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Why are some family firms not innovative?: Innovation Barriers and Path Dependence in Family Firms

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ABSTRACT

Although scholars have recognized the importance of innovation in family firms, the literature on family firm innovation tends to generally depict family firms as either 'good' or 'bad' for innovation, or focus on the factors with the potential to positively stimulate family firm innovation. Drawing on path dependence theory, this study focuses specifically on what family-specific barriers work against innovation in family firms. To that end, we follow a qualitative theory-building approach due to the limited amount of extant theory, and study a sample of four family businesses headquartered in Spain and Uruguay. The related propositions and theoretical contributions emerging from our study are shared in the concluding section.

1. Introduction

Why are some family firms not innovative? This is an important question and the central focus of this study. Research indicates that innovation is important for the competitiveness, performance, and growth of firms (Lohe & Calabrò, 2017; Rosenbusch et al., 2011; Sanchez-Famoso et al., 2019), including family firms (De Massis et al., 2015; Eddleston et al., 2008). Family ownership—defined by the involvement of a family in both ownership and management (Chua et al., 2012; Ling & Kellermanns, 2010)—is the most common form of firm ownership worldwide (Arregle et al., 2007; La Porta et al., 1999; Neckebrouck et al., 2018). Estimates suggest that over one third of the companies in the S&P 500 still have a significant family influence (Cruz et al., 2010; Miller et al., 2003). However, although "innovation in family firms is a relevant and promising research area because there are strong theoretical reasons to believe that the antecedents and effects of […] innovation are different in family and nonfamily firms" (De Massis et al., 2013: 10), most existing family business research tends to generally depict family firms as either 'good' (Chin et al., 2009; Rogoff & Heck, 2003) or 'bad' (Chrisman & Patel, 2012; Gomez-Mejia et al., 2014; Patel & Chrisman, 2014) for innovation *or* focus on the factors that may positively stimulate family firm innovation (e.g., Chirico & Salvato, 2014; Werner et al., 2018).

Interestingly, recent studies have stressed that family firms are facing an innovator's dilemma characterized by a paradox (Diaz-Moriana et al., 2020; Erdogan et al., 2020). That is, although they have the ability to innovate more, they still innovate less due to a lack of willingness to do so (Chrisman et al., 2015). For instance, some evidence suggests that family influence promotes myopic, path-dependent behaviours among family firms (Campopiano et al., 2020; Chirico et al., 2011; König et al., 2013), providing familiarity for decision makers who perceive past solutions as less risky than attempting a *de novo* solution to a problem. However, an overarching theoretical framework explaining *what* family-specific barriers work against innovation by family firms is missing. This is not a trivial issue, given that investigating factors inhibiting family firm innovation is key to enhancing our understanding of and helping family owners and managers to maximize the potential sustainable competitive advantage family firms may offer (cf. De Massis et al., 2013).

To that end, we follow a qualitative theory-building approach and study a sample of four family businesses headquartered in Spain and Uruguay. Our primary data sources are interviews supplemented with observations and other supporting evidence collected from the four family firms. We apply path dependence as a conceptual lens (Brekke, 2015; Liebowitz & Margolis, 1995; Sterman & Wittenberg, 1999; Sydow et al., 2009) to study what family-specific barriers are likely to affect

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family firm innovation (Kammerlander et al., 2015). Prior research agrees that path dependence is highly important for firms in shaping the strategies for their future endeavours (Brekke, 2015; Jaskiewicz et al., 2015; Kammerlander et al., 2015). Indeed, firms' strategic pattern is a combination of path dependence and present concerns, and the correct balance is needed to overcome an exceedingly narrow focus on only what worked well in the past (e.g. Ericson, 2006; Mintzberg & McHugh, 1985).

