Journal of Family Business Strategy 11 (2020) 100338

Contents lists available at ScienceDirect

Journal of Family Business Strategy

journal homepage: www.elsevier.com/locate/jfbs

Starting a family business as a career option: The role of the family household in Mexico

Daniel Pittino[b], Francesco Chirico[a,b,*], Massimo Baù[b], Marcia Villasana[c], Elvira E. Naranjo-Priego[d], Elda Barron[e]

[a] Macquarie Business School - Macquarie University, Department of Management, 4 Eastern Road, NSW 2109, Sydney, Australia
[b] Jönköping International Business School – Jönköping University, Centre for Family Entrepreneurship and Ownership, PO Box 1026, SE-551 11 Jönköping, Sweden
[c] Tecnologico de Monterrey, EGADE Business School, Av. Eugenio Garza Lagüera & Rufino Tamayo, Valle Oriente, San Pedro, Garza García, C.P.66269, N.L., Mexico
[d] Tecnologico de Monterrey, Escuela de Ciencias Sociales y Gobierno, Ave. Eugenio Garza Sada 2501, Monterrey, N.L., 64849 Mexico
[e] Universidad de Monterrey, Management Department, Av. Morones Prieto 4500 Pte., San Pedro Garza García, N. L.,66238 Mexico

ARTICLE INFO

Keywords:
Start up intentions
Family involvement
Family embeddedness
Global Entrepreneurship Monitor
Mexico

ABSTRACT

This study analyses the determinants of an individual's intention to start up a new venture that involves family members. Building on the family embeddedness perspective, we hypothesize the existence of an inverted U-shaped relationship between the number of individuals in a family household and the intention to start a family business. Moreover, we argue that this relationship is moderated by the household income and the individual's education level. With supportive empirical results based on data from the Global Entrepreneurship Monitor (GEM) from Mexico, our work contributes to research on family embeddedness and entrepreneurial career intentions by identifying the importance of household-level factors in the family business start-up decision, and by depicting such decision as a distinctive career option in terms of self-employment.

1. Introduction

The family, as a social system, plays a paramount role in the process of new venture creation (e.g., Aldrich & Cliff, 2003; Chrisman, Chua, & Steier, 2003; Goel & Jones, 2016; Jennings, Eddleston, Jennings, & Sarathy, 2015; Steier, 2009). Family support for entrepreneurial initiatives represents indeed a crucial contribution to the growth of regional and national economies worldwide (e.g., Astrachan, Zahra, & Sharma, 2003; Randerson, Bettinelli, Fayolle, & Anderson, 2015). The family embeddedness perspective (Aldrich & Cliff, 2003), in particular, has highlighted the importance of entrepreneurs' family ties and resources in the entrepreneurial process, and further studies have addressed the influence of family background and context on an individual's decision to become an entrepreneur (e.g., Criaco, Sieger, Wennberg, Chirico, & Minola, 2017; Edelman, Manolova, Shirokova, & Tsukanova, 2016; Klyver, 2007; Sieger & Minola, 2017; Steier, 2009; Powell & Eddleston, 2017).

However, while there is increasing general evidence "on how a new venture might spring from family relationships" (Aldrich & Cliff, 2003: 577), there is still limited understanding of the actual determinants of the involvement of family members in the entrepreneurial initiative, which in turn is connected to an individual's decision to initiate a career as a family business entrepreneur. Gaining knowledge of this phenomenon is important, given that new ventures are often led by teams of relatives (e.g., Brannon, Wiklund, & Haynie, 2013; Discua Cruz, Howorth, & Hamilton, 2013; Ensley & Pearson, 2005; Schjoedt, Monsen, Pearson, Barnett, & Chrisman, 2013), and families contribute significantly to the labor supply in the creation of new enterprises (Cruz, Justo, & De Castro, 2012). This phenomenon is especially relevant in emerging economies, where the role of family support in entrepreneurial ventures is seen as crucial, given the weakness of institutions and infrastructures supporting start-up processes (e.g., Jennings et al., 2015). It is therefore important to understand how and under what conditions family resources translate into an entrepreneurial initiative and to what extent resources at the family level may function as substitutes for supporting tools at the institutional level. Additionally, from the career perspective of an individual, the decision to start a new business involving multiple family members may have positive and negative implications regarding both expected economic utility and intrinsic satisfaction associated with the entrepreneurial role (e.g., Cruz et al., 2012; Fiegener, 2010). Therefore, it is relevant to identify which individual- and family-level factors are

* Corresponding author at: Macquarie Business School - Macquarie University, Department of Management, 4 Eastern Road, NSW 2109, Sydney, Australia.
E-mail addresses: daniel.pittino@ju.se (D. Pittino), francesco.chirico@mq.edu.au (F. Chirico), massimo.bau@ju.se (M. Baù), marciavillasana@tec.mx (M. Villasana), enaranjo@tec.mx (E.E. Naranjo-Priego), elda.barron@udem.edu (E. Barron).

https://doi.org/10.1016/j.jfbs.2020.100338

Available online 20 March 2020
1877-8585/ Crown Copyright © 2020 Published by Elsevier Ltd. All rights reserved.

important in encouraging or deterring the pursuit of this career option, thus leading to the decision to start a family firm versus starting a non-family business or not starting a new business at all. In this study, we define a family firm as a firm where multiple family members are involved as owners/managers (Arregle, Hitt, Sirmon, & Very, 2007) so that the family unit plays an important role in the career choices of individual family members (Carr & Sequeira, 2007). The prospective involvement of family members has in fact a potential impact on various dimensions affecting the entrepreneurial career decision, such as the availability of resources, the extent of emotional support, the fulfilment of specific individual motivations. For example, as highlighted by Brush and Manolova (2004), the household structure influences the availability of start-up capital, the social desirability of the entrepreneurial career, and the household commitment in the new venture.

As such, the present study analyzes the determinants of an individual's decision to start a new venture that involves family members in the context of Mexico – a representative emerging economy in Latin America (Baños-Monroy, Ramírez-Solís, & Rodríguez-Aceves, 2016). As in many other economies around the world, family businesses in Mexico provide a significant contribution to GDP and employment. In Latin American countries, where 90–98% of businesses are family-owned (Poza, 2010), family firms employ between 50–75% of the workforce. More specifically, in Mexico, there are 5,654,014 business units, out of which roughly 90 % are family businesses in the private sector, providing employment for 90 % of the national workforce (FFI, 2016; INEGI, 2016). Most new firms in Mexico are indeed created and managed by members of the nuclear or extended family (Davila & Hartman, 2016). Under the adage of "you trust your blood", business start-up decisions are strongly influenced by cultural patterns which originate from the family structure (Athanassiou, Crittenden, Kelly, & Marquez, 2002; Silva, 2017). Yet, despite the documented relevance of the family context for the business development, there is scarce research on the role of the family in terms of size and its influence on the individual intent to start a business. Indeed, the influence of the family into the business has been studied from different angles, such as succession (Hoshino, 2005; San Martín & Durán, 2016; Soto, de la Garza, Esparza, & San Martín, 2015; Ahrens, Uhlaner, Woywode, & Zybura, 2018; Harrington & Strike, 2018), corporate governance (Belausteguigoitia, Patlán, & Navarrete, 2007; González, Guzmán, Pablo, & Trujillo, 2019; Villalonga, Amit, Trujillo, & Guzmán, 2015), and internationalization (Velez-Ocampo, Govindan, & Gonzalez-Perez, 2017), but the literature studying family-based factors as explanatory variables for enterprise creation (Aldrich & Cliff, 2003; Jennings et al., 2015) is still relatively scarce, especially with reference to the emerging economies (e.g. Carreón-Gutiérrez & Saiz-Álvarez, 2019), in which the interface between the family context and entrepreneurial endeavor can help creating employment opportunities and alleviating poverty conditions.

