Moderating effect of absorptive capacity on the entrepreneurial orientation of international performance of family businesses

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Abstract

Purpose – The purpose of this paper is to analyse the moderating effect of absorptive capacity on the entrepreneurial orientation of international performance of family businesses.

Design/methodology/approach – The sample for this study was collected from 218 family firms associated with the Family Business Institute (IEF). This paper used a structural equation model through PLS-SEM technique to test the proposed model and for contrasting the moderating effect of absorptive capacity on the entrepreneurial orientation of international performance of family businesses.

Findings – The main result of this work is that international performance of family businesses is determined, to a great extent, by the entrepreneurial orientation. In addition, this effect is reinforced by the absorption capacity, exerting a positive moderating role.

Practical implications – If family firms want to improve their international results, they must act in the entrepreneurial orientation through the effect of absorption capacities.

Originality/value – The originality of this work comes from the discovery of the new moderating role of absorption capacities in family firms.

Keywords PLS, Moderating effect, Absorptive capacity, Entrepreneurial orientation, International performance, Family businesses

Paper type Research paper

Introduction

In the past few years, entrepreneurial orientation, internationalisation and absorptive capacity have drawn much academic and business interest. This study attempts to address the above concerns by checking how these concepts relate to each other. Entrepreneurial orientation is recognised as one of the most pertinent concepts in academic literature on entrepreneurship (Wales et al., 2011), being one of the central areas of research in business management (Miller, 1983; Covin and Slevin, 1991; Rauch et al., 2009; Wales et al., 2011; Covin and Miller, 2014). In part, this relevance is due to some research linking entrepreneurial orientation with economic growth and generation of employment (Wong et al., 2005), which are very necessary in the periods of crisis. The first analysis on entrepreneurial orientation was by Miller (1983), for whom “entrepreneurial orientation may be understood as behaviour of the business characterised by innovation, proactivity and risk-taking” (p. 771). Therefore, originally, entrepreneurial orientation was understood as a decision-making process that affected the will of the business to innovate, to be more proactive and aggressive than its competitors and to take risks (Miller and Friesen, 1983). This concept has undergone multiple reformulations since its original conception, giving rise to a dynamic definition of entrepreneurial orientation, which depends on the degree to which change and innovation, assumption of risks and aggressive competition are stimulated (Wiklund and Shepherd, 2005; George and Marino, 2011). Therefore, the entrepreneurial orientation can be defined as the capacity of the firm to undertake activities related with innovation, assumption of risks and pioneering new actions (Engelen et al., 2015). Although various studies confirm that
entrepreneurial orientation positively influences the performance of businesses (e.g. Kreiser et al., 2002; Stetz et al., 2000; Wiklund and Shepherd, 2005; Rauch et al., 2009; Lechner and Gudmundsson, 2014; Engelen et al., 2015), others do not observe this relationship (Ireland et al., 2003). Therefore, one of the most important contributions of this study is to analyse the influence of entrepreneurial orientation in international business performance. The latter is measured based on a multi-item scale, which includes international intensity, perceived satisfaction in the international activity and internationalisation results (Balabanis and Katsikea, 2004; Dimitratos et al., 2004; Etchebarne et al., 2010). The approach used aims at shedding light on the explanatory power of entrepreneurial orientation from a different, dynamic perspective when analysing the process of internationalisation (Hernández-Perlines et al., 2016).

This lack of consensus has led different researchers to have made a call to continue to advance analysis in the process of converting entrepreneurial orientation into improved performance (Wales et al., 2011; Covin and Miller, 2014), focussing the analysis on different contingency factors (Lyon et al., 2000) both external (Zahra and Covin, 1995) and internal (Covin et al., 2006). This paper focusses on absorptive capacities as internal factors analysed at the firm level. Absorptive capacity is linked with the identification, assimilation and exploitation of new knowledge (Cohen and Levinthal, 1990). The success of the business depends on its ability to recognise, assimilate and apply new knowledge (Jansen et al., 2005). Absorptive capacity, as a dynamic capacity (Van den Bosch et al., 1999; Floyd and Lane, 2000), has undergone various reformulations, as in 2002, by Zahra and George (2002, p. 186). For these authors, absorptive capacity is “a set of organisational routines and processes by which firms acquire, assimilate, transform and exploit knowledge” (Zahra and George, 2002, p. 186).

