



Internationalization of family firms: the effect of CEO attributes

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Abstract

This paper examines the influence of CEO characteristics on the internationalization of family businesses. The study is based on Upper Echelons Theory, where organizational performance is related to the cognitive foundations and values of the managers of the family business. This work aims to contribute to the construction of a link between research in management teams and theoretical studies on family businesses. Using Probit and Tobit regression analyses on a sample of 1005 Spanish family businesses, this study demonstrates that CEOs with some specific characteristics are more likely to adopt some strategies for the internationalization of a company. For example, the type of studies undertaken by the CEO or the existence of a consensual strategic plan within the family business are positively linked to the adoption of an exportation strategy. Also, previous professional experience outside the family business or being a first-generation family member contributes to going international via establishing strategic alliances, while being a tenured CEO shows a positive effect on an internationalization strategy based on direct investment, but a negative effect on the establishment of strategic alliances. Finally, a family member CEO negatively affects an internationalization strategy based on direct investment. The results also affirm that the internationalization strategy is determined by the size of the business and the sector in which it operates.

Keywords Family businesses · Internationalization strategies · CEO characteristics · Information processing capability · Executive leadership

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1 Introduction

Businesses might see the need to bring their activities to the international stage due to limited local markets or reduce costs via economies of scale (Caves, 1996; Hsu et al., 2013; Kontinen & Ojala, 2010). In the case of family businesses, their development in international markets seems less likely for different reasons such as resistance to change in leadership, goals, values, and disparate family needs (Fernández & Nieto, 2005). Using Upper Echelons Theory this study considers the qualities of chief executive officers (CEOs) that facilitate the internationalization of activities in family businesses. Our work is closely related to that of Saeed and Muhammad (2019) and Hsu et al. (2013), who also investigated the impact of CEO characteristics on the external expansion of SMEs (small and medium-sized companies); however, we focus on the field of family companies.

We refer to family businesses because these kinds of companies have specific characteristics as a consequence of the role that the family has in ownership, governance, management, strategic behaviors, and results (Basco, 2013; D'Allura, 2019), making them different from other kinds of businesses, especially regarding going international (Pukall & Calabrò, 2014; Ray et al., 2017).

Internationalization offers promising possibilities that could ensure the company's survival by increasing the amount of business received, the size of the company, and the family's future wealth (Claver et al., 2007). Exporting activities, maintained over time, offer advantages to future generations of family owners who will see increased value in heritage and new employment opportunities (Zahra, 2003). But there are obstacles that limit the internationalization process, specifically families who do not want to lose the control that they exercise over the company. Therefore, family businesses must deal with two opposing forces: one that favors their need to grow and enter new markets, and another that seeks stability and the development of low-risk projects in their traditional market (Casillas et al., 2010).

Faced with this opposition of forces, the CEO of a company plays an important role since his attributes exert a critical influence on the company's ability to process the information associated with internationalization (Roth, 1995). When CEOs are family members, their influence can be even greater as they have a lower risk of being fired than their counterparts who are not family members (Kalm & Gómez-Mejía, 2016). Notwithstanding, according to Upper Echelons Theory, managers must possess characteristics that allow them to process information effectively, and thus handle international complexity and ambiguity (Herrmann & Datta, 2002, 2005; Nielsen & Nielsen, 2011).

We defend the tenet that the attributes of CEOs influence the implementation and processing of information associated with the internationalization of a company, which in turn moderates the benefits and costs of that internationalization (Hsu et al., 2013). Therefore, this deserves a more in-depth study to better understand the predisposition of family businesses to internationalize.

In the present study we consider and test some hypotheses regarding the effects that certain qualities of a CEO have on strategic decision-making in family

businesses. Using a sample of 1005 Spanish family businesses, our work offers information that, to the best of our knowledge, is rarely available in other data sets at the firm level. As variables, we use the CEO's educational profile and previous professional experience, his/her tenure as CEO, whether he/she is a family member or not, their management style (i.e., having a strategic plan or not), and also the generation in charge of the business. The formulation of these variables is based on the extensive literature on Upper Echelons Theory, from the perspective of the behavior of family businesses. The variables express the characteristics of executives that facilitate strategic decision-making (D'Allura, 2019; Ramón-Llorens et al., 2017; Saeed & Muhammad, 2019).

Our results show that the internationalization of family businesses depends not only on the size of the company and the sector in which it operates, but also on the type of education that the CEO receives and also their experience, which are positive influences on the internationalization of the company. On the other hand, the fact that the CEO is a family member has a negative impact on the internationalization of the family firm. Finally, the existence of a strategic plan agreed upon in the family business also contributes to its internationalization.

The objective of this study is similar to the work of Ramón-Llorens et al. (2017) which also analyzes the influence of CEO characteristics on the internationalization of family firms; however, the present paper contains some important differences which constitute our contribution to the existing body of literature. First, to carry out the study, we used a larger and more representative sample of family businesses in Spain (1005 companies) which includes companies from different sectors and regions and also with markedly different sizes. Second, most of the previously published papers measure the willingness to become internationalized by considering whether or not the company may have foreign sales. However, this does not seem to show the real willingness of a company to become internationalized (i.e., foreign sales could just as easily be achieved Online). Instead of that, we consider the adoption of real internationalization strategies by the company: exportation, strategic alliances, and investing abroad. In this way, the paper provides a deeper analysis of the influence of the CEO's characteristics on the internationalization processes, revealing that the influence is not identical for all strategies, and showing that the adoption of one strategy or another in order to internationalize the company could depend on the specific characteristics of the CEO.

The rest of this study is structured as follows. In the next section we provide a literature review, after which we present the hypotheses holding that the attributes of a CEO (or an executive) can influence internationalization in family businesses. Then, we describe the sample and the models used in our study. In the subsequent section we present the results that were obtained, and in the final section we summarize and discuss our conclusions.

2 Background

Internationalization strategies of family businesses have attracted increasing attention in the recent literature, but there are still some unanswered questions regarding the elements contributing to family businesses having a greater presence in foreign

markets (Metsola et al., 2020). For example, more research is needed to uncover the role that CEOs play in the strategies adopted by family businesses to operate in foreign markets, as the type of management carried out in family versus non-family businesses leads to differing internationalization strategies (Avruchir et al., 2016; De Massis et al., 2018). This differential in behavior is due to the role that the family plays in the corporate ownership and management of the company (D'Allura, 2019; Mitter et al., 2014).

The decision for a business to internationalize is generally made by executives, who must then invest time and financial resources. Previous studies relate governance and internationalization in explaining the achievements in the internationalization of the family business (Alayo et al., 2018; Casillas et al., 2010). In fact, some authors suggest that a critical determinant of a company's ability to successfully deal with the complexity that arises from international operations is its governance structure (Calabrò & Mussolino, 2011; Sanders & Carpenter, 1998). Family firms have unique governance characteristics identified by the duality of economic and non-economic objectives (Galve-Górriz & Salas-Fumás, 2011). Family firms are built through a dual governance structure, promoting cohesion and shared vision within the family, within which family members can perform multiple roles in the business (Mustakallio et al., 2002). For this reason, the governance model of family businesses is different from that of other companies. The family business model incorporates both formal control and social control aspects of the governance, therefore agency theory is not enough to explain family governance and its influences on the quality of internationalization decision-making (Calabrò & Mussolino, 2011; Ramaswamy et al., 2000).