Our study contributes to the literature by identifying four dimensions as the origin of barriers to innovation in family businesses: a reduction of managerial discretion, family lock-in, a conservative family attitude, and inefficient paths. Identifying these dimensions allows us to advance the understanding of the capacity and disposition of family businesses to innovate at a more detailed level (Duran et al., 2016). Within these dimensions, specific factors that act as obstacles to the development of innovation in family businesses are identified. In addition, we highlight that these factors are conditioned by the family's past footprint in the company. In this way, we shed light on path dependence and its relevance for family businesses. We explain how the footprint generated by the company's previous trajectory conditions its processes, detailing the cases in which family businesses are unable to "overcome the dependencies on the path of the founding generation" towards innovation (Wright & Kellermanns, 2011: 193). As a practical contribution, this study helps managers of family businesses identify whether these barriers to innovation appear in their organization, what factors strengthen these barriers and what the origins of these barriers are over time.

2. Theoretical background

2.1. Family business and innovation

Innovation is important for family firms to remain competitive in the market (Craig & Moores, 2006; Erdogan et al., 2020). However, due to their wealth and tradition, some family firms tend to not take risks, conditioning their innovative actions for this reason. For instance, some studies have reported that over time, family businesses become conservative and unwilling or unable to assume the risks associated with new activities (De Massis et al., 2013; Zahra et al., 2004). On the other hand, the literature has also argued that family businesses are not necessarily less innovative than non-family businesses and that over time, they may even become more innovative and aggressive in their markets than non-family businesses (Aronoff, 1998; Calabrò et al., 2019). The question of how family businesses manage innovation and avoid path dependency traps remain largely unanswered (Dieleman, 2019).

In view of these works, how do researchers explain the "not-unique" behaviour of family businesses in innovation? The literature shows that these discrepancies may be due to several reasons that condition the behaviour of family businesses in the context of innovation. First, the degree to which family businesses are innovative may be determined by their *heterogeneity*, which influences strategic decisions (Brinkerink et al. (2020), enabling some types of family businesses to be less innovative than others. On the other hand, Kubíček and Machek (2020) present a family-driven innovation model, arguing that the heterogeneity of family businesses is captured by three factors: family disposition, family capacity in relation to discretion and family capacity in relation to resources. Therefore, an unfavourable disposition, insufficient capacity or a lack of resources negatively condition the innovative activities of companies.

Furthermore, Pittino and Visintin (2009) and McCann et al. (2001) identify different typologies of family business based on the model of Miles et al. (1978). These authors expect less innovative behaviour from two types of family businesses: analysers, with an intermediate profile between innovation in products and processes, and reactors, which do not have a clear orientation towards innovation, possibly due to the lack of a clear strategy, which may result in poor innovation results. Rondi et al. (2019) introduce another typology. To do this, they build a matrix with two factors that influence innovation: the propensity for risk and the position of the company against tradition. From here, four different types of family businesses are generated in the context of innovation, i.e., seasoner, re-enactor, digger, and adventurer; the first two are less innovative.

The second factor that can affect the approach to innovation that family businesses take is the *generation* to which the family business management team belongs (Beck et al., 2011; Núñez-Cacho & Lorenzo Gómez, 2020). Zahra (2005) states that the older the generation to which the management team belongs, the less dynamic the company's culture of innovation will be because new generations are characterized as the driving force behind innovation (Litz & Kleysen, 2001). Block et al. (2013) argue that when the manager is the founder of the firm, s (he) seeks to reduce management risk, acting as a steward, not an agent. Following Duran et al. (2016), the second and subsequent generations spend fewer resources on innovation. In addition, generational conflicts negatively affect innovation intensity, which leads to agency costs that are likely toxic for an innovation culture in the long run (Block et al., 2013; Calabrò et al., 2019).

The third factor is the influence of family *culture* on the choice of innovation strategies. There are certain variables, conditioned by the influence of the family on the company, that lead to less innovative behaviour, such as a lack of prudence, a low desire for entrepreneurship of the founder, or the degree of involvement by the management team (Hall et al., 2001; Mahmoud-Jouini & Mignon, 2009). In addition, as Zahoor and Al-Tabbaa (2020) highlight, the age and experience of entrepreneurs affect their innovative thinking. On the other hand, a low innovative culture among managers reduces the innovative potential of companies (Gupta & Barua, 2016).