Following Aldrich and Cliff (2003), who suggest focusing primarily on the family household as the unit of analysis to evaluate the effect of family embeddedness on entrepreneurship, we primarily assess how the structure of the household, particularly in terms of size, affects the family business start-up intention. Specifically, we hypothesize an inverted U-shaped relationship between the number of individuals in a family household and the intention to start a family business. Then, given that the household income and the individual's education level are considered to be among the most important determinants of an individual's intention to establish a new organization (e.g., Davidsson & Honig, 2003; Earle & Sakova, 2000; Krasniqi, 2009; Lazear, 2004) and existing research on family households has focused specifically on the roles of financial and human forms of capital on potential firm outcomes (Alsos, Carter, & Ljunggren, 2014; Brush & Manolova, 2004), we explore their moderating roles on the curvilinear relationship described above. To test our hypotheses, we rely on individual-level data from the Global Entrepreneurship Monitor (GEM) (2015) from Mexico. The data set includes information on adults weighted by gender, age, and state to make the dataset representative of the national population. The Mexican context is particularly appropriate for assessing the relationship between household characteristics and a family business start-up intention. In fact, venture creation is a common way to provide job opportunities for family members, and, at the same time, family members' work represents a critical resource for new ventures in emerging economies (e.g., Mead & Liedholm, 1998; Woodruff & Zenteno, 2007).

Our study makes two main contributions. First, it contributes to the family embeddedness perspective in family business studies (Aldrich & Cliff, 2003; Edelman et al., 2016) and to the literature on the role of the family in entrepreneurial processes (e.g., Meliou & Edwards, 2018; Naldi, Baù, Ahl, & Markowska, 2019; Randerson et al., 2015; Welter, 2011) by exploring the potential involvement of the family in a new venture and suggesting that different and often conflicting considerations connected to family and business-related goals come into play in the start-up decision. Second, this study adds to the literature on the role of the family entrepreneurial career intentions (e.g., Douglas & Shepherd, 2002; Kolvereid, 1996; Fayolle & Liñán, 2014; Schjoedt & Shaver, 2007) by studying more in depth the option of starting-up a family business in the career decision-making process. Thus far, studies on entrepreneurial careers have mainly focused instead on family business succession as a possible mode of entry in entrepreneurship or as an alternative to a new venture start-up and the takeover of an existing firm (Bastié, Cieply, & Cussy, 2013; Block, Thurik, Van der Zwan, & Walter, 2013; Parker & van Praag, 2012; Rocha, Carneiro, & Varum, 2015).

2. Family household, entrepreneurial intention and family involvement

A household is a small, closely knit collection of individuals who occupy a housing unit (Lancaster, 1975). There are two types of households – family and non-family. Differently than the latter, the former consists of two or more individuals related by birth, marriage, or adoption (McFalls, 2007). The household structure is a broader unit of analysis than the family structure, and it typically comprises the nuclear and extended family. For the purposes of the present study, we consider this conceptualization of the household, to ensure comparability with previous research that have taken the household as a unit of analysis in the investigation of the family context – entrepreneurial career nexus (e.g. Brush & Manolova, 2004; Carter, 2011).

As observed by Welter (2011), family business and entrepreneurship scholars have started to include the household and family as relevant contexts for entrepreneurial activities, leveraging on the concept of "socioeconomic hybrid systems" borrowed from the studies in agricultural economy (Welter, 2011). This view is also consistent with the recognition of the network embeddedness of economic action (Granovetter, 1985). As Alddlrich and Zimmer (1986) argue, entrepreneurial behavior is embedded in social networks and therefore cannot be considered in isolation. According to the family embeddedness model (Aldrich & Cliff, 2003), the family, as a primary context of socialization, has a crucial impact on the process of new venture creation; therefore, the decision to establish a new business may be the result of the influence of a family household rather than an individual business strategy (Alsos et al., 2014). This perspective implies a view of the entrepreneurial career choice of an individual within the context of her/his immediate family unit with implicitly blurred boundaries between the nascent business sphere and the private sphere. That is, new venture strategies are interwoven with household strategies. For example, household commitments such as child or elder care, household maintenance, and other tasks may represent a significant burden constraining the entrepreneurial intentions and actions. At the same time, the household can be seen as a rich supplier of resources for the new business (e.g., Brush & Manolova, 2004; Stewart, 2003). In particular, household members can be involved as co-founders and/or employees in the new firm (e.g. Discua Cruz et al., 2013; Ensley & Pearson, 2005;

Schjoedt et al., 2013). In more general terms, the contribution of the family can be framed in terms of "household capital," which is "both available to and created by members of the family unit" (Rodriguez, Tuggle, & Hackett, 2009, p. 261), and it involves financial and human components (Bubolz, 2001; Rodriguez et al., 2009; Sieger & Minola, 2017).

2.1. Family household size and intention to start a family business

Among the variables that define a family household structure, size is certainly one of the most important factors in influencing members' entrepreneurial intentions (e.g., Alsos et al., 2014; Brush, Ali, Kelley, & Greene, 2017; Krasniqi, 2009). Larger households may provide support for potential entrepreneurs in terms of a wide range of resources. That is, larger families provide higher levels of emotional support, personal encouragement and mentoring (Arregle et al., 2007, 2015; Chang, Memili, Chrisman, Kellermanns, & Chua, 2009; Edelman et al., 2016; Hoffman, Hoelscher, & Sorenson, 2006). As the household size increases, it is also more likely that members will bring invaluable business connections and social capital (Anderson, Jack, & Dodd, 2005; Cruz et al., 2012; Dyer, 2003; Steier, 2001). We argue that these features increase the likelihood of individuals starting a family firm since that support is likely to translate into the involvement of other members in terms of a direct supply of labor and/or participation in the new venture's equity. Moreover, altruism and willingness to reciprocate by the nascent entrepreneurs have the potential to encourage them to provide job opportunities to their relatives (e.g., Cruz et al., 2012; Sieger & Minola, 2017). Overall, as observed by Cruz et al. (2012): p. 63), the employment of relatives "offers a cheap way of securing workers and an efficient way of ensuring their trustworthiness and commitment." We therefore expect to observe that as the family household size increases, a positive relationship between the number of family members in the household and likelihood to start a new family venture will manifest given the potential advantages arising from the practical and emotional support offered by the employment of family members.

However, as the family household size increases further, the benefits are more likely to be offset by disadvantages. Although a large household may be beneficial because the potential entrepreneur can choose between more potential co-founders and managers from the family, this can also create possible tensions and dilemmas. The potential entrepreneur may feel morally obliged to involve multiple family members rather than more qualified external employees. That is, the likelihood to hire people with resources and capabilities that are insufficient or inappropriate for the business's needs may increase, and so might conflicts at the family and business levels (Boles, 1996). Thus, beyond a certain family size, the entrepreneur's altruistic responsibility to involve the highest possible number of family members in order to preserve kinship relationships and meet personal affective needs may impede an effective design of the new venture's workforce composition (Fiegener, 2010; Lansberg, 1983; Nguyen & Nordman, 2017). We argue therefore that individuals with entrepreneurial career intentions are increasingly likely to face a moral dilemma between competing family and business norms as household size increase further. Consequently, they may decide to avoid this uncomfortable psychological situation by not considering the possibility of starting a family business, either taking the non-family business route or abandoning the idea to start a business.

In summary, as the number of household members increases, an individual's intention to start a family business increases, as well. Yet, as the number of household members increases further, potential tensions and dilemmas between family and business norms tend to exceed the family-based advantages. Therefore, we propose:

Hypothesis 1: *There is an inverted U-shaped relationship between family household size and an individual's intention to start a family business.*

2.2. The moderating effects of household income and individual education

It is reasonable to assume that the family household size interacts with other factors, both at the family and individual level, to affect the family business start-up intention. In particular, previous research on the influence of the household on entrepreneurial endeavors and firm-level outcomes has focused mainly on the roles of financial capital and human capital (Alsos et al., 2014; Brush & Manolova, 2004). Accordingly, we focus our attention to these two factors as they are likely to relax the trade-off between family and business norms during the process of making a career-related decision.

At the household level, a family's financial resources are certainly important considerations. The household can obtain financial resources in multiple ways, for example, wages from its members' employment, the rental of property, ownership and shareholding of additional businesses, returns from financial investments, social security transfers and pensions (see e.g., Alsos et al., 2014). The extent of household income may create slack resources that facilitate the pursuit of entrepreneurial strategic options by individual members and make the curvilinear relationship between household size and family business start-up less pronounced. In this situation, in fact, the employment of family members is less crucial as a cost-saving option given that there are additional resources that release the financial constraints of the nascent venture. This would justify a "less steep" relationship between number of household members and the likelihood to start up a family firm in the ascending portion of the curve.

