ENTREPRENEURIAL ORIENTATION AND PRODUCT INNOVATION IN MEXICAN SMALL BUSINESS

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ABSTRACT

Entrepreneurial orientation has become an increasingly popular topic that is receiving more attention from researchers and scholars. It is also more common in published investigations in current literature but it is not often to find published theoretical or empirical researches that relate entrepreneurial orientation with the innovation of products in the environment of small and medium-sized enterprises (SMEs). This is why it is important to carry out investigations that analyze the effects that the entrepreneurial orientation creates in the innovation activities of products of SMEs. Therefore, SMEs have to adopt and implement entrepreneurial orientation as part of their everyday activities in order to have more opportunities to increase their level of innovation in products. Thus, the main goal of this research is to analyze the existing relation between entrepreneurial orientation and the abilities of products innovation.

Keywords: Entrepreneurial orientation, product innovation, small business.

INTRODUCTION

It is possible to find in the current literature two opposite approaches that analyze, on one hand, the positive influence that entrepreneurial orientation has in the activities and abilities of enterprises and, on the other hand, entrepreneurial orientation with the level of financial return (Thoumrungroje & Racela, 2013). However, in more recent theoretical and empirical investigations focused on several strategic orientations have provided enough empirical evidence that shows it is possible that enterprises, especially small and medium-sized ones (SMEs), can obtain a higher level of innovation, financial return and better sustainable advantages when enterprises implement complementary or multiple orientations simultaneously (Noble, Sinha & Kumar, 2002; Baker & Sinkula, 2007).

Similarly, different researchers and scholars also recommend lining up the different abilities that organizations have along with entrepreneurial Orientation in that that allows enterprises to develop constantly more innovations in their products to obtain better results.
(Hamel & Prahalad, 1994; Slater & Narver, 1995). As a result of this, the innovation abilities in products are increasingly getting more attention from researchers, scholars and professionals of business and management sciences because such innovation is precisely one of the essential abilities that SMEs can use not only a higher level of competitiveness and financial return, but also their own survival in the market where they interact (Sorescu & Spanjol, 2008; Tellis, Prabhu & Chandy, 2009).

However, most of the theoretical and empirical investigations published in the current literature have focused on big enterprises and only a few researches have focused on SMEs even when the effects of entrepreneurial orientation in products innovations is exactly opposite between big enterprises and SMEs. The limited amount of knowledge is not enough to show clearly the presence of a significantly positive relation between entrepreneurial orientation and products innovation (Salavou & Lioukas, 2003), which shows the relative importance for researchers, scholars and professionals in the field of business that the strategic abilities have in order to explain the innovation in products.

Moreover, it is generally considered in literature that SMEs have different advantages in their behavior that can justify somehow their low level of innovation (Dutta & Evrard, 1999), but at the same time there are different disadvantages that highly limit the availability of resources (Freel, 2000), which creates a lot of pressure so SMEs adopt the innovation of products not only as part of their entrepreneurial orientation but also as part of their everyday activities (Sweeney, 1983; Fritz, 1989). Thus, entrepreneurial orientation normally creates a higher level of product innovation even when most SMEs there is more an incremental innovation rather than a radical innovation but this situation needs to change if SMEs want to compete with big enterprises which often apply more radical innovations (Salavou & Lioukas, 2003).

Even when there are different theoretical and empirical investigations that relate entrepreneurial orientation and product innovation in big companies, there are few published empirical researches in the literature that have analyzed and discussed the influence of entrepreneurial orientation at the level of product innovation in SMEs (Salavou & Lioukas, 2003; Thoumrungroje & Racela, 2013; Urban & Streak, 2013). Consequently, the main contribution of this research paper is the analysis of the existing relation between entrepreneurial orientation and product innovation in the SMEs of a developing, or emerging, country such as Mexico and as it is suggested by Salavou and Lioukas (2003), Thoumrungroje and Racela (2013) as well as Urban and Streak (2013).

LITERATURE REVIEW

There are different theoretical and empirical investigations published in the field of business and management sciences that have showed a strong and significantly positive relation between entrepreneurial orientation and product innovation (Drucker, 1979; Lumpkin & Dess, 1996; Li, Liu & Zhao, 2006). Similarly, it is also possible to find in the literature that the ability of product innovation can be an important asset that creates several competitive advantages for enterprises, and even more when product innovation cannot be imitated (Barney, 1991; Nonaka, 1994; Hunt & Morgan, 1996; Hunt & Arnett, 2006). Moreover, several researchers and scholars have considered that a higher commitment of an enterprise in the adoption or implementation product innovation along with the development of entrepreneurial orientation can lead enterprises to increase their market position as well as their profits (Miller, 1983; Lumpkin & Dess, 1996; Zahra & Garvis, 2000; Li et al., 2009).