A fourth factor that explains the link between innovation and family businesses is the *pooling of resources* (Carnes & Ireland, 2013; Galunic & Rodan, 1998). Carnes and Ireland (2013) theorize that resource pooling, through its three individual components of stabilizing, enriching and pioneering, is a mediator between family and innovation. Penney and Combs (2013) add that family structure affects the way in which different families are involved in grouping processes that help or slow down innovation. Undoubtedly, inefficient management or orchestration of resources can potentially decrease innovation in family businesses (Chirico et al., 2011; De Massis et al., 2018).

2.2. Barriers to innovation

Innovation merely refers to a process of organizational change. The development and implementation of an innovation, however, also involves several modifications within the organization that pose specific issues, which must be addressed if the organization wants to achieve the benefits derived from adopting the proposed changes. The decision to adopt an innovation does not intrinsically guarantee a correct implementation such that it becomes just another organizational routine (cf. Collinson & Wilson, 2006; Hannan & Freeman, 1984; Santiago, 2015), because there are barriers to innovation that may delay, limit or even prevent the implementation of the changes that are necessary in an organization (Foxon & Pearson, 2008; Hadjimanolis, 1999; Madrid-Guijarro et al., 2009).

The notion of barriers is closely linked to the phenomenon of resistance to change attributed to Lewin (1947a, 1947b). According to the vision of Lewin's (1947a), both organizational and social change can be considered systems of social roles with different associated elements, such as patterns of attitudes, expectations and norms of behaviour, coexisting alongside "homeostatic biological systems," that is, the tendency to resist change and restore the previous state after a disturbance (Dent & Goldberg, 1999).

Scholars assume that innovation processes imply changes (Collinson & Wilson, 2006; Sandberg & Aarikka-Stenroos, 2014; Wolfe et al., 2006). For these changes to take place, two types of organizational

inertias must be overcome: the rigidity of resources and the rigidity caused by routines (Gilbert (2005). Inertia appears in family businesses, making change processes difficult and creating barriers. The barriers faced by this type of organization have been studied to solve various types of organizational changes, such as the specific problems of succession processes (Dias et al., 2014; Wiecek-Janka et al., 2016), intergenerational problems (Armstrong, 2012), obstacles to successors' career development (Akhmedova et al., 2020) or barriers that impede the growth of companies (Robson & Obeng, 2008). Certainly, the barriers derived from the interaction between the business and the family, such as nepotism, conflicts or justice, can represent an obstacle to the innovation capacity of the family company (Webb et al., 2010). König et al. (2013) analyse the links between family influence and five barriers to the adoption of discontinued technologies: formalization, dependence on resources from external providers of capital, political resistance, emotional links with existing assets and rigid mental models.

The literature suggests that family businesses present specific attributes that result in different approaches to innovation strategies (De Massis et al., 2013). Thus, the presence of these attributes, such as their typology, heterogeneity, generation, culture, resource bundling, or their dual input-output-related behaviour, shows that there are specific weaknesses derived from the character of the family that act as barriers to innovation. Similarly, family businesses are likely to have a different attitude towards processes of change because they are constructed through the transmission of knowledge and values from one generation to the next and because such processes may be hampered by family traits that limit or even prevent the implementation of change in the organization (Klein & Sorra, 1996; Rumelt, 1995). The existence of these specific barriers within family firms could be explained from the path dependence perspective (Liebowitz & Margolis, 1995; Sterman & Wittenberg, 1999; Sydow et al., 2009).

2.3. Path dependence

The past and history play an important role in firms' future actions (Brunninge, 2005; Ericson, 2006). The history and the past of the firm carry both positive and negative implications (Miller & Le Breton-Miller, 2005). The positive effects of strong past-to-presence linkages in businesses include an increased sense of loyalty of stakeholders such as employees, customers, and owners, the stability of long-term connections inside and outside the firm, and an increased level of reliability as perceived by customers and suppliers (Miller & Le Breton-Miller, 2005). The negative implications of a strong emphasis on history and tradition involve reduced flexibility and lower willingness to change (Zahra, 2005).

