ENTREPRENEURIAL ORIENTATION AND SMALL AND MEDIUM ENTERPRISES GROWTH: EXAMINING INNOVATIVENESS DIMENSION

Isaac Ruto Katialem  
Kabarak University  
Kenya  
isackatialem@gmail.com

Dr. Stella Muhanji  
Kabarak University  
Kenya  
smuhanji@kabarak.ac.ke

Prof. Robert Otuya  
University of Eldoret  
Kenya  
robertotuya@yahoo.com


ABSTRACT

Entrepreneurial orientation has generally been widely recognized as an imperative factor in enhancing the growth and profitability of a firm. Small and medium enterprises (SMEs) in Kenya play a pivotal role in employment, industrial transformation, stimulation of innovation, and poverty reduction. The study’s main objective was to examine the effect of innovativeness in the growth of SMEs in the manufacturing sector in Kenya. This study utilized descriptive cross-sectional design whereby data was collected using the survey method. Stratified random sampling was used to collect primary data from 265 SMEs in the manufacturing sector from a population of 853 SMEs registered with Kenya Association of Manufacturers (KAM) in Nairobi County, Kenya. Data was collected by use of a self-administered questionnaire and analysed by statistical computations of means, percentages, and correlation and regression analysis using SPSS Version 21. Inferential statistics was used in testing hypotheses of this study. The empirical findings demonstrate a statistically significant and positive relationship between innovativeness and growth of SMEs. Evidence from this research supports the conclusion that presence of innovativeness in a firm is quintessential in enhancing its growth.

Key words: Small and medium enterprises, entrepreneurial orientation, growth, innovativeness.

INTRODUCTION

The pivotal role played by entrepreneurship in enhancing firm growth, productivity, innovation and economic growth in general has been widely accepted (Munemo, 2012). For close to thirty years, entrepreneurial orientation (EO) as a key domain of entrepreneurship research has attracted scholarly attention (Covin & Wales, 2012). Entrepreneurial orientation refers to strategy making process and styles of firms engaged in entrepreneurial activities (Lumpkin & Dess, 2001). Entrepreneurial orientation consists of five factors: innovativeness, risk taking, proactiveness, competitive aggressiveness and autonomy (Lumpkin & Dess, 1996).

Globally, the crucial role played by Small and Medium Enterprises (SMEs) has been appreciated. This recognition is due to the contribution of the SME sector in economic development, particularly, in terms of employment creation, income generation and stimulation.
Small and medium enterprises (SMEs) in Kenya play a pivotal role in employment, industrial transformation, stimulation of innovation, and poverty reduction. SMEs play a vital role in the creation of employment opportunities for Kenyan compared to other sectors. Additionally, it has been acknowledged that SME sector in Kenya as a source of employment has been growing (Mutai, 2011). African Economic Outlook (2012) reported that the SME sector in 2011 employed nearly 80% of Kenya’s total workforce and contributed 20% to GDP. The Economic Survey of 2018 (Government of Kenya, 2018) shows that 787,800 (87.75%) of new jobs in the informal SME sector were created compared to 110,000 jobs in the formal sector in 2017. The aforesaid compares to 747,300 (89.7%) new jobs created in 2016 by the informal MSE sector and 84,800 in the formal sector. Moreover, based on the findings of National SME surveys of 1999 and 2016, the contribution of SMEs to the country’s GDP had been recording an upward trend, that is, from 18.4% to 33.8% respectively (Central Bureau of Statistics et al., 1999; Government of Kenya, 2016).

Previous empirical research (Zahra & Garvis, 2000) have demonstrated that SMEs possessing entrepreneurial orientation to a great extent attain better performance to those lacking it. Kusumawardhani (2012) pointed out that entrepreneurial orientation is important for SMEs because it enables their survival and ability to outperform competitors. Additionally, Lumpkin and Dess (2001) indicated that SMEs possessing high EO react to industry competition in an aggressive and proactive manner.

Innovation is demonstrated by finding novel solutions to problems and needs, finding creative solutions, and developing new products and services (Lumpkin & Dess, 2001). According to Lumpkin and Dess innovativeness consists of methods to develop or adopt new products, services, or processes, technological leadership and R&D in developing new processes. They additionally acknowledge the importance of innovativeness as key components of entrepreneurial orientation since it enables firms pursue new opportunities.

