

# 1 Strategic Decision Making and Firms in Growth Stage

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## 6 **Abstract**

7 This paper shows partial results from a project research about Strategic Decision Making  
8 (SDM) of firms in different stages of the organizational life cycle. SDM has been studied in  
9 the context of the firms. However, there is not enough knowledge about how the entrepreneurs  
10 make strategic decisions when the firm is in a growth stage. The objective of this research was  
11 to examine the effects of specific factors associated with the decision maker influencing  
12 Entrepreneurial Orientation (EO) and how the EO influences the firm's performance. The  
13 results were achieved by using empirical data from 173 firms in the growth stage. The results  
14 show that SDM has an effect on EO, and that there is a significant relation between EO and  
15 firm performance. The paper concludes with a discussion about the results and suggestions for  
16 future research of this topic.

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18 **Index terms**— strategic decision making, entrepreneurial orientation, firm performance, growth stage.

## 19 **1 Introduction**

20 Research about Entrepreneurial Orientation (EO) began around three decades ago with the seminal ideas of Miller  
21 (1983), although he didn't use the concept of EO in his initial study (Miller, 2011). EO has become a main  
22 topic in the field of entrepreneurship during the latest decades (Covin & Wales, 2012). The interest in EO can  
23 be found in the results of various studies that propose EO as a predictive variable of firm performance (Rauch  
24 et al., 2009). environments and strategies, or moderated by other conditions (Wiklund & Shepherd, 2005).

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

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

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

## 38 **2 II.**

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

## 5 C) FIRMS IN GROWTH STAGE

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43 In general, strategic decisions undertake the firm's resources to reach posed objectives. According to  
44 Noorderhaven (1995), strategic decisions share four essential characteristics which are interlinked and they are  
45 key in this research. The first of them is complexity. When a situation is simple, that is, when it consists of a  
46 limited number of variables, the strategic decision making process becomes trivial. Campbell (1988) mentions  
47 that a decision's complexity is found in the multiple trajectories that can be followed to reach a R ( )

### 48 3 A

49 Certainly, a wide research on EO has been produced in which analysis of EO's determinant factors abounds, as  
50 well as their consequences on performance. For example, some studies examine the founder-manager's psychology  
51 as EO's precursors (Simsek, Heavey & Veiga, 2010), and others study the context (Green, Covin & Slevin, 2008)  
52 and the relationship between the EO and the firm's resources (Dess, Lumpkin & Covin, 1997). The great  
53 majority of studies research the effects of EO on a firm's performance, whether directly within different result;  
54 or various results can be reached, considering that interdependence exists among the factors that lead to those  
55 results. The second characteristic mentioned by Noorderhaven (1995) is uncertainty. The decisionmaker does not  
56 know the possible results due to the multiple existing alternatives. This means that the information asymmetry  
57 influences on decision making given the uncertainty generated by not having the necessary information at the  
58 right moment.

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

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

### 69 4 b) Entrepreneurial Orientation

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

78 Research on EO has found evidence that leads to presume that the firms that adopt a greater EO have a  
79 better performance (Rauch et al., 2009;George & Marino, 2011). However, Covin and Lumpkin (2011) mention  
80 that the results are not conclusive yet and, although the differences in results may be attributed to different  
81 research designs, the differences reflect the fact that sometimes EO does not contribute to improve the firm's  
82 performance. Now, the strength of this relation depends on the internal and external characteristics to the  
83 organization, wherefore the EO firm performance relation is more complex than a simple direct relation (Miller,  
84 2011).

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

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

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

### 99 5 c) Firms In Growth Stage

100 The firm in the growth stage is prone to actively seek new investment opportunities and to enlarge the number  
101 of employees and clients (Jawahar & McLaughlin, 2001). The firm's growth makes the management more

102 complex, harder and more crucial. Managers need to focus more on the long-term effect their decisions have on  
103 organizational process, structures and systems (Smith, Mitchell & Summer, 1985).

