Strategic Decision Making and Firms in Growth Stage

By Héctor Montiel Campos, Alejandro Magos Rubio, Francisco A. Aguilar Valenzuela & Gerardo Haces Atondo

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Keywords: strategic decision making, entrepreneurial orientation, firm performance, growth stage.

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Strategic Decision Making and Firms in Growth Stage

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I. Introduction

Research about Entrepreneurial Orientation (EO) began around three decades ago with the seminal ideas of Miller (1983), although he didn’t use the concept of EO in his initial study (Miller, 2011). EO has become a main topic in the field of entrepreneurship during the latest decades (Covin & Wales, 2012). The interest in EO can be found in the results of various studies that propose EO as a predictive variable of firm performance (Rauch et al., 2009).

Certainly, a wide research on EO has been produced in which analysis of EO’s determinant factors abound, as well as their consequences on performance. For example, some studies examine the founder-manager’s psychology as EO’s precursors (Simsek, Heavey & Veiga, 2010), and others study the context (Green, Covin & Siciliano, 2008) and the relationship between the EO and the firm’s resources (Dess, Lumpkin & Covin, 1997). The great majority of studies research the effects of EO on a firm’s performance, whether directly within different environments and strategies, or moderated by other conditions (Wiklund & Shepherd, 2005).

In the interest of making progress in the study of EO, this research includes a new variable, this being the Strategic Decision Making (SDM) style adopted by the entrepreneur, since, by identifying the way in which the entrepreneur conceptualizes his firm and makes decisions, more knowledge on the EO’s nature could be gained and, accordingly, of the firm’s performance.

Based on the former facts, the objective of this paper is to know to what extent specific factors of the SDM influence in the EO and how the EO influences the firm’s performance when it is found in a growth stage. Therefore, this study makes two important contributions. First, it proposes the SDM style as a precurser variable of the EO and the firm’s performance as consequence of the EO (Covin & Lumpkin, 2011). Second, it considers the organizational life cycle, specifically the growth state, as a factor that influences decision making, as well as in the EO and in the firm’s performance (Bonn & Pettigrew, 2009).

In the next section of this paper a study of the literature related to this topic is presented, as well as the methodology used for this research. Later, the results of the study are presented, and finally, an argumentation and conclusions section is presented, in which suggestions for future research are included.

II. Literature Review and Hypothesis

a) Strategic Decision Making

SDM has been a subject of study from different academic disciplines. Schwenk (1995) mentions that some research projects have focused on its contents and have identified a decision making process. Other works have focused on organizational factors that influence in the SDM process (Rajagopalan, Rasheed & Datta, 1993).

In general, strategic decisions undertake the firm’s resources to reach posed objectives. According to Noorderhaven (1995), strategic decisions share four essential characteristics which are interlinked and they are key in this research. The first of them is complexity. When a situation is simple, that is, when it consists of a limited number of variables, the strategic decision making process becomes trivial. Campbell (1988) mentions that a decision’s complexity is found in the multiple trajectories that can be followed to reach a
result; or various results can be reached, considering that interdependence exists among the factors that lead to those results. The second characteristic mentioned by Noorderhaven (1995) is uncertainty. The decision-maker does not know the possible results due to the multiple existing alternatives. This means that the information asymmetry influences on decision making given the uncertainty generated by not having the necessary information at the right moment.

The third characteristic is rationality. The decision maker analyzes the advantages of all the possible trajectories that allow him to reach the specific objectives previously established. It is expected that this person has an extensive knowledge about the relevant elements involved in the situation as well as the resources which allow him to identify the option with the greatest value in his preference scale. The fourth and last characteristic mentioned by Noorderhaven (1995) is control. “Without control any pattern observable in a stream of decisions or actions at the level of an organization is the involuntary outcome of an interplay of causal forces rather than the intentional result of deliberate actions of individuals” (Noorderhaven, 1995, p. 22).