There is a general agreement that innovations enhances business performance. Kennedy (2013) points out that the manufacturing sector not only improves the economy of a given country but also drives innovation to enhance long term economic growth. Continuous and constant innovations by small and medium enterprises in the manufacturing sector in Kenya enhances improved performance and success (Nyoike, Ngugi, & Muturi, 2017).

**Objective of the study**

The objective of this study was to examine the effect of innovativeness in the growth of SMEs in the manufacturing sector in Kenya.

**Hypothesis of the study**

The research tested the following hypothesis.

H$_1$: There is a significant contribution between innovativeness and growth of SMEs in the manufacturing sector in Kenya.
LITERATURE REVIEW

Entrepreneurial orientation has generally been widely recognized as an imperative factor in enhancing the growth and profitability of a firm. Literature on the relationship between entrepreneurial orientation and growth suggests that both variables are positively related (Moreno & Casillas, 2008). Additionally, previous research has shown that high growth have a tendency of associating with a firm’s entrepreneurial orientation (Stevenson & Jarillo, 1990). Taking the abovementioned into perspective, Moreno and Casillas (2008) associated growth with innovativeness, proactiveness and risk taking behaviours of the firm which describe an entrepreneurial orientation dimension.

Innovativeness dimension of entrepreneurial orientation refers to a firm's willingness to engage in and support the generation of new ideas and to explore and experiment with them creatively (Lumpkin & Dess, 1996). The growth rate of a firm has been found to be positively and significantly influenced by strategies involving the development of new products and new processes (Moreno & Casillas 2008).

Literature has conceptualized innovation in diverse ways. However, researchers have grouped the definitions into two main categories namely those viewing innovation as a process or an outcome (Crossan & Apaydin, 2010; Jiménez-Jiménez & Sanz-Valle, 2011). In presenting a process viewpoint of innovation, Wan et al. (2005, p. 262) defined innovation as “a process that involves generation, adoption and implementation of new ideas or practices within the organization”. In conceptualizing innovation as an outcome, Crossan and Apaydin, (2010) assert that a number of dimensions including referent, form, magnitude, type, and nature are key. The referent dimension defines the newness of innovation as an outcome which can be new to the firm, market, industry. With regards to form, scholars have differentiated three forms of innovation: product or service innovation, process innovation, and business model innovation (Crossan & Apaydin, 2010). Similarly, other researchers have conceptualized the innovation construct from the perspective of product innovation versus process innovation (Shilling, 2008). Schilling mentions that process innovation works towards enhancing the efficiency of production or manufacturing.

Frishammar and Hörte (2007) assert that risk taking is not associated with performance. Calantone, Cavusgil, and Zhao’s (2002) research reveals that the innovativeness of a firm measured by the rate of adoption of its innovations is positively related to performance and contributes to the enhancing of its competitive advantage. In their study to assess the impact of innovation activities, Hashi and Stojcic’s (2013) research findings demonstrate that innovation activities and productivity exhibited a positive and significant relationship. Moreno and Casillas (2008) point out that growth rate of a firm will be positively and significantly influenced by strategies involving the development of new products and new processes.

Otieno, Bwisa and Kihoró’s (2012) work in Kenya found a positive and significant relationship between innovativeness and performance taking into consideration sales, profitability and employees growth parameters. Further, Mwaura, Gathenya and Kihoró (2015) research on the influence of entrepreneurial orientation on the performance of women owned enterprises in Kenya established a significant positive relationship between innovativeness and business performance.

A study to explore the influence of innovativeness on the growth of SMEs in Nairobi by Ngugi, McOrege, and Muiru, (2013) established that innovativeness influences the growth of SMEs in Kenya. This was mainly through proclivity of owner/manager to engage in and support new ideas, novelty, experimentation and creative processes resulting to new products, services or
technological processes. Provision of incentives for innovative employees and entrepreneurs support on employees’ innovation was also found to significantly influence the growth of SMEs in Ngugi et al.’s (2013) research. Enterprise surveys undertaken by International Finance Cooperation (2013) on Kenya’s innovative capability documents that 22% of Kenyan firms possessed internationally recognized quality certification compared to approximately 18% of firms in rest of Sub Saharan Africa.