Internationalization can be achieved relatively simply in large companies with structures dedicated to foreign business, but for SMEs this process is slower and more difficult (Calabrò & Mussolino, 2011; Fernandez & Nieto, 2006; Kontinen & Ojala, 2010). A lack of support from more conservative members of the board of directors tends to be one of the main factors that affects the decision to carry out activities abroad (Gallo & Pont, 1996). Thus, having a strategic plan agreed upon by members of the board reduces uncertainty and conflict (Zahra, 2003).

One point in favor of internationalization in family businesses is that family CEOs are at less risk of being fired than their non-family member counterparts (Kalm & Gómez-Mejia, 2016). Hence, family businesses offer greater job security and are likely to have CEOs who are more committed to the firm, instigated long-term strategies free from fear of losing their jobs, and it has been shown that they receive less compensation (Kalm & Gómez-Mejia, 2016). These characteristics help us understand the profile of CEOs in family businesses, and they merit further study so that we may better understand the predisposition of such businesses in going international.

Family businesses with a CEO from within the owning family exhibit a lower export propensity, but statistically significant evidence does not imply that private family firms should avoid employing family members in other management positions where they are needed (Westhead & Howorth, 2006). In cases where the CEO is also the owner of the family business, his/her influence and notoriety will determine the strategic behavior of the company in foreign markets. Using a

data set of Indian manufacturing firms, Chittoor et al. (2019) found that companies with owner-CEOs who practice strategic leadership are more likely to internationalize than those with non-owner professional CEOs. According to those authors, this is because their leadership and long-term orientation, along with a less restricted decision-making structure, facilitate their riskier decision-making.

However, when family businesses are taken as a whole, we see that decisions regarding internationalization are made with greater difficulty than in non-family businesses, which tend to achieve better results than family companies when expanding abroad (Ivanova et al., 2015). From examples in the literature, we can deduce that the participation of the family in the ownership and management is quite restrictive regarding making decisions about internationalization (Ivanova et al., 2015). Among the most important restrictions, the following stand out: on the one hand, the excessive risk posed by internationalization, which family businesses do not always want to assume, and on the other hand, the long-term perspective of family businesses does not combine well with the threats posed by undertaking expansion abroad (Hadryś-Nowak, 2018).

Apart from the difficulties that family businesses have when partaking in risky situations, it is also noteworthy that restrictions on the entrance of new capital are tied to the management style of the family business. A style that is more open to the outside world favors the incorporation of new stakeholders, while a more conservative management style impedes this. Under more open strategies, the CEO can play an important role in facilitating or hindering the entrance of new stakeholders. It has been observed that management favors internationalization when external CEOs are present versus the opposite case when the CEO is a family member (Daily & Near, 2000).

CEOs accustomed to management at the domestic level are often not prepared to tackle the cultural diversity or pressure associated with dividing their attention across geographic regions (Ghoshal & Nohria, 1989). The intellectual abilities of CEOs that demonstrate openness to change and learning about new cultures, and having relationships with people from other countries, play important roles in the successful internationalization of their businesses, because they are more able to process new information and make decisions (Herrmann & Datta, 2005).

Along this line, adeptly processing information is crucial to a CEO's work. Here, Upper Echelons Theory allows us to identify the characteristics of CEOs facing internationalization. The central premise of this theory is that the experiences, values, and personalities of executives exert a significant influence on how they interpret situations and in turn will affect their choices (Hambrick, 2007). Thus, in order to handle the complexity and ambiguity of international business, managers must have the characteristics that allow them to process related information effectively (Hsu et al., 2013; Nielsen & Nielsen, 2011). As Herrmann and Datta (2005) propose, CEOs who have advanced information processing capacities can better deal with the complexities of international business.

Some papers have focused on analyzing the role of the CEO in the internationalization process of SMEs based on Upper Echelons Theory (Hsu et al., 2013; Kunisch et al., 2019; Saeed & Muhammad, 2019); however, very few studies have

investigated how the characteristics of managers in family businesses influence internationalization decisions.

In the present work we aim to increase the knowledge regarding the behavior of family businesses, while understanding that the upper echelons of the corporate governance structures in these companies are occupied by family members (D'Allura, 2019; Ramón-Llorens et al., 2017). Our analysis provides a contribution to the line of study with the aim to transfer research on the Upper Echelons Theory to practical aspects of family businesses.

In this paper we aim to identify the qualities of a CEO that most contribute to the internationalization of the family business. In practice, family businesses often intend to go international, but are unable to do so because they do not have a CEO with sufficient managerial skills. Eventually, we find that although CEOs aim to be rational in their decision-making, the ability of managers to gather and process information is generally limited, and strategic decisions regarding internationalization are positively influenced by two basic elements: (1) the existence of a plan that has been agreed upon by the board and which governs the strategy while avoiding conflicts in the presence of a wide range of individual goals, and (2) the managerial characteristics of the CEO, which are based on his/her experiences, values, personality, education, and training.

3 Hypotheses

Our hypotheses are defined according to the notable tradition of studies based on Upper Echelons Theory and the studies that have adapted this theory to the analysis of family businesses (D'Allura, 2019; Hsu et al., 2013; Ramón-Llorens et al., 2017; Saeed & Muhammad, 2019). On this basis, the management team serves as a determining factor in the strategic decisions made by the company (Saeed & Muhammad, 2019). Furthermore, following on from the theory, in order to *manage international complexity and ambiguity*, managers should possess characteristics that enable them to process information effectively (Herrmann & Datta, 2002; Hsu et al., 2013; Ramón-Llorens et al., 2017). Therefore, taking into account the particularities of family businesses, Upper Echelons Theory allows us to assemble the qualities of the CEO. Using this as a basis, we define the hypotheses in the following subsections.

3.1 CEO's education

Education is an important dimension that helps form an individual's knowledge base, abilities, and cognitive preferences (Herrmann & Datta, 2002; Hsu et al., 2013). Some studies have found that the more highly educated executives have greater cognitive complexity, noting that education provides a greater ability to absorb new ideas and an increased capacity to process information (Herrmann & Datta, 2002, 2005; Hitt & Tyler, 1991; Tihanyi et al., 2000).

Particularly, the level of managerial training in family businesses tends to be lower than in other firms. It has been found that there is a preference for family

members to assume management positions, regardless of whether or not they have the necessary skills to do so (Cromie et al., 2001). However, this education may have less importance in these companies due to the superior knowledge of family managers regarding the business, which arises from the acquisition and transmission of expertise, collective learning, integration of knowledge and transmission of experiences between generations, which allows the development of one's own unique knowledge (Chirico & Nordqvist, 2010).

In line with previous research, we assume that a CEO's level of education is an important characteristic in understanding international markets and cultural differences among countries (Hsu et al., 2013; Nielsen & Nielsen, 2011; Ramón-Llorens et al., 2017). We suppose that a CEO with a high level of education is a well-prepared CEO and he/she knows how to develop solutions to problems while having a greater capacity to tackle unknown situations, as with the pathway of the internationalization process (Herrmann & Datta, 2005). The skills of a CEO are called for when difficult situations requiring intense intellectual preparation arise. The greater the environmental turbulence, the greater the difficulty in decision-making, and the greater the information-processing requirements will be (Goll et al., 2007).