These four characteristics describe a general framework in which the SDM takes place and identifies cognitive factors that sustain the decision making style. The cognitive representations developed by the entrepreneur act as a trigger for the decision of acting entrepreneurially or conservatively and the outcomes of these decisions.

b) Entrepreneurial Orientation

The concept of EO has been found in literature about strategy and entrepreneurship as a construct which helps characterize the entrepreneurial behavior in an organization (Basso, Fayolle & Bouchard, 2009). Miller (1983, p. 771) mentioned that “An entrepreneurial firm is one that engages in product market innovation, undertakes somewhat risky ventures, and is first to come up with proactive innovations, beating competitors to the punch”. For Stevenson and Jarrillo (1990), a firm has an entrepreneurial behavior if its actions and processes are oriented towards the recognition and exploitation of business opportunities. From a more general focus, EO refers to the tendencies, processes, and behaviors that lead a firm to enter new or already established markets, with new or already existent products (Lumpkin & Dess, 1996).

Research on EO has found evidence that leads to presume that the firms that adopt a greater EO have a better performance (Rauch et al., 2009; George & Marino, 2011). However, Covin and Lumpkin (2011) mention that the results are not conclusive yet and, although the differences in results may be attributed to different research designs, the differences reflect the fact that sometimes EO does not contribute to improve the firm’s performance. Now, the strength of this relation depends on the internal and external characteristics to the organization, wherefore the EO-firm performance relation is more complex than a simple direct relation (Miller, 2011).

Most of the studies have adopted Miller’s (1983) three sub-dimensions to become acquainted with a firm’s entrepreneurial behavior – innovativeness, risk taking, and proactiveness. Innovativeness is the firm’s proneness to support and encourage ideas and creative processes that lead to the development of new products and services. Risk taking reflects the firm’s tendency to undertake projects in which profits are uncertain and proactiveness refers to taking the initiative of pursuing new business opportunities in emerging markets.

In contrast to firms adopting an EO, there are firms that adopt a more conservative orientation, which do not tolerate risk, are less innovative and passive in developing new markets and business opportunities (Miller & Friesen, 1982). A firm’s behavior can be classified along a continuum ranging from highly conservative to highly entrepreneurial and firm’s position in this continuum describes its EO (Lumpkin & Dess, 1996).

Although EO favors a better performance for the firm, it is necessary for it to be directed appropriately within the organization, which implies seizing opportunities through the firm’s resources and capabilities (Covin, Green & Slevin, 2006). Hence, the managers must adopt a management style which privileges flexibility, speed, innovation, integration, as well as the constant challenges that emanate from changing conditions (Kuratko et al., 2005).

c) Firms In Growth Stage

The firm in the growth stage is prone to actively seek new investment opportunities and to enlarge the number of employees and clients (Jawahar & McLaughlin, 2001). The firm’s growth makes the management more complex, harder and more crucial. Managers need to focus more on the long-term effect their decisions have on organizational process, structures and systems (Smith, Mitchell & Summer, 1985).

Firms that are in the growth stage face the challenge of seizing opportunities. Nonetheless, in most occasions, these firms lack the necessary resources and capabilities as well as market power to allow them to respond faster to the circumstances within their competitive environment (Aloulou & Fayolle, 2005). Also, firms often aggressively challenge their competitors in the hopes of improving their competitive position and, ultimately their performance (Ferrier, 2001). In this sense, the entrepreneur exerts a dominant effect on this stage of the firm and he is capable of promoting a strong entrepreneurial culture, which may be transformed into a firm’s collective behavior (Meyer &
Heppard, 2000). Therefore, this study proposes that the SDM done by the founder-manager in a firm in the growth stage influences its EO and to figure out how the EO influences its performance. More formally, and given the previous review of literature on SDM and EO, this study establishes the following hypothesis:

**H1:** The SDM style adopted by the manager when the firm is in the growth stage influences its EO.

**H2:** The EO adopted by a firm when it is in the growth stage impacts its performance.

### III. Methodology

**a) Sample and Data Collection**

One of the challenges faced in this research was having a sample of firms in the growth stage in a particular industry. The data collection took place during 2011 and 2012 generating a sample size that would allow a robust statistical analysis. The selection criteria were the following: (1) to have achieved between 5 to 20 years operating in the market. This time frame is considered due to fact that, generally, the firm has stability and it’s searching for growth opportunities (Miller & Le Breton-Miller, 2005). (2) To have between 31 and 100 employees—a standard for the medium-size firm defined by Mexico’s Secretaría de Economía. (3) To be a firm in the manufacturing industry. Based on these criteria, an initial sample of 1285 firms was achieved by using the Sistema de Información Empresarial Mexicano.