Similarly, Nyagah’s (2013) study whose one of its objective was to determine how various technology and innovation factors influence the growth of SMEs in Kenya found out that 57.5% of the respondents reported that their firms had been involved in introducing a new product, 37% had been involved in acquiring completely new technology while 5.5% had upgraded an existing product line. With regards to the innovativeness of Kenyan enterprises, the findings revealed that 60.3% of the respondents indicated that Kenyan enterprises are very innovative, 34.2% indicated they are moderately innovative while 5.5% indicated they are not innovative.

METHODOLOGY

The study adopted descriptive cross-sectional design whereby data was collected using the survey method. A descriptive cross-sectional design involves the collection of data on more than one case in a single moment with the objective of answering a particular research question (Bryman & Bell, 2011; Sekaran & Bougie, 2013). Therefore to identify and analyze the relationship between entrepreneurial orientation and the growth of small and medium enterprises in the manufacturing sector in Kenya, questionnaires were used in this research. This study adopted the survey method because of numerous reasons. Firstly, access of accurate information about a given population in a quick and efficient manner is possible through surveys (Zikmund, 2003). Additionally, higher responses rates is enhanced through application of survey method especially when self-administered face-to-face method is used (Bryman & Bell, 2015).

The target population comprised of 853 SMEs registered with Kenya Association of Manufacturers (KAM). This study focused on SMEs in the manufacturing sector in Nairobi County. A sample of 265 SMEs was drawn from the population. This research used stratified random sampling technique where: food and beverage, leather and footwear, motor vehicle accessories, textile and apparel, plastic and rubber, chemical and allied as well as metal and allied subsectors were considered.

Self-administered questionnaires were used to collect data. In order to enhance reliability, the questionnaires were tested for internal consistency using the Cronbach’s coefficient alpha. The Cronbach alpha coefficients for the items in the questionnaires were above .07 indicating that information gathered with the research instrument was regarded as satisfactory.

Data analysis was done using descriptive statistical techniques like frequencies, mean and percentages. Inferential statistics was used in testing hypotheses of this study. Frequency distribution tables and percentages are used in presenting the findings of this research. SPPS Version 21 and SAS softwares were used for data analyses.
RESULTS

Background Information
This research sought to establish the background information of SMEs (n=201) in terms of type of business, activities of enterprise, years enterprise has been operating, number of employees and annual sales of the enterprise. Majority of the SMEs were private limited companies (79.5%). The other types of businesses were partnerships (9.95%) and individually owned enterprises (9.95%). Others in the above mentioned category comprising 1% of the SMEs were public corporations. Data collected revealed that 24.38% of the SMEs were involved with manufacturing of chemicals while 17.41% were engaged with plastic and rubber activities. Motor vehicle accessories activities were undertaken by 15.42% of the SMEs. Other SMEs dealing with, food and beverage activities, metal and allied, textile and apparel in addition to leather and footwear constituted 14.43%, 13.93%, 6.47%, and 5.47% respectively. The remaining enterprises (2.49%) were engaged with engineering as well as building and construction activities.

The findings also established that 46% of the SMEs had been in operation for more than 20 years, 13% between 16-20 years, 12.5% between 11-15 years, and 30% between 6-10 years. 13.5% of the SMEs had been in operation between 2-5 years. The research further sought to determine the number of employees and annual sales of the firm. Data collected revealed that 30.35% of the SMEs had between 10-49 employees while 24.38% had 50-59 employees. Half of the enterprises (49.25%) had annual sales exceeding 10 million while 25.37% of the SMEs had annual sales ranging from 5-10 million. The results also showed that 11.94% and 5.47% of the SMEs had annual sales of 2-3 Million and 1 Million and below respectively.

Innovativeness
The study’s main objective was to determine the effect of innovativeness in the growth of manufacturing SMEs in Kenya. Five statements were used in the measurement of innovativeness dimension of EO. Innovativeness dimension was measured using a seven-point semantic differential scale and the results are shown in Table 1. These results are described in terms of percentage form. Analysis of the response to whether improvements and innovations were actively introduced in their firms indicated that 58.71% strongly agreed, 23.38% agreed, 6.5% neutral, 6.47% somewhat agreed, 1% disagreed and 1.49% strongly disagreed. Further analysis indicated a mode of 7 and a median of 7, suggesting that majority of the respondents strongly agreed that improvements and innovations were actively introduced in their firms.

