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Abstract

This study focuses on heterogeneity in family firms by analyzing whether the non-economic aspects that meet the family's affective needs, or socioemotional wealth (SEW), influence debt financing. In the context of private family small and medium-sized enterprises (SMEs), our results indicate that family firms which are more concerned about preserving their SEW have lower debt levels (total and financial debt) and that CEO gender plays an important moderating role, with female CEOs strengthening the negative effect of SEW preservation on debt financing. Moreover, when family firms are managed by the first generation, the SEW effect on financial debt is even more negative. The findings are consistent with SEW being the point of reference in family SMEs' financial decisions, and highlight the importance of the CEO and family generation in charge of the firm as moderators of the relationship between SEW preservation and debt financing.

Keywords: Socioemotional wealth; financial decisions; debt; private family SMEs; CEO gender

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1. Introduction

The literature on financing decisions in family firms is growing rapidly, although a number of research challenges still remain in this field (Michiels & Molly, 2017; Motylska-Kuzma, 2017). Most previous studies have focused on traditional frameworks such as agency, pecking order or trade-off theories (Harris & Raviv, 1990; Jensen & Meckling, 1976; Myers & Majluf, 1984) to examine the difference between family and non-family firms in terms of their financial policies (Ampenberger, Schmid, Achleitner, & Kaserer, 2013; Anderson & Reeb, 2003; López-Delgado & Diéguez-Soto, 2020; Margaritis & Psillaki, 2010; Schmid, 2013; Setia-Atmaja, Tanewski, & Skully, 2009). The evidence provided by these studies is inconclusive due to their having mainly focused on explaining financing decisions based on business factors and economic aspects (Koropp, Kellermanns, Grichnik, & Stanley, 2014; Brannon & Edmon, 2016), which reveals difficulties in interpreting the capital structure decisions of family firms (Gottardo & Moisello, 2019).

Traditional finance theories thus seem unsuitable for explaining family firms' financing decisions since they fail to explicitly capture the role played by non-economic factors as key drivers of the firm's major strategic decisions (Gomez-Mejia, Cruz, Berrone, & De Castro, 2011; Michiels & Molly, 2017). Gomez-Mejia, Haynes, Núñez-Nickel, Jacobson and Moyano-Fuentes (2007) refer to these non-economic factors as "socioemotional wealth" (SEW). These researchers define SEW as "*non-financial aspects of the firm that meet the family's affective needs, such as identity, the ability to exercise family influence, and the perpetuation of the family dynasty*" (Gomez-Mejia et al., 2007, p. 106). Since then, considering SEW to be one of the main determinants of family firm behavior has received increasing interest in the theoretical

and empirical literature (Brannon & Edmon, 2016; Hernández-Linares, Kellermanns, López-Fernández, & Sarkar, 2019; Schulze & Kellermanns, 2015). SEW preservation plays a key role in influencing the business management that is unique to family firms and which leads them to make decisions that favor non-economic goals (Gomez-Mejia et al., 2011; Martin & Gomez-Mejia, 2016). However, in addition to the difference between family and non-family firms, the impact of SEW on the financial decision-making process may also vary within the family firm universe itself (Berrone, Cruz, & Gomez-Mejia, 2012; Thiele & Wendt, 2017).

When analyzing family firms' financial policies, most existing studies have overlooked the heterogeneous behavior found among family firms (De Massis, Frattini, & Lichtenthaler, 2013) as well as the non-economic and socioemotional aspects inherent to these firms (Gomez-Mejia et al., 2011). In an effort to fill this void, some recent studies have explored the influence of family-centered goals on debt financing (Molly, Uhlaner, De Massis, & Laveren, 2019), and the moderating role played by board composition (López-Delgado & Diéguez-Soto, 2020; Molly et al., 2019). These studies, however, display certain limitations in their findings, stemming from the partial analysis of family-related contextual factors, as well as from the use of unfit measures of SEW (Michiels & Molly, 2017).

Considering the above limitations, and in an attempt to respond to the call for additional research in this issue, the main purpose of this study is to examine SEW effects on debt policies in the context of private family small and medium-sized enterprises (SMEs). Specifically, we focus on analyzing debt financing, since it is the most important source of external funds for family businesses (Romano, Tanewski, & Smyrnios, 2001). We expect that the desire to preserve SEW may incline such businesses to resort to less debt. Moreover, we explore in depth the heterogeneity within family firms in debt decisions by examining the following moderators: the role of the CEO (CEO link to the founder family and CEO gender), the family generation in charge of the firm, and performance hazard. By doing so, we respond to the call for further research on contextual factors that explain potential differences in family firm behavior (De

Massis et al., 2013; Gomez-Mejia et al., 2014). While those factors related to SEW preservation, including family CEO, female CEO and early generational stages, are likely to strengthen the negative SEW-debt relationship, performance hazard may weaken it. We empirically analyze all of these topics using a sample of Spanish family firms. The Spanish economy offers a privileged context in which to conduct research on family businesses since family firms represent about 89% of all businesses, account for about 57% of national GDP in the private sector (Casillas, López, Meroño, Pons, & Baiges, 2015), and bearing in mind that over 80% of Spanish SMEs are family-owned (Merino, Monreal-Pérez, & Sánchez-Marín, 2015).

This study makes several contributions. First, we add to the growing literature addressing financial policy in family firms. Since previous studies have mostly examined differences between family and non-family firms, we focus exclusively on the family firm context to analyze its heterogeneity vis-à-vis SEW impact on debt financing (Berrone et al., 2012). Moreover, this paper considers the SEW theoretical framework, and responds to previous studies which encourage corporate finance research based on other theories that help to explain these other factors in the family firm context (Ampenberger et al., 2013; Romano et al., 2001). Second, the evidence provided in the literature tends to concentrate on large listed firms, but less frequently on privately held family SMEs. According to Carney, Van Essen, Gedajlovic, and Heugens (2015), private SMEs make different strategic choices that result in different performance outcomes compared to large listed firms, thus providing support for the need to carry out research in the private field of family SMEs. Third, we consider four contingent factors (family CEO, CEO gender, generational stage, and firm hazard) as potential moderators in the SEW-debt relationship and so provide new theoretical and empirical evidence. Finally, we use a SEW validated scale in our empirical setting (Debicki, Kellermanns, Chrisman, & Pearson, 2016) to overcome the problems related to the use of indirect measures for SEW (Berrone, Cruz, Gomez-Mejia, & Larraza-Quintana, 2010; Hauck, Suess-Reyes, Beck, Prügl, & Frank, 2016; Schulze & Kellermanns, 2015).

This paper proceeds as follows. Section 2 includes the theoretical framework, literature review and research hypotheses. The sample, variables and methods are included in Section 3. Section 4 presents the empirical results while, finally, Section 5 concludes.

2. Literature review and research hypotheses

2.1. Traditional financial theories

Traditionally, family firms have been seen as being more risk averse than non-family firms in their financial behavior in an effort to avoid potential loss of business control (González, Guzmán, Pombo, & Trujillo, 2013). This risk aversion is reflected through a greater preference for internal resources, less investment in intangible assets, lower levels of debt, a high concentration of capital in the hands of a single family, and a fixed ownership structure (Ampenberger et al., 2013; King & Santor, 2008; Poutziouris, 2011). For family firms, the pecking order theory (Myers & Majluf, 1984) is therefore supported in prior literature (Romano et al., 2001). First, due to problems of information asymmetry, family firms prefer to use personal savings and internal funds, followed by debt and, finally, external equity capital (new issue of ordinary shares). Both internal funds and debt protect the firm against outside intrusion. Family firms thus tend to avoid using external equity, which is often related to relinquishing control over the firm (Poutziouris, 2011). Although these researchers pay little or no attention to the role of SEW, it is the SEW effect that seems to lie behind financial decision-making. In this vein, Romano et al. (2001) find that external equity is less likely to be used in older family businesses and owners, who prefer to retain family control. This is consistent with the SEW preservation framework (Gomez-Mejia et al., 2007).