In a similar trend, Li et al. (2006) developed a conceptual model that analyzed in detail the relation between entrepreneurial orientation, the system of internal control and product innovation and they found out significantly positive relations between both constructs.
Additionally, it has also been recognized in the literature by several researchers and scholars that entrepreneurial orientation includes different types of innovation and activities related to entrepreneurism in enterprises, especially SMEs, and the ability to transform the organization (Guth & Ginsberg, 1990; Morris et al., 2008). Therefore, entrepreneurial orientation shows the way of running businesses and the way they carry out their business activities (Lumpkin & Dess, 1996; Li et al., 2009). This concept generally incorporates proactive processes, decision-making practices and innovation styles in organizations (Lumpkin & Dess, 1996; Urban & Barreira, 2010).

Similarly, entrepreneurial orientation can be considered as an essential business strategy (March & Simon, 1958; Child, 1972; Bourgeois, 1984) that emphasizes strategic leadership that managers or/and owners of SMEs should have in order to obtain better results (Hambrick & Mason, 1984; Miller, Droge & Toulouse, 1988; Guth & Ginsberg, 1990). Consequently, the style of entrepreneurial orientation adopted and implemented by organizations will be a key feature of product innovation that they carry out, especially in SMEs whose managers or/and owners have more influence in the staff (Salavou & Lioukas, 2003).

In this regard, there are in the current literature some investigations that have showed that entrepreneurial orientation is a basic element that makes easier the innovation activities (Covin & Slevin, 1991; Russell & Russell, 1992; Kitchell, 1995). Moreover, the innovation abilities of enterprises are closely related with proactivity and risk taking that business usually have (Khan & Manopichetwattana, 1989) since SMEs are currently involved in a highly competitive and globalized market so it is not enough that enterprises are reactive or proactive; they have to be more aggressive regarding the activities of product innovation and take risks to take advantage as much as possible from the opportunities provided by the markets in which they participate (Salavou & Lioukas, 2003).

However, there are relatively a few theoretical and empirical investigations that have analyzed the influence of entrepreneurial orientation and product innovation, mostly in SMEs (Salavou & Lioukas, 2003). That is why Miller and Friesen (1982) had already considered that entrepreneurial enterprises carried out more innovation activities and usually took more risks implementing their product-market strategies. Similarly, Miller, Kets de Vries and Toulouse (1982) concluded that product innovation demands bigger efforts from enterprise managers so they become more proactive and take more risks to obtain better results in the organization.

By contrast, Saleh and Wang (1993) obtained similar results obtained by Miller et al. (1982) by comparing the most innovative enterprises with those that scarcely carried out innovation activities and found out that the most innovative enterprises regarding products took bigger risks, adopted and implemented a more proactive strategy by anticipating needs and requirements of their clients and consumers as well as taking advantage of the opportunities provided by the market. Therefore, it is common to find in the literature several researchers and scholars that consider that the entrepreneurial orientation promotes innovation activities by introducing new or improved products (Salavou & Lioukas, 2003).

In addition to this, entrepreneurial orientation is also considered in the literature as a dynamic ability that enables enterprises to obtain more knowledge about the needs of the market in which they are and integrate information from such market in product innovation (Thoumrungroje & Racela, 2013). Therefore, the dynamic abilities can be defined as the “skills that enterprises have in order to integrate, build and reset their internal and external abilities so they can adapt quickly to the changes of the environment” (Teece, Pisano & Shuen, 1997: 516). Thus, entrepreneurial orientation does not only provide enterprises with this kind of skills but it also helps them to use enterprise resources more efficiently, including product innovation which is considered as one of the most important skills (Wernerfelt, 1984; Prahalad & Bettis, 1986; Barney, 1991; Obloj, Obloj & Pratt, 2010; Covin & Lumpink, 2011).

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Similarly, Miller (1983) considered that entrepreneurial orientation can be understood as a group of skills that enable and promote innovation activities of enterprises, whereas Lumpkin and Dess (1996: 136) concluded that it can be defined as “the processes, practices and activities of decision-making that create a new entry in enterprises”. For this reason, the concept of “new entry” should be one of the essential goals of entrepreneurial orientation of SMEs since the adoption and implementation of innovation activities in new or improved products as well as the new entry of such products to new national and international markets will depend mostly on the level of entrepreneurial orientation that enterprises have (Thoumrungroje & Racela, 2013).