Additionally, as the number of family members increase further, higher levels of family income also make less salient the dilemma regarding hiring or not incompetent additional family members. Therefore, the descending portion of the curve has a less pronounced downward slope. This happens because higher family income makes the choice to employ relatives that are insufficiently qualified for the requirements of the nascent business more sustainable. In support of this logic, family business literature has extensively discussed the tendency of family business owner/managers to use excess financial resources on the family or on the business side to compensate family employees, regardless of their relatively low levels of qualification/productivity (e.g., Danes, Zuiker, Kean, & Arbuthnot, 1999; Lansberg, 1983).

As such, we predict that the inverted U-shaped relationship between family household size and family business start-up intention becomes less pronounced (i.e., flatter) at higher levels of family income. Formally stated:

Hypothesis 2: *Family household income moderates the inverted U-shaped relationship between a family household size and an individual's intention to start a family business in such a way that the inverted U-shaped relationship will be flatter in households with a higher income.*

Another crucial factor in the decision to pursue an entrepreneurial career is an individual's education level (e.g., Davidsson & Honig, 2003), which is likely to produce a moderating effect similar to that predicted in relation to the family household income (i.e., a flatter relationship). A higher level of education increases the personal endowment in terms of general human capital, which consists mainly of explicit knowledge that is easily transferable across various settings. Human capital is indeed positively associated with the identification and pursuit of entrepreneurial opportunities (e.g., Ucbasaran, Westhead, & Wright, 2009; Zhang, Duysters, & Cloodt, 2014), as it enhances the screening ability to detect business opportunities and increases the expected returns from their exploitation (Davidsson & Honig, 2003; Shane & Khurana, 2003). As human capital acts as a driver for the recognition of profitable and innovative opportunities, it may help to align the economic priorities of the nascent business and the family-related non-financial goals (e.g., Hoskisson, Chirico, Zyung, & Gambeta, 2017; Gomez-Mejia et al., 2014; Martin & Gomez-Mejia, 2016).

Specifically, it is likely that better educated individuals are able to

spot more profitable opportunities; therefore, they expect to derive higher financial returns from the entrepreneurial endeavor in comparison to less educated individuals (e.g., Douglas & Shepherd, 2002). The higher expected returns create the potential for a less financially constrained situation, which, again, reduces the dependence of the nascent venture on family members' work and buffers the detrimental effect of hiring incompetent relatives. This would account for a less pronounced downward slope in the descending portion of the relationship between household size and the likelihood to start a family venture. The ascending portion of the curvilinear relationship will be also less steep, as more educated individuals, having themselves higher capacity of information processing and being more productive compared to individuals with lower education levels, will be more "indifferent" to the hiring of additional family members with the aim to expand the information processing and productivity of the new venture. This leads us to the following hypothesis:

Hypothesis 3: *An individual's level of education moderates the inverted U-shaped relationship between a family household size and an individual's intention to start a family business in such a way that the inverted U-shaped relationship will be flatter for individuals with higher levels of education.*

3. Method

3.1. Sample

To test our hypotheses, we relied on the Adult Population Survey (APS) of the Global Entrepreneurship Monitor (GEM) collected during 2015 in Mexico (GEM Mexico, 2015). The GEM APS focuses on the characteristics, motivations, and ambitions of individuals starting businesses, as well as social attitudes towards entrepreneurship. The dataset includes information on adults weighted by gender, age, and Mexican states, offering a representative sample of the national population. Based on the full set of available data, our final sample consisted of 3540 cases.

3.2. Variable definitions and measurements

The dependent variable is intention of *starting a family business,* and it was obtained by asking respondents who do not currently own a business, first if they are planning to start a new business and subsequently, if this is the case, if they are considering involving any family member as owner/manager in the creation of this new business. The variable is dummy coded as 1 in the case of a positive answer and is 0 in the cases in which an individual has the intention to start a non-family business or to not start a business at all. We also ran two robustness tests of our results by excluding *first* the individuals with the intention to start a non-family business, and *second* the individuals with no intention to start a business. In the first case, all hypotheses were confirmed. In the second case Hypotheses 1 and 3 were confirmed, but Hypothesis 2 was not (although the coefficients were in the expected direction).

Family household size is measured as the total number of members that make up the permanent household of the individual, including the respondent. *Family household income* represents the total annual income of all the members of the household, including the respondent. The variable is measured in Mexican Pesos considering 7 categories (less then Mex $1500; $1501–$3500; $3501–$7000; $7001–$10,000; $10,001–$15,000; $15,001–$25,000; more than $25,000). The *Individual level of education* is based on the national Mexican classification scheme. The variable is measured on a scale of 1–10, which ranges from no degree to university degree (1 = cannot read; 2 = incomplete elementary school; 3 = completed elementary school; 4 = incomplete junior high; 5 = completed junior high; 6 = incomplete high school; 7 = completed high school; 8 = incomplete college; 9 = complete college; 10 = graduate school).

We also controlled for ten variables (age; gender; perceived entrepreneurial skills; previous entrepreneurial experience; social capital; business opportunities; perceived easiness to start a business; fear of failure; desirable career; desirable status) believed to influence the relationship between our dependent and independent variables (e.g., Davidsson & Honig, 2003; Krasniqui, 2009). First, we controlled for the respondent *age,* coded as a continuous variable, given its potential effect on individuals' desire to start a family business (Minola, Criaco, & Obschonka, 2016). Second, a person's *gender* may also influence the decision of starting a business, and the work-family issues are particularly relevant in such choices (Langowitz & Minniti, 2007); thus, we constructed a dummy variable, where 0 is male and 1 is female. Third, prior research has indicated that individuals' entrepreneurial family behaviour is affected by their perceived skills to be entrepreneurs, thus we controlled for the individual's *perceived entrepreneurial skills* codified as a dummy variable equal to 1 when the person believes to have the skills required to start a new business (Clercq & Arenius, 2006; Criaco et al., 2017). Fourth, the *prior entrepreneurial experience* may also influence the decision to start a family business (Baù, Sieger, Eddleston, & Chirico, 2017). The variable was coded as 1 when the respondents declared that they owned a managed a firm which was sold or shut down, and was coded 0 otherwise. Fifth, prior research has also discussed the effect of inter-personal relationship on entrepreneurial intention, thus we controlled for *social capital* using as proxy the individual's acquaintance with someone who started a business in the past 2 years (Criaco et al., 2017; Estrin, Mickiewicz, & Stephan, 2013), codified as 1 in case of positive answer and 0 otherwise. Sixth, past research indicates that businesses are founded as a consequence of opportunity recognition or necessity (Block, Kohn, Miller, & Ullrich, 2015). Accordingly, we controlled for *business opportunities* as a dummy variable coded 1 if the respondents recognize good opportunities in the next six months for starting a new business in the area where they live, and coded 0 otherwise. Seventh, prior studies addressed the influence of the national business regulations and context on entrepreneurial behavior. Thus, we controlled for the individual's perception about the *perceived easiness to start a business* (Van Stel, Storey, & Thurik, 2007). The variable was coded as a dummy with value 1 when the individual perceived that it was easy to start a business in Mexico, and 0 otherwise. Eighth, similarly the *fear of failure* could affect the entrepreneurial spirit of individuals (Koellinger, Minniti, & Schade, 2007). Thus, we used a dummy variable coded as 1 when the respondent indicated that the fear of failure would prevent from starting a business, and 0 otherwise. Ninth, prior research indicated both positive and dark sides of entrepreneurship as a career choice (Kolvereid, 1996). Thus, we controlled for the individual's perception of entrepreneurship using a dummy variable coded as 1 when the respondent indicated that in Mexico, most people consider starting a new business a desirable career choice, and 0 otherwise (*desirable career*). Finally, literature shown that societal factors and the seek for a higher status affect the entrepreneurial intention of individuals (Tominc & Rebernik, 2007). Thus, we controlled for *desirable status* coded as a dummy variable equal to 1 when the individual indicated that those successful at starting a new business have a high level of status and respect in Mexico, and 0 otherwise.

