Effect of Entrepreneurial Orientation on SMEs’ Innovation Performance in Sri Lanka

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Authors’ contributions

This work was carried out in collaboration between both authors. Author LSP designed the study, wrote the protocol, and wrote the first draft of the manuscript. Author SMAKS managed the literature search, the analyses of the study and final draft of the manuscript. Both authors read and approved the final manuscript.

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ABSTRACT

The critical phenomenon that SMEs’ innovativeness denotes has growing interest from developing country researchers from multiple fields over the last decades. Thus, the study's objective is to examine the Entrepreneurial Orientations' effect on SMEs' innovativeness in Sri Lanka. Risk-taking, proactiveness, autonomy, innovativeness, and Competitiveness have been used to operationalize the Entrepreneurial Orientation concept, and SMEs' innovation performance was conceptualized based on three dimensions. A self-administrated questionnaire is distributed to the SEM owners and collected seventy-six completed questionnaires. Descriptive statistics and multiple regression analysis were used to analyze the data. Results of the study shown that OE as a whole significantly impacts innovative performance. Specifically, while the four dimensions of EO, namely, risk-taking, proactiveness, innovativeness, and autonomy, significantly impact SMEs' innovative performance. But, Competitiveness does not have a significant influence on SMEs' innovation performance. The study focuses only on OE that influences SMEs innovation performance. The most considerable significant portion of enterprises in Sri Lankan business sector represents SMEs. It is anticipated that Sri Lankan policy makers, SME owners, and business decision-makers will help SMEs better understand policymakers' significant impact on SMEs' innovation performance.
1. INTRODUCTION

Donkor et al. [1] mentioned that SMEs have played in upgrading a nation’s economic expansion has been recognized. SMEs as a unit have a much informal context in the business world. Further, Asemokha et al. [2] mentioned that SMEs are flexible, less bureaucratic, easygoing, employ informal strategies, and make the decision-making process easier because business objectives are always intertwined with larger business firms. Further, SMEs are essential for domestic economies’ strength and play a prominent role in enhancing innovation and employment. On the other hand, Organization for Economic Cooperation and Development [3] stated that there is an increasing number of SMEs in many countries worldwide, and over 90% of new business establishments each year are represented by SMEs in most countries.

Sri Lanka SMEs are defined based on the number of employees and the annual turnover. SMEs are made up of an enterprise that employs less than 300 employees and has a yearly turnover of less than Rs.750 Mn. Sri Lankan government identified that SMEs are the backbone of the Sri Lankan economy as SMEs account for more than 75% of the total number of enterprises, offer 45% of the employment opportunities, and contribute to 52% of the Sri Lankan Gross Domestic Production (GDP). Since the Sri Lankan government has recognized the SME sector is the essential strategic sector (Ministry of industry and commerce Sri Lanka), Sri Lankan economy is transcendentally a Small and Medium Enterprise economy where the SME sector delivers more than 50 % of GDP. Due to the globalization trend, the SME sector is not merely seen as a sector for “protection and promotion” but, more importantly, as a driving force for “growth and development.” Hence, Sri Lanka makes out that improving national and international competition is essential for this sector to face the emerging challenges and progress SMEs as a blooming sector (Ministry of industry and commerce Sri Lanka). However, SME products are facing very threatening competition with products from other countries.

On the other hand, SMEs have a challenge of raising the competitive landscape’s innovation competence, and it is more for the SMEs in developing countries [4]. Innovation capability plays a vital role in improving the performance and competitive advantages of products, operations, marketing, human resources, and networking in national and international markets. In a developing country like Sri Lanka, innovativeness within the SME business sector is more important than that in developed countries. The creation of self-employment opportunities and reduction of unemployment situations are critical issues within developing counties. The lack of innovation seems to be one of the critical aspects that could lead the SMEs in the nations to have shortcomings on the cost that could lead them to financial weakness [5]. There is always competition seen among SMEs and large-scale business entities. Since innovativeness is essential to advance SMEs’ sustainability [6], the innovativeness of products and operations should be improved by SMEs since the research focused on how entrepreneurial orientation influences SMEs’ innovativeness.