Thus, a high level of entrepreneurial orientation will allow enterprises, especially SMEs, to improve not only their market position but also the opportunity to participate in other markets since the level of entrepreneurship of SMEs will allow them to modify their structure, preferences and behavior towards the needs of current and new markets (Kumar, Scheer & Kotler, 2000). Therefore, the ability of entrepreneurism of enterprises is carried out mostly by three factors: proactivity, risk-taking and innovation which are not only the dimensions that are normally used to measure entrepreneurial orientation (Covin & Slevin, 1989; Miller, 1983) but they are also the most used ones in the operationalization of the level of entrepreneurism of organizations (Kreiser, Marino & Weaver, 2002; Rauch, Wiklund, Lumpkin & Frese, 2009).

In this regard, Lassen, Gertsen and Rii (2006) concluded that using the three dimensions to measure entrepreneurial orientation created several significant positive effects in the innovation of products by applying a qualitative analysis in five enterprises from different industries and different sizes. Similarly, other published empirical investigations in the literature analyzed entrepreneurial orientation and found out a significant positive relation of product innovation in the chemical industry (Ahuja & Lampert, 2001), in the innovation of new products in Chinese enterprises (Zhou, Yim & Tse, 2005), in the innovation of new products in manufacturing SMEs from Greece (Salavou & Lioukas, 2003) and in the innovation of products in biotechnology enterprises from Scandinavia and the United States (Renko, Carsrud & Brännback, 2009).

Moreover, the level of entrepreneurial orientation will create more abilities of product innovation in SMEs and it will also improve considerably the resources of enterprises in a way that they are more proactive to adapt as fast as possible to the changes imposed by the market (Covin & Lumpkin, 2011). Therefore, it is possible to state that entrepreneurial orientation will be able to create a higher level of product innovation in SMEs if enterprises adopt it and implement it in all the activities of the organization (Atuahene-Gima & Ko, 2001; Song & Thiene, 2006; Morrish, Miles & Deacon, 2010; Ernst, Hoyer & Rübsaamen, 2010). Thus, considering the information mentioned above, it is possible to establish the following hypothesis:

**H1: Higher level of entrepreneurial orientation, higher level of product innovation**

**METHODOLOGY**

In order to prove the hypothesis established in this research, an empirical investigation was implemented in SMEs from the State of Aguascalientes (Mexico) by using the business directory of the Sistema de Información Empresarial de México 2014 (Business Information System of Mexico) which had 6,194 registered companies in June 2014. For practical purposes of this empirical research, the only enterprises that were considered were the ones that had between 5 and 250 employees and for this reason the directory was reduced to 1,260 SMEs and a sample of 300 enterprises was obtained. The questionnaire was designed to be
answered by the managers and/or owners of SMEs and it was carried out as a personal interview to each of the 300 enterprises which were selected randomly with a sampling error of ±4.5% and a reliability level of 95%. The interviews with the managers were carried out from January to March, 2015.

Similarly, a scale proposed by Miller (1983) was used to measure entrepreneurial orientation, who considered that this orientation can be measured in three dimensions: proactivity (measured by means of a six-item scale); risk taking (measured by means of a six-item scale); and innovation (measured by means of a six-item scale). Regarding the measurement of product innovation, a four-item scale from OECD (OECD, 2005) was considered which was adapted by Pinzon (2009). All the items of both scales used in this research were measured by means of a five-point Likert scale (from 1 = Totally agree to 5 = Totally disagree) as its limits.

Additionally, in order to evaluate reliability and validity of the two scales used in this empirical research a Factorial Correspondence Analysis (FCA) was carried out by using the method of maximum likelihood with the software EQS 6.1 (Bentler, 2005; Brown, 2006; Byrne, 2006). The reliability of the scales was evaluated by means of Cronbach’s alpha and the Composite Reliability Index (CRI) (Bagozzi & Yi, 1988). The suggestions of Chou, Bentler and Satorra (1991) as well as of Hu, Bentler and Kano (1992) were taken into consideration regarding the correction of the statistics of the theoretical model when it is considered that the normality of data is present by using also the robust statistics in order to provide a better statistical adjustment of data (Satorra & Bentler, 1988).

The second order FCA results are shown in Table 1 and they indicate that the theoretical model has a good statistical adjustment of data ($S-BX^2 = 310.838$; $df = 166$; $p = 0.000$; $NFI = 0.855$; $NNFI = 0.915$; $CFI = 0.926$; $RMSEA = 0.054$). All the items of related factors are significant ($p < 0.01$). The size of all the standardized factorial loads are above 0.60 (Bagozzi & Yi, 1988). Cronbach’s alpha and IFC have a value above 0.70 and the Extracted Variance Index (EVI) has a value above 0.50 (Fornell & Larcker, 1981). These values indicate that there is sufficient evidence of convergent validity and reliability which justifies the internal reliability of the two scales used (Nunally & Bernstein, 1994; Hair et al., 1995).

