

ENTREPRENEURIAL ORIENTATION AND INNOVATION SUCCESS IN FAMILY FIRMS

Accepted manuscript

Jiménez Jiménez, D.; Sanz-Valle, R.; Pérez-Caballero, J.A.: (2020): “Entrepreneurial orientation and innovation success in family firms”. *International Journal of Entrepreneurship and Small Business*, Vol. 40, No. 1, pp-114-127.

10.1504/IJESB.2020.106941

Abstract: There is a general agreement that entrepreneurial orientation can significantly improve firms’ performance, for both family and non-family firms. With regard to the relationship between entrepreneurial orientation and the family status of a firm, there is some controversy in the literature. Traditionally, family firms have been considered more conservative and risk-adverse than non-family firms and, therefore, with less entrepreneurial orientation. However, some recent studies show that family firms do also take risks. This paper analyses entrepreneurial orientation of family firms in comparison with non-family firms, and suggests that the relationship between entrepreneurial orientation and performance, in particular when it is measured as new products success, is higher for family firms than for non-family firms. Using a sample of 268 firms (family and non-family), this paper tests its hypotheses. Findings show that there are not differences between family firms and non-family firms regarding entrepreneurial orientation. More important, they provide support to our proposition that the family status positively moderates the link between entrepreneurial orientation and new products success.

Keywords: entrepreneurial orientation, new products success, family firms.

Acknowledgement: The authors gratefully acknowledge the funding received from the Spanish Ministry for Economy, Industry and Competitiveness of Spanish Government (Research Project ECO2017-88987-R) and CajaMurcia Foundation.

1. Introduction

Over the last decades a growing body of literature has focused on family firms for various reasons. First, due to the weight they have worldwide (Craig *et al.*, 2014, Kraus *et al.*, 2012a, Randerson *et al.*, 2015). Second, because they are considered to have a crucial effect on employment and economic growth (Bettinelli *et al.*, 2017, Randerson *et al.*, 2015, Zahra *et al.*, 2004). Finally, research on family firms is still in an early stage.

Today, companies face increasing global competition, changes in customer demands and rapid and dramatic technical changes. In this context, their performance and even their survival depend on their flexibility and ability to respond quickly to those changes, for instance, through the development of new products. As a consequence, product innovation is generally considered to be critical to improve a firm's competitiveness and overall performance (Ardito & Messeni Petruzzelli, 2017, Gaia Rubera & Kirca, 2012, Kyriakopoulos *et al.*, 2016). However, product innovation will have a positive impact on firm's success only when new products succeed in the market (Cooper & Kleinschmidt, 1987). Therefore, this paper focuses on new product success (NPS).

According to the literature, one of the antecedents of NPS, and innovation in general, is a firm's entrepreneurial orientation (EO) (Craig *et al.*, 2014), which refers to the firm's propensity to be innovative, proactive and open to risk. Several studies have examined the relationship between EO and performance (Engelen *et al.*, 2015, Lee & Chu, 2017), as well as EO and innovation (Li *et al.*, 2006, Lumpkin & Dess, 1996, Szymanski *et al.*, 2007). However, fewer studies have addressed the relationship between EO and the NPS (Craig *et al.*, 2014). This is the first purpose of this paper.

Since EO is considered to be a relevant variable in fostering innovation output, family firms should enhance EO. However, they are usually considered to be more conservative and risk-adverse than non-family firms (Carney, 2005, Cucculelli, 2013, Garces-Galdeano *et al.*, 2016,

Gersick *et al.*, 1997, Gomez-Mejia *et al.*, 2007, Jaskiewicz *et al.*, 2015). If this is the case, family firms will be less able to innovate and, therefore, to respond to the changes that occur in their markets. Some recent studies provide arguments against this idea, proposing that family businesses can be very innovative and aggressive in their markets (Craig *et al.*, 2014, Zahra, 2012). This debate in the literature highlights the relevance of studying in greater depth how the family status of a firm affects EO. Furthermore, according to some researchers, the particular characteristics of family firms may favor the implementation of innovation processes and, therefore, entrepreneurial actions in family firms could be associated to superior performance (Duran *et al.*, 2016, Fuetsch & Suess-Reyes, 2017, Kellermanns *et al.*, 2012). Based on these studies, this paper compares EO between family and non-family firms, and suggests the relationship between EO and NPS will be positively moderated by the family status of a firm. As far as we know, this relationship has not been studied yet, so, this paper may be an interesting contribution to the literature.