Entrepreneurship plays an active role in economic growth by making innovative ventures by widely creating employment opportunities (Acş, Åstebro, Audretsch, and Robinson, 2016). Further, Covin and Slevin [7] stated that OE allows a company to advance ideas, realize them in new products and services, participate in risky projects, forecast future requirements, and find new market opportunities. Firm’s tactical attitude of innovativeness, risk-taking, and proactiveness are defined as entrepreneurial orientation [8,9]. After that, Lumpkin and Dess [10] OE conceptualized with five dimensions adding competitive aggressiveness and autonomy. Moreover, OE and firm performance have been wildly examined in past studies [11] (Basco et al., 2020). Other researchers examined OE and SMEs’ internationalization performance (Such as Galagedara, J., Samarakoon, S.M.A.K, 2020) [12] and business success. Entrepreneur orientation represents the policies and practices that are offered a basis for entrepreneurial decisions and actions (Rauch et al. 2009).

Although entrepreneurship has been considered crucial to any country’s economic growth, the empirical evidence on the entrepreneurship and growth link is inadequate [13]. Moreover, although managerial practice and academic
research have frequently shown interest in the concept of SMEs’ entrepreneurial orientation, limited studies have examined EO with five dimensions and innovativeness of SMEs in developing economies like Sri Lanka.

Further, as per the various studies, it was evident that Sri Lankans’ transparent barrier and their willingness to innovate. The number of new firms starts each year. Many firms will be closed down within a short period. The study aims to examine the Entrepreneurial Orientations’ effect on the SMEs’ innovativeness in Sri Lanka.

2. LITERATURE REVIEW

2.1 Entrepreneurial Orientation

Wiklund and Shepherd [14] stated that Entrepreneurship (OE) is a tactical tool utilized by enterprises to search and use market opportunities. It is significant to enable the use of new and prevailing knowledge to realize market opportunities. According to Miller [8], entrepreneurial orientation is defined with three elements: innovativeness, risk-taking, proactiveness. But in 1996, Lumpkin and Dess stated five dimensions of entrepreneurial orientation: innovativeness, risk-taking; proactiveness; competitive aggressiveness; and autonomy. Baba (2011) stated that several sub-levels in entrepreneurship studies cater to creating a more in-depth understanding of entrepreneurial orientation in a similar context.

Further, he discussed in length the entrepreneurial orientation stated that the entrepreneurial attitude and conduct are essential in utilizing new and existing knowledge when an organization discovers opportunities. Hence the entrepreneurial orientation prompts new knowledge-seeking, a fundamental part of innovativeness. Past studies used both measures for the OE related studies that is three dimensions’ scales and five dimensions’ scales (Ex. Amin, Thurasamy, Mohamad, Aznur, and Kaswuri, 2016) [15,16]. OE is recognized to have five dimensions constructed on the concept of Lumpkin and Dess [10]. They noted that OE refers to organizational behavior at a certain level to conduct; risk-taking, independent activities, involvement in innovation, react proactively and aggressively outperform competitors in the market. In this study, five dimensions were used to conceptualize and measure the OE.

2.2 Autonomy

Autonomy is entirely related to the development of entrepreneurial actions, the formation of an entrepreneurial setting, and opportunity pursuit and utilization behaviors [17]. A study formed on autonomy and its effect on the entrepreneurial orientation showed that the firms’ autonomy (SMEs) in conquering the market positively impact SMEs’ performance (Civelek et al., 2016). It can be attributed to the fact this leads to quick decision making hence helping the entrepreneurs to identify the trends and opportunities – the acting fast on those opportunities. Lechner and Gudmundsson [17] discovers how individual entrepreneurial orientation scopes impact the association between competitive strategy and firm outcomes. The level of autonomy that SMEs offer to their employees through encouraging them to exercise their skills and address their decisions is essential to achieve innovation performance Lechner and Gudmundsson [17].

H1: Autonomy positively affects the SMEs’ innovation performance in Sri Lanka

2.3 Risk Taking

Brice (2002) defined risk-taking as One’s ability to take a risk comfortably stated that previous entrepreneurial experience is an essential factor in this theory. Simon et al. [18] said that risk-taking is a process and, in this process, entrepreneurs have to evaluate the risk and decide what to do. In 2000 Simon et al. mentioned that a person’s risk-taking ability is based on risk assessment and depends on their cognitive base. The cognitive base consists of overconfidence and illusion control. Regardless of the alert upheld by Lumpkin and Dess [10], most examinations have utilized a joined proportion of hazard taking, imaginativeness and proactiveness to catch EO. Various investigations like Yoo (2001) and Covin et al. (2011) affirm the positive effect of risk-taking on innovation performance.