As the purpose of this research was to explore relationships between variables, the survey method was used to collect information. A questionnaire was developed whose external validity was resolved with pilot tests performed with managers from firms in the growth stage. Doubts, confusion and writing issues in the questionnaire allowed it to be corrected. The definite questionnaires were sent electronically.

Questionnaires were addressed to firms’ managers with a letter explaining the purpose of the study. A total of 173 questionnaires were obtained (13.4%). Response rate is low; nevertheless, this is common in this kind of studies. Given the sample’s size, concern arises about the results’ statistical generalization. Hence, the ANOVA test was performed to examine possible non-response bias, as suggested by Armstrong and Overton (1977). The results revealed that there was no evidence of systematic non-response bias.

**b) Measurements**

Strategic decision making. The first variable in this study was the SDM style adopted by the manager. This study followed the Noorderhaven (1995) proposal with the four cognitive factors which define the decision making style: complexity, uncertainty, rationality, and control. Eight items were generated to measure the degree of influence the cognitive factors hold in the decision making style, so the 7-point Likert scale was used to evaluate the 4 constructs. The Cronbach’s $\alpha$ for the SDM scale was found to be above the 0.80 threshold ($\alpha = 0.84$).

Entrepreneurial orientation. The second variable in this study was the EO. The Miller/Covin and Slevin (1989) scale was used, which constrains the constructs that measure the 7-point Likert scale, a firm’s tendency towards innovativeness, risk taking and proactiveness. The average of the nine items evaluated the intensity of the EO, so that the bigger the average was, the more entrepreneurial strategic stance the firm had. Cronbach’s $\alpha$ for the EO scale was found to be above 0.80 ($\alpha = 0.85$).

Firm performance. A frequent problem the research faces when evaluating firms’ performance is the lack of financial information. In the face of the absence of this information, some researchers (Chandler & Hanks, 1993; Wiklund & Shepherd, 2005) suggest evaluating the firm’s performance in comparison with its main competitors’ performance. Based on this proposal, the 5-item development evaluation scale was used, in which an internal efficiency and a sales’ performance is considered (Lichtenthaler, 2009; Parida et al., 2010). The 5 items were measured in a 7-point Likert scale where 4 points indicated a performance similar to its competitors. The Cronbach’s $\alpha$ for the firm’s performance scale was also found to be above 0.80 ($\alpha = 0.83$) here.

Control variables. Literature shows that the environmental conditions such as hostility and dynamism influence in the firm’s performance (Lumpkin & Dess, 2001), therefore, these factors were controlled during the analysis. In order to measure the hostility, an average of the three items was used in a 7-point semantic differential scale developed by Covin and Slevin (1990). The bigger the index, the more hostile the firm’s environment was. The coefficient alpha was acceptable ($\alpha = 0.86$). The environmental dynamism was measured by the three items that integrate the 7-point semantic differential scale by Miller and Friesen (1982). The bigger the average of the three, the greater the firm’s environmental dynamism. The coefficient alpha was acceptable ($\alpha = 0.82$).

**c) Data analysis**

The information analysis followed two stages. During the first stage a confirmatory factorial analysis was performed to determine if the EO’s dimensions, the SDM’s dimensions, and the firm performance represented different constructs. Initial results suggested that it was not necessary to remove any item from the scale to improve the model fit in the sample. The model fit was assessed using $\chi^2$/df, Goodness-of-Fit Index (GFI) (Jöreskog & Sörbom, 1996), and the...
Comparative Fit Index (CFI) (Bentler, 1992). The threshold for $\chi^2/df$ should be less than three or less than two in a more restrictive sense (Premkumar & King, 1994). The values of GFI and CFI should be above 0.90 (Jöreskog & Sörbom, 1996).

The measurement of the model resulted in a good fit for growth firms’ sample ($\chi^2/df = 2.88$, GFI = 0.890, CFI = 0.911). All the factor loadings are in acceptable ranges and significant at $p=0.001$, ranging from 0.62 to 0.82 indicating convergent validity (Anderson & Gerbin, 1988). The average variance obtained for the measurement of EO was 0.70 in growth firm’s sample, which is slightly higher than the threshold suggested by Bagozzi and Yi (1988).