Table 1. Internal consistency and convergent validity of the theoretical model

<table>
<thead>
<tr>
<th>Variable</th>
<th>Indicator</th>
<th>Loading Factorial</th>
<th>Robust t-Value</th>
<th>Cronbach’s Alpha</th>
<th>CRI</th>
<th>EVI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proactivity (F1)</td>
<td>PR1</td>
<td>0.676***</td>
<td>1.000a</td>
<td></td>
<td>0.842</td>
<td>0.843</td>
</tr>
<tr>
<td></td>
<td>PR2</td>
<td>0.720***</td>
<td>10.910</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PR4</td>
<td>0.721***</td>
<td>11.211</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PR5</td>
<td>0.740***</td>
<td>11.304</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PR6</td>
<td>0.743***</td>
<td>11.905</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk Taking (F2)</td>
<td>TR1</td>
<td>0.760***</td>
<td>1.000a</td>
<td></td>
<td>0.852</td>
<td>0.853</td>
</tr>
<tr>
<td></td>
<td>TR2</td>
<td>0.650***</td>
<td>8.035</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TR4</td>
<td>0.793***</td>
<td>9.128</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TR5</td>
<td>0.687***</td>
<td>9.613</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TR6</td>
<td>0.769***</td>
<td>9.455</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Innovativeness (F3)</td>
<td>IN1</td>
<td>0.724***</td>
<td>1.000a</td>
<td></td>
<td>0.867</td>
<td>0.869</td>
</tr>
<tr>
<td></td>
<td>IN2</td>
<td>0.630***</td>
<td>13.264</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>IN3</td>
<td>0.795***</td>
<td>13.736</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>IN4</td>
<td>0.742***</td>
<td>11.564</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>IN5</td>
<td>0.806***</td>
<td>15.070</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>IN6</td>
<td>0.645***</td>
<td>8.831</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entrepreneurial</td>
<td>F1</td>
<td>0.868***</td>
<td>10.667</td>
<td></td>
<td>0.875</td>
<td>0.875</td>
</tr>
</tbody>
</table>
Orientation F2 0.774*** 8.693
F3 0.866** 11.053

Product Innovation IP1 0.657*** 1.000*
IP2 0.657*** 6.626
IP3 0.937*** 6.306
IP4 0.794*** 6.675

\( S-\text{BX}^2 (df = 166) = 310.838; \ p < 0.000; \ NFI = 0.855; \ NNFI = 0.915; \ CFI = 0.926; \ RMSEA = 0.054 \)

A reliability interval test (Anderson & Gerbing, 1988) was considered for the measurement of the discriminant validity of both scales and it indicates that with an interval of 95% of reliability none of the individual latent elements of the matrix of correlation must have a value of 1.0. Similarly, the extracted variance test (Fornell & Larcker, 1981) establishes that the EVI value of each pair of constructs must be higher than their corresponding square covariance. Table 2 shows the results obtained and they indicate that both measurements provide enough evidence of discriminant validity of the scales used.

Table 2. Discriminant validity of the theoretical model

<table>
<thead>
<tr>
<th>Variables</th>
<th>Entrepreneurial Orientation</th>
<th>Product Innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrepreneurial O.</td>
<td><strong>0.701</strong></td>
<td>0.096</td>
</tr>
<tr>
<td>Product Innovation</td>
<td>0.248 - 0.372</td>
<td><strong>0.593</strong></td>
</tr>
</tbody>
</table>

The diagonal represents the Extracted Variance Index (EVI) while above diagonal the variance part is shown. Below diagonal is the correlation estimation of factors with a confidence interval of 95%.

RESULTS

A model of structural equation of second order was used in order to answer the hypothesis stated in this research paper by using the software EQS 6.1 (Bentler, 2005; Brown, 2006; Byrne, 2006) which analyzed the nomological validity through the Chi-square test. It was mostly based on the comparison of the results obtained from the theoretical model and the measurement model; the differences of square Chis between the two models were not significant which provides an explanation of the relations observed between the latent constructs of the scales used (Anderson & Gerbing, 1988; Hatcher, 1994). Table 3 shows these results in a more detailed way.