Asked whether their business were creative in their methods of operation, 29.4% strongly agreed, 45.8% agreed, 16.9% somewhat agreed, 3.5% neutral, somewhat 2.0% disagreed, .5% disagreed and 2% strongly disagreed. Further analysis indicated a mode of 6 and a median of 6, suggesting that majority of the respondents agreed that their businesses were creative in their methods of operation.

Analysis of the response to whether their firms had marketed new lines of products in the last five years indicated that 35.6 % strongly agreed, 42.6% agreed, 6.5% neutral, 9.8% disagreed and 5.6% strongly disagreed. Further analysis indicated a mode of 7 and a median of 6 suggesting that majority of the respondents strongly agreed that their firms had marketed new lines of products in the last five years.

When the responses to the statement that their firms constantly experiments with new services or products and original approaches to problem solving rather than imitating methods that other
firms have used for solving their problem were analyzed it was established that 31.3% strongly agreed, 12.9% agreed, 11.4% somewhat agreed, 33.8% neutral, 6% somewhat disagreed, 2.5% disagreed and 2% strongly disagreed. Further analysis indicated a mode of 7 and a median of 6, meaning that majority of the respondents strongly agreed that their firms constantly experiments with new services or products and original approaches to problem solving rather than imitating methods that other firms have used for solving their problem.

Asked whether changes in product or service lines have been mostly of a minor nature as compared with being quite dramatic in their firm, 13.9% strongly agreed, 20.9% agreed, 16.9% somewhat agreed, 21.9% neutral, 10.9% somewhat disagreed, 10.4% disagreed and 5% strongly disagreed. Further analysis indicated a mode of 4 and a median of 5, this means that majority of the respondents were not sure whether changes in product or service lines have been mostly of a minor nature as compared with being quite dramatic in their firms.

Table 1: Response to Innovativeness

<table>
<thead>
<tr>
<th>Innovativeness</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>In this firm we actively introduce improvements and innovations</td>
<td>1.49</td>
<td>1</td>
<td>1.49</td>
<td>6.47</td>
<td>7.46</td>
<td>23.38</td>
<td>58.71</td>
<td>6.22</td>
<td>1.243</td>
</tr>
<tr>
<td>Our business is creative in its methods of operation</td>
<td>2.0</td>
<td>.5</td>
<td>2.0</td>
<td>3.5</td>
<td>16.9</td>
<td>45.8</td>
<td>29.4</td>
<td>5.88</td>
<td>1.162</td>
</tr>
<tr>
<td>In the last five years, this firm has marketed new lines of products or services</td>
<td>5.5</td>
<td>5.0</td>
<td>13.4</td>
<td>11.9</td>
<td>13.9</td>
<td>22.9</td>
<td>27.4</td>
<td>5.02</td>
<td>1.822</td>
</tr>
<tr>
<td>This firm constantly experiments with new services or products and original approaches to problem solving rather than imitating methods that other firms have used for solving their problem</td>
<td>2.0</td>
<td>2.5</td>
<td>6.0</td>
<td>33.8</td>
<td>11.4</td>
<td>12.9</td>
<td>31.3</td>
<td>5.14</td>
<td>1.579</td>
</tr>
<tr>
<td>In my firm, changes in product or service lines have been mostly of a minor nature as compared with being quite dramatic</td>
<td>5.0</td>
<td>10.4</td>
<td>10.9</td>
<td>21.9</td>
<td>16.9</td>
<td>20.9</td>
<td>13.9</td>
<td>4.54</td>
<td>1.720</td>
</tr>
</tbody>
</table>

1 = “strongly disagree”; 2, “disagree”; 3, “somewhat disagree”; 4 “neutral”; 5 “somewhat agree; 6 “agree”; 7 = “strongly agree.