The businesses studied are family businesses located in Spain. The justification of this selection is due to the importance of this type of business: it represents 89 per cent of the businesses operating in Spain, 57 per cent of GDP and 67 per cent of private employment (Corona and Del Sol, 2016). This type of firm is an important driver of growth and well-being in Spain (Astrachan and Shanker, 2003).

To analyse the results and examine the hypotheses, this work uses structural equation models through PLS-SEM, using SmartPLS 3.2.7 (Ringle et al., 2015). The data were obtained from a questionnaire sent by e-mail to the CEOs of family businesses associated with the Family Business Institute (IEF) during the months of June to November 2016. At the end of the whole process, valid information was obtained from 218 family businesses.

This work is structured so that after this entry, a larger literature review was carried out on the entrepreneurial orientation and absorptive capacities, proposing the hypothesis to examine and designing the proposed research model. The third section references the population being studied, how the analysed variables have been measured, and the data analysis method. In the fourth section, the proposed hypotheses are examined with the SmartPLS 3.2.7 structural equations programme (Ringle et al., 2015) and the results obtained are analysed. The work is completed by offering the most pertinent conclusions obtained from the research carried out, describing the limitations encountered and proposing future lines of research.

Theory and hypothesis

Businesses may use their entrepreneurial orientation to obtain sustainable competitive advantages in an environment subject to profound changes, which are increasingly fast and profound (Sirivanh et al., 2014). When the effect of entrepreneurial orientation on the performance of businesses is analysed, it is necessary to consider various contingency factors, which alter the previous effect. The argument which underlies this work is that there are capacities (in our case, absorptive) which help to improve the effect of other...
capacities (in our case, entrepreneurial orientation) on the performance of the business (Kane, 2010; Sánchez and Mahoney, 1996). In this research, the absorptive capacity is considered as an internal contingency factor that moderates the effect of business orientation on performance. The absorptive capacity considered in this work is defined as the capacity to explore, assimilate, transfer and apply new knowledge (Cohen and Levinthal, 1990; Zahra and George, 2002). Absorptive capacity has been chosen because of its relationship with entrepreneurial orientation, highlighted by Miller and Friesen (1983) and Engelen et al. (2015), stating that absorptive capacity is stimulated in innovative behaviour of the company, that the company is more proactive and aggressive than its competitors and that it assumes moderate risks.

The theoretical framework upon which this research is based is that of dynamic capacities (Prahalad and Hamel, 1990; Teece et al., 1997; Makadok, 2001), as both the capacity of entrepreneurial orientation and absorption allow the business to adapt to the changing conditions of the environment. This paper analyses the entrepreneurial orientation and the absorption capacity at the firm level, being the result of collective learning that originates in organisational processes.

Entrepreneurial orientation

In recent years, entrepreneurial orientation has become one of the most important issues in business literature, to the point that it has created a great deal of knowledge (Covin and Slevin, 1991; Kropp et al., 2006; Rauch et al., 2009; Covin and Miller, 2014; Engelen et al., 2015). Entrepreneurial orientation has undergone multiple reformulations since its original conception, becoming a dynamic concept. Thus, the first author to discuss entrepreneurial orientation was Miller (1983), for whom entrepreneurial orientation may be understood as behaviour of the business characterised by innovation, proactivity risk-taking (p. 771). Later, some authors considered this definition, indicating that entrepreneurial orientation depends on the degree to which change and innovation, decision making and aggressive competition are stimulated (Wildlunds and Shepherd, 2005; George and Marino, 2011). In this sense, Engelen et al. (2015) define entrepreneurial orientation as the capacity of the business to carry out activities related to innovation, to assume risks and to pioneer new actions. In other words, entrepreneurial orientation has been conceived as the strategic posture for creating new offers for the market, taking risks to test new products/services and markets and being more proactive than their rivals in terms of new opportunities (Covin and Slevin, 1991; Lumpkin and Dess, 1996; Miller, 1983; Wiklund and Shepherd, 2005).