On the other hand, the trade-off theory (Harris & Raviv, 1990; Jensen & Meckling, 1976) indicates that the firm's optimal debt-equity ratio is determined by a trade-off between the costs and benefits of borrowing, which differs from the pecking order theory where there is no target level-equity ratio. López-Gracia and Sánchez-Andújar (2007) show that family firms

adapt relatively well to the trade-off and pecking order theories, although the latter displays a clear advantage over the former.

However, the literature addressing family firms' debt levels remains inconclusive. While some studies find that family firms rely less heavily on debt compared to non-family firms (Ampenberger et al., 2013; Margaritis & Psillaki, 2010; Mishra & McConaughy, 1999; Schmid, 2013), other researchers find that family firms use more debt (King & Santor, 2008; López-Delgado & Diéguez-Soto, 2020; Setia-Atmaja et al., 2009) or merely report a non-significant difference in debt level (Anderson & Reeb, 2003; Coleman & Carsky, 1999). Yet this literature rarely embraces the role of non-economic goals when exploring financial decisions (Koropp et al., 2014). Recent research suggests that more lies beyond these classical theoretical approaches inspired by agency theory (Jensen & Meckling, 1976), and provides evidence of non-traditional frameworks including the SEW theory to explain family firms' financing decisions (Michiels & Molly, 2017). Considering theoretical frameworks that help to explain the behavioral factors which impact the decision-making process of the financial structure is therefore crucial (Romano et al., 2001).

2.2. SEW and debt financing

Family firms' financial decisions are not only affected by economic goals, but also by family-centered characteristics such as family norms, attitude or personal preferences concerning growth, risk, and ownership-control (Gallo, Tàpies, & Cappuyns, 2004; Koropp et al., 2014). Consequently, research has shown that the financing policy of family firms differs from that of non-family firms (Ampenberger et al., 2013; López-Gracia & Sánchez-Andújar, 2007). Non-family firms aside, family firms are also seen to be heterogeneous with regard to their non-economic goals, and the SEW theory is becoming an efficient theoretical framework to explain differences among family firms in terms of their financing decisions (Chua, Chrisman, & De Massis, 2015; Gomez-Mejia et al., 2007; Molly et al., 2019; Vandemaele &

Vancauteren, 2015). In particular, decision-makers' adherence to SEW goals holds a relevant place in the context of SMEs compared to large family firms, since SEW priorities are likely to diminish as firm size increases and the family presence in ownership or management is reduced (Brannon & Edmond, 2016)

Under the SEW framework, the primary frame of reference for family owners in firm management is potential gains or losses in SEW (Berrone et al., 2012; Martin, Campbell, & Gomez-Mejia, 2016). Economic considerations remain in the background and the desire to preserve and/or enhance SEW drives the following strategic choices: risk taking, corporate diversification, international diversification, acquisition behavior, accounting choices, and debt (Gomez-Mejia et al., 2011; Monreal-Pérez & Sánchez-Marín, 2017; Sánchez-Marín, Carrasco-Hernández, & Danvila-del-Valle, 2019; Worek, De Massis, Wright, & Veider, 2018). Focusing on this latter strategic choice, to the best of our knowledge, Molly et al. (2019) provide the first empirical evidence regarding family-centered goals or SEW and debt financing. Based on a sample of Belgian family SMEs, these researchers find that SEW has an indirect effect on total debt rate through family board representation. Their findings suggest that the SEW perspective is relevant to family SMEs' financial decisions. Nevertheless, using validated measures for SEW preservation which allow us to provide new and relevant insights, the SEW effect on debt financing as well as on the other contextual factors that affect it must be explored in depth.

Two points of view, both of which apply the logic of SEW theory, are likely to lie behind the effect of SEW on debt financing. On the one hand, family firms which have a greater desire to preserve SEW would be prone to increase debt levels in order to maintain control and family influence, thereby relinquishing the use of external equity related to losing control over the firm (Poutziouris, 2011). A positive effect of SEW on debt financing is therefore expected in this regard (Gottardo & Moisello, 2019). On the other hand, if we compare debt with the possibility of financing through internal resources, SEW is likely to have a negative effect on debt levels. Firms which attach greater importance to preserving SEW are expected to have lower debt

levels and to use retained benefits as a source of funding, thereby avoiding the financial risk associated with debt and creditor monitoring (Schmid, 2013). From this point of view, an increase in debt levels is associated with the risk of financial distress and, if the firm goes bankrupt, leads to the loss of family control, which adversely impacts SEW.

The family's SEW is thus a potential determinant of the use of debt (Gomez-Mejia et al., 2011). Applying SEW logic, while both risk and loss aversion push firms toward lower debt levels (López-Gracia & Sánchez-Andújar, 2007; Molly et al., 2019), the need to finance growth without losing family control may lead to a preference for higher debt levels (González et al., 2013). This is a non-trivial relationship. Family firms mainly base their financial policies on internally generated resources, passing up growth if necessary (López-Gracia & Sánchez-Andújar, 2007). We therefore expect the negative effect of SEW on debt levels to outweigh a potential positive effect. This negative effect is supported by the idea that the desire to reduce any potential loss of family control and avoid putting SEW at risk will lead family firms that focus more strongly on pursuing SEW to use less debt (Molly et al., 2019; Schmid, 2013). We formulate the following hypothesis:

Hypothesis 1*: SEW preservation in private family firms negatively affects debt levels.*

2.3. Family CEO versus non-family CEO

The CEO is the most powerful member of the firm's management team, has the highest authority and is key to the firm's success (Finkelstein & Hambrick, 1996; Sanchez-Marin, Lozano-Reina, Baixauli-Soler, & Lucas-Perez, 2017; Waldkirch, 2020). Family firms are not homogeneous and the family's attachment to the business increases when the firm is run by the family itself (Berrone et al., 2012). Whether the CEO's position is held by a family or non-family member is therefore likely to moderate how the desire to preserve SEW influences debt financing.

As regards the differences between having a family or a non-family CEO in the firm, the SEW framework posits that family CEOs are usually characterized by a strong desire to protect the firm's SEW and are likely to have a low appetite for risk, seeking rather to preserve control over the firm as well as their own SEW (Gomez-Mejia et al., 2011; Schulze & Kellermanns, 2015). Family CEOs have great personal wealth and undiversified human capital tied to the firm and are usually averse to any factors that may heighten the risk of losing control (Mishra & McConaughy, 1999; Naldi, Nordkvist, Sjöberg, & Wiklund, 2007). A family CEO will therefore be more concerned with SEW preservation than a non-family CEO (Huybrechts, Voordeckers, & Lybaert, 2013; Sánchez-Marín et al., 2019).

When firms are managed by family CEOs, their authority and power within the firm allow them to protect the family's SEW better. This is consistent with the study of Baek, Cho, and Fazio (2016), who find that the positive relationship between family ownership and debt is offset when the CEO is a family member. The desire to maintain control over the firm makes family CEOs use lower levels of debt so as to avoid a greater probability of financial distress and the loss of family control associated with leverage (Mishra & McConaughy, 1999). While family CEOs are more concerned with SEW preservation, and therefore pursue investment and financial strategies associated with low risk, non-family CEOs take more entrepreneurial risks since they are not endangering any SEW (Huybrechts et al., 2013). Moreover, when a non-family member reaches the position of CEO, the firm's ownership is likely to have been dispersed over a number of family members such that the family's desire to preserve SEW may be lower (Lardon, Deloof, & Jorissen, 2017). In this vein, Amore, Minichilli, and Corbetta (2011) find that appointing a non-family CEO is associated with a significant increase in the use of debt, particularly when firms have lower levels of cash and when the external CEO can exploit spare borrowing capacity.