H2: Risk-Taking positively affects the SMEs’ innovation performance in Sri Lanka

2.4 Pro-Activeness

The pro-activeness of SMEs in responding to new competition, accelerating new product and series, and enhancing R&D has been found to directly affect their performance in innovation.
development (Kreisler et al., 2013). The term pro-activeness is often entangled with the concept of responsiveness. Because identifying a possible trend or a way of life, is the key to being proactive. Moreover, pro-activeness alludes to forms which are planned for "looking for new open doors which could be identified with the present line of tasks, presentation of new items and brands in front of rivalry and deliberately wiping out activities which are in the full-grown or declining phases of the existence cycle" [19]. Further, this must be considered a consideration in the research considering innovativeness (Civelek et al., 2016).

H3: Pro-activeness positively affects the SMEs’ innovation performance in Sri Lanka.

2.5 Competitiveness

Competitiveness is often one of the most effective forms of creating innovative solutions by leaping ahead for the market. In particular, this is seen as a contemporarily a bad trait to inherit with the owners whose decisions can directly change the firms’ entire strategic stance (Huang and Wang, 2011) as Lumpkin and Dess, (2001) mentioned that competitiveness in acts supports with enterprises in long-longest leader effect by being aware of the functions that need to be needed if they need to change the direction. Hence firms can then catch a new position for themselves or aim at tresses by emerging more unique products or services (Huang and Wang, 2011). Furthermore, firms can react aggressively and rapidly with innovation when it expressions competitors’ creative and troublesome movements. Competitiveness is fore mounted as in the SMEs, dealing with competitors and adopting decisive plan to compete is essential to achieve innovation performance (Baba, 2011).

H4: Pro-activeness positively affects SMEs’ innovation performance in Sri Lanka.

2.6 Innovativeness

Generally, innovation reflects a leaning to support new ideas, novelty, experimentation, and creative processes [20]. Innovativeness is a company’s openness to taking on new concepts, procedures, and products. It is made up of the firm’s readiness to convert and accept the most recent technology and market trends [21]. Since innovativeness was defined within two significant aspects of innovation: developing ideas and knowledge. In contrast, the second is the concrete implementation of the ideas. Moreover, Lumpkin and Dess [10] mentioned that the firm's "willingness to support creativity and experimentation in introducing new products or services, novelty, technological leadership, and R&D in developing new processes." Further, past studies state that innovation leads to an increase in the ability to sense the market. Additionally, Ireland and Webb [22] said that successful SMEs pay much care to innovations because innovations advance performance [23]. The entrepreneurial orientation on SME innovativeness is to be concerned in all the decision-making activities to discover our customers’ additional requirements (Martin, 2017).

H5: Innovativeness positively affects the SMEs’ innovation performance in Sri Lanka.

2.7 Entrepreneurial Orientation and SMEs' Innovation Performance

The researchers defined it from numerous perspectives; the forms of innovation differ and are influenced by the object, sector, and scope or the extent of invention. Each creation has its traits and characteristic [24]. Further, Omar et al. (2016) mentioned that knowledge creation is a central position of innovation. It is widely applied by anyone search to stimulate innovation. Duse, innovation is the process of collecting new and practical ideas to solve problems, including forming, adopting, and implementing new ideas for processes, productions, and services (Kanter, 1995). In the market view, innovations consist of providing unique and valuable ideas, transmitting them to the market quickly, implementing cheaper and better products, or acquiring more effective customer support. Joseph Schumpeter presents four innovations in his research on design; introducing new products or changing existing product quality, creating a new market, finding new sources of raw materials and other input supplies, and changing the industrial organization. SMEs may either be involved in incremental or radical innovations, the advance of continuing knowledge and product domain to attain the existing market and customers [25]. Innovation is an idea, product or process, or system considered new to individuals [26].

Further, Ireland and Webb [22] stated that successful SMEs pay much care to innovations because innovations advance performance [23]. Zhao, Li, Lee and Chen [27] mentioned that the
enterprise's upper leaders' propensity to take risks and demonstrate strategic proactiveness and innovation. The SMEs' innovative performance was conceptualized via three dimensions: product, processes, and management innovation (Huiban and Boushina, 1998).

The conceptual model consists of an independent variable (Entrepreneurial orientation) and a dependent variable (SMEs' innovative performance). Entrepreneurial orientation measures by five dimensions, namely Autonomy, Risk-taking, Pro-activeness, competitiveness, and innovativeness.