Source: Survey Data

In order to enrich this study, this section additionally explores the relationship between innovativeness and background information of enterprises. Cross tabulation is used to examine the abovementioned relationship. Consequently, items measuring innovativeness were compared with background information questions as seen in Table 2. Analysis of the response to whether improvements and innovations were actively introduced in their firm showed that 42.1% of private limited companies strongly agreed, 20.4% agreed, 5.1% were neutral, 0.9% disagreed and 1.9% strongly disagreed. With partnerships, 7.9% strongly agreed, 3.4% agreed, 0.9% were neutral, and none disagreed. For individual ownership, 6% strongly agreed, 5.1% agreed, 0.5% were neutral, 1% disagreed while none disagreed. In the others category comprising public corporations all the SMEs (1.4%) strongly agreed.
Table 2: Cross tabulation results on type of business and response to innovativeness items

<table>
<thead>
<tr>
<th>Innovativeness Items</th>
<th>Type of Business</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>In this firm we actively introduce improvements and innovations</td>
<td>Individual Ownership (%)</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>.5%</td>
<td>1.5%</td>
<td>2.0%</td>
<td>6.0%</td>
</tr>
<tr>
<td></td>
<td>Partnership</td>
<td>0%</td>
<td>0%</td>
<td>.5%</td>
<td>.5%</td>
<td>.5%</td>
<td>4.0%</td>
<td>4.5%</td>
</tr>
<tr>
<td></td>
<td>Private Limited Companies (%)</td>
<td>1.5%</td>
<td>1.0%</td>
<td>1.0%</td>
<td>5.5%</td>
<td>5.5%</td>
<td>16.9%</td>
<td>47.8%</td>
</tr>
<tr>
<td></td>
<td>Others (%)</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>.5%</td>
<td>.5%</td>
</tr>
<tr>
<td>Our business is creative in its methods of operation</td>
<td>Individual Ownership (%)</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>2.0%</td>
<td>4.5%</td>
<td>3.5%</td>
</tr>
<tr>
<td></td>
<td>Partnership</td>
<td>0%</td>
<td>0%</td>
<td>.5%</td>
<td>.5%</td>
<td>1.5%</td>
<td>4.0%</td>
<td>3.5%</td>
</tr>
<tr>
<td></td>
<td>Private Limited Companies (%)</td>
<td>2.0%</td>
<td>.5%</td>
<td>1.5%</td>
<td>3.0%</td>
<td>13.4%</td>
<td>36.3%</td>
<td>22.4%</td>
</tr>
<tr>
<td></td>
<td>Others (%)</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>1.0%</td>
<td>0%</td>
</tr>
<tr>
<td>In the last five years, this firm has marketed new lines of products or services</td>
<td>Individual Ownership (%)</td>
<td>.5%</td>
<td>.5%</td>
<td>.5%</td>
<td>.5%</td>
<td>1.5%</td>
<td>3.0%</td>
<td>3.5%</td>
</tr>
<tr>
<td></td>
<td>Partnership</td>
<td>.5%</td>
<td>.5%</td>
<td>1.0%</td>
<td>2.0%</td>
<td>2.0%</td>
<td>1.5%</td>
<td>2.5%</td>
</tr>
<tr>
<td></td>
<td>Private Limited Companies (%)</td>
<td>4.5%</td>
<td>4.0%</td>
<td>11.4%</td>
<td>9.5%</td>
<td>10.4%</td>
<td>18.4%</td>
<td>20.9%</td>
</tr>
<tr>
<td></td>
<td>Others (%)</td>
<td>.5%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>This firm constantly experiments with new services or products and original</td>
<td>Individual Ownership (%)</td>
<td>.5%</td>
<td>.5%</td>
<td>.5%</td>
<td>3.5%</td>
<td>2.0%</td>
<td>1.5%</td>
<td>1.5%</td>
</tr>
<tr>
<td>approaches to problem solving rather than imitating methods that other firms have</td>
<td>Partnership</td>
<td>0.0%</td>
<td>0.0%</td>
<td>1.0%</td>
<td>2.5%</td>
<td>1.5%</td>
<td>1.5%</td>
<td>3.5%</td>
</tr>
<tr>
<td>used for solving their problem</td>
<td>Private Limited Companies (%)</td>
<td>1.5%</td>
<td>2.0%</td>
<td>4.5%</td>
<td>27.9%</td>
<td>7.0%</td>
<td>10.0%</td>
<td>26.4%</td>
</tr>
<tr>
<td></td>
<td>Others (%)</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>1.0%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>In my firm, changes in product or service lines have been mostly of a minor nature</td>
<td>Individual Ownership (%)</td>
<td>1.0%</td>
<td>.5%</td>
<td>2.0%</td>
<td>1.5%</td>
<td>1.0%</td>
<td>2.5%</td>
<td>1.5%</td>
</tr>
<tr>
<td>as compared with being quite dramatic</td>
<td>Partnership</td>
<td>.5%</td>
<td>.5%</td>
<td>2.5%</td>
<td>3.0%</td>
<td>2.5%</td>
<td>.5%</td>
<td>.5%</td>
</tr>
<tr>
<td></td>
<td>Private Limited Companies (%)</td>
<td>3.5%</td>
<td>9.5%</td>
<td>6.5%</td>
<td>16.4%</td>
<td>13.4%</td>
<td>17.9%</td>
<td>11.9%</td>
</tr>
<tr>
<td></td>
<td>Others (%)</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>1.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