The paper is structured as follows. The first section provides a review of the literature on the relationships between EO, NPS and the family status of a firm, and proposes the research hypotheses. Next, the methodology of the empirical study developed to test the hypotheses is described, and our findings are presented. Finally, the conclusions and implications of our findings are discussed.

2. Theoretical framework

2.1. Entrepreneurial orientation and innovation success

Although EO has been conceptualized in different ways, it is often described, following Miller (1983), as the propensity of the firm to engage in entrepreneurial activities and innovation (Bauweraerts & Colot, 2017, Lee & Chu, 2017), and it is considered to cover three dimensions: innovativeness, risk-taking, and proactiveness. Lumpkin and Dess (1996) define *innovativeness*

as a firm's tendency to engage in and support new ideas and processes that may result in the development of new products, services or technological processes. *Risk-taking* is understood as "the degree to which managers are willing to make large and risky resource commitments"(Miller & Friesen, 1978). Finally, *proactivity* is conceived as a firm's tendency to search for opportunities that lead to the introduction of new products or services ahead of competitors and to act in anticipation of future demand (Lumpkin & Dess, 1996).

The literature has highlighted the importance of EO for a firm's success and long-term sustainability (Lumpkin & Dess, 1996, Zahra, 1991, Zellweger & Sieger, 2012) and most empirical studies find a positive relationship between EO and performance (Engelen *et al.*, 2015, Lee & Chu, 2017). Lee and Chu (2017) suggest that the main reason why EO has such an influence on performance is that EO usually implies the ability to detect emerging opportunities and to gain first-mover advantage by introducing new products or services earlier than competitors.

It is widely accepted that product/service innovation is a critical factor for companies in order to maintain their competitive advantage and improve their overall performance (Ardito & Messeni Petruzzelli, 2017, Gaia Rubera & Kirca, 2012, Kyriakopoulos *et al.*, 2016). However, product innovations involve risks and their development is not always translated into benefits for the company. To have a positive impact on company's performance, new products need to be successful. That is why recent literature has highlighted the need of focusing on the innovation outputs (Craig *et al.*, 2014, Duran *et al.*, 2016). New products' success (NPS) is considered one of the main objectives of innovative companies (Derk Jan & Marjolein, 2008) and one of the most important indicators of firm performance (Bartram *et al.*, 2002).

Some empirical studies have examined the relationship between EO, or its components, and NPS. Szymanski *et al.* (2007) conducted a meta-analysis of previous studies that focus on the relationship between one component of EO, innovativeness, and NPS. Their findings reveal

that there is a positive relationship between these variables, which is more substantial when some contextual factors are considered. More recently, Wong (2014), using a sample of 244 Chinese firms in the electronic industry, finds that the three components of EO –innovativeness, proactiveness, and risk-taking– are positively related to NPS.

Although empirical research on the effect on EO on NPS is scarce, based on previous research on the relationship between EO and performance, and the arguments by Lee and Chu (2017), our first hypothesis is formulated:

H₁: There is a positive relationship between entrepreneurial orientation and new product success.

2.2. Family firms and entrepreneurial orientation

Family firms are usually defined as those firms where ownership and management are concentrated in one single family. In this line Anderson *et al.* (2005) suggest that a family business is one in which “the ownership and management are dominated by members of a familiar group”.

Given the important weight that family firms have in the economy of all the countries, and their extremely important impact on job creation, economic growth, and wealth generation worldwide (Bettinelli *et al.*, 2017, Craig *et al.*, 2014, Kraus *et al.*, 2012a, Randerson *et al.*, 2015, Zahra *et al.*, 2004), there is a growing interest in the literature in focusing on the context of family firms.