Regarding strategic making decision, the model resulted in a good fit also ($\chi^2/df = 2.78$, GFI = 0.90, CFI = 0.92). All the factor loadings were significant at $p = 0.001$ with the range between 0.62 and 0.81. Regarding the measurement of firm’s performance, the model resulted in a good fit ($\chi^2/df = 2.77$, GFI = 0.940, CFI = 0.921). All the factor loadings are in acceptable ranges and significant at $p = 0.001$, ranging from 0.69 to 0.84 indicating convergent validity (Anderson & Gerbin, 1988).

The second stage in the analysis of information was to test the hypotheses using the correlation analysis and multiple regression analysis to determine how specific factors in SDM influence the EO and how the EO influences the firm’s performance. The multiple regression analysis had two models. The first one was processed with the EO as a dependent variable and the second one was processed with firm’s performance as a dependent variable.

IV. Results

In the place, Pearson’s correlations among complexity, uncertainty, rationality, control, EO, firm performance and the control variables were calculated (see Table 1). The correlation matrix reveals significant correlation results. For the EO there are positive and significant correlations to complexity, uncertainty and rationality. The control dynamism is also positive and significant. For firm performance, uncertainty and rationality had a positive and significant relation to firm performance. Additionally, there is a strong link with EO and dynamism.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hostility</td>
<td>3.88</td>
<td>2.01</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dynamism</td>
<td>4.45</td>
<td>0.98</td>
<td>-0.04</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complexity</td>
<td>4.57</td>
<td>1.01</td>
<td>-0.05</td>
<td>0.01</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uncertainty</td>
<td>4.02</td>
<td>0.77</td>
<td>0.07***</td>
<td>-</td>
<td>0.11**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rationality</td>
<td>3.55</td>
<td>1.16</td>
<td>0.01</td>
<td>-</td>
<td>0.05</td>
<td>0.02</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>3.11</td>
<td>1.76</td>
<td>0.03**</td>
<td>0.03</td>
<td>0.07</td>
<td>0.04</td>
<td>0.01</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entrepreneurial orientation</td>
<td>4.36</td>
<td>0.88</td>
<td>0.03</td>
<td>0.21**</td>
<td>0.23***</td>
<td>0.27**</td>
<td>0.21***</td>
<td>0.07**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Firm performance</td>
<td>4.73</td>
<td>0.95</td>
<td>0.01</td>
<td>0.22**</td>
<td>0.10**</td>
<td>0.23**</td>
<td>0.28***</td>
<td>0.03**</td>
<td>0.24**</td>
<td>1</td>
</tr>
</tbody>
</table>

*p <0.10; **p< 0.05; ***p <0.01

The next analysis was the multiple regression analysis to prove the hypothesis. The main purpose was to investigate the effects of SDM on growth firm’s EO, and the effects of the EO on growth firm’s performance. The results can be noted in Table 2. Within the factors intervening in decision making, rationality was the one exerting the greatest influence on the on the firm’s EO ($\beta = 0.24$, $p < 0.10$ and, in second place, complexity was found ($\beta = 0.19$, $p < 0.05$). On the other hand, the two control variables exert a positive influence on the EO (Hostility, $\beta = 0.17$, $p < 0.10$; Dynamics, $\beta = 0.15$, $p < 0.10$). The explained variance for the first regression (EO as dependent variable) is appropriate (about 17%). With this, the hypothesis 1 (H1) posed in this research is proved.
Table 2: Regression analysis

<table>
<thead>
<tr>
<th>Control and independent variables</th>
<th>Entrepreneurial orientation</th>
<th>Firm performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hostility</td>
<td>0.169*</td>
<td>-0.224*</td>
</tr>
<tr>
<td>Dynamism</td>
<td>0.147*</td>
<td>-0.203*</td>
</tr>
<tr>
<td>Complexity</td>
<td>0.193**</td>
<td></td>
</tr>
<tr>
<td>Uncertainty</td>
<td>-0.09*</td>
<td></td>
</tr>
<tr>
<td>Rationality</td>
<td>0.244*</td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>-0.02*</td>
<td></td>
</tr>
<tr>
<td>Entrepreneurial orientation</td>
<td></td>
<td>0.258***</td>
</tr>
</tbody>
</table>