There has been an intense debate about the dimensionality of entrepreneurial orientation and interdependence between its dimensions (Covin et al., 2006; Knight, 1997; Kreiser et al., 2002; Lumpkin and Dess, 1996). For this work, the entrepreneurial orientation is composed of three dimensions: innovation, proactivity and risk-taking. Innovation is characterised by a tendency to support new ideas, experimentation and the use of creative processes (Miller and Friesen, 1983; Kropp et al., 2006; Chandra et al., 2009). Productivity refers to pioneers seeking advantages, anticipating future desires and needs of the market and capitalising on emerging business opportunities (Covin and Slevin, 1989; Lumpkin and Dess, 1996), and introducing new products and services before competitors (Rauch et al., 2009). Finally, the assumption of risks implies the implementation of bold actions that require significant levels of resources without any certainty about obtaining potential profits (Lumpkin and Dess, 1996; Kraus et al., 2012).

The entrepreneurial orientation is considered as a second-order composite mode by (for more information, see Rauch et al., 2009; Hansen et al., 2011; Covin and Wales, 2012; Hernández-Perlines, 2016) made up of innovation, proactivity and risk-taking. That is, entrepreneurial orientation captures business behaviour, important for its relationship with the performance of the business. The theoretical argument upon which this statement is
based is that businesses profit from innovation, proactivity and the assumption of risks (for a discussion of this, see Lumpkin and Dess, 1996).

Previous studies confirm the existence of a positive relationship between entrepreneurial orientation and the performance of businesses (Miller, 1983; Covin and Slevin, 1989; Zahra, 1991; Zahra and Covin, 1995; Lumpkin and Dess, 1996; Barringer and Bluedorn, 1999; Wiklund, 1999; Wiklund and Shepherd, 2005; Davis et al., 2010; Frank et al., 2010; Hernández-Perlines et al., 2016). The previous relationship has been demonstrated independently of the characteristics of the business and the national context (Rauch et al., 2009; Saeed et al., 2014); thus, the entrepreneurial orientation is a valuable predictor of business success (Kraus et al., 2012). In the business literature, the study of internationalisation has been addressed from different approaches; although, in recent years, the entrepreneurship approach has emerged strongly. This approach has a high explanatory power of the process of creating value by companies operating abroad (Joardar and Wu, 2011; Jones and Coviello, 2005; Weerawardena et al., 2007). This is how the concept of entrepreneurial orientation arises, as a different, dynamic way of explaining why companies become internationalised (e.g. Freeman and Cavusgil, 2007; Sundqvist et al., 2012). Within this approach, many authors analyse the influence of entrepreneurial orientation in international business performance, and most of them establish that the former positively influences the latter (e.g. Balabanis and Katsikea, 2004; Dimitratos et al., 2004; Etchebarne et al., 2010; Ahimbisibwe and Abaho, 2013; Hernández-Perlines et al., 2016). This allows us to formulate the first of the hypotheses of this work:

**H1.** Entrepreneurial orientation positively influences the international performance of family businesses.

**Absorptive capacity**

Lumpkin and Dess (1996) analysed the effect of various contingency factors on the effect of entrepreneurial orientation on the performance of businesses. Subsequently, some works have explored the moderating roles of internal factors such as the availability of resources (Wiklund and Shepherd, 2005), the capacity for commercialisation, strategy training process (García-Villaverde et al., 2013; Covin et al., 2006), the internal social context (De Clercq et al., 2010) and the generation of the family involved in management (Chirico et al., 2011). Other researchers have highlighted the moderating role of external factors such as hostility, turbulence and dynamism of the environment (Covin and Covin, 1990; Dess et al., 1997; Namen and Slevin, 1993; Wiklund and Shepherd, 2005), the lifecycle of the industry (Lumpkin and Dess, 2001) and external networks (Lee et al., 2001; Stam and Elfring, 2008), with Dess et al. (1997) integrating internal and external moderators into a configurational model.

This research focuses on the moderating effect of the absorptive capacity on the effect of entrepreneurial orientation on the performance of businesses. The absorptive capacity is selected due to its importance, so that businesses, in order to overcome certain pressures, can recognise, assimilate and apply new knowledge (Jansen et al., 2005). Absorptive capacity arises as an essential research issue in business strategy (Jansen et al., 2005). The concept of absorptive capacity was originally developed by Cohen and Levinthal (1990). For these authors, absorptive capacity is the capacity of the business to identify, assimilate and exploit new knowledge. This is an essential intangible asset for success and mainly depends on the level of prior knowledge, which will facilitate the identification and processing of new knowledge. Absorptive capacity has undergone various reformulations. Thus, Zahra and George (2002) revitalised interest in the concept through the review of various research works, offering a redefinition,
the result of integrating prior hallmarks. Thus, they defined the absorptive capacity as “a set of organisational routines and processes by which businesses systematically acquire, assimilate, transform and exploit knowledge” (Zahra and George, 2002, p. 186). These authors state that within absorptive capacity there are two subsets of capacities: the potential absorptive capacity, consisting of the acquisition of knowledge and assimilation, and the realised absorptive capacity, based on the transformation of knowledge and exploitation. Both subgroups have different effects on the business, where the potential absorptive capacity plays an important role in the accumulation and renewal of the business’ knowledge base.