In this field, one of the topics that have attracted the attention of researchers is EO. The literature suggests that the organizational form of family firms is unique, and that it influences EO. However, it is not clear whether the family status enhances or hampers EO. Some academics defend that family firms may be as innovative as other companies (Craig *et al.*, 2014, Zahra, 2012), but others consider that family firms are more conservative (Gersick *et al.*, 1997, Hall *et al.*, 2001) and risk-taking adverse (LaPorta *et al.*, 1997, Morris, 1998).

Some streams of research have been used to explain whether family firms show a higher or lower EO- Agency Theory is one of them. Jensen and Meckling (1976) defined the agency relationship as "a contract under which one or more persons (the principal) engages another person (the agent) to perform some service on their behalf, which involves delegating some decision making authority to the agent". According to this approach, the presence of possible intra-family divergence of interests can inhibit EO in family firms.

Another theoretical approach that suggests that family firms show a lower EO than non-family firms is the Socio-emotional wealth approach (Gomez-Mejia *et al.*, 2007). According to this perspective, managerial decisions are not driven by financial goals, but by a desire to preserve and enhance the family's socio-emotional wealth (SEW), which refers to affective endowment of family-firms' owners. Regarding EO, the literature suggests that although entrepreneurial behaviors and attitudes are critical for long-term performance (Cruz & Nordqvist, 2012, Eddleston *et al.*, 2012), family firms consider that they may endanger the family's ability to maintain control and family's SEW, which leads the owning family to be less risk adverse and to show a lower EO than non-family firms. (Cucculelli, 2013, Garces-Galdeano *et al.*, 2016, Naldi *et al.*, 2007, Zahra, 2005).

Unlike the Agency and SEW perspectives, according to the Stewardship theory, family owners have a high commitment to the organizational and emotional attachments that leads them to act as stewards in order to achieve a sustainable value for all shareholders (Davis *et al.*, 1997), and this stewardship attitude promotes entrepreneurial behaviors to ensure the firm's long-term success (Bauweraerts & Colot, 2017, Eddleston *et al.*, 2012).

In general, empirical research provides support to the assumptions by Agency and SEW that EO is lower in family firms. Garces-Galdeano *et al.* (2016), for example, find that family firms are less entrepreneurial oriented than non-family firms and argue that this result is "due to the pervasive influence of SEW protection motives in their decision making". Similar results are

obtained in other empirical studies which do not focus on EO but on other variables that are close related to it, such as innovation efforts or investment in R&D (Duran *et al.*, 2016, Gomez-Mejia *et al.*, 2014, Nieto *et al.*, 2015).

Some researches examine the influence of the family status of the firm on one or some EO dimensions separately. For example, McConaughy *et al.* (2001) find that family firms are more risk adverse than non-family firms. In this line, the study by Naldi *et al.* (2007) shows that family firms take risks, but to a lesser extent than non-family firms. Short *et al.* (2009) report significant differences between family-firms and non-family firms for three of the five dimensions of EO they examine: risk-taking, proactiveness and autonomy; but not for innovativeness and aggressiveness. Craig *et al.* (2014), in contrast, find that family firms show higher levels of proactivity, but lower levels of other dimensions of EO.

Despite the controversial results obtained regarding some EO dimensions, based on the findings of most previous studies, we propose:

H₂: Family firms have a lower entrepreneurial orientation than non-family firms.

2.3. The moderator effect of family status on the relationship between entrepreneurial orientation and innovation success

According to Hypothesis 2, family firms show a lower EO than non-family firms due to the idiosyncrasies of this type of firm. However, some studies find that higher levels of innovativeness in family firms are associated with superior performance (Kellermanns *et al.*, 2012, Naldi *et al.*, 2007) and a recent meta-analysis provided empirical evidence that family business has a better innovation input-output ratio than non-family business (Duran *et al.*, 2016).

Based on these findings, we suggest that the family status of the firm will positively moderate the relationship between EO and NPS. The literature provides arguments that support this hypothesis.