1 = “strongly disagree”; 2, “disagree”; 3, “somewhat disagree”; 4 “neutral”; 5 “somewhat agree; 6 “agree”; 7 = “strongly agree.

Source: Survey Data

Inferential statistics
Bivariate correlational analysis was done to establish the relationship between innovativeness and SME growth. The results of the analysis are presented in Table 3.

### Table 3: Bivariate Correlation

<table>
<thead>
<tr>
<th>Correlations</th>
<th>Innovativeness</th>
<th>SME growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovativeness</td>
<td>Pearson Correlation</td>
<td>.229*</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
</tr>
<tr>
<td>SME growth</td>
<td>Pearson Correlation</td>
<td>.229*</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.033</td>
</tr>
</tbody>
</table>

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

Source: Research Data

The results of correlation analysis depicted in Table 3 demonstrate that Pearson correlation coefficient for innovativeness and SME growth is .229 with a p value of .033. Given that the p value is less than .05, the null hypothesis $H_0$ is rejected that there is no correlation in the population and $H_1$ is accepted that there is correlation. The above indicates that there is sufficient evidence to support a weak linear relationship between the independent and dependent variables. Further, simple linear regression analysis was done to facilitate statistical test in order to determine the existence of a statistically significant casual link between innovativeness and SME growth. The linear regression model also established the coefficients of the variables.

In this research, innovativeness was regressed on SME growth using SPSS Version 21. The results are presented in Table 4. The regression model depicting the hypothesized relationship between innovativeness and SME growth was presented in the following linear regression equation:

$$\text{SME Growth}=\beta_0+\beta_1\text{X}_1+\epsilon$$

Where:

$\text{SME Growth} =$ Volume of sales, $\beta_0 =$ is the Y intercept/constant, $\beta_1 =$ coefficient of regression which measures how strong innovativeness influence the dependent variable SME growth and $\text{X}_1 =$ Innovativeness.

### Table 4: Model summary showing the relationship between innovativeness and SME growth

<table>
<thead>
<tr>
<th>Model Summary</th>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>.274*</td>
<td>.075</td>
<td>.071</td>
<td>1.078</td>
</tr>
<tr>
<td>a. Predictors:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Research Data
From the model summary as shown in Table 4, R = .274 and $R^2 = .075$. This means that the innovativeness constitute 7.5% of the changes in the growth of small and medium manufacturing enterprises in Kenya. The rest of the variance in the dependent variable is accounted for by variables outside the model. In addition, in order to test for significance of the regression model, F test was used.

**Table 5: Analysis of variance results showing the contribution of innovativeness on growth of manufacturing SMEs**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>20.213</td>
<td>1</td>
<td>20.213</td>
<td>17.385</td>
<td>.000</td>
</tr>
<tr>
<td>1</td>
<td>Residual</td>
<td>198</td>
<td>1.163</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>269.024</td>
<td>199</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Growth  
b. Predictors: (Constant), Innovativeness  

Source: Research Data

The analysis of variance was done to test the model goodness of fit for the study. Results of the regression analysis in Table 5 show that the regression model fitted the observed data well with a significant level of .001 which is below the .05 threshold adopted for testing the hypothesis at 95% level of confidence. This implies that the simple linear model ($Y=\beta_0+\beta_1X_1+\varepsilon$) with innovativeness as the only independent variable is a significant fit and can be used to make predictions.