Since this redefinition by Zahra and George (2002), an abundance of literature has emerged on absorptive capacity (Volberda et al., 2010). There are studies that address the multidimensional nature of absorption capacity (Jansen et al., 2005; Lane et al., 2006; Todorova and Durisin, 2007). Other authors analyse the background of absorptive capacity (Andersen and Foss, 2005; Argote and Ingram, 2000; Dijksterhuis et al., 1999; Kogut and Zander, 1992;Lane and Lubatkin, 1998; Lane et al., 2001; Lenox and King, 2004; Lyles and Salk, 1996; Van den Bosch et al., 1999). Furthermore, many papers analyse the absorption capacity and its effect on the results (Lane et al., 2001; Lewin et al., 1999; Stock et al., 2001; Tsai, 2001; Wales et al., 2013).

Focussing on the latter line of research, the specific relationship between absorptive capacity and business performance has been studied from two different perspectives. The first approach explores the role of absorptive capacity as a key factor of business conduct. Zahra et al. (2009), for example, assert that absorptive capacity is one of the main determining factors of corporate capacity in businesses, as it can significantly improve the capacity for recognising and exploring new opportunities through the construction of new skills and the reduction of cognitive inflexibility of senior management. In the same way, Salvato et al. (2009) assert that absorptive capacity enhances entrepreneurial orientation at a business level. Furthermore, Desmond (2007) asserts that in diversified businesses, absorptive capacity allows the discovery of new applications of resources. In general, absorptive capacity has a significant role as a determining factor of entrepreneurial capacity in certain contexts (Grimpe and Sofka, 2009).

The second focus addresses the moderating role of absorptive capacity in relation to entrepreneurial orientation and the performance of the business. Specifically, Hayton and Zahra (2005) assert the moderating role of the absorptive capacity in the growth of the business through collaboration or acquisitions of businesses, and the result measured from the revenues and/or development of new products/processes. Furthermore, Zahra and Hayton (2008) assert that absorptive capacity positively moderates the relationships between international activities and entrepreneurial performance.

This work falls within this second focus, based on the moderating role of absorptive capacity in relation to entrepreneurial orientation and business performance. This line has already been developed, among others by Engelen et al. (2015), who confined their research to German businesses. For these authors, absorptive capacity strengthens the relationship between entrepreneurial orientation and the performance of businesses. In keeping with this, a model is proposed that seeks to analyse the moderating effect of the absorptive capacity on the relationship between the entrepreneurial orientation and the performance of the family firm. Therefore, the following hypothesis is stated:

**H2.** Absorptive capacity moderates the effect of entrepreneurial orientation on the international performance of family businesses.

With all of this, the research model is proposed (see Figure 1) which analyses, first, the effect of entrepreneurial orientation on the performance of family businesses (direct effect); and second, the moderating effect of the absorptive capacity on this relationship.
Methodology

Data

Data were obtained from a questionnaire sent by e-mail through the Limesurvey v.2.5. tool to the highest-ranking executive of a sample of companies taken from the IEF. The questionnaire sent contained Likert (1-5) type questions. The sample size consists of 1,045 businesses associated with the IEF, with 218 responses obtained, representing 20.86 per cent. The field work was carried out between the months of June and November 2016 (Table I).

The statistical power of the sample is calculated through the Cohen’s (1992) retrospective test. The G*Power 3.1.9.2 programme (Faul et al., 2009) is used to calculate it. The sample of family businesses of this study has a statistical power of 0.998 (over the limit of 0.80 established by Cohen, 1992) (Figure 2).