Indeed, the decisions made by the owner-manager's ancestors or values carried by previous generations influence later generations' identity and the organization's culture (Dyer, 1986; García-Álvarez & López-Sintas, 2001). Similarly, the historical values, beliefs and strategic choices made by founder family owners affects future family members' change and adaptability refers to as "founder's shadow" (Hall et al., 2001; Short et al., 2009). We generally refer to such orientation towards the past as path dependency (Bebchuk & Roe, 1999; Brekke, 2015; Garud et al., 2010; Perchard & MacKenzie, 2021; Sydow et al., 2009; Vergne & Durand, 2010). Path dependency refers to dynamic processes, triggered by events that determine the future trajectory of an organization (Antonelli, 1997).

The literature, however, also suggests that there are different views to explain how persistent behaviour arises, such as structural inertia, imprinting, and institutionalization (Hannan & Freeman, 1984; Johnson, 2007). According to Schreyögg and Sydow (2011), a path dependence is led by three process stages: first, preformation, in which managers make decisions that create a "small event" that sets off a self-reinforcing process. In that moment, the process is placed at a critical juncture. Second, there is the formation phase, where the self-reinforcing dynamic generates a dominant action pattern and the alternative path faces problems of acceptance, generating a process that becomes an increasingly irreversible feedback loop. The reinforcing mechanism consists of coordination effects, complementary effects, learning effects and adaptive expectation effects (Arthur, 1989), although the decision process is still contingent. Third, when the reinforcing mechanism acts continuously, a dominant pattern is created with a deterministic character that tends to be reproduced, even when the business faces more efficient alternatives. Thus, from this perspective, previous decisions in the family business could generate a dominant pattern that can act as a barrier to innovation (Priem & Cycyota, 2001).

Despite some insights related to history and tradition (Byrom & Lehman, 2009; Liebowitz & Margolis, 1995) and progress made when drawing on path dependence, knowledge of how the past affects innovation is still limited (Kammerlander et al., 2015; Liebowitz & Margolis, 1995; Sydow et al., 2009). This study aims to explore family-firm-specific barriers to innovation.

3. Research methods

3.1. Research design and setting

Given the mixed results reported by previous scholars and in line with call for a more in-depth exploration of innovation and family businesses in general and innovation barriers in family business in particular (Calabrò et al., 2019), we applied an inductive qualitative research approach based on a multiple case study design (Eisenhardt & Graebner, 2007; Eisenhardt, 1989; Yin, 2009). The usefulness of a qualitative inductive research design in analysing family businesses has been stressed by McCollom (1990). A multiple case design allows a replication logic, where each case is treated as an experiment and each case serves to confirm or disconfirm interpretations drawn from others (Bingham & Eisenhardt, 2011; Yin, 2009). This approach is especially useful for studying the barriers to innovation in the early stages of development. To obtain new insights about unexplored research issues as in the case of this study (Edmondson & McManus, 2007; Snow & Thomas, 1994), multiple-case studies are an appropriate research method, as in this research. The inductive approach offers us a deep and enriching contextual view to understand and solve the paradoxes that we have found in the literature where the constructs, their relationships, and the nature of the paradox do not produce an easy solution (cf. Shepherd & Sutcliffe, 2011). Therefore, the different views of the relationships between innovation and the nature of family businesses, the paradoxes explaining these relationships, and the discrepancies between the results of studies justified the need for an inductive theory based on the studied cases in this research.

In line with our research design, we applied theoretical sampling for case selection (Eisenhardt, 1989). First, we studied four family businesses (see Table 1 for case snapshots) from Spain and Uruguay. According to Welter (2011), the context in which a company operates is an important factor in obtaining a real vision of its strategy and activities. In this work, three Spanish firms and one from Uruguay are studied. Both nations share some specific traits, such as collectivist culture or the relevance of family values. This similarity in cultural traits and family values between family businesses in Spanish-speaking countries is present in recent studies on family values and communication in Latin America and Spain (ATREVIA & IESE, 2016). On the other hand, the Uruguayan firm was founded by a couple of Spanish nationality, so the culture of the company has a solid basis in Spanish culture. For this reason, Spanish cultural values are dominant in all four cases.

Second, to capture the environmental contexts related to the market and industry, we sampled cases from different business areas, such as telecommunications, food, catering and business services, and the stopper industry. Third, our previous knowledge about these family firms and contextual in-depth information provided us rich data. Eisenhardt and Graebner (2007) stated that a particularly relevant

Table 1
Cases and Informants.