Research has suggested that some features of family businesses facilitate a better implementation of entrepreneurial initiatives, for instance, the low degree of formalization and the flexible organizational structure that often characterizes this type of firms (Fuetsch & Suess-Reyes, 2017). Kellermanns *et al.* (2012) also point out that the involvement of the members of the family goes beyond decision-making and affects the implementation too. Therefore, when family firm owners decide to adopt any change, they find more support to do so, which may improve the implementation of this change. Duran *et al.* (2016) also highlights the preference family firms have for non-financial goals as a factor that can explain their greater success in the implementation of any new ideas. They argue that this preference leads to the creation and maintenance of trust-based, long-term relationships with both firm-internal and external stakeholders, which are very valuable during the whole innovation process. In particular, they argue that “pursuing non-financial goals, over time, goes along with the development of a firm-level network, firm-internal human capital, and routines that are beneficial for the conversion of innovation input into output”. In this vein, Fuetsch and Suess-Reyes (2017) suggest that family firms often have at their disposal trusting social networks that can be a valuable source of knowledge and can provide valuable feedback throughout the innovation process. In addition, they defend that the strong stewardship culture these firms usually exhibit leads to a higher involvement of employees, which is crucial in the innovation process.

In summary, although the moderating role that family status can have on the relationship between EO and NPS has not been empirically studied yet, we hold that it is reasonable to propose it. Specifically, we hypothesize that:

H₃: The positive relationship between entrepreneurial orientation and new product success is greater in family firms than in non-family firms.

3. Methodology

3.1. Sample and data collection

The sample for this research includes family and non-family firms that operate in the manufacturing and service industries in a region of Spain and have more than 20 employees. We decided to exclude smaller firms in order to increase the probability of the firms in the sample engaging in entrepreneurial activities and new product development projects. According to the SABI data base (Iberian Balance Analysis System), the number of firms fulfilling these requirements was 1397.

Data were collected through personal interviews with senior managers of the firm, using a structured questionnaire. In order to increase the quality of data collection, interviewers were trained in the purpose of the research and in the questionnaire content. The questionnaire was developed after a comprehensive review of the literature. To ensure the accuracy of the survey data, the questionnaire was checked by a group of experts. Information collected from them helped to refine the questionnaire.

268 valid questionnaires were obtained (a response rate of 18.2%). The representativeness of the sample compared to the population was checked. No differences were found in terms of industry distribution, firms' number of employees or firms' profits.

3.2. Measures

Family firm (versus non-family firm). Family firm status is usually measured by the concentration of control within a single family (Eddleston & Kellermanns, 2007, Kraus *et al.*, 2012b, Zahra, 2012). In this study, a firm is considered to be a family firm if more than 50% of

its capital is held by a single family and if more than 50% of managerial positions are occupied by family members (see Appendix). A dummy variable was used to measure whether the firm is a family-firm (value 1) or a non-family firm (value 0).

Entrepreneurial orientation. As mentioned in the theoretical framework, EO is usually considered to include three dimensions: innovativeness, proactiveness, and risk-taking. Previous studies have defined scales based on this idea (Covin & Slevin, 1989, Li *et al.*, 2006, Naman & Slevin, 1993). The measure used in this study is based on these (see Appendix). The overall index was reliable ($\alpha = 0.785$).

New product success. Since NPS is a multidimensional concept, previous research has used a variety of variables to measure it. Some studies have defined scales including the different aspects of NPS (Baker & Sinkula, 1999, Baker & Sinkula, 2007). In this paper, we measure NPS using 5 items taken from previous research ($\alpha = 0.740$). These items are included in the Appendix.

Control variables. Firm size and firm age are usually associated with the dependent variable of our study. Thus, they were included in our study as control variables. Firm size was measured as the firm's number of employees, while firm age was measured according to the year in which the firm was founded.

Table 1 shows means, standard deviations and correlations among the variables used in this study.

Table 1
Means, standard deviations and correlations

	Mean	S.D.	Correlations				
			1	2	3	4	5
1. Family firm	0.570	0.496	1				
2. EO	2.934	0.908	-0.066	1			
3. NPS	2.787	0.700	0.030	0.486***	1		
4. Size	0.340	0.474	-0.185**	0.174***	0.057	1	
5. Age	0.380	0.486	-0.106*	0.000	-0.022	-0.091	1

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

3.3. Statistical Analysis

The proposed hypotheses were tested by using regression analysis. We decided to use this technique instead of others, such as SEM, because the independent variable in the second hypothesis is dichotomous, and because regression analysis is suitable for examining effects of moderations, such as that proposed in Hypothesis 3.