To examine the hypotheses and the analysis of the direct effect and moderating effect of the absorptive capacity, a multivariate statistical technique has been used from partial least square (PLS) structural equations. This method is the most suitable for addressing the research questions posed, for several reasons:

1. due to their predictive character (Hair et al., 2014; Sarstedt et al., 2014);

2. because it allows different causal relationships to be observed (Jöreskog and Wold, 1982; Astrachan et al., 2014); and

| Sample size | 1,045 |
| Scope of application | Spain |
| Responses obtained | 218 |
| Sample procedure | Simple random |
| Confidence level | 95%, p = p = 50%; α = 0.05 |
| Response rate | 20.86 |
| Sample error | 5.91 |
| Field work | June-November 2016 |

Table I. Technical datasheet of the field work
(3) because it is less demanding with regard to the minimum sample size (Henseler et al., 2015).

The software used for the data analysis through SEM-PLS was SmartPLS v.3.2.6 (Ringle et al., 2015).

Measurement of variables

Measurement of entrepreneurial orientation. To measure entrepreneurial orientation, with nine items which make up innovation, proactivity and risk-taking, based on the scale proposed by Miller (1983) modified by Covin and Slevin (1989) and Covin and Miller (2014).

Measurement of absorptive capacities. To measure the absorptive capacity, the scale proposed by Cohen and Levinthal (1990) and Lane et al. (2006), validated by Flatten et al. (2011) has been considered. With this second-order composite, the degree to which a company was dedicated to the acquisition of knowledge (three items), assimilation (four items) transformation (four items) and exploitation (three items) was evaluated.

Measurement of international performance. In the present work, international performance is measured according to a multi-item scale based on the exporting intensity, which was included as a measure of international performance by some authors such as Zahra et al. (1997) and Morgan et al. (2004). We also included perceived satisfaction in exporting performance, which was previously included by some authors such as Cavusgil and Zou (1994), Balabanis and Katsikea (2004), Dimitratos et al. (2004) and Zahra et al. (1997). Both previous variables were measured according to a five-point Likert scale. Finally, the third item included to measure international performance refers to exporting results, and had previously been used by some authors such as Zahra et al. (1997), Morgan et al. (2004) and Ibeh (2003).

Control variables. For control variables, size (number of employees), age (number of years since establishment) and the main activity sector of the family business, appearing on a recurring basis in studies on family businesses (Chrisman et al., 2005).
Results
To ensure that the proposed scales of the different measurements are valid and reliable, the two steps proposed by Barclay et al. (1995) have been followed:

1. evaluation of the measurement model; and
2. evaluation of the structural model.

Evaluation of the measurement model
Following the recommendations formulated by Roldán and Sánchez-Franco (2012), our first step was to analyse composite reliability, Cronbach’s \( \alpha \) and the average variance extracted, allowing the reliability of the items and the composites considered to be checked. In Table II, the aforementioned values are shown. As can be seen, these values exceed the thresholds recommended by the literature[1].

The discriminant validity is also calculated, which measures to what extent a composite is truly distinct from other composites (Hair et al., 2014). For its calculation, comparing the square root values of the AVE for each composite with the correlations between constructs associated with this construction (Fornell and Larcker, 1981). In all cases (see Table II), the AVE values are greater than the corresponding correlations. Furthermore, the HTMT index for composite type A is calculated, allowing the measurement of the discriminant validity between indicators of the same composite and between indicators of different composites. To fulfil the discriminant value, the values of the HTMT ratio must be lower than 0.85 (Henseler et al., 2015) (see Table II).

Finally, the HTMT_{inference} is calculated from the bootstrap option (5,000 subsamples). When the resulting interval contains values lower than 1, discriminant validity exists. In our case, it is fulfilled (see Table III).

The entrepreneurial orientation became operational as a second-order composite mode b, obtained in two steps through latent variable scores (Wright et al., 2012). To validate the entrepreneurial orientation composite, the recommendations of Diamantopoulos et al. (2008) were taken into account. In this case, being a second-order composite mode a, the items which form it must not show problems of co-linearity (Diamantopoulos and Winklhofer, 2001). Problems of collinearity may appear when the variance inflation factor (VIF) reaches or exceeds the value of 5 (Kleinbaum et al., 1988). In our case, no co-linearity problems were observed (see Table IV).

