed that 39.8% and 19.3% of the respondents agreed and strongly agreed respectively. The statement had a mean of 4 which confirmed that majority of the respondents agreed. On whether, SMEs had introduced new equipment, machinery or technology in the last 5 years, 32.5% and 15.0% agreed and strongly agreed while 28.5% and 1.8% disagreed and strongly disagreed respectively (see Table 3).

The study further sought to establish whether SMEs business processes are automated e.g. accounts, human resources, procurement. The findings showed that some SMEs had not automated their business process as shown by 43.2% who disagreed while other had automated their business process as shown by 24.0% of the respondents who agreed. These findings implied that not all SMEs had innovations in their business processes. The findings further showed that 48.3% and 16.4% agreed and strongly agreed that they market their products/services through social media e.g. Facebook, emails and Instagram. The findings further showed that more than half disagreed that they had opened branches in the last 5 years. On whether customer numbers have grown in the last 1 year and whether SMEs provide unique products/ services as compared to their competitors, the results showed that statement had mean response of 3 implying that respondents had varying opinion with some agreeing while other disagreeing (see Table 3).

Finally the mean of 4 implied than majority of the SMEs in the study population agreed that they used technology to acquire new customers and retain the existing customers. The study revealed that innovations adoption by SMEs improved operations and management of customers. Findings further showed that SMEs in Kenya had adopted product innovations and business process innovations and targeted to improve products and services they offered with the intention of boosting their performance.

The results of this study support those of Jones and Linderman (2014) who argued that product/service innovation can be an important source of competitive advantage that leads to improved performance. Nyang'au, Mukulu and Mung'atu (2014) contributed in this discourse by adding that entrepreneurial growth and development cannot be continued

without added innovations (usually in the product or services or in its marketing). The author further posited that with extra innovations, firms become "attractive" coming with novel products is usually seen as part of the process of innovation, which is the engine driving sustained entrepreneurial growth and development. Therefore, innovation was crucial components for SMEs to remain afloat.

Table 3 Descriptive Results on Innovation Used by SMEs

	SD	D	N	A	SA	Mean	Std Dev
We have introduced new products/services or improvements on existing products/services in the last 5 years	0.9%	22.0%	18.1%	39.8%	19.3%	4	1.06
We have introduced new equipment, machinery or technology in the last 5 years	1.8%	28.5%	22.1%	32.5%	15.0%	3	1.09
Our business processes are automated e.g. accounts, Human resources, procurement etc	3.6%	43.2%	24.6%	24.0%	4.6%	3	0.99
We market our products/services through social media e.g. Facebook, emails, Instagram etc	4.9%	22.2%	8.2%	48.3%	16.4%	3	1.15
We have opened new branches of our business in the last 5 years	8.5%	48.3%	16.4%	16.7%	10.0%	3	1.15
Our customer numbers have grown in the last 1 year	2.7%	24.7%	17.2%	42.8%	12.7%	3	1.07

We provide unique products/ services as compared to our competitors	4.6%	15.6%	25.2%	41.4%	13.2%	3	1.05
We use technology to acquire new customers and retain the existing customers	1.8%	14.5%	19.9%	33.4%	30.4%	4	1.09

SA-Strongly Agree, A-Agree, Neutral, D-Disagree, SD- Strongly Disagree

4.3.1 Analysis of the Effect of Self-Efficacy on SME Performance

4.3.1.1 Pearson Correlation Analysis between Innovation and SMES Performance

Pearson correlation analysis between innovation and SMEs performance revealed r=0.452, p=0.000, which also implied that innovation had positive correlation with SMEs performance in Kenya (see Table 4). These findings implied that increasing innovation activities would result to increase in SMEs performance in Kenya. The study finding supports the finding of Weerasiri, Zhengang and Perera (2012) who also posited that SMEs becomes very competitive in an emerging market when they give importance to innovative activities that build their reputation in the market environment. Sandvik and Sandvik (2003) similarly argued that innovation is one of the most important competitive weapons and generally seen as a business's core value capability. Jones and Linderman, (2014) also found that product/service innovation can be an important source of competitive advantage that leads to improved performance.