Additionally, if CEOs have completed business-related studies, they will be able to assemble more complex organizations, have a better ability to carry out structuring activities, plan coordinated efforts with detailed budgets, and build complex incentive systems (Hambrick & Mason, 1984). To this end, some authors argue that the socio-cognitive abilities of CEOs, such as open attitudes towards new cultures, greater information-processing capacities, plus flexibility and receptiveness to change, are characteristics that can be related to educational achievements and thus play vital roles in improving performance in foreign markets (Herrmann & Datta, 2005; Ramón-Llorens et al., 2017).

Hence, it is accepted that studies in the body of literature take education as a proxy for an executive's basic cognitive knowledge and his/her ability to process information, both of which have an impact on the internationalization of a business (Herrmann & Datta, 2005; Tihanyi et al., 2000). If we refer to the effect of specialized education, there are papers in the literature reporting a strong relationship between CEOs with an education in business and their position in international companies (Geringer & Pendergast, 2010; Geringer et al., 2019). With these considerations in mind, and based on Upper Echelons Theory, which states that managers must have a formal education enabling them to meaningfully process information, we pose the following hypothesis:

H₁ CEOs with a high level of business education will lead to a higher level of internationalization in family businesses.

3.2 Incorporation of a new family generation

Previous studies have found that new generations are more likely to add a new impetus to the entrepreneurial orientation of family businesses (Kellermanns et al., 2008). New generations have acquired the capacities that the founder lacked and

therefore they are open to new ideas and strategies. Consequently, subsequent generations can act as triggers to seeking international entrepreneurship opportunities (Mitter et al., 2014).

Most empirical studies have shown that the incorporation of new generations has a positive influence on the internationalization of a family business (Calabrò & Mussolino, 2011; Fernández & Nieto, 2005; Menéndez-Requejo, 2005). In addition, some family businesses even go international faster after a generational shift, as the new momentum of the new generation leads to a radical change in vision, resulting in a strong long-term commitment to internationalization (Graves & Thomas, 2008).

Executives of older age also tend to be more loyal to the systems with which they have been working for years. Unfortunately (or fortunately), they are more prone to dismiss the idea of embarking on new pathways, and they tend to perpetuate the kinds of strategies that have traditionally been employed by the organization (Hambrick & Mason, 1984). That is, age can also affect the adaptation of executives to new management processes (Tihanyi et al., 2000). Older-aged executives tend to hesitate when faced with innovation, as they often feel that a strategy with a greater level of uncertainty could translate to poor results for the company, thus compromising their own jobs, careers, and financial situations (Hambrick & Mason, 1984).

Specifically, in family businesses it has been shown that generational succession leads to new opportunities. The arrival of young CEOs triggers innovation and the possibility of gaining competitive advantages by opening up to foreign markets (Levering & Moskowitz, 1993). It is easy to believe that family businesses are managed in a conservative manner based on their desire to build a legacy. Due to the high risk of failure in this regard however the ideology is not entirely true, because when new family members begin their participation in the management of the company, a change in strategy is likely to occur (Levering & Moskowitz, 1993). Using these reasons as a basis, we put forward the following hypothesis:

H₂ The incorporation of new generations of family members into the management of family businesses has positive effects on the internationalization of those businesses.

3.3 Family versus non-family CEO

Family businesses can have CEOs who are either family members or non-family members. A CEO from outside of the family would have less constraints when managing and would base his/her decisions on profitability objectives. If the CEO is a family member, in addition to the objectives of the firm, he/she is also constrained by other, non-financial objectives related to the continuity of the business and the passing on of the company to future generations (Gallizo et al., 2017). This can inhibit free decision making when it comes to internationalization. It has been shown that family CEOs have a dramatically large and negative causal impact on the profitability of the business. Profitability falls by at least four percentage points in transitions from non-family-member CEOs to family-member CEOs (Gallizo et al., 2017). In particular, it has been found that, in family businesses, when the highest

levels of the board are occupied by non-family members, their activities are more likely to be international than if these positions were occupied by family members (Calabrò et al., 2009).

Nevertheless, it has also been shown that it is positive for businesses to have a CEO who is a family member. Family experience, culture, and control are some of the values that a family CEO can provide (Astrachan & Klein, 2002), and this can be a source of competitive advantages; thus helping to create value in relationships with economic agents.

Various authors have suggested that family education, professional education, personal experiences, and systems of values allow CEOs to adopt a particular form of reasoning, which then influences the way they analyze information for creating a business strategy (Blanco et al., 2009; Crossland et al., 2014; Nadkarni & Herrmann, 2010; Peterson et al., 2003). For this reason, family-member CEOs are noted for their commitment to the business, having shared family values and also being trusted by the family, which can be transmitted to the (foreign) organization(s) to unite forces and direct available resources in the business towards achieving international success (Fernández & Nieto, 2005).

Decisions that may seem unprofessional to an outside observer—such as naming an inexperienced family member as the CEO of the company—could be logical to the family owners, as the action can provide benefits that are not financial in nature. Specifically, for those companies that replace non-family member CEOs with family-member CEOs, Kang and Kim (2016) found no evidence that the decision to change the CEO category would decrease or increase the performance of a company. Previous findings also suggest that having low levels of growth and profit are associated with the selection of a non-family member CEO (Datta & Guthrie, 1994). Hence, it might be the case that a CEO is given the position but not because of his/her experience, and rather in order to be a fitting representative of the family identity. For this reason, we offer the following hypothesis:

H₃ Having a CEO who is a family member negatively affects internationalization in family businesses.

3.4 Existence of a strategic plan in the family business

Some papers in the literature have focused on the importance of different aspects related to the strategic decision-making processes in international business (Musso & Francioni, 2012). Particularly, those studies aim to understand whether there is a relationship between the characteristics of decision makers within SMEs (e.g., international experience, nationality, and skill) and the process of strategic decision making at an international level. Their results reveal the existence of a strong correlation between certain CEO characteristics and the process of making decisions based on a strategic plan (Musso & Francioni, 2012). In other words, if a CEO with international experience and information-processing abilities has a consensual strategic plan within a family business, the company will be more likely to expand internationally (Papadakis, 2006). Regarding this strategic plan, the families behind family

businesses must be involved in opening up to the outside world, being proactive when facing new challenges, and employing strategic planning tools (Gibcus et al., 2009; Hadryś-Nowak, 2018).

Through strategic internationalization plans, the boards of family businesses can consider and anticipate the evolution of the environment and the issues that this might imply. This knowledge allows for measures to be designed that would respond to new challenges. Previous studies have shown that a lack of formal planning leads companies to have poor results when exporting (Aaby & Slater, 1989). This is because having a formally drawn-up plan reduces the uncertainty that comes from export markets and means that the strategy can be deployed more effectively (Cavusgil & Zou, 1994).

Perspectives on how to move forward with the internationalization of a family business may be varied among members of the board and could lead to conflict among owners, executives, and the CEO (Zahra, 2003), as some could be considering what is best for the company while others put the family first. In these situations, internal conflicts tend to arise for two reasons: (1) there are family members who refuse to risk financial resources on internationalization for fear of losing their inheritance, and (2) there are family members who feel that their traditional areas of control are being threatened (Zahra, 2003). In both cases the CEO's negotiating skills are required to reach an agreement and calm family members who perceive risk in taking the business abroad.

Therefore, for companies to successfully compete internationally, they must formally plan their desired objectives and decide what resources are needed to achieve these goals (Cavusgil & Zou, 1994). However, in family businesses, having a strategic plan agreed upon by members of the board has an additional advantage, in that it builds collective determination to avoid future tension (Mustakallio et al., 2002). For this reason, we pose the following hypothesis:

H₄ Family business managers having medium/long-term strategic plans are more likely to internationalize.