<table>
<thead>
<tr>
<th>Composites/measurements</th>
<th>AVE</th>
<th>Composite reliability</th>
<th>(1) EO</th>
<th>(2) ACAP</th>
<th>(3) IPFB</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Entrepreneurial orientation (EO)</td>
<td>0.645</td>
<td>0.845</td>
<td>0.803*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2) Absorptive capacity (ACAP)</td>
<td>0.750</td>
<td>0.923</td>
<td>0.630</td>
<td>0.860*</td>
<td></td>
</tr>
<tr>
<td>(3) International performance of family</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>businesses (IPFB)</td>
<td>0.661</td>
<td>0.836</td>
<td>0.484</td>
<td>0.555</td>
<td>0.813*</td>
</tr>
</tbody>
</table>

**Heterotrait-monotrait ratio (HTMT)**

| (1) Entrepreneurial orientation (EO)    |       |                       |        |          |         |
| (2) Absorptive capacity (ACAP)          |       |                       |        |          |         |
| (3) International performance of family |       |                       |        |          |         |
|   businesses (IPFB)                     | 0.245 |                       |        |          |         |
| Cronbach’s \( \alpha \)                | 0.724 | 0.888                 | 0.748  |          |         |
| Average                                 | 4.17  | 4.37                  | 4.01   |          |         |
| Typical deviation                       | 1.10  | 1.08                  | 1.09   |          |         |

**Notes:** The averages are evaluated based on the average scores of the different first order composites which make up each one of the second-order composites considered. The correlations are those of the second-order composites. *Square root of AVE

Table II. Correlation matrix, composite reliability, convergent and discriminant validity, heterotrait-monotrait ratio (HTMT) and descriptive statistics
Analysis of the structural model. The analysis of the structural model confirms that the entrepreneurial orientation has a positive impact on the performance of family businesses. The path coefficient is 0.303 (greater than 0.2 which Chin, 1998 states as a minimum limit). Furthermore, this effect is significant (the value of $t$ is 5.746, based on $t$ (4,999) of a line and $p < 0.001$), entrepreneurial orientation being able to explain 34.2 per cent of the variance of the performance of family businesses (see Table V). Therefore, the first hypothesis is confirmed.

Additionally, the absorptive capacity positively and significantly influences the performance of family businesses (the path coefficient is 0.381). Furthermore, the absorptive capacity can explain 36.7 per cent of the variance of the performance of family businesses (see Table V).

Finally, the moderating effect of the absorptive capacity is positive and significant, as the path coefficient is 0.249 and the value of $t$ is 4.707 (see Table V). Furthermore, the moderating effect of the absorptive capacity causes the effect of entrepreneurial orientation on the performance of family businesses to increase, explaining 46.8 per cent of its variance (see Table V). Finally, the moderating effect of the absorption capacity is moderate, with a value of $f_2$ is 0.25 (Chin, 2010).

None of the control variables has an effect which may be considered pertinent (the path coefficients are lower than 0.2) and are not significant (the $t$-value is lower than the recommended $p < 0.001$) (see Table VI).

To complete the analysis of the structural model, the goodness of the fit of the model is calculated through the standardised residual average square root (SRMR) proposed by Hu and Bentler (1998) and Henseler et al. (2015). In our case, the SRMR value was 0.074 (lower than 0.08 recommended by Henseler et al., 2015 as adequate).

<table>
<thead>
<tr>
<th>Factor</th>
<th>Sample mean (M)</th>
<th>5.0%</th>
<th>95.0%</th>
<th>Sample mean (M) Bias</th>
<th>5.0%</th>
<th>95.0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absorptive capacity → International performance of family businesses</td>
<td>0.092</td>
<td>0.075</td>
<td>0.043</td>
<td>0.326</td>
<td>0.075</td>
<td>-0.016</td>
</tr>
<tr>
<td>Entrepreneurial orientation → Absorptive capacity</td>
<td>0.761</td>
<td>0.759</td>
<td>0.685</td>
<td>0.837</td>
<td>0.759</td>
<td>-0.002</td>
</tr>
<tr>
<td>Entrepreneurial orientation → International performance of family businesses</td>
<td>0.223</td>
<td>0.229</td>
<td>0.082</td>
<td>0.448</td>
<td>0.229</td>
<td>0.005</td>
</tr>
</tbody>
</table>