Table 4: Correlation Matrix

		Innovation	SME Performance
Innovation	Pearson Correlation	1	.452**
	Sig. (2-tailed)		.000
	N	335	335
SME Performance	Pearson Correlation	.452**	1
	Sig. (2-tailed)	.000	
	N	335	335

**. Correlation is significant at the 0.05 level (2-tailed).

4.3.1.2 Linear Regression Model Fitting

Coefficient of Determination

In this section the study presents the findings on the linear regression model used to ascertain the effect of innovation on the performance of small and medium enterprises in Kenya. The findings on coefficient of determination, analysis of variance and regression coefficients are presented (see Table 5). R-square =204 revealed that innovation accounted for 20.4% of the variation in SMEs performance. The finding therefore confirmed that innovation significantly influenced SMEs performance.

International Journal of Entrepreneurship
ISSN 2520-0153 (Online)
Vol.2, Issue 1 pp 15- 28, 2019
www.ajpojournals.org

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.452[a]	.204	.202	.78495

a. Predictors: (Constant), Innovation

ANOVA Results and Model Significance

The study employed ANOVA to test the significance of the regression model used to ascertain the relationship between innovation and performance of small and medium size enterprises in Kenya. The null hypothesis tested was model is not statistically significant, therefore since f-computed =85.465 with p=0.000<0.05, the study rejected the null hypothesis and concluded that model used to link innovation to SMEs Performance was significance meaning it had good fitness (see Table 6). At this point the null hypothesis that innovation does not significantly affect SMEs performance was rejected.

Table 6: ANOVA Results and Model Significance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	52.659	1	52.659	85.465	.000[b]
	Residual	205.178	333	.616		
	Total	257.838	334			

a. Dependent Variable: SME Performance

b. Predictors: (Constant), Innovation

Regression Coefficients

The study used regression coefficients to test the effect of self-efficacy on performance of small and medium size enterprises in Kenya (see Table 7). The research hypothesis was to test whether innovation had a significant effect on performance of small and medium size enterprises in Kenya.

Table 7: Regression Coefficients and Test for Hypothesis

	B	Std. Error	Beta	t	Sig.
(Constant)	1.369	0.184		7.43	0.000
Innovation	0.507	0.055	0.452	9.245	0.000

a Dependent Variable: SME Performance

In the regression analysis innovation had regression coefficient β=0.507, with a corresponding p=0.000. The coefficient β = 0.507 was also significantly different from 0 with a p-value=0.001 which was less than 0.05. This implies that the null hypothesis $\beta_1=0$ was rejected and the alternative hypothesis (H_{A1}) $\beta_1 \neq 0$ was taken to hold implying that innovation had positive and significant effect on performance of small and medium size enterprises in Kenya. Based on these findings a unit increase in innovation would results to

increase of 0.558 units in performance of small and medium size enterprises in Kenya (see Table 7).

The study finding supports the finding of Weerasiri, Zhengang and Perera (2012) who also posited that SMEs becomes very competitive in an emerging market when they give importance to innovative activities that build their reputation in the market environment. Sandvik and Sandvik (2003) similarly argued that innovation is one of the most important competitive weapons and generally seen as a business's core value capability. Jones and Linderman (2014) also found that product/service innovation can be an important source of competitive advantage that leads to improved performance. The findings of this study and those of the previous studies analysed reveals that innovation adoption among SMEs was a recipe for improved SME performance.

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The study findings showed that majority of the SMEs had innovated in digital payment services and marketing services but were yet to innovate in financial and human resources management. Majority of the SMEs were taking advantage of the rapid growth in the use of social media to market their product and services and reach wide range of customers. The study revealed that innovations adoption by SMEs improved operations and management of customers. Findings further showed that SMEs in Kenya had adopted product innovations and business process innovations and targeted to improve products and services they offered with the intention of boosting their performance.

The study also concluded that adoption of latest innovations in product production, process improvement and marketing process differentiated high performing and sustainable SMEs from the rest. The innovations play a significant role in cost reduction and efficiency improvement which leads to high customer satisfaction and consequently increase in return on investments.