3.5 Tenure of the CEO

Management teams that stay in the company for a long period of time can reproduce similar attitudes and subsequently not evolve. This is the reason for research into whether the permanence in the position of CEO over a long period of time affects the CEO's decisions (Katz, 1982). To the best of our knowledge, there have been some studies on this issue but the results have been inconclusive. Studies have shown that CEOs with a longer tenure can resist change, making them less likely to initiate risky processes such as company internationalization (Finkelstein & Hambrick, 1996). Similarly, other authors have found that shorter stays in a firm could have a positive relationship with the international diversity of the company (Niñerola et al., 2016).

From another perspective, it is observed that CEOs are actively involved in the corporate reputation when they have spent more time in their position. The

permanence of the CEO is a commitment to management and corporate reputation, especially in leadership activities such as internationalizing the company (Conte, 2018). Other studies have found that the probability of an internationalization of the company becomes stronger as the mandate of the CEO extends over time (Woo, 2019). These findings show that the alignment of interests between a CEO and shareholders affects the strategic decision of early internationalization (Woo, 2019).

Despite the above arguments, tenure is found to have a curvilinear relationship with the internationalization of SMEs, with rapid learning in the initial management years followed by a deterioration when he/she settles down (Saeed & Muhammad, 2019). Moreover, in family firms the inverse U-shaped relationship is less pronounced and the level of entrepreneurial orientation peaks considerably later in the CEO's tenure when compared with nonfamily firms (Boling et al., 2015).

Taking into consideration the papers indicated above, we expect that CEOs who have held their position for less time are more willing to open up to new markets in countries where they have not previously carried out activities. Based on this, we pose the following hypothesis:

H₅ Family businesses with CEOs having held the position for longer, will practice internationalization less.

3.6 Experience of the CEO

The abilities required to internationalize a company could be acquired through previous professional experiences in other companies. In this sense, the internationalization of a company could be easier if the CEO has previously participated in the internationalization of another company in the past. Experience can help face up to additional complexities of cultural distance in internationalization processes (Carpenter et al., 2001). Based on Information Processing Theory, international experience and shared team-specific experience of a top management team (TMT) positively moderate the relationship between added cultural distance and firm profitability (Hutzschenreuter & Horstkotte, 2013).

This professional experience provides some knowledge about the best way to reach this goal and offers information on how to deal with the difficulties that could arise during the process (Steward, 2006). A particularly important factor that influences information processing has been argued to be the extent of prior relevant experience that TMT members bring to the task (Finkelstein et al., 2009).

In some family businesses, owners send the potential family CEOs to work in other companies to acquire various facets of professional experience and enrich the set of resources of the family business. Without this experience a problem of homogeneity of thought could occur in family firms (Webb et al., 2010), thus the influence of the founding member on other members of the family induces everyone to hold a similar attitude to changes in the environment and to perceive the same signals (Miller & Le Breton-Miller, 2006). In other words, there may be a degree of endogamy due to lack of training or experience outside the family business (Lorenzo & Núñez-Cacho, 2013). In this way, Okorafo (1999) found that if a family business

does not get involved in foreign markets in the first and second generations, then it is unlikely to do so in later generations, which could be explained by this endogamy. In the same line, previous studies have pointed to a strong and significant impact of individual CEO-related variables (such as previous professional experience outside the family business) on the entrepreneurial behavior of the company (Corbetta et al., 2004). For this reason, we pose the following hypothesis:

H₆ Family businesses that require family-member managers to have previous professional experience outside the company are more likely to internationalize.

4 Methodology

4.1 Selection of the sample

The data analyzed in this study correspond to a sample of 1005 family businesses in Spain during the year 2016. These data coincide with the sample of businesses used in the study published by Spain's Family Business Institute (2018), and they were obtained from the list of 94,565 Spanish companies that fell under the Family Business Institute (2015) definition of a family business. This definition uses the percentages of capital in the hands of the owning family as its base; however, the Family Business Institute considers it inappropriate to apply the same percentages of capital to all companies as those businesses with more dispersed ownership structures do not require as high a percentage of (family) ownership to exert control over the business. With this in mind, a business is considered to be a family business in the following cases:

- Dispersed ownership structure (no shareholder has more than 50% of the capital). The business shall be considered a family business if one person or family is in possession of more than 5%, in the case of individuals, or 20% as a whole, and the natural person shareholder is a member of the board of directors or the whole represents shareholders with more than 20% of capital and management. Otherwise, the business will be classified as non-family.
- Concentrated ownership structure (one shareholder has more than 50% of the capital). The business shall be considered a family business when the family shareholder controls the majority portion (50.01%) or when shareholder-executives have a share > 50.01%. Businesses not meeting this criterion will be considered non-family businesses.

As explained by the Family Business Institute (2018), the final sample of 1005 businesses was obtained through random selection, following a systematic random procedure in existing national telephone databases. With regards to the distribution of the sample, we made use of stratified sampling that considered the autonomous community, size, and commercial activity of the businesses in order to obtain a sample that is highly representative of family businesses in Spain.

Financial and economic data on the businesses were obtained from the database of the Iberian Balance Sheet Analysis System (SABI is the Spanish acronym). Information regarding the characteristics of the executives in the businesses, their management of the business, and their participation in international markets was obtained via telephone interviews with CEOs or top managers of the businesses using a structured questionnaire.

Table 1 shows the distribution of businesses in the sample by size (number of employees) and commercial activity (NACE-REV. 2; i.e., European Commission statistical classification of economic activities from January 1, 2008 onwards):

As can be seen, the sample is primarily made up of small businesses (between 10 and 49 workers), representing 60.3% of all of the companies in the sample. They are followed by micro-sized businesses (with < 10 workers), which account for 30.05% of the companies. There are far fewer medium-sized (between 50 and 249 workers) and large-sized (more than 250 workers) businesses, representing 8.76% and 0.90% of the total, respectively. Regarding commercial activities, the largest group of businesses (31.04%) is made up of those practicing wholesale and retail trade and motor vehicle and motorcycle repair. This is followed by manufacturing (21.29%) and construction (12.84%) industries.

Table 1 Distribution of businesses by commercial activity and size

Activity	Micro	Small	Medium	Large	Total
Agriculture, farming, forestry, and fishing	9	18	2	0	29
Extractive industries	1	3	0	0	4
Manufacturing industries	39	147	25	3	214
Provision of electricity, gas, steam, and air conditioning	1	1	0	0	2
Provision of water, sanitation activities, waste management, and decontamination	1	3	1	0	5
Construction	56	67	6	0	129
Wholesale and retail trade; motor vehicle and motorcycle repair	118	174	20	0	312
Transport and storage	15	38	5	1	59
Hospitality	12	47	7	1	67
Information and communications	5	13	4	1	23
Insurance and financial activities	3	3	0	0	6
Real estate	9	5	0	0	14
Technical, scientific, and professional activities	13	29	4	0	46
Administrative and support service activities	9	23	7	2	41
Education	2	7	2	0	11
Healthcare and social service activities	3	12	3	1	19
Entertainment, recreation, and artistic activities	3	8	1	0	12
Other services	3	8	1	0	12
Total	302	606	88	9	1005

4.2 Defining the model

To analyze the influence that manager or CEO characteristics have on internationalization in family businesses, we estimate two types of regression models. The first type (Model P) aims to estimate the *willingness to become internationalized* in family businesses and it is a Probit regression, which is an appropriate model when employing binary dependent variables. This enables us to distinguish between family businesses that adopted internationalization strategies and companies that did not.