Case	Year Founded	Generation	Interviews	Firm Characteristics	Other data Sources
RKAM	1986	1st and 2nd	4	The founder and son are in charge of the company as owners and managers. No other relatives are involved in the company.	Website, presentations, guided visit, CEO check of case study
UNO	1992	2nd	4	The firm was founded by the father (70 years old) and son (33 years old) in 1992. The father died in 2004. The living founder holds 48 % of the shares; 52 % are owned by his six brothers and sisters.	Website, presentations, guided visit, CEO check of case study
HOST	1916	2nd and 3rd	4	The 2nd and 3rd generations share the holding company. A member of the 2nd generation is in charge of the company, while some members of the 3rd generation manage some of the subsidiaries.	Website, master's thesis of the financial director, guided visit
CHIL	1985	1st and 2nd	4	The founders, owners and managers are a married couple. Their son is also a manager. There are also three daughters. The retirement of the founders is expected in a few years, but succession is not scheduled.	Website, presentations, guided visit by the CEO, internal reports of the company

Interviewee partners.
RKAM: General Manager and successor (2GEN); Founder (1GEN); Deputy General Manager (non-family member); Human Resources Manager (non-family member).
UNO: General Manager and owner (2GEN); Production Manager and owner (2GEN); Quality Manager (non-family member); Owner (2GEN).
HOST: Administrative Manager and owner (3GEN); Financial Manager and owner (3GEN); Owner (3GEN); Owner (3GEN).
CHIL: Founder, General Manager and father (1GEN); Founder, Administration Manager and mother (1GEN); Commercial Manager and son (2GEN); Daughter (2GEN).

theoretical sampling approach consists of "polar types", in which a researcher samples extreme cases (e.g., very high and very low performing) to more easily observe contrasting patterns in the data. Thus, half of the composition of the sample in our study consists of very high innovative firms, and the other half consists of very low innovative firms [the two cases that are more innovative in nature: RKAM (1) and UNO (2); the two cases that are less innovative in nature: HOST (3) and CHIL (4)]. This sampling technique helped us decipher the barriers derived from the nature of family businesses that are avoiding the development of innovative processes. Our sampling criteria led us to have firms characterized by the presence of innovation processes, and two out of the four cases consist of each extreme, with the focal organizational process being "innovation". In our sampling process, we first established contact with the CEO of each firm with an initial pilot informal interview and observations while visiting the firm's business facilities (factories).

3.2. Data collection

Continuously seeking to triangulate the information obtained, several sources of information were used to collect the data necessary for the study (see Table 1). First, open-ended, semi-structured interviews with the manager of the business were conducted, using a protocol focused on our research question. Each researcher conducted two interviews with the informants of each case (a total of 16 interviews). The first was with the general manager of the company, and the second was with another family member with a current or past relevant position in the family business, such as the founder or the potential successor, as a function of the nature of each case. These interviews typically started by mainly dealing with biographical aspects of the business and the family, together with aspects considered relevant to innovation processes. In the second part of the interview, the conversation followed established guidelines based on our research question, with the aim of ascertaining the respondents' perspectives on the barriers derived from the family-owned nature of the business that could affect innovation processes. Throughout the interviews, extensive notes and observations were taken, which were subsequently transcribed within six hours of conducting the interview to minimize loss of information. The reliability of the study was ensured through the participation of two out of four members of the research team in the transcription and interpretation of the interviews, striving for a consistent interpretation, combined with prior and subsequent informal meetings with other family members to obtain further details about how the business operated. Later, the third and the fourth researchers independently read the interview transcripts and checked the data according to the research questions. Additionally, during the visits to the factories and during conferences and with the examination of the websites and social profiles of the firms, we took notes regarding information relevant to answering our research question, and these notes were used in the development of detailed case histories.

3.3. Data analysis

We applied a three-step data analysis process in our study. The analytical process for this study was iterative; we constantly moved back and forth from raw data to theory to develop insights and generalizability (Miles & Huberman, 1994). The steps in our data analysis are detailed below.