5.2 Recommendations

On the relationship between innovation and SMEs performance, the study recommends that SMEs managers should invest more in e-commerce which include buying or selling through the internet to reduce the transactions cost and cost associated with keeping inventory. This will lead to improved performance. The study further recommends that SMEs owners should adopt accounting software, bulk SMS marketing and customer information data storage system innovation to enhance their performance. The study also recommends that SMEs should provide unique products/ services as compared to our competitors to achieve competitive advantages.

References

Aggarwal, Y. P. (2008). *Science of Educational Research*. Kolkata, India: Nirmal Book Agency.

Alasadi, R., & Sabbagh, H.A. (2015). The role of training in small business performance. *International Journal of Information, Business and Management*, 7 (1), 293-311.

Al-Swidi, A.K., & Al-Hosam, A. (2012). The effect of entrepreneurial orientation on the organizational performance: A study on the Islamic banks in Yemen using the

partial least squares approach. *Arabian Journal of Business and Management Review (OMAN Chapter)*, 2(1), 73-84.

Babbie, E. (2004). *The practice of social research*. Belmont, CA: Wadsworth Publishing Company.

Bakar, L. J., & Ahmad, H. (2010). Assessing the relationship between firm resources and product innovation performance. *Business Process Management Journal*, 16(3), 420-435.

Beaver, G. (2002). *Small business, entrepreneurship and enterprise development*. London: Pearson Education Ltd.

Cantwell, J. A., & Santangelo, G. D. (2000). Capitalism, profits and innovation in the new techno-economic paradigm. *Journal of Evolutionary Economics* 10(2), 131-157.

Cochran, W. G. (1963). *Sampling Techniques.* (2nd ed.). New York: John Wiley and Sons, Inc.

Dhliwayo, S., & Vuuren, V. (2007). The strategic entrepreneurial thinking imperative. *Independent Research Journal in the Management Sciences*, 7(1), 123-134.

Gilmore, A., Galbraith, B., & Mulvenna, M. (2013). Perceived barriers to participation in R&D programmes for SMEs within the European Union. *Technology Analysis and Strategic Management*, 25(3), 329-339.

Harrigan, P., Ramsey, E., & Ibbotson, P. (2011). Critical factors underpinning the e-CRM activities of SMEs. *Journal of Marketing Management*, 27(6), 503-529.

Jones, J., & Linderman, K. (2014). Process Management, Innovation and efficiency performance: The moderating effect of competitive intensity. *Business Process Management Journal*, 20(2), 335-358.

Jong, J. P., & Vermeulen, P. A. (2006). Determinants of product innovation in small firms: a comparison across industries. *International Small Business Journal*, 24(6), 587-609.

Karen, K. (2015). *SMEs as Catalysts of Economic Growth*. Retrieved February 10, 2019, from http://www.the-star.co.ke/news/2015/10/22/smes-as-catalysts-of-economic-growth_ c1228515.

Kenya National Bureau of Statistics. (2016). *Micro, Small and Medium Establishment (MSME) Survey: Basic Report.* Retrieved February 6, 2019, from http://www. knbs.or.ke/index.php?option=comphocadownload&view= category&id= 137:micro small and-medium-enterprises-msmes&Itemid=599.

Kimandu, L.N. (2016). Relationship between government regulations and Entrepreneurial orientation of SMEs in Kenya. Unpublished PhD thesis, Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya.

Kombo, D. K., & Tromp, D. L. (2006). *Proposal and thesis writing: An introduction*. Nairobi: Paulines Publications Africa.

Kurz, D.H. (2008). Innovations and profits Schumpeter and the classical heritage. *Journal of Economic Behavior & Organization*, 67(1), 263-278.

Levin, D. M. (1988). *The opening of vision: Nihilism and the postmodern situation*. London: Routledge.

McAdam, R., & Keogh, K. (2004). Transitioning towards creativity and innovation measurement in SMEs. *Creativity and Innovation Management*, 13(2), 126-141.

McGrath, R., & MacMillan, I. (2000). *The Entrepreneurial Mindset*. Boston: Harvard Business School Press.

Moshe, M. (2012). *Strategic entrepreneurship and performance of small and medium enterprises in South Africa*. Unpublished Master of Management in Entrepreneurship and New Venture Creation research paper, University of the Witwatersrand, Johannesburg, South Africa.