3. METHODOLOGY OF THE STUDY

Moreover, manufacturing firms that employ less than 300 employees have an annual turnover not exceeding Rs. 750 Mn selected to study the Colombo District sample. To analyze entrepreneurial orientation influence on SME innovations, the researcher employed both primary and secondary data. This study used Lumpkin and Dess’s five-dimensions used [10] to measure the entrepreneurial construct. Developing OE constructs was developed using Venkatraman [19], Lumpkin and Dess’s [10], and Zehir et al. [16]. For each of the five constructs, namely Autonomy, Risk-taking, Pro-activeness, competitiveness, and innovativeness, respondents were asked to reply on a Likert scale of 1—strongly disagree to 5—strongly agree.

A five-point Likert scale was used to measure EO dimensions. The innovativeness concept was conceptualized using three dimensions: product, processes, and management innovation (Huiban and Boushina, 1998). Product, process, and managerial innovation performance were modeled and captured with Skerlavaj, Song, and Lee (2010), Calantone, R. J., Cavusgil, S. T., and Zhao, Y. [28]. The dependent variable was measured using five points Likert scale. Where one stands for (strongly disagree) and 5 (strongly agree). Data collection was done via questionnaires; two hundred questionnaires were sent via mail. Follow-up emails and telephone calls are used to increase response rates. Eighty-two questionnaires were returned from the SMEs located in the Colombo district. However, seventy-six completed questionnaires were used to analyze the data. Multiple regression analysis was used to test the hypotheses.

4. RESULTS

Table 1 shows the result of reliability test; all Cronbach’s Alpha values are above the accepted level (0.70).

As per the above table, it is visible that 26.32% of the selected group is in the age category of 25 years to 30 years, 46.05% of the group is in the age category of 31 years – 45 years, and the balance of 27.63% is in the age category above 45 years. Thus, it can be concluded that most of the owners of the selected sample represent 31 years - 45 years.

Table 3 represents the gender analysis; it shows that 71.05% of the selected sample are males while 28.95% of the sample is females. Therefore, it can be concluded that most of the SMEs established in Colombo District, Sri Lanka is males, which highlights the restrictions women have to open up their stores and the barriers of the glass ceiling in the society of Sri Lanka.
Table 1. Reliability analysis result

<table>
<thead>
<tr>
<th>Variable</th>
<th>Cronbach’s alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomy</td>
<td>0.732</td>
</tr>
<tr>
<td>Risk Taking</td>
<td>0.843</td>
</tr>
<tr>
<td>Pro-activeness</td>
<td>0.791</td>
</tr>
<tr>
<td>Competitiveness</td>
<td>0.775</td>
</tr>
<tr>
<td>Innovativeness</td>
<td>0.774</td>
</tr>
<tr>
<td>SMEs’ innovation performance</td>
<td>0.705</td>
</tr>
</tbody>
</table>

Table number two present the age analysis of the respondents.

The Table 4 the model summary analysis of regression. Multiple regression analysis is conducted in order to identify the influence of independent variables on the dependent variable.

The R-value is 0.805, and the R2 value of the model is 0.720, which is 99.5% denotes the proportion of the dependent variables’ changes as explained by the dependent variables.

Moving on to the table of ANOVA, the significance is 0.00, which means that at 95% confidence level, the dependent variables can be successfully used to predict the accuracy of the dependent variable changes.

As per Table 6, which is the coefficient value of regression analysis, the Beta value represents each variable’s coefficient for the regression equation. It shows that each of them has a significantly less than 0.05 at a 95% confidence level. In other words, the Beta coefficient explains how much variation in the dependent variable could be seen when one independent variable is changed, given that the others are kept constant.

Thus, the regression line for the above can be formed as below.

As per the above model, it can be concluded that the salient factors affecting the innovation performance of the SME sector are risk-taking, proactiveness, innovativeness, competitiveness, and autonomy. Since except competitiveness other four dimensions of OE significantly influence on innovation performance of the SME. Since except H4 Hypothesis, the other four alternative hypotheses can be accepted.