First, all interviews were conducted in Spanish and later transcribed into English. We then started building case descriptions based on content analysis (Gioia et al., 2013). Subsequently, each case study was constructed from this information, addressing each case independently to ensure rigor in the application of a replication logic. We developed the first-order concepts that emerged from the analysis based on the evidence found in the data. The information obtained from the cases was progressively integrated by using an inductive approach. The use of a multiple case study design facilitated the analysis, cross-referencing and comparison of similarities and differences, as indicated by Eisenhardt (1989). The analysis was performed using an informant-centric concept starting with a data reduction of the information, grouping, condensing and simplifying. In addition, with four polar cases consisting of two that are more innovative and two that are less innovative, we grouped each first-order concept as a positive or negative influence on innovation to identify which concepts would act as a barrier to innovation and which would not. The polar approach consistently offers empirical evidence and a very clear pattern of recognition of the central construct, relationships, and logic of the focal phenomenon (Eisenhardt, 1989). As the research progressed, we reduced the observed categories to 26 to obtain a more manageable number (Gioia et al., 2013).

Second, we investigated and tried to match the information obtained, grouped into 26 categories in the first-order analysis, with the second-order concepts. After the iterative processes of analysis, ten second-order themes finally emerged; thus, we had the base for our data structure. Third, by identifying four aggregate dimensions after a theoretical saturation process, we completed the data structure, as depicted in Fig. 1.

To ensure the validity and reliability of our research findings, we used longitudinal data, considering retrospective information and real-time data, which allowed us a better understanding of the phenomenon. In addition, we shared the obtained information, draft and transcriptions of the cases, which were validated by the interviewees (Nag et al., 2007). These were subsequently used to triangulate information and to detect possible mistakes arising from the transcription of the

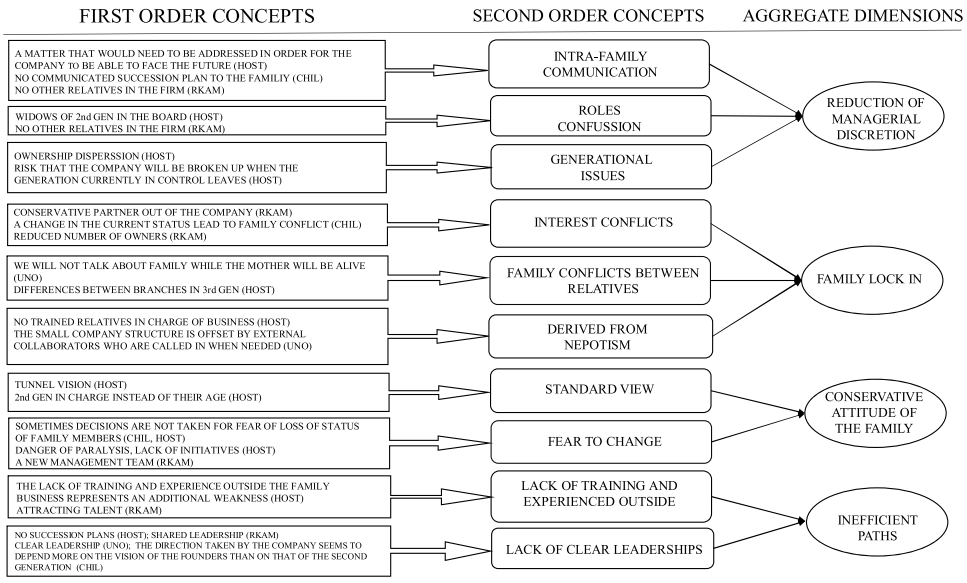

Fig. 1. Data Structure.

interviews, allowing us to examine the construct validity and the consistency and accuracy of the information. To assess the internal validity of the analysis, which refers to the establishment of causal relationships (Yin, 2009), we designed a cross-case comparison to identify the similarities and differences among the cases, based on our four polar cases. First, we collected sufficient knowledge of each case; second, we started the cross-case analysis, checking whether the cases confirmed or refuted the emerging findings.

4. Findings and propositions

The iterative process between the data and the analysis revealed the findings shown in the data structure (Fig. 1). The results are organized following the data structure of Fig. 1 from which we derived four aggregate dimensions: (1) a reduction of managerial discretion, (2) family lock-in, (3) the conservative attitude of the family, and (4) inefficient paths.