4. Results

4.1. Descriptive statistics

The descriptive statistics and correlations of the variables analyzed are presented in Table 1. An inspection of the variance inflation factors (VIFs) revealed that multicollinearity is not a concern. All the VIF coefficients were lower than 2 (Kutner, Nachtsheim, & Neter, 2004).

Table 1
Correlation table and summary statistics.

	Mean	S.D.	1.	2.	3.	4.	5.	6.	7.	9.	8.	10.	11.	12.	13.
1. Starting a family business	0.08	0.28													
2. Household size	5.20	2.04	0.05												
3. Household income	5.71	1.82	0.07	−0.05											
4. Individual Education	3.84	1.17	0.09	0.21	0.33										
5. Age	36.69	12.64	0.02	0.02	−0.30	0.03									
6. Gender	1.52	0.50	−0.03	−0.01	−0.07	−0.03	−0.01								
7. Perceived entrepreneurial skills	0.38	0.59	0.17	−0.01	0.14	0.15	0.02	−0.07							
8. Previous entrepreneurial experience	0.05	0.22	0.02	0.05	0.04	0.02	0.01	−0.01	0.07						
9. Social Capital	0.44	0.54	0.15	−0.04	0.14	0.07	0.01	−0.06	0.30	0.06					
10. Business opportunities	0.36	0.48	0.18	0.00	0.09	0.09	0.01	−0.06	0.26	0.06	0.25				
11. Perceived easiness to start a business	0.14	0.59	0.06	−0.02	0.08	0.11	0.00	−0.01	0.24	0.05	0.16	0.24			
12. Fear of failure	0.24	0.59	0.04	−0.01	0.04	0.10	−0.02	0.01	0.10	0.04	0.10	0.08	0.17		
13. Desirable career	0.33	0.69	0.08	−0.03	0.09	0.05	−0.01	−0.03	0.18	0.01	0.17	0.22	0.24	0.11	
14. Desirable status	0.40	0.66	0.07	−0.08	0.07	0.04	−0.01	−0.03	0.20	0.02	0.22	0.17	0.19	0.10	0.39

N = 3,540; Correlations with values of |0.03| or greater are significant at $p < 0.05$.

Table 2
Logistic regression (DV: starting a family business).

	Model 1	Model 2	Model 3	Model 4	Model 5
Age	0.01	0.01	0.01	0.01	0.01
	(0.63)	(0.75)	(0.99)	(0.93)	(0.91)
Gender	−0.07	−0.05	−0.05	−0.04	−0.05
	(0.61)	(0.40)	(0.40)	(0.37)	(0.45)
Perceived entrepreneurial skills	0.75***	0.70***	0.72***	0.71***	0.73***
	(5.76)	(5.30)	(5.41)	(5.40)	(5.48)
Previous entrepreneurial experience	0.17	0.13	0.18	0.20	0.20
	(0.73)	(0.55)	(0.77)	(0.83)	(0.86)
Social Capital	0.57***	0.57***	0.55***	0.54***	0.55***
	(4.25)	(4.17)	(4.05)	(3.99)	(4.03)
Business opportunities	0.94***	0.93***	0.94***	0.93***	0.93***
	(7.12)	(7.09)	(7.11)	(7.06)	(7.03)
Perceived easiness to start a business	−0.11	−0.12	−0.11	−0.10	−0.11
	(1.06)	(1.15)	(0.97)	(0.94)	(1.00)
Fear of failure	0.20+	0.17	0.17	0.17	0.17
	(1.83)	(1.52)	(1.52)	(1.59)	(1.51)
Desirable career	0.08	0.08	0.07	0.07	0.07
	(0.83)	(0.74)	(0.65)	(0.65)	(0.64)
Desirable status	−0.09	−0.07	−0.07	−0.07	−0.07
	(0.82)	(0.64)	(0.68)	(0.67)	(0.64)
Household income		0.15*	0.14*	0.07	0.14*
		(2.21)	(2.09)	(0.91)	(2.04)
Individual Education		0.09	0.11	0.11	−0.01
		(1.36)	(1.60)	(1.53)	(0.12)
Household size		0.16***	0.26***	0.26***	0.34***
		(2.67)	(3.59)	(3.41)	(4.13)
Household size2			−0.12**	−0.17**	−0.19***
			(2.76)	(3.08)	(3.49)
Household size * Household income				−0.06	
				(0.84)	
Household size2 * Household income				0.08*	
				(1.97)	
Household size * Individual education					−0.15*
					(2.22)
Household size2 * Individual education					0.12**
					(2.77)
Constant	−3.64***	−3.67***	−3.61***	−3.56***	−3.56***
	(15.15)	(14.88)	(14.53)	(14.27)	(14.24)
Log Likelihood	−989.55	−979.72	−975.29	−973.34	−970.36
LR Chi2	192.35***	211.99***	220.85	224.77	230.73***
Hosmer-Lemeshow Chi2	20.32	8.82	12.27	9.80	9.50
AIC	1993.55	1982.46	1975.18	1974.99	1969.04
Pseudo R2	0.088	0.097	0.1017	0.1035	0.1063
N	3540	3540	3540	3540	3540

+ $p < 0.1$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

4.2. Logistic regression analyses

We tested the hypotheses using five models, which are reported in Table 2. First, we considered the control variables (Model 1) and then added the independent variables—household size, education, and household income—of interest (Model 2). In Model 3, we computed the squared value of household size to assess the curvilinear effects. Finally, we tested the interaction effects of household size and its squared term

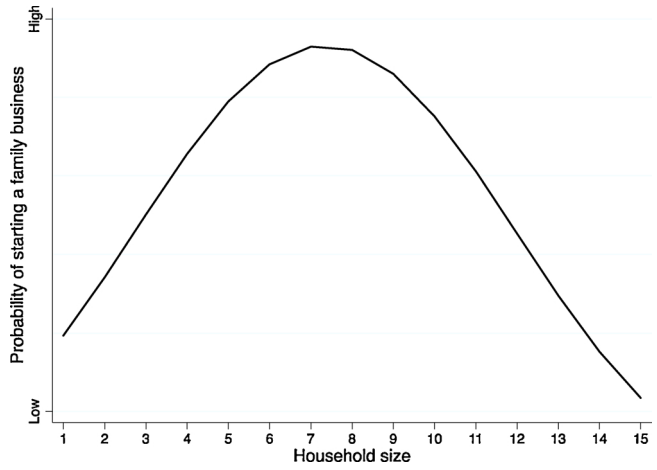

Fig. 1. Relationship between household size and probability of starting a family business.

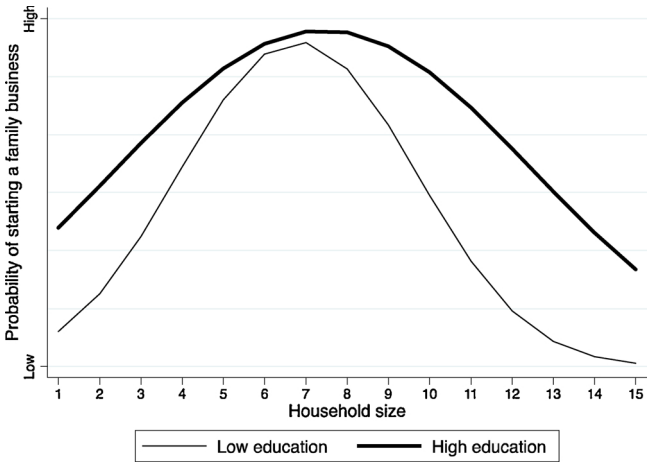

Fig. 3. Moderating effect of education level on the relationship between household size and probability of starting a family business.

with education (Model 4) and household income (Model 5).

Hypothesis 1 argues that an inverted U-shaped relationship exists between household size and the intention to start a family firm. The analytical results and related plot (+/- 1 s.d.) support our first hypothesis, where household size is positive and significantly related to the intention to start a family firm, and its squared term is negative and statistically significant (see Model 3 and the plot in Fig. 1).

Hypothesis 2 suggests that household income moderates the hypothesized curvilinear relationship in such a way that in situations of higher household income, the inverted U-shaped becomes flatter. We plotted the results in Fig. 2 (+/- 1 s.d.) to fully interpret our empirical findings from Model 4. As expected, the curvilinear relationship becomes flatter for individuals with higher household income, thus supporting Hypothesis 2.