Natarajan, G. S., & Wyrick, D. A. (2011). *Framework for implementing sustainable practices in SMEs in the United States, Proceedings of the World Congress on Engineering 2011 Vol I WCE 2011*. Retrieved February 16, 2019, from http://ijmsh.com/articles/IJMSH_2_SEPT2005/Ajide_&_Dr_Oyetade.pdf.

Ngek, B. (2012). An exploratory study on entrepreneurial mindset in the small and medium enterprise (SME) sector: A South African perspective on fostering small and medium enterprise (SME) success. *African Journal of Business Management*, 6(9), 3364-3372.

Nieman, G. (2006). *Managing the small business, Small Business Management: A South African approach*. Pretoria: Van Schaik.

Njeru, P. W. (2012). *The Effect of Entrepreneurial Mind Set on The Performance of Manufacturing Businesses in Nairobi Industrial Area*. Unpublished PhD thesis, Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya.

Nyang'au, S., Mukulu, E., & Mung'atu, J. (2014). The influence of entrepreneurship on the growth of micro and small enterprises in Thika town, Kenya. *International Journal of Business, Humanities and Technology*, 4(2), 82-83.

Oladapo, V., & Onyeaso, G. (2012). An empirical investigation of the impact of luck on small business performance: dynamic panel data evidence. *International Journal of Management & Marketing Research*, 5 (3), 29-41.

Ong, J.W., & Ismail, H.B. (2012). Entrepreneurial traits and firm serendipity-seeking on SMEs' performance: The effect of firm size. *Journal of Enterprising Culture*, 20 (3), 265-286.

Reisman, D. (2004). *Schumpeter's market: enterprise and evolution*. Northampton, UK: Edward Elgar Publishing, Inc.

Roberts, P. W., & Amit, R. (2003). The dynamics of innovative activity and competitive advantage: The case of Australian retail banking, 1981 to 1995. *Organization Science*, 14(2), 107-122.

Rukevwe, J. O. (2015). Effect of Innovation on the Performance of SMEs Organizations in Nigeria. *Management*, 5(3), 90-95.

Sandvik, I. L., & Sandvik, K. (2003). The Impact of Market Orientation on Product Innovativeness and Business Performance. *International Journal of Research in Marketing*, 20(4), 255-376.

Schumpeter, J. A. (1934). *The theory of economic development*. Cambridge, MA: Harvard University Press.

Schumpeter, J. A. (1942). *Capitalism, socialism and democracy*. New York: Harper.

Schumpeter, J. A. (1965). *Economic theory and entrepreneurial history: Explorations in Enterprise*. Cambridge, MA: Harvard University Press.

Shelley, V. (2004). *Factors Hindering Growth in small business*. Retrieved February 15, 2019, from http:// www.sbae. uca.edu/research/2004 paper pdf/019.pdf.

Singh, A. S., & Masaku, M. B. (2014). Sampling techniques &determination of sample size in applied statistics research: An overview. *International Journal of Economics, Commerce and Management*, 11(11), 1-22.

Tyoapine, H., Teddy, T. T., James, A.T., & Ringim, K.J. (2016). Entrepreneurial mindset and the success of small and medium enterprises (Smes) in Nigeria. *Mkar Journal of Media and Culture*, 1(3), 1-22.

Verspagen, B. (2005). Innovation and Economic Growth. In J. Fagerberg, D. C. Mowery,and R. R. Nelson (eds), *The Oxford handbook of innovation*. Oxford, UK: Oxford University Press.

Weerasiri, S., Zhengang, Z., & Perera. T. R. (2012). *Innovation and Creativity of Small and Medium Scale Enterprises (SMEs) in Sri Lanka: A Review*. Retrieved February 17, 2019, from https://www.researchgate.net/publication/280094206 _Innovation_and_Creativity_of_Small_and_Medium_Scale_Enterprises_SMEs_i n n_Sri_Lanka_A_Review.

Yahya, A., Marwan, A., & Muna, S. (2013). Technology Orientation, Innovation and Business Performance: A Study of Dubai SMEs. *The International Technology Management Review*, 3(1), 1-11.