In sum, due to the CEO's strategic control in private family firms (Harris & Ogbonna, 2007; Kraus, Mensching, Calabròb, Cheng, & Filser, 2016), as well as the stronger desire of

family CEOs to preserve SEW (Gomez-Mejia et al., 2007), we predict that when the CEO is a family member, the negative relationship between SEW preservation and debt level will be stronger. Put differently, a family CEO will negatively moderate the SEW-debt relationship. We put forward the following hypothesis:

> ***Hypothesis 2****: The negative effect of SEW preservation on debt levels will be stronger when the firm is managed by a family CEO.*

2.4. Male CEO versus female CEO

Gender is a key demographic factor which shapes the risk that CEOs are willing to take and, therefore, their strategic decisions (Finkelstein, Hambrick, & Cannella, 2009; Hambrick & Mason, 1984; Gomez-Mejia, Baixauli-Soler, Belda-Ruiz, & Sanchez-Marin, 2019). Family members are loss averse with respect to SEW (Gomez-Mejia et al., 2011) and, as far as gender is concerned, previous literature is consistent with the idea that women are more risk and loss averse than men (Arano, Parker, & Terry, 2010; Baixauli-Soler, Belda-Ruiz, & Sanchez-Marin, 2015; Brooks & Zank, 2005; Jianokoplos & Bernasek, 1998). In the business context, albeit without focusing on the family scenario, previous studies have shown that female CEOs exhibit less risk-taking behavior compared to men in the decision-making process, particularly vis-à-vis debt financing (Croson & Gneezy, 2009; Faccio, Marchica, & Mura, 2016; Graham, Harvey, & Puri, 2013; Palvia, Vähämaa, & Vähämaa, 2015).

The empirical literature in this respect provides important insights. Faccio et al. (2016) find that firms run by female CEOs have less volatility earnings, a higher chance of survival and lower leverage than otherwise similar firms managed by male CEOs. Moreover, when there is a change in the CEO position from a male to a female CEO, the firm shows a significant reduction in leverage. Graham et al. (2013) also show that male CEOs are more likely to have higher debt ratios and, particularly, higher short-term debt ratios compared to their female

counterparts. Although Huang and Kisgen (2013) find no significant differences in overall leverage, they do find that firms with female CEOs are less likely to issue debt, while Palvia et al. (2015) provide evidence consistent with higher levels of capital in the case of female-led banks. More recently, in the context of family firms, López-Delgado and Diéguez-Soto (2020) found that having female directors on the board has a negative influence on the firm's debt level. The evidence provided by all of these studies regarding the more conservative behavior of female-controlled firms could be considered an important determinant of company success, since this cautious behavior is likely to be associated with better long-term outcomes (Gomez-Mejia et al., 2019).

Beyond the family nature of the CEO, the SEW framework has not considered personal characteristics such as gender to be contingency variables and, as commented before, gender differences in risk propensity are reflected in the decisions that CEOs make (Baixauli-Soler, Belda-Ruiz, & Sanchez-Marin, 2017). Since the findings of prior literature are driven by female CEOs imposing their preferences on corporate choices, and in particular displaying less preference for debt, we expect CEO gender to moderate the SEW effect on debt levels. Family CEOs take decisions in order to preserve the family's SEW, and if female CEOs are more inclined to take less risk and are also more loss averse (Brooks & Zank, 2005; Croson & Gneezy, 2009; Schmidt & Traub, 2002) we predict they may be more inclined to preserve SEW compared to their male counterparts. In firms with a female CEO, the negative effect of SEW on debt levels will thus be stronger compared to firms in which the CEO position is held by a man. We formally hypothesize:

Hypothesis 3*: The negative effect of SEW preservation on debt levels will be stronger when the firm is managed by a female CEO.*

2.5. Generational stage

Drawing on the SEW perspective, the desire to preserve SEW is vital when the firm is managed by the first generation; that is, in the case of founding-family-controlled and managed firms (Gomez-Mejia et al., 2007). During the first generation, the family is usually nuclear, with low agency costs and closed relationships (Blanco-Mazagatos, De Quebedo-Puente, & Castrillo, 2007). It is during this first stage when several characteristics are stronger, including personal attachment to the firm, self-identification with the firm, or social capital (Gomez-Mejia et al., 2011). This is consistent with Sciascia, Mazzola, and Kellermanns (2014), who argue that at later generational stages there is less need to preserve SEW, and that family firms tend to focus more on increasing financial wealth. In these stages, family managers are less identified with the firm, added to which their emotional attachment also decreases. Profitability and financial performance are then considered by family managers as their new point of reference in the decision-making process in later generational stages (Arrondo-García, Fernández-Méndez, & Menéndez-Requejo, 2016; Sciascia et al., 2014).

The key role of generational stage has been considered in prior literature focused on performance, growth, and risk taking (Arrondo-García et al., 2016; Cruz & Nordqvist, 2012; Eddleston, Kellermanns, Floyd, Crittenden, & Crittenden, 2013), as well as in the financial context, including dividend payout (Vandemaele & Vancauteren, 2015) or debt financing (Molly, Laveren, & Deloof, 2010; Molly, Laveren, & Jorissen, 2012). In the context of private family SMEs, Vandemaele and Vancauteren (2015) argue that the importance of SEW preservation for family members is more predominant in early generational stages and, therefore, that it is in these stages when internal financing (retained earnings) is preferable over external financing. This is in line with the study of Blanco-Mazagatos et al. (2007) who note that as firms move into later generations, family members are less "overinvested" in the firm and are more prone to use debt, thereby putting their own individual wealth at risk. However, Molly et al. (2010) showed that a transfer from the first to the second generation is associated with a lower use of debt, although this effect is reversed in the case of later transitions. They

support this negative relationship by arguing that it is in the second generation where the family becomes more risk averse and aims to preserve wealth rather than seeking further wealth creation. Molly et al. (2012) later found that the generation controlling the firm does not directly influence capital structure.

Conflicting views thus emerge in the prior literature, although our prediction regarding the moderating role of the generational stage within the SEW-debt relationship is supported by the SEW perspective referred to previously. The desire to preserve SEW prevails over increasing financial wealth during the first generation, when identification with the firm and emotional attachment are stronger (Arrondo-García et al., 2016; Gomez-Mejia et al., 2007, 2011; Sciascia et al., 2014). SEW preservation in early generational stages is likely to be associated with lower debt levels, thereby avoiding the risk associated with leverage and the risk of losing control over the firm. We formally state:

Hypothesis 4*: The negative effect of SEW preservation on debt levels will be stronger when the firm is managed by the first generational stage.*

2.6. Firms' performance hazard

Firm hazard is another contingency factor that moderates the influence of the firm's SEW as a point of reference when making financial decisions (Gomez-Mejia et al., 2011). The risk of performance hazard implies the possibility of the firm's failure, threats to its survival, or below-target performance, considering such a target to be the firm's past performance or the performance of firms in the same industry (Gomez-Mejia et al., 2007; Huybrechts et al., 2013).

Although the desire to preserve SEW drives management decisions (Berrrone et al., 2010, 2012; Schulze & Kellermanns, 2015), behavioral theories indicate that the framing of problems may change decision-makers' preferences (Kahneman & Tversky, 1976; Wiseman & Gomez-Mejia, 1998). Taking these ideas into account, Gomez-Mejia et al. (2011) state that

family firms focus on making economically driven decisions as the firm faces greater performance hazard. In this negative context, the desire to preserve SEW takes a back seat (SEW losses are accepted) and economic goals become the new point of reference for making strategic decisions (Gomez-Mejia et al., 2014; Miller, Le Breton-Miller, & Lester, 2010). The reason is clear: as the firm's performance hazard increases, in the worst-case scenario the firm may lose everything, including its patrimony, financial wealth, and SEW (Gomez-Mejia et al., 2011).