Hypothesis 3 suggests that education moderates the hypothesized curvilinear relationship in such a way that for higher levels of education, the inverted U-shaped relationship is less pronounced, and the curve is flatter. We plotted the results in Fig. 3 (+/- 1 s.d.) to fully interpret our empirical findings from Model 5. Again, as expected the curvilinear relationship becomes flatter for individuals with a higher education level, thereby supporting Hypothesis 3.

Finally, in order to assess the goodness-of-fit (GOF) of our models, we reported the following GOF measures (see Table 2): McFadden's R2, log likelihood, LRChi(2), Akaike's information criterion (AIC) and the Hosmer-Lemeshow-GOF-Test, which are important for the contemporary logistic fit analysis (see e.g., Hilbe, 2009). All the values presented satisfactory levels.

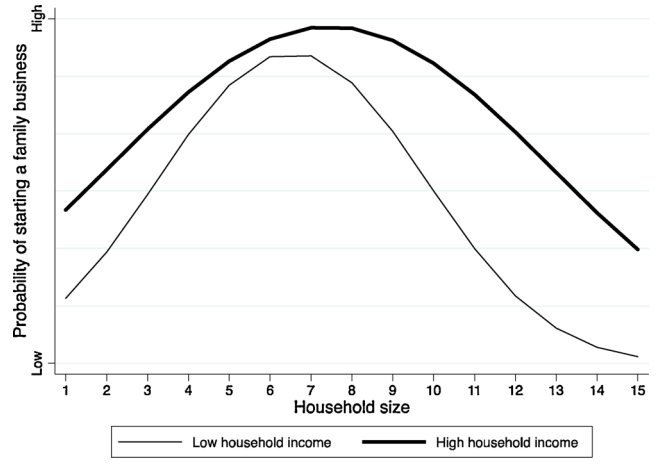

Fig. 2. Moderating effect of household income on the relationship between household size and probability of starting a family business.

4.3. Robustness tests for the U-shaped relationship

In accordance with previous studies (e.g., Wales, Parida, & Patel, 2013), we drew on the tests of Lind and Mehlum (2010) and followed the recommendations of Haans, Pieters, and He (2016)) to further assess the validity of the inverted U-shaped relationship between household size and the intention to start a family business. These tests determine whether the extreme point (or the inflection point) is within the bounds of the data. First, we used a Wald test to assess the joint significance of the direct and squared terms of household size on the dependent variable. The results confirmed that both terms are jointly statistically significant [chi2(2) = 14.50; Prob > chi2 = 0.000]. Second, the directions of the slopes at low and high values of the household size were estimated. If the slope at the low value of household size is positive and the slope at the high value of household size is negative, the relationship likely exhibits an inverted U-shape. It is necessary to test slopes at these bounds to ensure that such a relationship is representative of the data and is not a statistical artifact. Thus, the Sasabuchi test (Sasabuchi, 1980) was used to assess whether (1) the effect of household size on the intention to start a family firm is increasing at low values of household size and (2) decreasing at high values. The test indicates the presence of an inverted U-shaped relationship (Lower bound slope = .024; t-value = 3.21; P > |t| = .014; Upper bound slope = -0.033; t-value = -2.20; P > |t| = .014; overall test: t-value = 2.20; P > |t| = .014). Third, to further assess whether the extreme point is within the upper and lower bounds of household size, Lind and Mehlum (2010) propose the Fieller approach for estimating confidence intervals around the extreme points. If the confidence intervals are within the bounds of the low and high values of household size, it provides further evidence of the inverted U-shaped relationship in the data. In our analysis, the estimated extreme point was 7.27, which is within the upper and lower bounds of household size (95 % Fieller interval for extreme point: [6.02; 12.37]).

5. Discussion

The present study offers relevant implications for research. Unlike previous studies (Bastié et al., 2013; Block et al., 2013; Parker & van Praag, 2012; Rocha et al., 2015), our work contributes to research on entrepreneurial career intentions by depicting the family business start-up decision as a distinctive career option in terms of self-employment. Moreover, whereas existing studies at the intersection between

entrepreneurial career choices and family business have focused on the influence of the family on the decision to continue or exit a firm (e.g. Chirico, Gomez-Mejia, Hellerstedt, Withers, & Nordqvist, 2019; Hsu, Wiklund, Anderson, & Coffey, 2016; Marshall, Dibrell, & Eddleston, 2018), or to entry an existing firm as a successor versus starting up a new company (e.g. Pittino, Visintin, & Lauto, 2018), our research devotes special attention to the possibility to start up a family business as a more or less desirable career option.

Additionally, our study underlines the importance of altruistic concerns in a career decision that is usually portrayed as individualistic (e.g., Davidsson & Honig, 2003; Douglas & Shepherd, 2002; Fayolle & Liñán, 2014). Previous research has focused on individual characteristics; rather, our study extends existing literature to include the role of the family household as a deciding factor. Specifically, our work suggests that the family household structure, measured in terms of size, affects an individual's decision to start the self-employment career as an entrepreneur in a family business versus the options to start a non-family business or to not start a business at all. Fig. 1 shows that when the number of household members increases from low to moderate levels, the potential entrepreneur views favorably the possibility of starting a business involving family members, given the potential advantages from the resources embedded in the household and translated into the business through the active commitment of the relatives. This result provides support for existing research about family involvement in small and new firms, which is depicted as a crucial resource to overcome the "liability of smallness" (e.g., Aldrich & Auster, 1986; Cruz et al., 2012; Wheelock & Baines, 1998). However, the most interesting finding lies in the "descending" part of the curvilinear relationship. Here, the conflicting norms of family altruism and business efficiency are likely to come into play, as the results highlight the ambivalent effect of family embeddedness on the likelihood of starting a family firm.

In so doing, our work sheds additional light on research on family embeddedness by focusing specifically on the creation of a family firm as an entrepreneurial outcome and by highlighting the possible negative effects of family "over-embeddedness" situations on the entrepreneurial career option, which is the result of a trade-off between financial and non-financial costs and benefits of family involvement (Fiegener, 2010). When relatives see the new business as a job opportunity regardless of their level of competence, the nascent entrepreneur is somewhat forced to choose between helping family members in need or limiting the family involvement to the most qualified and resourceful members (Lansberg, 1983). Ignoring business needs from the inception may threaten the survival of the new venture, whereas deliberately overlooking family interests can result in a traumatic personal experience for the potential entrepreneur (Davis, 1983). Our theory and findings suggest that when faced with this possible dilemma, individuals discard the opportunity to start a family business.

Moreover, our theory and results suggest that the family household income and the educational level may offer a richer resource endowment or the possibility of more favorable business conditions, which relieves the tensions between family and business norms, thus increasing the overall intention to start a family firm (in Figs. 2 and 3 the curves corresponding to high family income and high educational levels lie constantly above the low income and low education curves) while weakening the relationship between household size and family business start-up intention.

As such, our study extends previous work on household families and individuals' entrepreneurial intention (Criaco et al., 2017; Mungai & Velamuri, 2011) that surprisingly failed to explore the effect of the household family size together with the family income and educational level on individuals' entrepreneurial intentions. In so doing, we advance the literature on entrepreneurial family intentions (e.g., Laspita, Breugst, Heblich, & Patzelt, 2012). We also contribute to the non-economic goal literature (Chrisman, Chua, Pearson, & Barnett, 2012; Chua, Chrisman, & De Massis, 2015; Chua, Chrisman, De Massis, & Wang, 2018; Kotlar & De Massis, 2013; Vazquez & Rocha, 2018) in nascent businesses. Our study provides evidence that a complex relationship fueled by economic and non-economic goals and motivations (Hoskisson et al., 2017) may exist even before the start-up of a family business and that the family household size together with other crucial financial and human resources may affect an individual's intention to start a family business in the Mexican context.