The second kind of model (Model T) is a Tobit regression that analyzes whether the characteristics of the CEO or the management have any influence on the level at which family businesses export. This kind of regression model is considered appropriate for dependent variables with a range that is constrained in some way. That is to say, there are bounded minimum and/or maximum values. Here, one important characteristic of the data is that the value of the variable can be zero for many observations. This affects linearity, hence the method of least squares is clearly inappropriate (Fernández & Nieto, 2005). In our case, the dependent variable is *export intensity*, and it is bounded by 0 if the company does not export and 100 if all the company's sales are exported. Importantly, the Tobit model may take values between 0 and 100, thus enabling us to consider the particular case of the extremes in addition to the intermediate cases. The variables we employ are described hereinafter and are summarized in Table 2.

4.3 Dependent variables

Business internationalization can be analyzed as an evolving process that occurs over various stages and classified based on companies' gradual participation in international markets. Not all companies take the full path to internationalization. Instead, many restrict their participation in foreign markets to opportunistic deals responding to unplanned orders from clients and/or foreign distributors (Cavusgil, 1984). Besides this, businesses' activities abroad can be addressed by considering the possible ways for entering international markets: exporting, cooperation, alliances, and investing directly abroad (Root, 1994). In order to analyze the internationalization of a company, two main dependent variables have been regularly used in the literature to capture the exporting behavior of companies: willingness to export and export intensity (Bonaccorsi, 1992; Calof, 1993; Sullivan, 1994; Wakelin, 1998). The willingness to become internationalized is sometimes measured with a dependent dummy variable linked to having or not having foreign sales. However, in our opinion this variable does not show the real willingness of a company to become internationalized because it could be the result of unplanned transactions or one-off sales. Instead, to measure this willingness we study the implementation of specific strategies for entering international markets. In particular, we consider the adoption of three strategies: exporting, strategic alliances, and investing directly abroad.

Table 2 Variables in the model**Dependent variables**

Exportation	Dichotomous variable (1 if the company has adopted an exportation strategy to become internationalized; 0 if not)
Strategic alliances	Dichotomous variable (1 if the company has engaged in strategic alliances to become internationalized; 0 if not)
Direct investment	Dichotomous variable (1 if the company has invested directly abroad to become internationalized; 0 if not)
Export intensity	Export sales/total sales

Independent variables

CEO's education	Dichotomous variable (1 if the CEO has completed studies in business administration or related; 0 if he don't have it)
Generation in charge of the business	Dichotomous variable (1 if first generation; 0 otherwise)
Family CEO	Lineage of the CEO (1 from the family; 0 external)
Experience	Experience required for family members to occupy a managerial position (1 if experience in other companies is required; 0 if not)
Strategic plan	Dichotomous variable (1 if it exists; 0 if it does not exist)
CEO's tenure	Natural logarithm of the number of years the CEO has been in charge

Control variables

Size	Natural logarithm of total assets
Activity sector	$\frac{\text{Average_Sales_Export_Activity_Sectors}}{\text{Average_Total_Sales_Activity_Sectors}}$
Financial autonomy	$\frac{\text{Equity}}{\text{Total_Assets}}$
Age	Natural logarithm of the number of years since the company was founded
R&D	Dichotomous variable (1 if the company maintains research relationships with Universities or Research centers; 0 otherwise)

Hence, to analyze the willingness to become internationalized (Model P) we have the following three dependent variables:

- Exporting: Exporting (direct and indirect) is the simplest and most traditional way of starting to internationalize a company. Production is kept in the local market and then sold in foreign markets. Therefore, this is the internationalization strategy involving the least risk and effort. This variable takes a value of 1 if the company has adopted a strategy of exporting to become internationalized and 0 if the company does not export.
- Strategic alliances: This refers to cooperation among two or more independent firms that commit to working together towards common objectives, either through licenses (rights to use production processes, patents, etc.) or franchises. This variable takes a value of 1 if the company has established strategic alliances to become internationalized and 0 if the company has not.
- Direct invest: This refers to a company that is operating abroad with its own means in the destination country, for example, through joint ventures (or shared companies) or its own subsidiaries. This variable takes a value of 1 if

the company has invested directly abroad to become internationalized and 0 if the company has not.

The strategy chosen by a family business to enter foreign markets is a relevant issue in its internationalization because the different ways of entry are characterized by interrelated variables: degree of control, commitment of resources, cost of exit, etc. In this sense, we find it interesting to better understand which strategies are preferred by Spanish family businesses.

Therefore, to measure the degree of the internationalization (Model T), and similarly to previous studies in the literature (Fernández & Nieto, 2005; Monreal-Perez & Sánchez-Marín, 2017), we use export data and the following dependent variable:

- Export intensity: This variable is calculated as the proportion of export sales over the company's total sales.

4.4 Independent variables

4.4.1 CEO's education

This variable focuses on the type of education received by the CEO of the company. Particularly, it takes into account whether or not the CEO has completed university studies in business administration or a related field such as finance. The variable takes a value of 1 if the CEO has completed undergraduate studies in these fields or postgraduate studies in business administration and 0 if the CEO has not. Previous studies have found a positive relationship between the CEO's level of education and business internationalization (Barroso et al., 2011; Cavusgil & Naor, 1987; Hsu et al., 2013; Ramón-Llorens et al., 2017). Further, in particular, the relationship is stronger regarding MBA or postgraduate degrees in business education (Geringer et al., 2019).

4.4.2 Generation in charge of the business

We include this dichotomous variable that takes a value of 1 if the CEO in charge of the company belongs to the first generation of the founding family and 0 if the CEO is from a second or later generation of family members. Previous studies have suggested that the succession of a newer generation could negatively (Okorofo, 1999) or positively (Fernández & Nieto, 2005; Menéndez-Requejo, 2005) affect the process of internationalization.

4.4.3 CEO is a member of the family

This dichotomous variable takes a value of 1 when the CEO is a member of the family that has control over the business and 0 when the CEO is a professional from outside the family. This characteristic could imply different managerial abilities (Finkelstein & Hambrick, 1996) and lead to different kinds of agency problems (Jensen & Meckling,

1976), which would undoubtedly affect the performance of the company (Che & Zhang, 2017). Studies in the literature (see for example: Alayo et al., 2018), have found that a high concentration of family members in executive roles hinders the process of internationalizing the business.

4.4.4 Experience

This variable takes into account the previous professional experience of the company managers. It is a dichotomous variable that takes a value of 1 if previous professional experience in another company is required for family members to become a company manager and 0 if it is not required. Corbetta et al. (2004) found that previous professional experience outside the family business significantly influences the entrepreneurial activities of family companies (Corbetta et al., 2004).

4.4.5 Strategic plan in the family business

This dichotomous variable takes a value of 1 if the business has a medium/long-term strategic plan and 0 if it does not. To the best of our knowledge, in many studies internationalization processes require businesses to make strategic plans, as going international requires various kinds of resources (i.e., financial, managerial, etc.) that allow the company to reach beyond national borders and reduce the uncertainty synonymous with export markets (Dunning, 1988; Hymer, 1976). Aragón and Monreal (2008) have found that the existence of a formal strategic plan explains the increased exporting activities among industrial SMEs in Spain.