Applying the above ideas to financial decision-making, the family firm would opt to go into debt when faced with high business risk and performance hazard (Miller et al., 2010). We predict that a situation of performance hazard would lead the firm to assume the risk associated with debt and the loss of the firm's control due to creditor monitoring (Schmid, 2013), and therefore accept SEW losses in order to survive. Firm performance hazard would attenuate the negative influence of the desire to preserve SEW on debt levels. Thus:

Hypothesis 5*: The negative effect of SEW preservation on debt levels will be attenuated, or will even be positive, when the family firm faces greater performance hazard.*

[Insert Figure 1 about here]

The conceptual model, with all the proposed research hypotheses, can be seen in Figure 1. To sum up, under the SEW framework, our predictions are in line with the fact that non-economic goals captured by "*SEW preservation*" negatively affect debt levels in family SMEs, and that this main relationship is moderated by contingent factors related to the firm's family nature or management as well as by other economic factors, including performance hazard.

3. Methodology

3.1. Sample and data

To analyze the SEW effect on debt financing, this study uses the extensive database created by the Spanish Family Firm Institute (Casillas et al., 2015). Casillas et al. (2015) consider firms included in the SABI (Iberian Balance Sheets Analysis System) database as the starting point to then take into account rigorous conditions of family ownership and governance/management structures in order to consider a firm as a family firm. Following prior literature (Arosa, Iturralde, & Maseda, 2010; Diéguez-Soto, López-Delgado, & Rojo-Ramírez, 2015), we do not consider: listed firms, firms from the financial, insurance and public sector, firms affected by special situations (bankruptcy proceedings, winding up, liquidation or period of no activity) and firms which do not contain general information (name, address or sector of activity). We also eliminate firms with less than 50 employees, and large firms (with over 250 employees) so as to focus exclusively on medium-sized family firms. By doing so, we preselect 3,920 Spanish medium-sized family firms.

In order to obtain the research data, this study combines two different sources. First, survey data using the method of telephone interviews between March and June 2016. Of the initial 3,920 firms, 508 answered the questionnaire correctly, representing a response rate of 12.96%. The final sample is made up of 420 family firms, for which we obtain all the necessary financial and accounting data from the second source: the SABI database for 2016.

3.2. Variables

3.2.1. Dependent variables

The main dependent variable used in the regression models is total debt (*TDebt)*. Following previous studies (Coleman & Carsky, 1999; López-Gracia & Sánchez-Andújar, 2007; Molly et al., 2010), this is measured as the total amount of debt scaled by total assets. Additionally, our empirical models consider the difference between financial (*FinDebt*) and

non-financial debt (*NonFinDebt*), with both variables being scaled by total assets (Molly et al., 2019). While financial debt refers to funding obtained in the banking sector and which is therefore subject to creditor monitoring and potential restrictions, non-financial debt includes accounts payable and other funding, which is not associated with losing control over the family firm.

3.2.2. Independent variable

The independent variable of interest, the family firm's SEW, is measured using the socioemotional wealth importance scale (SEWi) developed by Debicki et al. (2016). The SEWi scale allows for the direct measurement of the importance of SEW to family owners and family firm managers. In this way, we respond to the call for research made by Michiels and Molly (2017), who support the use of the SEWi scale to test "*how variations in the importance attached to SEW leads to heterogeneous financing decisions among family firms*" (p. 382). This scale has been validated in family SMEs. The nine items proposed by Debicki et al. (2016) were measured on a five-point Likert Scale, ranging from "not important" (=1) to "very important" (=5), and which was geared towards measuring the importance of SEW for the owner-manager over the last three years. The score of these nine items was then averaged (Cronbach's alpha = 0.913). By using this direct measure of the importance of preserving SEW, we overcome the clear shortcoming involved in employing archival data sources to indirectly measure SEW (Berrone et al., 2010; Schulze & Kellermanns, 2015), and we attempt to ascertain exactly what it is that drives financial decision making in the context of family SMEs. The final variable, *SEW*, is a dummy variable that equals 1 when the family firm's SEW is above the median value of the whole sample (median SEW of 4.11), and 0 for firms whose SEW is below the median.

3.2.3. Moderating variables

For those hypotheses which focus on moderating effects in the relationship between SEW and debt financing, we consider three different dummy variables: *FamCEO*, *GenCEO, and Stage*. *FamCEO* takes the value of 1 if the CEO is a member of the family managing the firm, and 0 for a non-family CEO (Vandemaele & Vancauteren, 2015). Of the 420 family firms in the final sample, 84% have a family CEO. For CEO gender, *GenCEO* takes the value of 1 when the CEO is a woman, and 0 when the CEO is a man (Faccio et al., 2016). Approximately 8.6% of our family firms have a woman in the top management position. Finally, *Stage* takes the value of 1 if the firm is in the first generation (around 42% of the sample), and 0 for the second or later generations (Arosa et al., 2010; Arrondo-García et al., 2016). Finally, to analyze the moderating effect of the firm's performance hazard (*Altman Z*), we employ the Altman Z-score by using the equation for private firms (Altman, 2000), which has been used in prior family firm literature (Crespí & Martín-Oliver, 2015)[1]. Higher (above 3) *Altman Z* values mean that the family firm is safe from bankruptcy and enjoys a sound financial position, while values below 1.8 indicate the worst-case scenarios, in that the firm may be heading for bankruptcy: in other words, the risk of performance hazard is very high.

3.2.4. Control variables

In line with previous studies focusing on the determinants of capital structure, particularly debt financing in the context of private family SMEs (Anderson & Reeb, 2003; Coleman & Carsky, 1999; Lardon et al., 2017; Molly et al., 2019), we include as control variables: firm age, size, profitability, asset tangibility, cash holding, and industry. *Age* is the natural logarithm of the number of years the firm has been in existence since its foundation until 2016. Given that older family firms are more likely to have internal funding, this is

[1] Following Altman (2000), to measure the risk of a firm, we implement the following equation: $z = 0.717X_1 + 0.847X_2 + 3.107X_3 + 0.420X_4 + 0.998X_5$. X_1: net working capital, X_2: retained earnings scaled by assets, X_3: EBIT scaled by assets, X_4: book value of equity scaled by total liabilities, X_5: sales scaled by assets.

expected to have a negative impact on debt. *Size* is measured as the natural logarithm of total assets, and a measure of profitability or performance is included in the empirical models, particularly return on assets (*ROA*), which is constructed as Earnings Before Interest and Taxes (EBIT) scaled by total assets. When the firm's profitability is higher, this indicates a greater capacity to retain benefits. A negative relationship between return on assets and debt levels is thus expected, since the need to resort to debt decreases. *ATangibility* is defined as the ratio of tangible fixed assets to total assets, and *Cash* is measured as the firm's cash and cash equivalents scaled by total assets. In line with the evidence shown in the prior literature, we predict a positive (negative) relationship between tangibility (cash holding) and debt levels. Finally, to control for sector effects, we include industry dummies in the empirical analyses.

[Insert Table 1 about here]

A detailed description of all the variables included in the empirical analyses of this study is presented in Table 1.

3.3. Methods

We examine the impact of SEW preservation on the family firm's debt levels, and the moderating effects formulated in the former section, using several statistical approaches. We conduct three different univariate techniques: descriptive statistics of the financial and accounting variables included in the models, t-Student tests to examine differences in means of debt (total, financial, and non-financial debt) according to the dummy variables of this research, and correlation analysis. Moreover, since multicollinearity makes the regression model estimates of the coefficients unstable and the standard errors for the coefficients potentially wildly inflated, we compute variance inflation factor (VIF) values to verify the absence of multicollinearity problems for our set of variables.

After the univariate techniques, we estimate OLS-regressions to test the first hypothesis of this study; that is, the effect of SEW preservation on debt levels. We use the Breusch-Pagan test and the White test to check the null hypothesis that the error variances are all equal (homoscedasticity) versus the alternative hypothesis (heteroscedasticity). We estimate the standard errors that are robust to the fact that the error term is not identically distributed. We use robust standard errors; that is, standard errors computed with the sandwich estimator of variance. These can be used to draw valid statistical inference about our coefficients, even though our data are not identically distributed. Moreover, we control intragroup correlation by relaxing the usual requirement that observations must be independent. We consider firms to be independent across industries but not necessarily within the same industry. This procedure estimates the variance–covariance matrix of the estimators but does not affect the estimated coefficients.