Table III. HTMT

<table>
<thead>
<tr>
<th>Factor</th>
<th>Loads ($\lambda$)</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovation</td>
<td>0.381</td>
<td>1.558</td>
</tr>
<tr>
<td>Proactivity</td>
<td>0.413</td>
<td>1.602</td>
</tr>
<tr>
<td>Risk-taking</td>
<td>0.370</td>
<td>1.980</td>
</tr>
</tbody>
</table>

Table IV. Collinearity of entrepreneurial orientation

<table>
<thead>
<tr>
<th>Model</th>
<th>$R^2$</th>
<th>$\beta$</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1: OE → IPFB</td>
<td>0.342</td>
<td>0.303</td>
<td>5.746</td>
</tr>
<tr>
<td>Model 2: OE → IPFB</td>
<td>0.367</td>
<td>0.356</td>
<td>5.738</td>
</tr>
<tr>
<td>ACAP → IPFB</td>
<td>0.381</td>
<td>4.676</td>
<td></td>
</tr>
<tr>
<td>Model 3: OE × ACAP → IPFB</td>
<td>0.468</td>
<td>0.347</td>
<td>6.591</td>
</tr>
</tbody>
</table>

Table V. Structural model
Conclusions
The objective of this paper was to analyse the moderating effect of absorptive capacity and its influence on entrepreneurial orientation in the international performance of family businesses. To achieve this objective, this paper proposes the conceptualization of the entrepreneurial orientation proposed by Miller (1983), which has given rise to the universalisation of this composite. Furthermore, the theory of dynamic capacities was used (Prahalad and Hamel, 1990; Teece et al., 1997; Makadok, 2001) to propose the research models (direct model and moderating model). The first research question posed was whether the entrepreneurial orientation positively affected the international performance of family businesses. The answer to this question is affirmative, as entrepreneurial orientation can explain 34.2 per cent of the variability of international performance of family businesses. Furthermore, the items used to measure entrepreneurial orientation (second-order composite mode b) are reliable and have discriminant validity (Henseler et al., 2016). Therefore, the main result of this work is that entrepreneurial orientation positively affects the international performance of family businesses. This finding has practical implications for managers of family businesses, as with this model they can determine upon which dimensions entrepreneurial orientation may be carried out to improve their results.

The second research question involved analysing the moderating effect of absorptive capacity, reproducing prior studies which analyse this moderating effect (see Engelen et al., 2015). The results confirm that absorptive capacity positively moderates the effect of entrepreneurial orientation on the international performance of family businesses, increasing the capacity for explanation in the explained variance of the international performance of family businesses up to 46.8 per cent. The intensity of this moderating effect of absorption capacity is moderate (Chin, 2010). This finding allows managers of family businesses to determine how they should use absorptive capacity to improve the effect of entrepreneurial orientation on international results, designing relevant mechanisms for acquisition, assimilation, transformation and exploitation of new knowledge.

The first limitation is the use of a single informant on Likert-type scales. To overcome this limitation, the study follows the recommendations of Rong and Wilkinson (2011), Woodside (2013) and Woodside et al. (2015), appropriately selecting the individual of the business to whom the questionnaire is addressed (the highest executive, according to the recommendations of Dal Zotto and Van Kranenburg, 2008). A computerised process has been used to send the questionnaires (e-mail, based on the recommendations of Torchiano et al. (2013). In this e-mail, participation is requested, the objectives of the research are explained, and a contact e-mail address is attached in case of any queries arising. Furthermore, the participants received emails to remind them to complete the questionnaire.

As future lines of research, it is proposed to carry out longitudinal studies to analyse the effect of time. It is also proposed to carry out comparative studies with other countries using the same scales of measurement, to check whether there are differences based on the context in which they are analysed. Finally, it is proposed to analyse the moderating effect of absorption considering the potential and realised dimensions (Zahra and George, 2002).

<table>
<thead>
<tr>
<th>Variable</th>
<th>$\beta$</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>0.052</td>
<td>0.627</td>
</tr>
<tr>
<td>Sector</td>
<td>0.090</td>
<td>1.232</td>
</tr>
<tr>
<td>Size</td>
<td>0.084</td>
<td>1.131</td>
</tr>
</tbody>
</table>

Table VI. Control variables
Note
1. Fornell and Larcker (1981) recommend values greater than 0.7, 0.7 and 0.5 for composite reliability, Cronbach’s $\alpha$, and the average variance extracted (AVE), respectively.

References


Further reading

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