In particular, having a strategic plan in family businesses provides an additional advantage in that it helps to build the collective determination of family members. When internationalization decisions have to be made, having a strategic plan agreed upon by the board avoids future tension between family members with opposing views regarding the future of the business (Mustakallio et al., 2002).

4.4.6 CEO's tenure

This variable counts the number of years the CEO has been in charge of the firm (i.e., from the moment that they were named to the date the survey was carried out in 2016). This variable was taken as a natural logarithm in order to minimize asymmetry given its high level of variability. Such variables have commonly been used in the literature on executives and corporate governance. A number of studies have found a negative relationship between the number of years a CEO has held the position and the level of internationalization in the company (Barroso et al., 2011; Kaymak & Bektas, 2008; Kor, 2006; McIntyre et al., 2007).

4.5 Control variables

4.5.1 Size (Ln assets)

As an indicator of business size, we took the natural logarithm of the total business assets. Size could be related to a number of a business characteristics hence its inclusion as a control variable is common (Hsu et al., 2013; Zahra et al., 2007) and even in studies on family businesses (Barroso et al., 2011; Fernández & Nieto, 2005; Ramón-Llorens et al., 2017). In our case, the variable could be representative of the resources that the firm has available to undertake internationalization efforts, in which case it would exert a positive influence, as has been suggested by Cerrato and Piva (2012), Zahra et al. (2007), and Ramón-Llorens et al. (2017). Nevertheless, some studies have shown that having less resources available is not necessarily an obstacle to internationalization (Bonaccorsi, 1992; Calof, 1993).

4.5.2 Activity sector

Given that the sample includes businesses from a variety of sectors and activities, which could affect a company's level of internationalization (Rivas et al., 2009), we have included a variable to control for this. The variable was calculated as the average level of internationalization in the activity sector in which the company operates, as was done in the study by Fernández and Nieto (2005) but by distinguishing activities and not solely sectors.

4.5.3 Financial autonomy

This measure is the quotient of equity and a company's total assets. We expect that a company with high levels of debt will not have the resources needed to undertake the process of internationalization, as it generally requires products, services, markets, and/or technology to be adapted. Thus, we expect a positive relationship between the variables. In this way, family businesses prefer to keep control of their financial decisions, participating less in capital markets and limiting the entry of new partners that could put their continuity at risk. For this reason, family businesses tend to have a harder time when it comes to having sufficient financial resources, which limits their growth potential and forces them to rely, in large part, on self-financing. The inclusion of this variable or its opposite (leverage) as control variables is quite common in the literature (Andres, 2004; Arosa et al., 2010; Ramón-Llorens et al., 2017).

4.5.4 Age (Ln age)

This variable is calculated as the number of years since the company was founded. We take the natural logarithm of this number in order to minimize asymmetry, as it presents a high level of variability. The inclusion of age as a control variable is common in the literature (Andres, 2008; Arosa et al., 2010; Cabrera-Suárez & Martín-Santana, 2015). It is seen as a measure of a company's ability to compete in a highly competitive environment (i.e., the business world). We have included

this variable because companies with greater longevities tend to envisage greater levels of internationalization (Calof, 1993; Zahra et al., 2007). However, Barroso et al. (2011) have shown there is an inverse relationship in listed Spanish companies.

4.5.5 R&D (research and development)

This dichotomous variable has a value of 1 when the company maintains a research relationship with a University or research center and 0 if it does not. Previous studies provide strong evidence that R&D expenditure and investment both have a positive effect on a firm's export intensity (Cieslik et al., 2017; Roper & Love, 2001; Veugelers & Cassiman, 1999). Expenditure on R&D has the potential to enhance quality and generate economic growth in the production process, and these factors may increase the likelihood of entering the export market (Srinivasan & Archana, 2011).

Our model is laid out as per Eq. (1):

$$\begin{aligned}
 INT = & \beta_0 + \beta_1 EDUCATION + \beta_2 GENERATION + \beta_3 FAMILY + \beta_4 EXPERIENCE \\
 & + \beta_5 ESTRATPLAN + \beta_6 TENURE + \beta_7 SIZE + \beta_8 ACTIVITYSECTOR \\
 & + \beta_9 FINANAUTONOMY + \beta_{10} AGE + \beta_{11} R\&D
 \end{aligned}
 \tag{1}$$

where INT is the willingness to become internationalized for the Probit model (P), and also the export intensity for the Tobit model (T).

Table 3 Descriptive statistics

Variable	Mean	Std. dev.	Min.	Max.
Exportation	0.2498	0.4331	0	1
Strategic alliances	0.0567	0.2314	0	1
Direct invest	0.0388	0.1932	0	1
Export intensity	0.1000	0.2169	0	1
Education	0.3134	0.4641	0	1
Generation	0.4796	0.4998	0	1
Family CEO	0.9025	0.2968	0	1
Experience	0.1114	0.3148	0	1
Strategic plan	0.3532	0.4782	0	1
Ln tenure	2.6062	0.8719	0	4.0943
Size (Ln assets)	7.5283	1.2827	2.86	12.64
Activity sector	0.09956	0.5703	0	0.1914
Fin. autonomy	0.4428	0.4053	- 5.53	1
Ln age	3.0224	0.4936	1.1	4.6
R&D	0.1721	0.3777	0	1

5 Results

5.1 Descriptive statistics and correlations

Table 3 shows the descriptive statistics of the variables used; it is noteworthy that some of the variables are dichotomous variables. Specifically, the table shows the average values, standard deviations, and the maximum and minimum values of the variables in the model. The results show that around 25% of the family businesses in the sample have adopted a strategy of exporting to become internationalized. In addition, only 5.67% of the companies have established strategic alliances to this end, and only 3.88% have invested directly abroad. Hence, these results reveal the low levels of willingness among family businesses as a whole to become internationalized. We can also see that on average 10% of the total sales of the companies in the sample take place abroad.

Regarding the independent variables, we can see that only around 31% of the CEOs in the sample have completed advanced studies in business administration or related fields. Almost half of the businesses in the sample are run by the first generation of family owners, while the others are run by the second generation or later. In 90% of the cases, the CEO is a family member, while in only 11% of these family businesses previous professional experience in other firms is required to occupy a managerial position. In addition, only 35% of the sample has a medium/long-term strategic plan. Finally, the average tenure of CEOs in the sample is 13.55 years.

Table 4 shows the matrix of Pearson correlations to test for multicollinearity in the model. As can be seen, there is little correlation between variables, and it is often non-significant. To complement this analysis, we have provided the variance inflation factor (VIF), and we can see that all of the VIFs are lower than 2, meaning that the results are not biased due to multicollinearity.

5.2 Regression results

Table 5 shows the results of the regression models that we estimated. In the first three models (Model P), the dependent variable is the willingness of family businesses to become internationalized by adopting specific strategies: exportation, strategic alliances, or direct investment. In these models, the variable takes a value of 1 if the business has adopted the particular strategy under consideration and 0 if it has not. In the last model (Model T), the dependent variable is the export intensity of family businesses, and it is calculated as the proportion of exported sales over the company's total sales.