104 Firms that are in the growth stage face the challenge of seizing opportunities. Nonetheless, in most occasions,  
105 these firms lack the necessary resources and capabilities as well as market power to allow them to respond  
106 faster to the circumstances within their competitive environment (Aloulou & Fayolle, 2005). Also, firms often  
107 aggressively challenge their competitors in the hopes of improving their competitive position and, ultimately their  
108 performance (Ferrier, 2001). In this sense, the entrepreneur exerts a dominant effect on this stage of the firm and  
109 he is capable of promoting a strong entrepreneurial culture, which may be transformed into a firm's collective  
110 behavior ?? ??000). Therefore, this study proposes that the SDM done by the founder-manager in a firm in the  
111 growth stage influences its EO and to figure out how the EO influences its performance. More formally, and  
112 given the previous review of literature on SDM and EO, this study establishes the following hypothesis: H1: The  
113 SDM style adopted by the manager when the firm is in the growth stage influences its EO. H2: The EO adopted  
114 by a firm when it is in the growth stage impacts its performance.

## 115 6 III.

### 116 7 Methodology a) Sample and Data Collection

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

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

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

### 134 8 b) Measurements

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

140 Entrepreneurial orientation. The second variable in this study was the EO. The Miller/Covin and Slevin  
141 (1989) scale was used, which constrains the constructs that measure the 7-point Likert scale, a firm's tendency  
142 towards innovativeness, risk taking and proactiveness. The average of the nine items evaluated the intensity of  
143 the EO, so that the bigger the average was, the more entrepreneurial strategic stance the firm had.

144 Cronbach's  $\alpha$  for the EO scale was found to be above 0.80 ( $\alpha = 0.85$ ).

145 Firm performance. A frequent problem the research faces when evaluating firms' performance is the lack of  
146 financial information. In the face of the absence of this information, some researchers (Chandler & Hanks,  
147 1993; Wiklund & Shepherd, 2005) suggest evaluating the firm's performance in comparison with its main  
148 competitors' performance. Based on this proposal, the 5-item development evaluation scale was used, in which  
149 an internal efficiency and a sales' performance is considered (Lichtenthaler, 2009; Parida et al., 2010). The 5 items  
150 were measured in a 7-point Likert scale where 4 points indicated a performance similar to its competitors. The  
151 Cronbach's  $\alpha$  for the firm' performance scale was also found to be above 0.80 ( $\alpha = 0.83$ ) here.

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

### 159 9 c) Data analysis

160 The information analysis followed two stages. During the first stage a confirmatory factorial analysis was  
161 performed to determine if the EO's dimensions, the SDM's dimensions, and the firm performance represented  
162 different constructs. Initial results suggested that it was not necessary to remove any item from the scale to  
163 improve the model fit in the sample.

164 The model fit was assessed using  $\chi^2 / df$ , Goodness-of-Fit Index (GFI) (Jöreskog & Sörbom, 1996), and the  
165 Comparative Fit Index (CFI) (Bentler, 1992). The threshold for  $\chi^2 / df$  should be less than three or less than  
166 two in a more restrictive sense (Premkumar & King, 1994). The values of GFI and CFI should be above 0.90  
167 (Jöreskog & Sörbom, 1996).

168 The measurement of the model resulted in a good fit for growth firms' sample ( $\chi^2 / df = 2.88$ , GFI =  
169 0.890, CFI = 0.911). All the factor loadings are in acceptable ranges and significant at  $p=0.001$ , ranging from  
170 0.62 to 0.82 indicating convergent validity (Anderson & Gerbin, 1988). The average variance obtained for the  
171 measurement of EO was 0.70 in growth firm's sample, which is slightly higher than the threshold suggested by  
172 Bagozzi and Yi (1988).