A hierarchical regression analysis was run to test the hypotheses. This procedure allows one to specify a fixed order of entry for variables in order to control for the effects of some variables on the dependent variable. In the first step (model 0), the dependent variables (NPS and EO) were regressed on the control variables. In the second step, the independent variables were included in the model. For Hypothesis 3, an interaction term was created and introduced and, then, NPS was regressed on the control, independent, and interaction variables (model 3). Support for the hypotheses requires β coefficients of the estimated variables to be significant and with the expected sign, and the R^2 to increase when moving from model 0 to the models containing the dependent variables and the interaction variable.

4. Findings

Table 2 shows the results of the analyses conducted to test the hypotheses.

Table 2

Results of the hypotheses testing

Model	Dependent variable					
	EO		NPS			
	Model EO0	Model EO1	Model NPS0	Model NPS1	Model NPS2	Model NPS3
Size	0.175***	0.169***	0.055	-0.031	-0.032	-0.018
Age	0.016	0.012	-0.017	-0.025	-0.026	-0.028
Family firm		-0.033			-0.006	-0.008
EO				0.491***	0.491***	0.309***
EO * family firm						0.232***
R2	0.023	0.021	-0.004	0.229	0.226	0.245
ΔR^2	0.030**	0.001	0.003	0.234***	0.234***	0.021***
F	4.167**	2.866**	0.464	27.422***	20.493***	18.320***

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

Hypothesis 1 predicts a positive relationship between EO and NPS. As is seen, a significant increase in R^2 occurs when passing from model NPS0 to model NPS1 ($F = 27.422$ ***; $\Delta R^2 =$

0.234 ***). In addition, the coefficient of the variable EO ($\beta = 0.491$) is significant and positive. Thus, our findings provide support for Hypothesis 1.

To test Hypothesis 2, we should compare model EO0 and model EO1. As Table 2 shows, the coefficient of the variable family firm is not significant. Therefore, Hypothesis 2 is not supported, meaning that, contrary to our expectations, family firms don't 'show a lower EO than non-family firms.

Finally, findings provide support for the Hypothesis 3. As Table 2 shows, the coefficient of the interaction term in the model NPS3 is positive and significant ($\beta = 0.232$ ***). Furthermore, its inclusion in the NPS2 model improves the explanation of the variable NPS ($\Delta R^2 = 0.021$ ***; $F = 18.320$ ***). Consequently, it can be said that, as predicted, the positive relationship between EO and new product success is higher for family firms than for non-family firms.

The implications of these findings are discussed in the next section.

5. Discussion

EO is considered to be a key variable in explaining superior performance of both non-family and family firms, because EO usually implies a higher ability to detect emerging opportunities and to gain first-mover advantage by introducing new products or services earlier than competitors (Lee & Chu, 2017). The purpose of this paper was to examine the relationship between EO and product innovation, in particular NPS, and it analyses whether family firms differ from non-family firms, first in their EO, and second in their ability to transform entrepreneurial attitudes and actions to NPS. After a review of the literature, the hypotheses were tested using a sample of Spanish companies.

First, as expected, the findings provide evidence that EO is positively associated to NPS. This result is consistent with conclusions obtained by the few previous empirical studies that relate EO to NPS (Szymanski *et al.*, 2007, Wong, 2014).