The base model of the main analysis is the following:

$$Debt_i = \beta_0 + \beta_1 \cdot SEW_i + \sum \beta_i \cdot MVar_i + \sum \beta_i \cdot CVar_i + \varepsilon_i \quad (1)$$

where $Debt_i$ is total debt, financial and non-financial debt (depending on the models), and $MVar_i$ and $CVar_i$ include the moderating and control variables, respectively.

To test the moderating effects of family CEO, CEO gender, the family generation in charge of the firm, and performance hazard, we conduct a propensity score matching procedure (Rosenbaum and Rubin, 1983). The reason for matching the sample is based on the nature of the data in this study. While non-family CEOs only manage 16% of all family firms in the sample, the percentage is even lower if we consider CEO gender. Few women hold the top management position in the initial sample (only 36 female CEOs), which invalidates the analysis of the moderating roles predicted from Hypothesis 2 to Hypothesis 5. By using the residuals from Equation 1, we thus obtain the matched sample by pairing each family firm that

has a female CEO with five family firms in which there is a male CEO in the management structure. In this way, we obtain a new sample of 216 firm observations to test the moderating effects and we conduct regressions according to the following model:

$$\varepsilon_i = \beta_0 + (\sum \beta_i \cdot MVar_i)SEW_i + v_i \quad (2)$$

where ε_i captures the residuals from Equation 1 and $MVar_i$ includes the moderating variables.

4. Empirical results

Table 2 provides descriptive statistics for the variables included in the empirical analyses. Panel A of Table 2 includes the financial and accounting variables. The mean value for the total debt rate is 52.2%, where around 25% corresponds to bank loans (financial debt). The funding generated by the daily operation routine of the family firm which is not associated with the banking sector averages 27.2% of total assets.

Panel B of Table 2 provides subsample analyses according to the dummy variables of this study, including mean values of the three debt measures by groups and a t-test for differences in means. The mean value of total debt is seen to differ significantly if we consider the level of SEW: firms with a greater desire to preserve SEW display lower levels of total debt compared with firms in which the preservation of SEW is less important in the firm's management. The difference in debt levels is also significant when we take into account the CEO: firms managed by a family CEO are less leveraged than firms with an external or professional CEO, while the same pattern can be observed between female and male CEOs. Focusing on the distinction between financial and non-financial debt, the t-test for difference in means reveals the same conclusions: family firms characterized by high SEW preservation have less financial debt and non-financial debt than firms in which concern for non-economic aspects is not so important.

Table 3 shows correlation coefficients between the financial and accounting variables. VIF values for the variables were calculated and do not exceed 10, which indicates that multicollinearity is not a problem in our empirical analyses (Myers, 1990).

[Insert Table 2 about here]

[Insert Table 3 about here]

Table 4 presents the results of the cross-sectional regressions to test Hypothesis 1 concerning the influence of SEW preservation on debt levels. All the models included in Table 4 show a negative coefficient for the SEW variable, and all of them are significant at 1%. Although the literature provides supports for both a positive and negative effect of non-economic goals on debt financing, our results point to a negative relationship as predicted under the SEW theoretical framework explained in this study. When we include the moderating variables one by one (Models 2-5) and all of them in the same model (Model 6), the sign and significance of the coefficient of the SEW variable remain unchanged. Specifically, Model 6 leads us to support Hypothesis 1 (β=-0.044, $p<0.01$): family firms in which the desire to preserve SEW is higher have lower levels of total debt in their financial structure, which is consistent with the arguments of risk aversion associated with debt and loss of family control due to creditor monitoring. In economic terms, the level of indebtedness of family firms with a high SEW is 4.4% lower than that of family firms which display less desire to preserve SEW.

[Insert Table 4 about here]

As regards the role of the CEO and its direct effect on debt levels, according to Table 4, firms managed by family CEOs are associated with lower levels of total debt. This negative and

significant relationship also exists in family firms managed by a female CEO compared with their male counterparts. While there are no significant generational differences, the Altman Z-score presents a significant negative effect on the total debt rate. This means that when the family firm does not face performance hazard and its financial situation is not likely to go into bankruptcy (higher values of the Z-score), its debt levels are lower. Put differently, firms in the worst-case scenario have higher debt levels in their financial structure.

With regard to control variables, while firm size shows a negative and significant effect on total debt, more profitable firms need less debt to finance their investments. As expected, as the firm's cash holding increases, the need to go into debt decreases, which is indicated by the negative and significant coefficient of the cash-related variable.

[Insert Table 5 about here]

[Insert Table 6 about here]

If we differentiate between financial and not-financial debt, Table 5 shows that the influence of SEW preservation and the direct effects of the moderating variables on financial debt are very similar to those for total debt. Thus, SEW logic extends to the specific context of bank financing. In particular, the significant and negative coefficient of the SEW variable in Model 6 leads us to support Hypothesis 1 for the case of financial debt (β=-0.043, $p<0.01$). Family SMEs characterized by a greater desire to preserve SEW have a financial debt level that is 4.3% less than firms with lower SEW preservation. It can thus be said that private family SMEs focused on preserving non-economic goals have lower levels of total debt as a result of having lower levels of financial debt.

Unlike financial debt, non-financial debt does not seem to be considered a threat to the family firm's control, a fact reflected in Table 6. The findings of this table indicate that the

desire to preserve SEW is not significantly related with the level of non-financial debt, which includes, for instance, financing provided by suppliers. As is well known, contrary to financing from the banking sector, non-financial debt is not associated with the risk of bankruptcy, or with the risk of losing family control, since creditor monitoring does not exist in this case. SEW arguments are not therefore applicable in this context. The family CEO variable remains significant and negatively related to non-financial debt, while performance hazard again shows a negative coefficient.

[Insert Table 7 about here]

Using the sample obtained from the propensity score matching procedure explained in Section 3.3. and the residuals from Model 6 of Tables 4-6, Table 7 shows the results for the regression models including the moderating effects. Three panels are shown in this table corresponding to each debt-related variable (total, financial, and non-financial debt).

Focusing on total debt (Panel A), the coefficients related to the moderating role of CEO −both family vs. non-family CEO and female vs. male CEO− are negative and significant at 1% level in Models 1 and 2, respectively. When considering generational stage and firm hazard separately (Models 3 and 4), the coefficients of the interaction terms are not significant. To support Hypotheses 2-5, we must focus on Model 5, where the marginal effects can be seen. The moderating effect of having a family CEO is seen to lose its significance when we include all the moderating effects in the same model. Although having a family CEO is associated with lower levels of total debt and non-financial debt in family firms (see Model 6 of Tables 4 and 6), the findings of Model 5 in Table 7 do not provide support for Hypothesis 2 regarding the moderating role of family CEO in the SEW-debt relationship.

As regards CEO gender, female CEOs are characterized by being more risk and loss averse than their male counterparts, and we argue that this could be applicable to the risk and

loss aversion of SEW. The results of Table 7 indicate that the negative effect of SEW preservation on debt levels is stronger when a woman holds the CEO position (Model 5), and this moderating role exists for the case of total debt (Panel A: β=-0.162, $p<0.01$), financial debt (Panel B: β=-0.103, $p<0.01$), and non-financial debt (Panel C: β=-0.059; $p<0.05$). Results thus confirm Hypothesis 3 for the three types of indebtedness. In particular, when there is high SEW preservation and a woman holds the CEO position, the marginal effect on total debt is about 16.2%. In economic terms, this means that the presence of a female CEO in the family firm leads to a reduction in total debt level of about 16.2% (Model 5, Panel A), a reduction of about 10.3% in the level of financial debt (Model 5, Panel B), and a 5.9% reduction in non-financial debt (Model 5, Panel C). According to our results, CEO gender is the most important factor moderating the SEW-debt relationship.