Table 2. Age analysis of respondents

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 years - 30 years</td>
<td>26.32</td>
</tr>
<tr>
<td>31 years - 45 years</td>
<td>46.05</td>
</tr>
<tr>
<td>Above 45 years</td>
<td>27.63</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 3. Gender analysis of respondents

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>71.05</td>
</tr>
<tr>
<td>Female</td>
<td>28.95</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 4. Model summary

<table>
<thead>
<tr>
<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>1</td>
<td>.805*</td>
<td>.720</td>
<td>.703</td>
<td>.31380</td>
</tr>
</tbody>
</table>

*a. Predictors: (Constant), Competitiveness, autonomy, Pro-activeness, Risk Taking, innovativeness*
Table 5. ANOVAa

<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>19.687</td>
<td>4</td>
<td>4.922</td>
<td>49.983</td>
<td>.000**</td>
</tr>
<tr>
<td>Residual</td>
<td>4.333</td>
<td>44</td>
<td>.098</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>24.020</td>
<td>48</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Dependent Variable: SMEs' innovation performance

a. Predictors: (Constant), Competitiveness, autonomy, Pro-activeness, Risk Taking, innovativeness

Table 6. Coefficients of regression analysis

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized coefficients</th>
<th>Standardized coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>-.033</td>
<td>.304</td>
<td></td>
<td>-.108</td>
</tr>
<tr>
<td>autonomy</td>
<td>.305</td>
<td>.110</td>
<td>.247</td>
<td>2.766</td>
</tr>
<tr>
<td>Risk Taking</td>
<td>.466</td>
<td>.114</td>
<td>.519</td>
<td>4.087</td>
</tr>
<tr>
<td>Pro-activeness</td>
<td>.244</td>
<td>.113</td>
<td>.232</td>
<td>2.165</td>
</tr>
<tr>
<td>Competitiveness</td>
<td>.011</td>
<td>.049</td>
<td>.015</td>
<td>.236</td>
</tr>
<tr>
<td>Innovativeness</td>
<td>.322</td>
<td>.112</td>
<td>.288</td>
<td>2.233</td>
</tr>
</tbody>
</table>

a. Dependent Variable: SMEs' innovation performance

5. DISCUSSION AND CONCLUSION

The study discusses the significance of entrepreneurial orientation to the innovativeness of manufacturing SMEs. In this context, entrepreneurial orientation has significant influences on SMEs Innovation in Sri Lanka. Risk-taking has a coefficient of 0.466, making it the most salient factor affecting the dependent variable. The second and third significant dimensions are autonomy has a coefficient of 0.322 and 0.305, respectively. In the practical scenario where the more the workforce or the organization's management, the create new ideas, time, and resources for more research and development. Innovativeness would bring about team efforts and more competitiveness among each other to be more innovative and productive. In the view of anatomy aspects, the organization's decision-makers should ensure that all the organization members are given the freedom to act with the firms' structure in terms of the innovative elements (Shir, 2019). Besides, the organization's staff members are also allowed to deal with problems and opportunities that could be implacable in entrepreneurial orientation on SME innovation of SMEs.

Furthermore, the decision-makers can focus on the operating divisions or sub-divisions to be entirely independent (Chiniara, 2016). The managers and authorities can especially encourage the employees to take risks since they take risks (Kenayathulla, 2019). On the other hand, the organization's leaders should emphasize accepting that the moderate level risks are involved for long-term gains and engaging in risky investments to propel growth and risk and rewards alignment in a very balancing way with entrepreneurial orientation SME innovativeness (Jeon, 2017). The organizational decision-makers have to look for alternatives and decisions to continuously look for new business opportunities in the competitive environment in proactiveness. It is also vital that organizational marketing focuses on leading customers rather than responding to their needs with entrepreneurial orientation on SME innovativeness (Mamun, 2018). The managers also make sure the proactiveness even par with the latest business or markets to approach.

On the other hand, the organization must emphasize beating competitors to enter new markets and reduce costs faster than business competitors. Therefore, the decision-makers will have the opportunity to create essential partnerships with suppliers and retailers, on a higher level, than the competitors (Kaur, 2017). It is anticipated that this study's findings will help SMEs’ owners and managers better understand market orientation and the significant impact it has on SME innovativeness. Furthermore, this study's findings would be a benefit to the Sri Lankan economy. Breaking the unreasonable confinement in the Sri Lankan economy will help the working class's responsibility in the
upper organization positions in their work environment.

5.1 Limitations and Suggestions for Future Research

The study is limited to the OE and SMEs' innovation performance, although performance is the boarded concept; therefore, future researchers can conduct further investigation to perform the same study with both nonfinancial and financial performance. Further, research can fulfill the role of moderating factors (Ex. leadership styles, environmental turbulence, type of industry, etc.) on the relationship between OE and SMEs’ innovation performance. The study is limited to Sri Lankan’s context; another interesting study would be to conduct the same research on the growth of similar industries in different countries. Moreover, Future researchers can conduct Market orientation influence on SMEs’ innovation performance in the Sri Lankan context. Future investigation can work using a massive sample that represents all districts and various industries.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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