This study sought to determine the relationship between innovativeness and SME growth in the manufacturing sector. Accordingly, the following null and alternative hypothesis were tested:

$H_0$: There is no significant contribution between innovativeness and growth of SMEs in the manufacturing sector in Kenya  

$H_1$: There is a significant contribution between innovativeness and growth of SMEs in the manufacturing sector in Kenya

Therefore in order to test for significance of the regression relationship between innovativeness and growth of SMEs in the manufacturing sector, the model’s regression coefficient and intercept were subjected to the t-test. That is, the null hypothesis of the coefficient is tested at zero.

An examination of individual coefficients in Table 6 depict a significant linear relationship between innovativeness and growth of SMEs in the manufacturing sector in Kenya ($\beta = .265$, p-value = .001). These results supported the rejection of the null hypothesis that there is no significant contribution between innovativeness and growth of SMEs in the manufacturing sector in Kenya. Consequently, the alternate hypothesis that there is a significant contribution between innovativeness and growth of SMEs in the manufacturing sector in Kenya is accepted.

Table 6 additionally show beta coefficient and t values of the regression model. The constant $\beta_0$ (4.139) represents the value of the independent variable (Y) when the independent variable is at zero. Similarly, $\beta_1$ represents the slope of the regression line and depicts the amount the
dependent variable will change for each unit change in the independent variable. Thus the fitted model from the analysis is shown below:

\[ \text{SME Growth} = 4.139 + .265 \text{ Innovativeness} + \varepsilon \]

The above equation simply means that if other factors are held at zero, SME growth will be at 4.139. Going further at 95% confidence level, innovativeness has a positive effect on SME growth. Particularly, a unit increase in innovativeness corresponds to an increase in SME Growth by .265 units. This study therefore concludes that innovativeness affects the growth of SMEs in the manufacturing sector in Nairobi Bounty, Kenya.

**Table 6: Coefficient results showing the relationship between innovativeness and growth of manufacturing SMEs**

<table>
<thead>
<tr>
<th>Coefficientsa</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1</td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>(Constant)</td>
<td>4.139</td>
<td>.482</td>
</tr>
<tr>
<td>Innovativeness</td>
<td>.265</td>
<td>.018</td>
</tr>
</tbody>
</table>

a. Dependent Variable: SME Growth

Source: Research Data

**DISCUSSION**

Correlation analysis undertaken in this research indicates a significant and positive relationship between innovativeness and growth of SMEs. Results from the inferential statistics demonstrated that the first alternate hypothesis (H₁) examining the effect of innovativeness and growth of SMEs in Kenya was supported. These findings are consistent with the results of Calantone, Cavusgil, and Zhao’s (2002) research which indicated that innovations are positively related to performance as well as enhancing the firm’s competitive advantage.

Similarly, Hashi and Stojicic’s (2013) results demonstrate that innovation activities and productivity exhibited a positive and significant relationship. Additionally, a study to explore the influence of innovativeness on the growth of SMEs in Nairobi by Ngugi, McOrege, and Muiru, (2013) established that innovativeness influences the growth of SMEs in Kenya. The findings of the current study are in agreement with the results of Rauch et al.’s (2009) and Casillas and Moreno’s (2010) research. Rauch et al.’s study portrayed that innovativeness exerted highest influence on performance measured by growth when compared to other EO dimensions. Previous empirical studies undertaken by Jiménez-Jiménez and Sanz-Valle, (2011) as well as Rhee, Park, and Lee, (2010) obtained similar findings with this research.

Uddin, Bose, and Yousuf’s (2014) research in Bangladesh that showed innovativeness has a statistically significant and positive effect with business performance supports the findings of this research. Likewise, Otieno’s (2012) research on firms operating under the moderating influence of EAC regional integration established that performance of Kenya’s firms were significantly influenced by the adoption of entrepreneurial orientation. Additionally, the results of this study are in agreement with that of Mwaura, Gathenya and Kiiboro (2015) work which established a positive relationship between innovativeness as component of entrepreneurial dimension.
CONCLUSIONS
Innovativeness is a key dimension of entrepreneurial orientation that SMEs need to critically focus on given that it enhances better business performance in all sectors. This research examined the effect of innovativeness in the growth of SMEs in the manufacturing sector in Nairobi County, Kenya. The findings of this study demonstrate that there is a weak positive linear correlation between the independent and dependent variables. The results of this study also indicate that innovativeness was empirically confirmed to have a statistically significant effect on growth of SMEs in the manufacturing sector.

REFERENCES


http://www.ijsse.org ISSN 2307-6305 Page | 12