Table 7 also shows that the firm's generational stage has no significant moderating effect when we consider total debt (Model 5, Panel A) or non-financial debt (Model 5, Panel C), although our results do support Hypothesis 4 for the case of financial debt, which can be seen in the significant and negative coefficient of Model 5 in Panel B (β=-0.083; $p<0.01$). In the context of bank financing, firms managed by the first generation are more concerned about this type of funding and its potential link with loss of SEW, and is reflected in a significantly lower level of financial debt (8.3%).

Finally, the results of Table 7 for firm performance hazard do not support our prediction made in the final hypothesis of this study. There is no significant moderating role of performance hazard as measured by the Altman Z-Score when we analyze the influence of SEW preservation on debt financing, both with regard to total debt and when distinguishing between financial and non-financial debt.

[Insert Table 8 about here]

To sum up, Table 8 includes all the research hypotheses included in this study, indicating whether they are supported (or not) for total debt, financial, and non-financial debt. We conclude that family SMEs exhibiting greater SEW preservation have lower levels of total debt (4.4%) and financial debt (4.3%) compared to firms displaying less desire to preserve SEW. The difference of 4.4% in total debt levels is still higher in firms with a female CEO (16.2%), while the 4.3% difference in financial debt levels is higher (18.6%) in the case of family firms managed by the first generation with a female CEO in their corporate hierarchy.

5. Conclusion

Family firms make strategic decisions driven by the desire to preserve non-economic aspects or SEW (Gomez-Mejia et al., 2007; Sánchez-Marín, Meroño-Celdrán, & Carrasco-Hernández, 2019). Based on prospect and behavioral agency theories, SEW is conjectured to serve as the main frame of reference in the decision-making process of family firms (Berrone et al., 2012; Gomez-Mejia et al., 2011). This inclusion of SEW is key when examining how family firms shape their capital structure (Motylska-Kuzma, 2017). In line with this stream of research, this study analyzes heterogeneity in family SMEs with regard to differences in the desire to preserve SEW and their subsequent influence on debt financing, and considers contingency variables that are likely to increase such heterogeneity and moderate the SEW-debt relationship (De Massis et al., 2013; Thiele & Wendt, 2017).

The new evidence provided in this study, focusing on the context of privately held family SMEs, is consistent with SEW logic. Our findings reveal that the firm's desire to preserve SEW has a significant negative effect on debt financing. Internally generated resources are usually the main source of financing (López-Gracia & Sánchez-Andújar, 2007), although the literature is fairly inconsistent when debt is analyzed (Michiels & Molly, 2017). While previous studies find no significant direct effect of non-economic goals on debt financing (Molly et al., 2019), our findings indicate that family firms in which SEW preservation is higher

use less debt in their capital structure (both in terms of total debt and financial debt). In this way, by being able to elude the financial risk associated with debt and creditor monitoring (Schmid, 2013) they do not jeopardize SEW. They thus maintain family control over the firm and protect their SEW. Protecting the firm's SEW and the subsequent effect of having less debt persists when the firm faces greater performance hazard, since our results offer no significant moderating effect in this respect. SEW therefore seems to be the most important point of reference to debt financing in family firms.

Other contextual factors are more likely to explain heterogeneity in family firms (Gomez-Mejia et al., 2014) as well as differences in the financial behavior of these firms. First, the SEW effect on debt, particularly on financial debt, is moderated by the family generation in charge of the firm. This occurs in the case of founding-family controlled and managed firms (first generation) when personal attachment to the firm and the desire to preserve SEW is greater when compared to later generational stages (Gomez-Mejia et al., 2011). This difference in terms of non-economic goals is reflected in lower levels of financial debt in the first generational stage. Second, the CEO is the most powerful member of the management structure (Finkelstein & Hambrick, 1996), and their personal traits are likely to influence financial decisions (Amore et al., 2011; Lardon et al., 2017). Having a family or an external CEO directly affects debt financing. In particular, a family CEO is associated with lower total and non-financial debt. However, belonging to the owning family does not seem to be relevant as a moderator of the SEW-debt relationship.

According to the evidence provided in this study, CEO gender is the most important demographic characteristic in terms of moderating the SEW effect on the firm's indebtedness. This therefore furthers current knowledge of the moderating role played by CEO gender. Within the SEW theoretical framework, it is common to analyze characteristics related to the family that may lead to differences in strategic decision-making, including the family generational stage (Vandeamele & Vancauteren, 2015), family board representation (Molly et al., 2019) or

family involvement in the top management team (González, Guzmán, Pombo, & Trujillo, 2014). However, our results reveal that the demographic characteristic of gender has a significant moderating effect when we analyze SEW and debt financing. Particularly, based on the common stereotype that women are more risk and loss averse than men (Croson & Gneezy, 2009), the literature finds that female managers are directly associated with lower levels of leverage (Faccio et al., 2016; Graham et al., 2013; Huang & Kisgen, 2013; Palvia et al., 2015). Our results indicate that when the CEO of the family firm is a woman, the negative influence of SEW preservation on debt financing is still stronger (considering total, financial, and non-financial debt). Regardless of whether or not a family CEO is more concerned than a non-family CEO about preserving the firm's SEW (Huybrechts et al., 2013), our results do allow us to indicate that a female CEO in a family SME is more concerned than a male CEO about protecting, preserving and enhancing family SEW. Yet the fact that women CEOs tend to focus on non-economic goals more than their male counterparts (Jennings and Brush, 2013), coupled with the subsequent lower risk-taking behavior in terms of debt financing and the negative moderating role within the SEW-debt relationship, should not be interpreted as being detrimental to the firm's performance. On the contrary, despite being more conservative, female CEOs may take more prudent risks that yield better long-term outcomes and positive performance effects when compared to their male counterparts (Gomez-Mejia et al., 2019; Fernando, Jain, & Tripathy, 2020). Thus, under the SEW framework, female leadership can be considered key to the firm's corporate performance (Ting, Wang, Lu, & Chen, 2019).

Our research has important academic and practical implications. The evidence brings to light the heterogeneous nature of family firms. This heterogeneity could be motivated by the classical differences between family SMEs and large family firms, but also by the role played by non-economic goals. As regards the former, the family-specific advantages of family SMEs concern long-term orientation (Miller & Le Breton-Miller, 2005), greater access to internal financial capital (Steier, 2007), reputational commitment to local producers and to the local

labor market (Gedajlovic, Carney, Chrisman, & Kellermanns, 2012), shared social capital (Arregle, Hitt, Sirmon, & Very, 2007), preponderance of stewardship behaviors, values and norms (Miller, Le Breton-Miller, & Scholnick, 2008), as well as a general networking ability which favors business alliances, among other aspects. As for non-economic goals, these play a key role in the context of family SMEs, since SEW priorities could be reduced as firm size increases and family presence in ownership or management diminishes (Brannon & Edmond, 2016). Thus, when managers in family SMEs must take decisions regarding the firm's capital structure, particularly concerning debt financing, they must remember that they are different from larger family firms, and must consider the role of non-economic aspects within the firm, as well as contingent factors, including CEO gender and generational stage. They should seek to balance economic goals with non-economic goals, thinking what is best for the firm's success, taking into account that the family's priorities in terms of non-economic utilities not only shape strategic decisions, but also the goals that drive them (Worek et al., 2018).