Second, our findings show that, contrary to what we hypothesized, EO is not lower in family firms than non-family firms. Our hypothesis was formulated on the results of most of previous empirical studies on this issue (Garces-Galdeano *et al.*, 2016, Gomez-Mejia *et al.*, 2014, McConaughy *et al.*, 2001, Naldi *et al.*, 2007), which usually follow the Agency or the SEW approaches. Neither do our findings support the arguments of other authors who, following the Stewardship approach, suggest that family firms engage more in entrepreneurial behaviors to ensure long-term success (Bauweraerts & Colot, 2017, Eddleston *et al.*, 2012). This paper finds no significant differences between family and non-family firms regarding EO. These results seem to be more in line with those who defend that family firms may be as innovative as other companies (Craig *et al.*, 2014) and that their EO will be higher or lower depending on different factors: family influence on the board (Bauweraerts & Colot, 2017), generation in the board (Duran *et al.*, 2016), family emotional attachment (Zellweger & Sieger, 2012), industry characteristics, such as technological intensity (Garces-Galdeano *et al.*, 2016), etc. Bettinelli *et al.* (2017) offers a good summary of the antecedents of EO, which should be considered in future research in order to shed light on this issue.

Finally, the most interesting finding in this paper and its most important contribution is that it provides evidence for a higher relationship between EO and NPS for family firms than for non-family firms. As far as we know, the likely moderator effect of the family status of a firm in such a relationship has not been previously tested. However, recent research suggests that, family firms' idiosyncrasies can facilitate the implementation of new ideas within the company (Duran *et al.*, 2016, Fuetsch & Suess-Reyes, 2017, Kellermanns *et al.*, 2012). This is one of the conclusion of the meta-analysis developed by Duran *et al.* (2016), that family firms have a higher conversion rate of innovation input into output than non-family firms. Family support for decisions implementation and the trust-based relationship family firms often create with their stakeholders may explain this result.

The results obtained in this study have interesting implications for professionals. The most important are for family firms involved in the development of new products. According to our findings, EO is positively related to NPS. Furthermore, the relationship between these two variables is higher for family firms than for non-family firms. Therefore, for family firms it is worth making the effort to foster their EO, that is to say, the search for opportunities and the engagement in new ideas and processes, because it seems that their idiosyncrasies as family firms will allow them to obtain better results than other companies, so helping them to improve their competitive position.

Despite the contributions of the paper and its implications for practitioners, the results should not be interpreted without recognizing some potential limitations. First, data used to test the hypotheses were provided by a single informant. Having multiple informants would allow us to increase the validity of our research results. However, we should note that we have followed the methodology proposed by Podsakoff *et al.* (2003), which shows that bias is not a problem in our study. A second limitation of this study is its cross-sectional design, which may constrain both the observation of multiple long-term effects of each variable and the elucidation of causal relationships between the variables. This limitation could be avoided by employing a longitudinal study design. Finally, another limitation of this study is the dichotomous distinction between family firms and non-family firms. Although this is the usual approach in the research, it does not capture the heterogeneity between some family firms and others. As previously mentioned, recent research has highlighted that family firms are not a homogeneous group (Craig *et al.*, 2014, Kellermanns *et al.*, 2012, Zahra, 2012), and that their behavior and performance depend on the characteristics of each firm.

Future research would advance by overcoming this paper's limitations, for example, by examining whether differences within family firms may explain the level of EO they show. In future research it will also be interesting to identify the variables that explain why the

relationship between EO and NPS is higher in family firms than non-family firms. The literature has suggested some of them, which were mentioned before, but empirical research on this issue is needed. Finally, this paper has focused on NPS, but has not considered the degree of radicalness of new products. According to recent studies, family firms are more likely to achieve incremental innovations than radical innovations (Nieto *et al.*, 2015). Thus, a question for future research is whether the type of innovation these firms develop may explain the relationship between their EO and NPS.

6. References

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7. Appendix

Scales

Family firm

- Percentage of the firm's capital held by the family: ...
- Percentage of management positions occupied by family members: ...

Entrepreneurial orientation

- The firm emphasizes R&D and innovations development
- The firm is usually the first one in the introduction of new products, services and technologies in its industry
- The firm usually initiates actions that other firms follow.
- The firm usually adopts aggressive actions against its competitors
- The firm is involved in high-risk projects, which have high performance expectations.

New products success (referred to the last three years and in comparison with the competitors)

- Number of new products developed by the firm
- Rate of success of new products
- Degree of differentiation which implies firm's innovations
- Speed in new products development
- Ability of the competitors to imitate firm's new products (reverse)