However, as in any study, our work is not without limitations, which suggest several directions for future research. First, we do not directly measure either family resources or forms of conflicts/tensions but rather use such arguments to motivate our hypotheses. Second, we focus on an individual's family firm start-up intention. It would be of interest to explore the extent to which our specific findings may be extended to other social contexts. For instance, perhaps similar predictions for family firms may be extended to contexts which are unrelated to kinship yet characterized by strong emotional commitments. Third, our data were collected in Mexico through GEM, thereby limiting the possibility of generalizing our findings to other countries or continents. An individual's intention to start a (family) business may be specifically bound to cultural contingencies. We suggest extending the findings through a country-level analysis, which includes comparisons across countries, to examine similarities and differences in cultural factors related to family links. For instance, results may change when considering developed countries. Finally, other important variables beyond income and education could moderate the relationship between a family household size and an individual's intention to start a family business (e.g., country-level factors) which suggest further research directions to pursue. For instance, the structure of the household and the role of the entrepreneur may have an influence on the start-up intention, especially if we consider the possibility that a household may provide different kinds of support to different members; e.g., in the form of cheap labor (mainly from younger members) or mentoring, social capital or financial support (probably from older members). All these factors could moderate the relationship between a family household size and an individual's intention to start a family business. Also, future studies may explore how our theory would be affected when considering individuals whose parents run a family business (Criaco et al., 2017). Additionally, in relation to our dependent variable, although proxies of future actions through intentions (Ajzen, 1991) have been extensively employed in entrepreneurship research, and the robustness of the connection between intentions and actual behavior has been consistently proven in previous empirical studies (e.g. Kautonen, van Gelderen, & Fink, 2015), given the characteristics of our dependent measure we cannot rule out the possibility that the potential entrepreneur may finally effectively involve or not family members once the new venture has been started.

Regarding our data, we acknowledge that even though we focus on an individual's start-up intention, it is not possible to identify the role of this particular entrepreneurial adult within the household. As the unit of analysis for GEM is the adult population, the sampling method requires an adult to be randomly selected within the household. However, although the GEM-APS survey is nationally representative for the adult population, it could be of great interest to further research this relationship considering the household as the unit of analysis, as this will allow us to explore the relationship between the household size and the intention to start a business among all its members.

Our work has also several important practical implications. Our findings invite potential entrepreneurs to be aware of the possible trade-offs that exist between family and business norms in the context of household entrepreneurship and their potential related start-up intentions. Government, institutions and University programs should be specifically implemented to better sustain and support household families for the creation of new (family) businesses. The household family represents indeed 'the oxygen that feed the fire of entrepreneurship' (Rogoff & Heck, 2003) and our study provides arguments related with the importance of both financial and education forms of capital which

need to be channeled through dedicated programs at the national level. Additionally, we provide insights for practitioners and policymakers regarding the design of support tools that help future entrepreneurs to address, at the psychological level, the pressures and stress derived from the need to sacrifice some portions of the family relationships for the overall personal and household well-being.

In general, we trust that this study serves as a basis for further elucidating the role of a family household in an individual's intention to start a family business while enriching knowledge and encouraging future work on the antecedents of a family firm start-up intention.

Author statement

Authors are listed based on their contribution in the paper.

Appendix A. Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:https://doi.org/10.1016/j.jfbs.2020.100338.

References

Ahrens, J.-P., Uhlaner, L., Woywode, M., & Zybura, J. (2018). "Shadow emperor" or "loyal paladin"? – The Janus face of previous owner involvement in family firm successions. *Journal of Family Business Strategy, 9*(1), 73–90.

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*(2), 179–211.

Aldrich, H., & Auster, E. R. (1986). Even dwarfs started small: Liabilities of age and size and their strategic implications. *Research in Organizational Behavior, 8*, 165–198.

Alddlrich, H., & Zimmer, C. (1986). Entrepreneurship through social networks. In D. Sexton, & R. Smilor (Eds.). *The art and science of entrepreneurship* (pp. 3–23). Cambridge, MA: Ballinger Publishing Company.

Aldrich, H. E., & Cliff, J. (2003). The pervasive effects of family on entrepreneurship: Toward a family embeddedness perspective. *Journal of Business Venturing, 18*(5), 573–596.

Alsos, G. A., Carter, S., & Ljunggren, E. (2014). Kinship and business: How entrepreneurial households facilitate business growth. *Entrepreneurship and Regional Development, 26*(1–2), 97–122.

Anderson, A. R., Jack, S. L., & Dodd, S. D. (2005). The role of family members in entrepreneurial networks: Beyond the boundaries of the family firm. *Family Business Review, 18*(2), 135–154.

Arregle, J. L., Batjargal, B., Hitt, M. A., Webb, J. W., Miller, T., & Tsui, A. S. (2015). Family ties in entrepreneurs' social networks and new venture growth. *Entrepreneurship Theory and Practice, 39*(2), 313–344.

Arregle, J. L., Hitt, M. A., Sirmon, D. G., & Very, P. (2007). The development of organizational social capital: Attributes of family firms. *Journal of Management Studies, 44*(1), 73–95.

Astrachan, J. H., Zahra, S. A., & Sharma, P. (2003). *Family-sponsored ventures.* Kansas, MO: Kauffman Foundation.

Athanassiou, N., Crittenden, W. F., Kelly, L. M., & Marquez, P. (2002). Founder centrality effects on the Mexican family firm's top management group: Firm culture, strategic vision and goals, and firm performance. *Journal of World Business, 37*(2), 139–150.

Baños-Monroy, V., Ramírez-Solís, E., & Rodríguez-Aceves, L. (2016). Entrepreneurship and innovation in latin american family firms: The case of México. *Digital Entrepreneurship and Global Innovation, 104*.

Bastié, F., Cieply, S., & Cussy, P. (2013). The entrepreneur's mode of entry: The effect of social and financial capital. *Small Business Economics, 40*(4), 865–877.

Baù, M., Sieger, P., Eddleston, K. A., & Chirico, F. (2017). Fail but try again? The effects of age, gender, and multiple-owner experience on failed entrepreneurs' reentry. *Entrepreneurship Theory and Practice, 41*(6), 909–941.

Belausteguigoitia, I., Patlán, J., & Navarrete, M. (2007). Organizational climate as antecedent of commitment, effort and entrepreneurial orientation in Mexican family and non family firms. *Revista Del Centro de InvestigaciÃ³n de La Universidad La Salle, 7*(27), 5–25.

Block, J. H., Kohn, K., Miller, D., & Ullrich, K. (2015). Necessity entrepreneurship and competitive strategy. *Small Business Economics, 44*(1), 37–54.

Block, J., Thurik, R., Van der Zwan, P., & Walter, S. (2013). Business takeover or new venture? Individual and environmental determinants from a cross-country study. *Entrepreneurship Theory and Practice, 37*(5), 1099–1121.

Boles, J. S. (1996). Influences of work–Family conflict on job satisfaction, life satisfaction and quitting intentions among business owners: The case of family-operated businesses. *Family Business Review, 9*(1), 61–74.

Brannon, D. L., Wiklund, J., & Haynie, J. M. (2013). The varying effects of family relationships in entrepreneurial teams. *Entrepreneurship Theory and Practice, 37*(1), 107–132.

Brush, C., Ali, A., Kelley, D., & Greene, P. (2017). The influence of human capital factors and context on women's entrepreneurship: Which matters more? *Journal of Business Venturing Insights, 8*, 105–113.

Brush, C., & Manolova, T. (2004). Household structure. In W. Gartner, K. Shaver, N. Carter, & P. Reynolds (Eds.). *Handbook of entrepreneurial dynamics: The process of business creation* (pp. 39–48). Thousand Oaks, CA: SAGE Publications.

Bubolz, M. M. (2001). Family as source, user, and builder of social capital. *The Journal of Socio-economics, 30*(2), 129–131.

Carr, J. C., & Sequeira, J. M. (2007). Prior family business exposure as intergenerational influence and entrepreneurial intent: A theory of planned behavior approach. *Journal of Business Research, 60*(10), 1090–1098.

Carter, S. (2011). The rewards of entrepreneurship: Exploring the incomes, wealth, and economic well–Being of entrepreneurial households. *Entrepreneurship Theory and Practice, 35*(1), 39–55.

Carreón-Gutiérrez, J. P., & Saiz-Álvarez, J. M. (2019). Opportunity motivation and growth aspirations of mexican entrepreneurs: The moderating role of the household income. *Sustainability, 11*(22), 6288.

Chang, E. P., Memili, E., Chrisman, J. J., Kellermanns, F. W., & Chua, J. H. (2009). Family social capital, venture preparedness, and start-up decisions: A study of Hispanic entrepreneurs in New England. *Family Business Review, 22*(3), 279–292.