Finally, several limitations must be highlighted that give rise to interesting future lines of research. This study refers exclusively to a sample of Spanish family firms for 2016. The motives that drive families to influence their firm's capital structure may depend, for instance, on the level of creditor monitoring, which may differ among institutional environments (Schmid, 2013) or different corporate governance contexts (Sanchez-Marin & Baixauli-Soler, 2015). It would be interesting for future research to explore differences in the SEW effect on capital structure taking into account multi-country analyses and a longer timeframe. Moreover, the non-economic goals of family firms or SEW are likely to influence other strategic decisions such as investment policy or compensation systems, and research should be extended in this regard so as to provide fresh insights for both researchers and practitioners alike. In addition, the evidence provided in this study implies that CEOs' demographic features (Hambrick & Mason, 1984), which is extensible to board or management team members, should be considered within SEW-related studies. Greater clarity concerning how family firms might take

different financial decisions depending on the importance attached to economic and/or non-economic goals is needed, as is a deeper understanding of the role played by contingent factors related (or otherwise) to the family. Finally, as Brigham and Payne (2019) recently highlight, due to the difficulties associated with directly measuring SEW, and despite the development of several scales, there is a lack of consensus related to the nature of the SEW construct, its dimensionality and measurement. Future research should explore the SEW construct in depth and its influence on family firms' strategic decisions.

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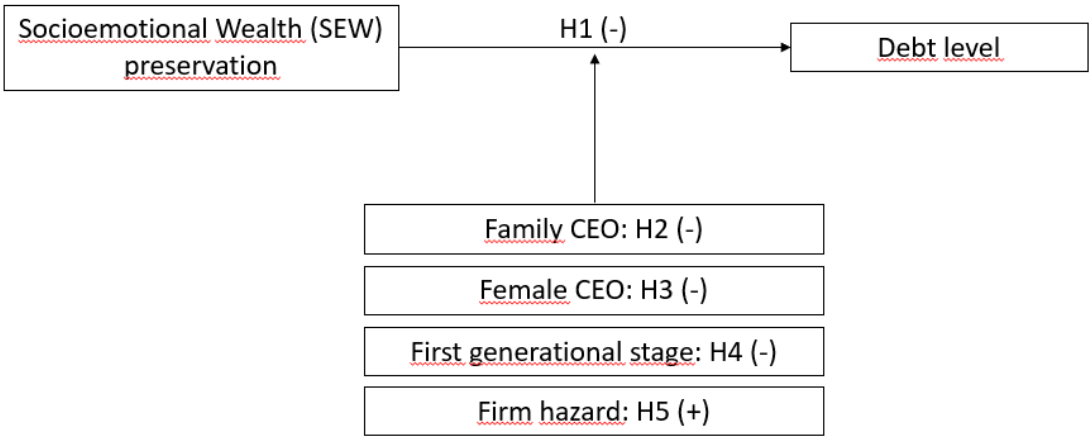

Fig. 1. Conceptual model from a SEW preservation perspective.

Table 1
Variable definitions and source.

Variable	Definition	Source
TDebt	Total debt (short-term and long-term) divided by total assets.	SABI
FinDebt	Total financial debt (interest-bearing debt) divided by total assets.	SABI
NonFinDebt	Total non-financial debt (non-interest-bearing debt) divided by total assets.	SABI
SEW	Dummy variable that equals 1 if the family firm's SEW is higher that the median SEW value of the sample firms, and 0 zero otherwise. SEW is measured with the 9-item scale of Debicki et al. (2016).	Questionnaire
FamCEO	Dummy variable that equals 1 if the CEO is a family member, and zero otherwise.	Questionnaire
GenCEO	Dummy variable that equals 1 if the CEO is a woman, and zero otherwise.	Questionnaire
Stage	Dummy variable that equals 1 if the firm is managed by the first generation, and zero otherwise.	Questionnaire
Altman Z	Altman S-score calculated by the following equation: : $z = 0.717X_1 + 0.847X_2 + 3.107X_3 + 0.420X_4 + 0.998X_5$. X_1: net working capital, X_2: retained earnings divided by total assets, X_3: EBIT divided by total assets, X_4: book value of equity divided by total liabilities, X_5: sales divided by total assets.	SABI
Age	Natural logarithm of the years since a firm's inception.	SABI
Size	Natural logarithm of total assets.	SABI
ROA	Earnings Before Interest and Taxes (EBIT) divided by total assets.	SABI
ATangibility	Tangible fixed assets (plant, property and equipment) divided by total assets.	SABI
Cash	Cash and cash equivalents divided by total assets.	SABI
Industry dummies	Dummy variables according to the Standard Industrial Classification (SIC).	SABI

The SABI (Iberian Balance Sheet Analysis System) database is compiled by Bureau Van Dijk and provides firm information for businesses across Spain and Portugal.

Table 2
Descriptive Statistics.

Panel A: Financial and accounting variables (n = 420)

	Mean	SD	Min	Median	Max
TDebt	0.522	0.216	0.031	0.543	0.998
FinDebt	0.251	0.190	0.000	0.230	0.924
NonFinDebt	0.272	0.162	0.025	0.231	0.924
Altman Z	2.704	1.485	-0.498	2.393	16.433
Age	3.203	0.525	1.353	3.286	4.570
Size	8.776	1.288	5.018	9.000	12.351
ROA	0.061	0.086	-0.039	0.049	0.738
ATangibility	0.404	0.230	0.000	0.399	0.968
Cash	0.118	0.139	0.000	0.070	0.911

Panel B: Mean value of debt levels by dummy variables and t-test for differences in means (n = 420)

Variable	SubSample	TDebt	FinDebt	NonFinDebt
SEW	High SEW	0.484	0.228	0.256
	Low SEW	0.567	0.277	0.290
	Difference	-0.084***	-0.049***	-0.034**
FamCEO	Family CEO	0.510	0.242	0.267
	Non-Family CEO	0.588	0.294	0.295
	Difference	-0.078***	-0.051**	-0.027
GenCEO	Female CEO	0.474	0.207	0.267
	Male CEO	0.532	0.260	0.273
	Difference	-0.058**	-0.053**	-0.005
Stage	First stage	0.542	0.245	0.297
	Second or later stage	0.508	0.255	0.253
	Difference	0.033	-0.010	0.044

See variable definitions in Table 1. SD: standard deviation.
** and *** significant at 5% and 1%, respectively.

Table 3
Correlation coefficients.

Variables	1	2	3	4	5	6	7	8	9
1. TDebt	1								
2. FinDebt	0.69	1							
3. NonFinDebt	0.52	-0.26	1						
4. Altman Z	-0.47	-0.58	0.06	1					
5. Age	-0.13	0.06	-0.24	-0.11	1				
6. Size	-0.12	0.13	-0.30	-0.31	0.40	1			
7. ROA	-0.19	-0.24	0.03	0.36	-0.12	0.07	1		
8. ATangibility	-0.02	0.28	-0.36	-0.29	0.09	0.20	-0.09	1	
9. Cash	-0.37	-0.45	0.03	0.36	-0.06	-0.19	0.26	-0.31	1

See variable definitions in Table 1.

Table 4
Regression results: Influence of SEW preservation on total debt.

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
SEW	-0.072***	-0.068***	-0.074***	-0.071***	-0.047***	-0.044***
	(0.019)	(0.019)	(0.019)	(0.019)	(0.017)	(0.017)
FamCEO		-0.073***				-0.079***
		(0.026)				(0.021)
GenCEO			-0.061**			-0.053***
			(0.024)			(0.020)
Stage				0.016		-0.000
				(0.021)		(0.018)
Altman Z					-0.075***	-0.075***
					(0.014)	(0.014)
Age	-0.036*	-0.039*	-0.030	-0.030	-0.023	-0.021
	(0.020)	(0.020)	(0.020)	(0.021)	(0.018)	(0.019)
Size	-0.019**	-0.022***	-0.022**	-0.019**	-0.044***	-0.050***
	(0.009)	(0.009)	(0.009)	(0.009)	(0.008)	(0.008)
ROA	-0.002*	-0.002	-0.002*	-0.003*	-0.002	-0.002*
	(0.002)	(0.002)	(0.001)	(0.002)	(0.001)	(0.001)
ATangibility	-0.094**	-0.090**	-0.085*	-0.094**	-0.175***	-0.163***
	(0.045)	(0.043)	(0.044)	(0.045)	(0.043)	(0.042)
Cash	-0.626**	-0.622***	-0.621***	-0.628***	-0.489***	-0.479***
	(0.083)	(0.084)	(0.081)	(0.082)	(0.062)	(0.060)
Constant	0.965***	1.056***	0.976***	0.939***	1.324***	1.434***
	(0.082)	(0.087)	(0.081)	(0.090)	(0.100)	(0.111)
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
Adj R^2	0.226	0.241	0.237	0.228	0.406	0.432
F-Statistic	12.68***	12.59***	12.86***	11.62***	21.34***	18.72***
Observations	420	420	420	420	420	420

See variable definitions in Table 1. The dependent variable in all models is total debt (*TDebt*). Robust standard errors in parentheses. Similar results are obtained when we use robust standard errors clustered by industry.
*, ** and *** significant at 10%, 5% and 1%, respectively.