173 Regarding strategic making decision, the model resulted in a good fit also ( $\chi^2 / df = 2.78$ , GFI = 0.90, CFI  
174 = 0.92). All the factor loadings were significant at  $p = 0.001$  with the range between 0.62 and 0.81. Regarding  
175 the measurement of firm's performance, the model resulted in a good fit ( $\chi^2 / df = 2.77$ , GFI = 0.940, CFI =  
176 0.921). All the factor loadings are in acceptable ranges and significant at  $p = 0.001$ , ranging from 0.69 to 0.84  
177 indicating convergent validity (Anderson & Gerbin, 1988).

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

182 IV.

### 183 10 Results

184 In the place, Pearson's correlations among complexity, uncertainty, rationality, control, EO, firm performance  
185 and the control variables were calculated (see Table 1). The correlation matrix reveals significant correlation  
186 results. For the EO there are positive and significant correlations to complexity, uncertainty and rationality. The  
187 control dynamism is also positive and significant. For firm performance, uncertainty and rationality had a positive  
188 and significant relation to firm performance. Additionally, there is a strong link with EO and dynamism. The  
189 next analysis was the multiple regression analysis to prove the hypothesis. The main purpose was to investigate  
190 the effects of SDM on growth firm's EO, and the effects of the EO on growth firm's performance. The results  
191 can be noted in Table 2. Within the factors intervening in decision making, rationality was the one exerting the  
192 greatest influence on the on the firm's EO ( $\beta = 0.24$ ,  $p < 0.10$  and, in second place, complexity was found ( $\beta$   
193 = 0.19,  $p < 0.05$ ). On the other hand, the two control variables exert a positive influence on the EO (Hostility,  
194  $\beta = 0.17$ ,  $p < 0.10$ ; Dynamics,  $\beta = 0.15$ ,  $p < 0.10$ ). The explained variance for the first regression (EO as  
195 dependent variable) is appropriate (about 17%). With this, the hypothesis 1 (H1) posed in this research is  
196 proved. Regarding the firm's performance, EO was the variable with the greatest influence on performance ( $\beta$   
197 = 0.26,  $p < 0.10$ ). Regarding the control variables (hostility and dynamism), they exerted a negative influence  
198 on the firm's performance (Hostility,  $\beta = 0.22$ ,  $p < 0.10$ ; Dynamism,  $\beta = 0.20$ ,  $p < 0.10$ ). The explained  
199 variance for the second regression (firm performance as dependent variable) explained about 22% of the variation  
200 in performance. Regarding hypothesis 2, EO has a better impact on firm's performance. With this, hypothesis  
201 2 (H2) is proved.

202 V.

### 203 11 Discussion and Conclusions

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

208 Regarding the elements that distinguish the decision making, both, rationality and complexity affect the firm's  
209 EO positively. It is important to highlight that rationality is the element with the biggest influence on the EO  
210 and performance. It indicates that firms become more analytical in their decision making. Managers need to  
211 think about the long-term effects of their decisions on organizational processes, structures and systems because  
212 the organization is moving towards a greater level of scrutiny. On the other hand, when the entrepreneur faces  
213 a complex decision making, that is, when the possible outcome or consequence is not as evident, then he may  
214 be more rational. The results show that this combination does not inhibit the firm's EO or its performance,  
215 but, on the contrary, it promotes them. This means that we are facing a type of firm that is actively seeking  
216 new investment opportunities and to increase its staff, clients and geographical contacts (Jawahar & McLaughlin,  
217 2001).

218 Finally, the relationship between EO and firm performance highlights once more that a firm that adopts an  
219 entrepreneurial posture achieves a better performance (Rauch et al., 2009). This may indicate that firms that  
220 adopt an entrepreneurial strategy are able to differentiate themselves from other firms through risktaking and  
221 proactive actions, and by developing innovative products leading to a competitive advantage. Thus, having an  
222 entrepreneurial posture represents a path for firm's competitiveness.