Chirico, F., Gomez-Mejia, L., Hellerstedt, K., Withers, M., & Nordqvist, M. (2019). To merge, sell or liquidate? Socioemotional wealth, family control, and the choice of business exit. *Journal of Management*. https://doi.org/10.1177/0149206318818723.

Chrisman, J. J., Chua, J. H., & Steier, L. P. (2003). An introduction to theories of family business. *Journal of Business Venturing, 18*, 441–448.

Chrisman, J. J., Chua, J. H., Pearson, A. W., & Barnett, T. (2012). Family involvement, family influence, and family-centered non-economic goals in small firms. *Entrepreneurship Theory and Practice, 36*(2), 267–293.

Chua, J. H., Chrisman, J. J., & De Massis, A. (2015). A closer look at socioemotional wealth: Its flows, stocks, and prospects for moving forward. *Entrepreneurship Theory and Practice, 39*(2), 173–182.

Chua, J. H., Chrisman, J. J., De Massis, A., & Wang, H. (2018). Reflections on family firm goals and the assessment of performance. *Journal of Family Business Strategy, 9*(2), 107–113.

Clercq, D. D., & Arenius, P. (2006). The role of knowledge in business start-up activity. *International Small Business Journal, 24*(4), 339–358.

Criaco, G., Sieger, P., Wennberg, K., Chirico, F., & Minola, T. (2017). Parents' performance in entrepreneurship as a "double-edged sword" for the intergenerational transmission of entrepreneurship. *Small Business Economics, 49*(4), 841–864.

Cruz, C., Justo, R., & De Castro, J. O. (2012). Does family employment enhance MSEs performance?: Integrating socioemotional wealth and family embeddedness perspectives. *Journal of Business Venturing, 27*(1), 62–76.

Danes, S. M., Zuiker, V., Kean, R., & Arbuthnot, J. (1999). Predictors of family business tensions and goal achievement. *Family Business Review, 12*(3), 241–252.

Davidsson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing, 18*(3), 301–331.

Davila, A., & Hartman, A. M. (2016). *Tradition and Modern Aspects of Mexican Corporate Culture. Mexican Business Culture: Essays on Tradition, Ethics, Entrepreneurship and Commerce and the State.* Jefferson: NC McFarland26–27.

Davis, P. S. (1983). Realizing the potential of the family business. *Organizational Dynamics, 12*, 47–56.

Discua Cruz, A., Howorth, C., & Hamilton, E. (2013). Intrafamily entrepreneurship: The formation and membership of family entrepreneurial teams. *Entrepreneurship Theory and Practice, 37*(1), 17–46.

Douglas, E. J., & Shepherd, D. A. (2002). Self-employment as a career choice: Attitudes, entrepreneurial intentions, and utility maximization. *Entrepreneurship Theory and Practice, 26*(3), 81–90.

Dyer, W. G. (2003). The family: The missing variable in organizational research. *Entrepreneurship Theory and Practice, 27*(4), 401–416.

Earle, J., & Sakova, Z. (2000). Business start-ups or disguised unemployment? Evidence on the character of self-employment from transition economies. *Labour Economics, 7*, 575–601.

Edelman, L. F., Manolova, T., Shirokova, G., & Tsukanova, T. (2016). The impact of family support on young entrepreneurs' start-up activities. *Journal of Business Venturing, 31*(4), 428–448.

Ensley, M. D., & Pearson, A. W. (2005). An exploratory comparison of the behavioral dynamics of top management teams in family and nonfamily new ventures: Cohesion, conflict, potency, and consensus. *Entrepreneurship Theory and Practice, 29*(3), 267–284.

Estrin, S., Mickiewicz, T., & Stephan, U. (2013). Entrepreneurship, social capital, and institutions: Social and commercial entrepreneurship across nations. *Entrepreneurship Theory and Practice, 37*(3), 479–504.

Fayolle, A., & Liñán, F. (2014). The future of research on entrepreneurial intentions. *Journal of Business Research, 67*(5), 663–666.

FFI (2016). *Global data points.* Retrieved from http://www.ffi.org/page/globaldatapoints.

Fiegener, M. K. (2010). Locus of ownership and family involvement in small private firms. *Journal of Management Studies, 47*(2), 296–321.

GEM Mexico (2015). *Mexico national report. GEM – Tecnologico de monterrey*.

Goel, S., & Jones, R. J., III (2016). Entrepreneurial exploration and exploitation in family business: A systematic review and future directions. *Family Business Review, 29*(1), 94–120.

Gomez-Mejia, L. R., Campbell, J. T., Martin, G., Hoskisson, R. E., Makri, M., & Sirmon, D. G. (2014). Socioemotional wealth as a mixed gamble: Revisiting family firm R&D investments with the behavioral agency model. *Entrepreneurship Theory and Practice, 38*(6), 1351–1374.

González, M., Guzmán, A., Pablo, E., & Trujillo, M. A. (2019). Is board turnover driven by performance in family firms? *Research in International Business and Finance, 48*, 169–186.

Granovetter, M. (1985). Economic action and social structure: The problem of embeddedness. *The American Journal of Sociology, 91*(3), 481–510.