Table 5
Regression results: Influence of SEW preservation on financial debt.

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
SEW	-0.063***	-0.061***	-0.065***	-0.063***	-0.043***	-0.043***
	(0.016)	(0.016)	(0.016)	(0.016)	(0.015)	(0.014)
FamCEO		-0.027				-0.032
		(0.024)				(0.021)
GenCEO			-0.056***			-0.051***
			(0.020)			(0.018)
Stage				0.005		-0.007
				(0.018)		(0.015)
Altman Z					-0.062***	-0.062***
					(0.014)	(0.014)
Age	0.003	0.002	0.008	0.004	0.013	0.014
	(0.016)	(0.017)	(0.016)	(0.017)	(0.014)	(0.015)
Size	0.006	0.005	0.004	0.006	-0.015**	-0.019***
	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
ROA	-0.003***	-0.003***	-0.003***	-0.003***	0.001	0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
ATangibility	0.147***	0.148***	0.155***	0.147***	0.080**	0.089**
	(0.039)	(0.039)	(0.038)	(0.039)	(0.039)	(0.039)
Cash	-0.483***	-0.481***	-0.478***	-0.484***	-0.369***	-0.362***
	(0.061)	(0.061)	(0.060)	(0.061)	(0.050)	(0.049)
Constant	0.244***	0.277***	0.253***	0.235***	0.541***	0.602***
	(0.068)	(0.075)	(0.068)	(0.072)	(0.096)	(0.103)
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
Adj R^2	0.267	0.269	0.279	0.267	0.426	0.440
F-Statistic	20.70***	18.72***	20.11***	18.18***	29.10***	23.60***
Observations	420	420	420	420	420	420

See variable definitions in Table 1. The dependent variable in all models is financial debt (*FinDebt*). Robust standard errors in parentheses. Similar results are obtained when we use robust standard errors clustered by industry.
** and *** significant at 5% and 1%, respectively.

Table 6
Regression results: Influence of SEW preservation on non-financial debt.

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
SEW	-0.009	-0.006	-0.001	-0.008	-0.005	-0.001
	(0.014)	(0.014)	(0.014)	(0.014)	(0.015)	(0.015)
FamCEO		-0.046**				-0.047**
		(0.023)				(0.023)
GenCEO			-0.005			-0.002
			(0.018)			(0.018)
Stage				0.011		0.006
				(0.018)		(0.017)
Altman Z					-0.013**	-0.013**
					(0.005)	(0.005)
Age	-0.038**	-0.040**	-0.038**	-0.034*	-0.036**	-0.035**
	(0.017)	(0.017)	(0.017)	(0.019)	(0.017)	(0.019)
Size	-0.025***	-0.027***	-0.025***	-0.025***	-0.029***	-0.032***
	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
ROA	0.000	0.000	0.000	0.000	0.001	0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
ATangibility	-0.241***	-0.238***	-0.240***	-0.241***	-0.255***	-0.252***
	(0.037)	(0.036)	(0.037)	(0.037)	(0.036)	(0.035)
Cash	-0.143**	-0.141**	-0.143**	-0.145**	-0.120**	-0.117**
	(0.057)	(0.058)	(0.057)	(0.057)	(0.056)	(0.057)
Constant	0.722***	0.779***	0.723***	0.704***	0.783***	0.833***
	(0.066)	(0.073)	(0.066)	(0.076)	(0.068)	(0.085)
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
Adj R^2	0.214	0.225	0.214	0.215	0.223	0.235
F-Statistic	13.27***	12.91***	11.58***	12.39***	13.83***	10.84***
Observations	420	420	420	420	420	420

See variable definitions in Table 1. The dependent variable in all models is non-financial debt (*NonFinDebt*). Robust standard errors in parentheses. Similar results are obtained when we use robust standard errors clustered by industry.
*, ** and *** significant at 10%, 5% and 1%, respectively.

Table 7
Propensity score matching: Moderating roles in the SEW-debt relationship.

Panel A: Effect on total debt (TDebt)

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
SEW × FamCEO	-0.060***				-0.024
	(0.016)				(0.020)
SEW × GenCEO		-0.168***			-0.162***
		(0.023)			(0.025)
SEW × Stage			-0.032		-0.007
			(0.021)		(0.023)
SEW × Altman Z				-0.011	0.004
				(0.011)	(0.009)
Constant	0.139***	0.140***	0.117***	0.126***	0.145***
	(0.009)	(0.007)	(0.009)	(0.014)	(0.009)
Adj R^2	0.062	0.290	0.002	0.024	0.287
F-Statistic	14.67***	53.11***	2.30	0.97	13.18***
Observations	216	216	216	216	216

Panel B: Effect on financial debt (FinDebt)

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
SEW × FamCEO	-0.041**				0.008
	(0.021)				(0.030)
SEW × GenCEO		-0.108***			-0.103***
		(0.026)			(0.027)
SEW × Stage			-0.091***		-0.083***
			(0.024)		(0.026)
SEW × Altman Z				-0.010	0.001
				(0.012)	(0.012)
Constant	0.073***	0.072***	0.070***	0.068***	0.081***
	(0.073)	(0.011)	(0.012)	(0.018)	(0.015)
Adj R^2	0.013	0.065	-0.001	0.009	0.089
F-Statistic	3.91**	17.60***	14.68***	0.66	8.50***
Observations	216	216	216	216	216

Panel C: Effect on non-financial debt (NonFinDebt)

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
SEW × FamCEO	-0.019				-0.032
	(0.021)				(0.028)
SEW × GenCEO		-0.060**			-0.059**
		(0.026)			(0.028)
SEW × Stage			0.058**		0.036
			(0.028)		(0.031)
SEW × Altman Z				-0.001	0.003
				(0.005)	(0.006)
Constant	0.066***	0.067***	0.047***	0.059***	0.064***
	(0.015)	(0.012)	(0.011)	(0.013)	(0.015)
Adj R^2	-0.001	0.017	0.001	-0.005	0.036
F-Statistic	0.83	5.00**	4.34**	0.03	4.91***
Observations	216	216	216	216	216

See variable definitions in Table 1. Robust standard errors in parentheses. Similar results are obtained when we use robust standard errors clustered by industry.
** and *** significant at 5% and 1%, respectively.

Table 8
Research hypotheses supported.

Hypothesis	Total debt	Financial debt	Non-Financial debt
H1: SEW preservation in private family firms negatively affects debt levels.	Yes	Yes	No
H2: The negative effect of SEW preservation on debt levels will be stronger when the firm is managed by a family CEO.	No	No	No
H3: The negative effect of SEW on debt levels will be stronger when the firm is managed by a female CEO.	Yes	Yes	Yes
H4: The negative effect of SEW on debt levels will be stronger when the firm is managed by the first generational stage.	No	Yes	No
H5: The negative effect of SEW on debt levels will be attenuated, or will even be positive, when the family firm faces greater performance hazard.	No	No	No

To support Hypothesis 1, see Tables 4-6, Model 6. To support Hypotheses 2-5, see Table 7, Model 5.