223 The results shown in this study generate possibilities for future research. One of them may generate a more  
224 homogeneous sample. For this study only manufacturing firms were considered, but it would be interesting to find  
225 out how these variables behave in a particular industry, among them, the high-tech industry. These characteristics  
226 may show a different behavior of the variables in decision making. Moreover, a future research could consider  
227 a control variable on the number of staff members, in such way that whether this element influences in the EO  
228 or not, may be known. The firm's agility can be distressed by the number of staff members, thus subtracting  
229 the ability to adapt to a more changing environment; in the other words, it can be a negative influence in its  
230 dynamic capabilities (Eisenhardt & Martin, 2000). It could be assumed that this behavior would remain the  
231 more advanced the firm is in its development stages, but for this, it would be worth to compare at least two  
232 stages of firm's development.

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

239 The results shown in this study demonstrate the importance of the entrepreneur's decision making and how it  
240 influences in the firm's fate from the development stage the firm is in. The combination of several elements leads  
241 the entrepreneur to make decisions under conditions of uncertainty and incomplete information. This makes the  
242 heuristic a useful tool for decision making, since it can be conceived as a simplification strategy or rule that helps  
243 to deal with complex decisions (Bazerman & Moore, 2009). Ultimately, decision making is different in each firm  
244 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. <sup>1 2 3 4</sup>

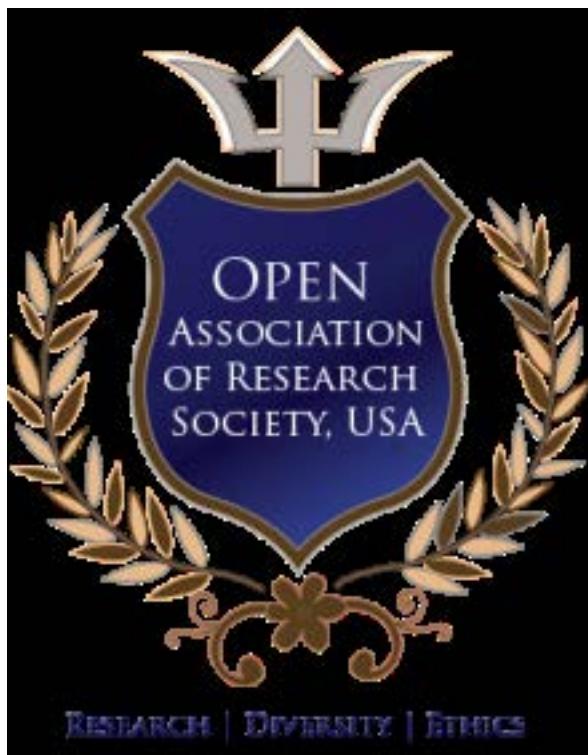


Figure 1:

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<sup>2</sup>Year

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## 11 DISCUSSION AND CONCLUSIONS

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Variables	Mean	SD	1	2	3	4	5	6	7	8
1 Hostility	3,88	2,01	1							
2 Dynamism	4,45	0,98	-0,04	1						
3 Complexity	4,57	1,01	-0,05	0,01	1					
4 Uncertainty	4,02	0,77	0,07***		-	0,11**	1			
					0,10**					
5 Rationality	3,55	1,16	0,01	-	0,05	0,02	1			
				0,12**						
6 Control	3,11	1,76	0,03**		0,03	0,07	0,04	0,01	1	
7 Entrepreneurial orientation										

Figure 2: Table 1 :

2

	Dependent variables	
	Entrepreneurial orientation	Firm performance
Control and independent variables		
Hostility	0,169*	-0,224*
Dynamism	0,147*	-0,203*
Complexity	0,193**	
Uncertainty	-0,09*	
Rationality	0,244*	
Control	-0,02*	
Entrepreneurial orientation		0,258***
Model summary		
F-ratio	6,023	7,441
R 2	0,198	0,235
R 2 adjusted	0,173	0,221
Standart error of the estimate	1,011	0,455
Significance	< 0,001	< 0,001

\*p <0,10; \*\*p< 0,05; \*\*\*p <0,01

Figure 3: Table 2 :

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