Regarding the variables being considered in this study, we can see that the kind of education that a CEO has undertaken has a positive and statistically significant effect on the adoption of an exporting strategy (at a 10% level of significance) but not on the adoption of an internationalization strategy based on strategic alliances or direct investments. Also, if the CEO of a company has completed studies in business administration or finance, this significantly (at a 1% confidence level) contributes to

Table 4 Pairwise correlations and variance inflation factor

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	VIF
(1) Exportation	1															
(2) Strategic alliances	0.037	1														
(3) Direct invest	0.003	0.151*	1													
(4) Export intensity	0.600*	0.215*	0.185*	1												
(5) Education	0.066*	0.066*	0.075*	0.120*	1											1.11
(6) Generation	-0.034	0.014	-0.038	-0.002	-0.168*	1										1.15
(7) Family CEO	-0.027	-0.035	-0.056	-0.082*	-0.205*	0.067*	1									1.11
(8) Experience	0.029	0.064*	0.076*	0.027	0.054	-0.049	0.010	1								1.03
(9) Strategic plan	0.126*	0.084*	0.051	0.121*	0.105*	-0.004	-0.066*	0.117*	1							1.06
(10) Tenure	0.037	-0.077*	0.015	-0.046	-0.178*	0.130*	0.263*	-0.010	-0.055	1						1.16
(11) Size	0.221*	0.123*	0.147*	0.237*	0.171*	-0.1356*	-0.107*	0.020	0.163*	0.022	1					1.22
(12) Activity sector	0.320*	0.100*	0.137*	0.263*	0.032	-0.125*	0.029	0.063	0.002	0.044	0.180*	1				1.07
(13) Fin. autonomy	0.033	-0.000	0.028	0.022	0.017	-0.054	0.030	0.040	0.001	0.020	0.086*	0.073*	1			1.08
(14) Age	0.076*	0.016	-0.004	0.004	0.035	-0.272*	-0.008	0.042	-0.019	0.187*	0.157*	0.170*	0.167*	1		1.24
(15) R&D	0.151*	0.150*	0.127*	0.154*	0.090*	-0.037	-0.090*	0.006	0.2031*	0.013	0.128*	0.054	-0.003	0.050	1	1.07

* $p < 0.05$

Table 5 Results of the empirical models

	(P) Exportation		(P) Strategic alliances		(P) Direct invest		(T) Export intensity	
	Coef.	Z	Coef.	Z	Coef.	Z	Coef.	T
Education	0.1649	1.69*	0.0982	0.76	0.2381	1.37	0.0971	2.92***
Generation	0.0992	1.56	0.2416	1.94*	-0.1298	-0.54	0.0689	1.49
Family CEO	-0.0133	-0.07	0.3425	1.58	-0.3687	-1.89*	-0.0358	-0.48
Experience	0.0566	0.49	0.3833	3.16***	0.3175	2.22**	0.0460	1.21
Strategic plan	0.2120	3.72***	0.0482	0.22	-0.0554	-0.42	0.0754	3.57***
Tenure	0.0847	1.19	-0.1792	-2.27**	0.1387	2.00**	0.0071	0.27
Size	0.1937	3.78***	0.1188	1.34	0.1932	3.76***	0.0909	9.50***
Activity sector	7.8352	9.19***	3.3061	3.76***	6.1519	4.61***	3.2930	5.97***
Fin. autonomy	-0.0527	-0.64	-0.0465	-0.24	0.3840	1.50	0.0010	0.02
Ln age	-0.1042	-0.84	-0.0357	-0.19	-0.5264	-4.42***	-0.1009	-1.35
R&D	0.3702	2.64***	0.6200	4.63***	-0.5718	2.89***	-0.1964	6.05***
Cons.	-2.7682	-6.18	-2.4041	-4.01	-2.2974	-2.87	-0.8847	-5.26
No. observations	1.005		1.005		1.005		1.005	
Log pseudo-likelihood	-437.76		-166.35		-126.53		419.53	
Pseudo R ²	0.1462		0.1133		0.1809		0.1938	

Standard error adjusted for 18 sector clusters

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

increasing the export intensity of the company. This means that the probability of a family business becoming internationalized using an exportation strategy increases along with the CEO's academic training in business. These results are in line with several previous studies in the literature (Barroso et al., 2011; Fernández & Nieto, 2005; Geringer & Pendergast, 2010; Geringer et al., 2019; Ramón-Llorens et al., 2017) and lead us to accept Hypothesis 1. Therefore, CEOs with advanced degrees in business education increase the capacity for family businesses to export abroad.

Other variables related to the CEO, such as his/her tenure as CEO or whether or not he/she is a member of the owning family, have no statistically significant effect on the propensity to export or on the intensity of exporting, in line with the results of the studies by Merino et al. (2014) and Calabrò and Mussolino (2011). However, we can identify the influence of these variables on the adoption of other internationalization strategies. For instance, having a family-member CEO has a statistically significant negative effect on the adoption of an internationalization strategy based on direct investment (with a level of significance of 10%). This result allows us to accept, at least in part, Hypothesis 3. Sometimes, family CEOs are constrained by non-financial objectives related to the continuity of the business and the passing on of the company to future generations (Gallizo et al., 2017), which could inhibit the adoption of internationalization strategies by this kind of CEO.

With regards to tenure, the results reveal different effects depending on the strategy considered. We can identify a statistically significant negative effect on the establishment of strategic alliances (at the 5% level of significance) and a statistically significant positive effect on making direct investments (also at the 5% level of significance). Hence, this result reveals that CEOs who have spent more time in charge of the company have clearer preferences regarding the best way to become internationalized, avoiding strategic alliances and opting for direct investments abroad. The positive effect of this variable on the adoption of an internationalization strategy based on direct investments abroad leads us to reject Hypothesis 5, as a negative effect on internationalization is not confirmed.

Regarding professional experience outside the firm, we can see that companies requiring family members to have some outside professional experience before becoming a manager of the family business are more likely to go international via the adoption of strategies based on establishing strategic alliances (at a 1% level of significance) and also via direct investments abroad (5% level of significance). This result is in line with Corbetta et al. (2004), who found support for the idea that previous professional experience outside the family business influences the entrepreneurial activities of the company, i.e., internationalization. Hence, we can accept Hypothesis 6.

The existence of a strategic plan that has been agreed upon by the family business does have a positive and statistically significant effect both on willingness to export and export intensity (at the 1% level of significance). This reinforces the idea that internationalization in family businesses requires more long-term strategic planning, as it is known that such businesses tend to be more reluctant to expand abroad (Casado et al., 1997) and tend to begin internationalizing slowly, focusing their activities on business dealings that could be considered more strategically important in the long term (Fernández & Nieto, 2005). The existence of a strategic plan, however, does not exert any significant influence on the other strategies (strategic alliances or direct investment). Therefore, we accept Hypothesis 4 which suggests that the presence of a strategic plan in a family business has a positive influence on its internationalization, although this influence is only visible in terms of exportation.

We find that the generation in control of the company has a weakly significant influence in only one model. In particular, we found that when the first generation is in charge, companies are more likely to go international by establishing strategic alliances (at the 10% level of significance). Hence, we reject Hypothesis 2. These results are in line with Okorafo (1999) who stated that if a family business does not get involved in foreign markets in the first generations it is unlikely to do so in later generations.