Model summary

- F-ratio: 6.023, 7.441
- R²: 0.198, 0.235
- R² adjusted: 0.173, 0.221
- Standard error of the estimate: 1.011, 0.455
- Significance: < 0.001, < 0.001

* p < 0.10; ** p < 0.05; *** p < 0.01

Regarding the firm’s performance, EO was the variable with the greatest influence on performance (β = 0.26, p < 0.10). Regarding the control variables (hostility and dynamism), they exerted a negative influence on the firm’s performance (Hostility, β = 0.22, p < 0.10; Dynamism, β = 0.20, p < 0.10). The explained variance for the second regression (firm performance as dependent variable) explained about 22% of the variation in performance. Regarding hypothesis 2, EO has a better impact on firm’s performance. With this, hypothesis 2 (H2) is proved.

V. Discussion and Conclusions

The general objective of this research was to examine the influence that the SDM style may have on the firms’ EO and how the EO influences the firm’s performance in the growth stage. We want to discuss two subjects that emerge from the results: (1) the influence of rationality, complexity and hostility on a firm’s EO, and (2) the link between EO and firm’s performance.

Regarding the elements that distinguish the decision making, both, rationality and complexity affect the firm’s EO positively. It is important to highlight that rationality is the element with the biggest influence on the EO and performance. It indicates that firms become more analytical in their decision making. Managers need to think about the long-term effects of their decisions on organizational processes, structures and systems because the organization is moving towards a greater level of scrutiny. On the other hand, when the entrepreneur faces a complex decision making, that is, when the possible outcome or consequence is not as evident, then he may be more rational. The results show that this combination does not inhibit the firm’s EO or its performance, but, on the contrary, it promotes them. This means that we are facing a type of firm that is actively seeking new investment opportunities and to increase its staff, clients and geographical contacts (Jawahar & Mclaughlin, 2001).

Finally, the relationship between EO and firm performance highlights once more that a firm that adopts an entrepreneurial posture achieves a better performance (Rauch et al., 2009). This may indicate that firms that adopt an entrepreneurial strategy are able to differentiate themselves from other firms through risk-taking and proactive actions, and by developing innovative products leading to a competitive advantage. Thus, having an entrepreneurial posture represents a path for firm’s competitiveness.
The results shown in this study generate possibilities for future research. One of them may generate a more homogeneous sample. For this study only manufacturing firms were considered, but it would be interesting to find out how these variables behave in a particular industry, among them, the high-tech industry. These characteristics may show a different behavior of the variables in decision making. Moreover, a future research could consider a control variable on the number of staff members, in such way that whether this element influences in the EO or not, may be known. The firm’s agility can be distressed by the number of staff members, thus subtracting the ability to adapt to a more changing environment; in the other words, it can be a negative influence in its dynamic capabilities (Eisenhardt & Martin, 2000). It could be assumed that this behavior would remain the more advanced the firm is in its development stages, but for this, it would be worth to compare at least two stages of firm’s development.

While the results of this paper help to better understand the SDM and its impact in the firm’s EO and subsequent performance, it is important to consider the results under certain limitations. The first one is that it would be interesting to know the evolution in strategic thinking of the same firm, although this would demand a long-term research. On the other hand, the acquired information on the firm’s development was obtained through qualitative and comparative assessments on the entrepreneur’s side. Although this way of obtaining information on the firm’s performance has proven to be reliable, it is important to rely on other types of information.

The results shown in this study demonstrate the importance of the entrepreneur’s decision making and how it influences in the firm’s fate from the development stage the firm is in. The combination of several elements leads the entrepreneur to make decisions under conditions of uncertainty and incomplete information. This makes the heuristic a useful tool for decision making, since it can be conceived as a simplification strategy or rule that helps to deal with complex decisions (Bazerman & Moore, 2009). Ultimately, decision making is different in each firm and it influences on its EO and performance, so it demands the use of resources and different capacities to deal with the challenges it faces.

References

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