Table 3. Structural equation model results

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Structural Relation</th>
<th>Standardized Coefficient</th>
<th>Robust t-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>H1: Higher level of entrepreneurial orientation, higher level of product innovation.</strong></td>
<td>Entrepreneurial O. → Product Innovation</td>
<td>0.321***</td>
<td>3.309</td>
</tr>
</tbody>
</table>
Table 3 shows the results obtained from the statistical implementation of the model of structural equations. It was found that, regarding hypothesis H1, the results (β = 0.303, p < 0.01) indicate that entrepreneurial orientation has significant positive results in product innovation so it is possible to conclude that entrepreneurial orientation is a good estimator of product innovation in SMEs.

DISCUSSION

These results also create a series of implication for both managers and enterprises. One of the first implications is that managers of SMEs will have to be completely convinced that entrepreneurial orientation can create a series of benefits for the organization if it is adopted and implemented correctly and efficiently. Therefore, managers have to understand fully and clearly the conceptualization of entrepreneurial orientation as well as the different commitments and implications for all the organization because this will result in a significant increase in the activities of product innovation as well as the acquisition of more and better permanent, competitive advantages, a better level of business growth and development, and a higher level of profit and competitiveness of SMEs.

Consequently, managers of SMEs will have to implement the basic necessary actions to create inside organizations a working environment that can adopt and implement entrepreneurial orientation with a minimum of resistance from employees and worker. Otherwise, it will be very complicated that all the members of the SME are convinced of the benefits and advantages of being more entrepreneurial, that is, that workers and employees have some freedom to express their ideas, develop their creativity and work as a team not only to improve the level of entrepreneurial orientation in the organization but also to propose alternative solutions to the main problems of enterprises, to create more and better product innovations and obtain better competitive advantages and results than their main competitors.

It is not possible to create a working atmosphere where the ideas of employees and worker flow freely without oppression, an environment where knowledge and skills can be shared by all the personnel of the enterprise then it will be very complicated that managers of SMEs can adopt and implement all the activities that lead to entrepreneurial orientation. It is not possible that a SME intends to be entrepreneurial if their employees and workers do not have the working conditions to be entrepreneurial or if they do not have a place where they can express their ideas and opinions about the steady improvement of the organization or if they do not work as a team and agree to share their knowledge, experience and skills with their colleagues. It is not possible if such personnel is afraid of changing and doing things in a different way from what they are used to do, if they are afraid of being more innovative.

Additionally, managers of SMEs have to design and implement the necessary training and preparation so all workers and employees of the organization improve and increase their creativity, develop their working skills as a team, share their knowledge, experience and abilities to facilitate both their personal development and an effective and efficient integration of all members of such SME. This will help to run more smoothly and effectively the adequate implementation of proactivity tasks, decision taking and the creation of a higher level of innovation, that is, the adoption and implementation of entrepreneurial orientation as well as a significant increase in the abilities of product innovation which will allow enterprises to obtain more and better results than their main competitors.
Finally, managers also have to work hard in order to change the organizational culture of a SME, that is, to go away from a traditional culture where workers and employees are consider themselves as a big family with rigid working rules and embrace an entrepreneurial and innovative culture where workers and employees of SMEs can contribute with their ideas, creativity, experience and skill to solve the main problems that exist in the organization. All this will highly contribute to a more proactive participation of the personnel in the development and innovation of new products so decision can be taken with a minimum risk in order to improve significantly the innovation abilities of SMEs and obtain more and better results.

CONCLUSIONS

The results obtained in this empirical research allow us to give some conclusions on two important aspects. On one side, the more entrepreneurial SMEs are the higher the level of product innovation they will have, that is, if enterprises adopt or implement entrepreneurial orientation in all the functional areas and in their everyday activities, they will have more opportunities and possibilities to improve their abilities of product innovation significantly. Similarly, the development of entrepreneurial orientation will not only be implemented as part of a business strategy but rather as part of the organization and the daily activities carried out by SMEs. It is only in this way that the enterprise will innovate the product demanded by the market and it will allow the enterprise not only to continue in its market but rather survive in it.

On the other hand, it is also possible to conclude that SMEs have to be more proactive, take higher risks and be more innovative so all this can help them to be more entrepreneurial and improve their level of entrepreneurial orientation. If organizations are reactive to changes demanded by the business and market environment, they do not take risks in order to take advantage of an increasingly globalized market and they do not develop their innovation abilities so it will be difficult to develop new products required by current and potential clients and consumers. This will cause the decrease of their market ranking and they will have serious problems to obtain or improve their competitive advantages, improve their level of growth and development, and get a higher level of business profit. In a nutshell, it will be difficult for SMEs to survive in such market.

REFERENCES