Finally, with respect to the control variables, it can be seen that the size, R&D, and the activity sector in which the company operates have statistically significant effects in almost all the models estimated. These results suggest that larger businesses undergo higher levels of internationalization, a finding in line with other studies (see, for example, Cerrato & Piva, 2012; Ramón-Llorens et al., 2017; Zahra et al., 2007) that relate having more available resources with more internationalization. Regarding the research relationships with Universities and research centers, the positive effect on the adoption of internationalization strategies is in line with

previous studies (Cieslik et al., 2017; Roper & Love, 2001; Veugelers & Cassiman, 1999) suggesting that R&D has the potential to enhance quality and to generate economic growth in the production sector, all of which contributes to going international (Srinivasan & Archana, 2011). With regards to the activity sector in which businesses operate, our results are in line with previous studies (Fernández & Nieto, 2005; Rivas et al., 2009) and show that export willingness and intensity, as well as having an internationalization strategy based on direct investments or strategic alliances, are highly linked to the activity sector, as belonging to one activity sector or another implies more or less complexity when it comes to adapting products, services, processes, or technologies, among other aspects.

Neither financial autonomy nor the age of the company have a statistically significant impact on the adoption of an internationalization strategy based on exporting or on the establishment of strategic alliances. Only a certain degree of significant influence is observed when we consider an internationalization strategy based on direct investments. Specifically, the results show that the older the company is, the less it will opt for direct investment as a strategy to become internationalized.

As can be seen, the Pseudo R² for the estimated models ranges from 0.11 to 0.19. It means that these models only explain a small portion of the variability of our dependent variables and the existence of some omitted variables which are even more relevant to determine the adoption of the different internationalization strategies. Despite this, the influence found for some CEO attributes is clear.

6 Discussion and conclusions

Our study draws on Upper Echelons Theory to analyze the influence that the managerial characteristics of family businesses in Spain have on their level of internationalization. To do this, we considered a sample of 1005 family businesses that are representative of such Spanish businesses in 2016. We then used econometric models (Probit and Tobit) to analyze which variables influence the willingness of these businesses to become internationalized as well as their export intensity. To capture this willingness to go international, we considered the adoption of three different strategies (exporting, strategic alliances, and direct investment). The analysis also included qualitative financial variables related to the family businesses themselves.

Our results show that the strategy most used by family businesses when it comes to internationalizing is the export strategy (25%). It is the form of entry into international markets that involves less risk and commitment of resources. The other two strategies are less usual in family businesses; the establishment of strategic alliances was only carried out in 5.7% of the sample, while only 3.9% of the family businesses made direct investments abroad, which would be the riskiest option.

The results further reveal that family businesses as a whole have a low willingness to internationalize, and only 10% of their total sales are made abroad. However, these results are not surprising, mainly because of the characteristics normally attributed to family businesses that differentiate them from non-family businesses, such as greater risk aversion and restrictions on the entry of new capital from outside the family. Family businesses often show adverse behavior to any strategy that

may potentially involve a loss of control. Internationalization involves entering uncertain environments and requires, in many cases, a structural adaptation in the company that might be met with resistance by family members who belong to the board of directors. In this sense, and as the results reveal, the existence of a consensual strategic plan can reduce uncertainty and risk inherent in the process of internationalization and facilitate participation in foreign markets. However, we observe that only 35% of Spanish family businesses have such a plan.

The results of the regressions confirm that managerial characteristics influence the internationalization of family businesses. However, there are some differences depending on the internationalization strategy considered. For example, the kind of education received by the CEO or the existence of a consensual strategic plan in the family business all have positive and statistically significant influences on the willingness of family businesses to export and also their export intensity. Hence, having a CEO with an education in business administration (or similar) could have an effect of increasing a company's ability to confront new strategic situations, process information, and tackle new organizational challenges. Greater managerial capabilities could also be among the factors that determine the management's mental openness to processes of internationalization. Similarly, having a formal strategic plan that addresses future objectives and considers the resources (financial, human, organizational, etc.) needed for achieving these objectives, can help with decision-making and the vision of these companies. Requiring managers to have previous professional experience outside the family business positively influences the establishment of strategic alliances. It seems likely that it would be easier for managers to adopt this kind of internationalization strategy if they had faced internationalization processes in other companies. In contrast, if the CEO is a family member, this negatively affects the internationalization of the company. This conclusion comes from the statistically significant negative effect of this variable on the adoption of an internationalization strategy based on direct investment. It is also proven that there is greater risk aversion among family owners who are more interested in retaining control than in pursuing growth strategies. The higher risk associated with direct investments clearly explains the aversion of owner family members to this internationalization strategy.

Regarding CEO characteristics having a positive influence when companies decide to go international, as revealed in this study, we observe that only 31% of CEOs in the sample have an educational background in business administration or similar studies. In addition, only 11% of the companies require the family manager to have had previous professional experience outside the company. These together could provide CEOs with a better skill set for tackling internationalization because they might be better prepared to process information and face complex situations. Upper Echelons Theory states that strategic choices have a large behavioral component (perceptions, interpretations, etc.) contingent on the people who make the decisions, and they depend greatly on the cognitive base and the values that the decision maker has (Hambrick & Mason, 1984). Therefore, family businesses should take these characteristics or skills into account when selecting their executive leaders and realize that not doing so may have implications for organizational results, specifically regarding the internationalization

of their businesses. Furthermore, when we study management teams, we should not ignore the rest of the perceptions or judgments that other board members, consultants, and others might contribute; this is what Hambrick (1982) called a “common body of knowledge”. In other words, the knowledge of alternatives, future events, and consequences associated with these alternatives will be influenced not only by the cognitive base and the values that the decision-maker possesses, but also by the environment that surrounds him/her. In this sense, family businesses and their characteristics condition both the intensity of internationalization and the strategy adopted to expand abroad.

Regarding the managerial implications of this paper, our results can help the owners and administrators of family businesses better understand the effect that managerial qualities can have on the processes of internationalizing their businesses. They should carefully consider the characteristics of the candidates for CEO and use the results of this study to make a decision on whether or not to focus their efforts abroad. For example, if companies are considering going international, they should take into account that there will be more chances of success if the CEO has a higher education in business or similar fields and previous experience in other companies; while looking for a CEO inside the family could hamper this internationalization goal.

The main limitation of this study is that the analysis is based on data for a period of only 1 year, linking independent and dependent variables within the bounds of this year. As the process of internationalization takes place over extended time periods, it would be preferable over a longer period of time to link CEO characteristics with the dynamics of internationalization and also observe the outcomes if CEO changes are dispersed. Unfortunately, the available data only refer to one specific year, and it was not possible to consider a longer period because some characteristics, such as the CEO or the ownership structure of the company could change over the years without us knowing. Hence, that is an interesting line of research for the future. Regarding the variables used in this study, in terms of CEO experience we have considered the requirement of previous experience outside the company before occupying managerial positions; however, this measurement probably does not reflect the complexity of the phenomenon analyzed and as a consequence a more detailed measurement of the required experience would be necessary (e.g., the number of years of experience prior to joining the family business). Also, reflection on the generation in charge should be undertaken in future research since, typically, there is more than one generation in charge in a family business; hence they are often contemporary in their actions. In this paper we have considered the older generation in charge due to the experience they bring to the business, but other approaches could also be considered. Further, it should be taken into account that the three strategies of internationalization identified in this paper can be contemporary, not only alternative, so the influence of some characteristics could be confused when more than one strategy is carried out. In addition, the Pseudo R² for the estimated models has a low value, which means the existence of some omitted variables that are even more relevant to explain the adoption of the different internationalization strategies in family businesses. Finally, it would also be interesting to study the differences

seen between family and non-family businesses, rather than solely between family and non-family CEOs.

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