Haans, R. F., Pieters, C., & He, Z. L. (2016). Thinking about U: Theorizing and testing U-and inverted U-shaped relationships in strategy research. *Strategic Management Journal, 37*(7), 1177–1195.
Harrington, B., & Strike, V. (2018). Between kinship and commerce: Fiduciaries and the institutional logics of family firms. *Family Business Review, 31*(4), 417–440.
Hilbe, J. (2009). *Logistic regression models.* New York: CRC Press.
Hoffman, J., Hoelscher, M., & Sorenson, R. (2006). Achieving sustained competitive advantage: A family capital theory. *Family Business Review, 19*(2), 135–145.
Hoshino, T. (2005). La estructura propietaria y el mecanismo de control de las grandes empresas familiares en México. In M. A. Pozas (Ed.). *Estructura y dinámica de la Gran empresa en México: Cinco estudios sobre su realidad reciente*. México: El Colegio de México.
Hoskisson, R. E., Chirico, F., Zyung, J., & Gambeta, E. (2017). Managerial risk taking: A multitheoretical review and future research agenda. *Journal of management, 43*(1), 137–169.
Hsu, D. K., Wiklund, J., Anderson, S. E., & Coffey, B. S. (2016). Entrepreneurial exit intentions and the business-family interface. *Journal of Business Venturing, 31*(6), 613–627.
INEGI (2016). *Resultados definitivos.* Retrieved fromMexico City: INEGI. http://www.inegi.org.mx.
Jennings, J., Eddleston, K., Jennings, D., & Sarathy, R. (2015). Introduction: A framework for studying the "double embeddedness" of business enterprising. In J. Jennings, K. Eddleston, D. Jennings, & R. Sarathy (Eds.). *Firms within families: Enterprising in diverse country contexts* (pp. 1–12). Northampton, MA, USA: Edward Elgar Publishing.
Kautonen, T., van Gelderen, M., & Fink, M. (2015). Robustness of the theory of planned behavior in predicting entrepreneurial intentions and actions. *Entrepreneurship Theory and Practice, 39*(3), 655–674.
Klyver, K. (2007). Shifting family involvement during the entrepreneurial process. *International Journal of Entrepreneurial Behavior & Research, 13*(5), 258–277.
Koellinger, P., Minniti, M., & Schade, C. (2007). "I think I can, I think I can": Overconfidence and entrepreneurial behavior. *Journal of Economic Psychology, 28*(4), 502–527.
Kolvereid, L. (1996). Prediction of employment status choice intentions. *Entrepreneurship Theory and Practice, 21*(1), 47–58.
Kotlar, J., & De Massis, A. (2013). Goal setting in family firms: Goal diversity, social interactions, and collective commitment to family-centered goals. *Entrepreneurship Theory and Practice, 37*(6), 1263–1288.
Krasniqi, B. A. (2009). Personal, household and business environmental determinants of entrepreneurship. *Journal of Small Business and Enterprise Development, 16*(1), 146–166.
Kutner, M. H., Nachtsheim, C., & Neter, J. (2004). *Applied linear regression models.* McGraw-Hill/Irwin.
Lancaster, K. (1975). The theory of household behavior: Some foundations. In S. Berg (Vol. Ed.), *Annals of economic and social measurement: Vol. 4*, (pp. 5–21). National Bureau of Economic Research.
Langowitz, N., & Minniti, M. (2007). The entrepreneurial propensity of women. *Entrepreneurship Theory and Practice, 31*(3), 341–364.
Lansberg, I. S. (1983). Managing human resources in family firms: The problem of institutional overlap. *Organizational Dynamics, 12*, 39–46.
Laspita, S., Breugst, N., Heblich, S., & Patzelt, H. (2012). Intergenerational transmission of entrepreneurial intentions. *Journal of Business Venturing, 27*(4), 414–435.
Lazear, E. P. (2004). Balanced skills and entrepreneurship. *The American Economic Review, 94*(2), 208–211.
Lind, J. T., & Mehlum, H. (2010). With or without U? The appropriate test for a U-Shaped relationship. *Oxford Bulletin of Economics and Statistics, 72*(1), 109–118.
Marshall, D. R., Dibrell, C., & Eddleston, K. A. (2018). What keeps them going? Socio-cognitive entrepreneurial career continuance. *Small Business Economics, 53*(1), 227–242.
Martin, G., & Gomez-Mejia, L. (2016). The relationship between socioemotional and financial wealth: Re-visiting family firm decision making. *Management Research, 14*(3), 215–233.
McFalls, J. A., Jr (2007). Population: A lively introduction. *Population Bulletin, 62*(1), 1–31.
Mead, D. C., & Liedholm, C. (1998). The dynamics of micro and small enterprises in developing countries. *World Development, 26*(1), 61–74.
Meliou, E., & Edwards, T. (2018). Relational practices and reflexivity: Exploring the responses of women entrepreneurs to changing household dynamics. *International Small Business Journal, 36*(2), 149–168.
Minola, T., Criaco, G., & Obschonka, M. (2016). Age, culture, and self-employment motivation. *Small Business Economics, 46*(2), 187–213.
Mungai, E. M. E., & Velamuri, S. R. (2011). Parental entrepreneurial role model influence on male offspring: is it always positive and when does it occur? *Entrepreneurship Theory and Practice, 35*(2), 337–357.
Naldi, L., Baù, M., Ahl, H., & Markowska, M. (2019). Gender (in) equality within the household and business start-up among mothers. *Small Business Economics*. https://doi.org/10.1007/s11187-019-00275-1.
Nguyen, C. H., & Nordman, C. J. (2017). Household entrepreneurship and social networks: Panel data evidence from Vietnam. *The Journal of Development Studies, 54*(4), 594–618.
Parker, S. C., & van Praag, C. M. (2012). The entrepreneur's mode of entry: Business takeover or new venture start? *Journal of Business Venturing, 27*(1), 31–46.
Pittino, D., Visintin, F., & Lauto, G. (2018). Fly away from the nest? A configurational analysis of family embeddedness and individual attributes in the entrepreneurial entry decision by next-generation members. *Family Business Review, 31*(3), 271–294.
Powell, G., & Eddleston, K. A. (2017). Family involvement in the firm, family-to-business support, and entrepreneurial outcomes. *Journal of Small Business Management, 55*(4), 614–631.
Poza, E. J. (2010). *Family Business 3E.* Mason: South Western- Cengage Learning.
Randerson, K., Bettinelli, C., Fayolle, A., & Anderson, A. (2015). Family entrepreneurship as a field of research: Exploring its contours and contents. *Journal of Family Business Strategy, 6*(3), 143–154.
Rocha, V., Carneiro, A., & Varum, C. A. (2015). Entry and exit dynamics of nascent business owners. *Small Business Economics, 45*(1), 63–84.
Rodriguez, P., Tuggle, C. S., & Hackett, S. M. (2009). An exploratory study of how potential "family and household capital" impacts new venture start-up rates. *Family Business Review, 22*(3), 259–272.
Rogoff, E. G., & Heck, R. K. Z. (2003). Evolving research in entrepreneurship and family business: Recognizing family as the oxygen that feeds the fire of entrepreneurship. *Journal of Business Venturing, 18*(5) 559–56.
San Martín, J., & Durán, J. (2016). Sucesión y su relación con endeudamiento y desempeño en empresas familiares. *ContadurÃa Y AdministraciÃ³n, 61*, 41–57.
Sasabuchi, S. (1980). A test of a multivariate normal mean with composite hypotheses determined by linear inequalities. *Biometrika, 67*(2), 429–439.
Schjoedt, L., & Shaver, K. G. (2007). Deciding on an entrepreneurial career: A test of the pull and push hypotheses using the panel study of entrepreneurial dynamics data. *Entrepreneurship Theory and Practice, 31*(5), 733–752.
Schjoedt, L., Monsen, E., Pearson, A., Barnett, T., & Chrisman, J. J. (2013). New venture and family business teams: Understanding team formation, composition, behaviors, and performance. *Entrepreneurship Theory and Practice, 37*(1), 1–15.
Shane, S., & Khurana, R. (2003). Bringing individuals back in: The effects of career experience on new firm founding. *Industrial and Corporate Change, 12*(3), 519–543.
Sieger, P., & Minola, T. (2017). The family's financial support as a "Poisoned gift": A family embeddedness perspective on entrepreneurial intentions. *Journal of Small Business Management, 55*(S1), 179–204.
Silva, J. (2017). Family businesses in Mexico. *Revista ESPACIOS, 38*(53), 21.
Soto, A., de la Garza, M., Esparza, J., & San Martín, J. (2015). The influence of family relationships in the succession: A factorial analysis of Mexican enterprises. *Journal of Family Business Management, 5*(2), 238–256.
Steier, L. (2001). Next-generation entrepreneurs and succession: An exploratory study of modes and means of managing social capital. *Family Business Review, 14*(3), 259–276.
Steier, L. (2009). Where do new firms come from? Households, family capital, ethnicity, and the welfare mix. *Family Business Review, 22*(3), 273–278.
Stewart, A. (2003). Help one another, use one another: Toward an anthropology of family business. *Entrepreneurship Theory and Practice, 27*(4), 383–396.
Tominc, P., & Rebernik, M. (2007). Growth aspirations and cultural support for entrepreneurship: A comparison of post-socialist countries. *Small Business Economics, 28*(2-3), 239–255.
Ucbasaran, D., Westhead, P., & Wright, M. (2009). The extent and nature of opportunity identification by experienced entrepreneurs. *Journal of Business Venturing, 24*(2), 99–115.
Van Stel, A., Storey, D. J., & Thurik, A. R. (2007). The effect of business regulations on nascent and young business entrepreneurship. *Small Business Economics, 28*(2-3), 171–186.
Vazquez, P., & Rocha, H. (2018). On the goals of family firms: A review and integration. *Journal of Family Business Strategy, 9*(2), 94–106.
Velez-Ocampo, J., Govindan, K., & Gonzalez-Perez, M. A. (2017). Internationalization of Mexican family firms: the cases of Xignux and Grupo Alfa. *Review of International Business and Strategy*.
Villalonga, B., Amit, R., Trujillo, M. A., & Guzmán, A. (2015). Governance of family firms. *Annual Review of Financial Economics, 7*(1), 635–654.
Wales, W. J., Parida, V., & Patel, P. C. (2013). Too much of a good thing? Absorptive capacity, firm performance, and the moderating role of entrepreneurial orientation. *Strategic Management Journal, 34*(5), 622–633.
Welter, F. (2011). Contextualizing entrepreneurship—Conceptual challenges and ways forward. *Entrepreneurship Theory and Practice, 35*(1), 165–184.
Wheelock, J., & Baines, S. (1998). Dependency or self-reliance? The contradictory case of work in the UK small business families. *Journal of Family and Economic Issues, 19*(1), 53–74.
Woodruff, C., & Zenteno, R. (2007). Migration networks and microenterprises in Mexico. *Journal of Development Economics, 82*(2), 509–528.
Zhang, Y., Duysters, G., & Cloodt, M. (2014). The role of entrepreneurship education as a predictor of university students' entrepreneurial intention. *International Entrepreneurship and Management Journal, 10*(3), 623–641.