4.1. Reduction of managerial discretion

Family business owners select and incorporate historically specific elements during the founding phase. These elements may become routinized and may consequently come to influence the organization's structure and behaviour long after the founding phase (Schreyögg & Sydow, 2011). When these routines appear, the behaviour of the organization becomes standardized through the use of repetitive patterns, which contribute alone or are combined with others in creating organizational persistence. These are cognitive schemes and interpretative frameworks that are constructed during the period managed by the founder, and they become dominant in management actions (Gioia & Sims, 1986; Schwenk, 1988).

Once these routines appear, the decision-making capacity of the manager is conditioned by considerations of the utility of these established patterns, instead of the fact that they are not always the best choice. There are several factors that generate routines that limit the managerial capacity in family businesses. One of the main sources of disagreement between people within families stems from problems in the communication inside the family, role confusion, and generational conflicts. Furthermore, the family's emotional commitment to the company can promote a lack of objectivity in communication between groups and resentment and hostility in personal relationships.

4.1.1. Intrafamily communication

Sometimes, firms lack the ability to see the future clearly, which could be caused by wrong opinions on strategic issues that affect long-term investments (Cannarella & Piccioni, 2011). Family businesses may not perceive these signs of the need to innovate due to a lack of communication between family members, which can be one of the main weaknesses of a family business (Sciascia et al., 2013; Vassiliadis & Vassiliadis, 2014). Sciascia et al. (2013) argue that whether family firms are more or less innovative depends on the communication archetypes of the family. Indeed, some family members who understand the need to innovate are unable to communicate this to other family members for a variety of reasons (Michael-Tsabari & Weiss, 2015; Sciascia et al., 2013). Similarly, scholars argue that a family member may perceive the need for innovation but not communicate it to others due to the presence of obstacles preventing knowledge transmission within the family (Zahra et al., 2007). A shared vision of the business, a common language, and relationship intensity are antecedents of innovation in family firms (Alayo et al., 2021, 2020). Thus, a lack of communication in the family environment can negatively influence the innovation capacity of family businesses by obstructing the signals promoting innovation or, if such signals are detected, by preventing knowledge transmission within the family, thus reinforcing routines and decreasing managerial discretion. According to our data, we observed that there was a greater propensity to describe a lack of communication in the family as an obstacle to innovation among firms that had adopted a more conservative strategy (e.g., HOST and CHIL).

Effective and transparent communication between the family business owners and employees is an important issue in family businesses (Tagiuri & Davis, 1992). Some of the conflicts within the family might be the result of a lack of communication or ineffective communication. Our data lead us to the insight that the less innovative companies present relevant information gaps between the members of the family. One of the owners of HOST stated, "*Sometimes the volume of work reduces the interactions between family members. The load of daily activities affects our family communication. Sometimes losing contact between us influences our ability to put common ideas related to innovation…..* ". (HOST; financial manager and owner, 3rd gen.). The owners reflected in the above quote that a lack of family communication in everyday activities may affect the innovation in family firms.

Apart from the issue noted above, we also observed a considerable lack of communication between the family branches of HOST, leading to a situation in which none of the family business owners, except for the

person in charge, has a clear vision about the near future regarding the several businesses of the firm and the on-going renewal of the firm's strategy. This situation of waiting for something to happen, without making decisions, leads each branch of the family to take care of its own business rather than take care of the company as a whole, which exacerbates the lack of communication. As confirmed by a manager of HOST, "*There is a lack of communication, more within the business than in the family. It is a matter that we would need to address in order for the company to be able to face the future*" (HOST; administration manager and owner, 3rd gen.). Similarly, for CHIL, we found that a lack of communication plagued this business as well. For instance, when asked, the owners have no clear idea who will take over the business once the present owners step down, and there was no clear section plan discussed among the family business owners. A manager from CHIL explains, "*While there are no apparent risks to our relationships or reputation, there are certain communication problems between family members, comprising a lack of information on business matters given to the family*" (CHIL; manager, 2nd gen.). The above quote leads us to interpret that the communication gap between family owners affects firms' innovation capability, as argued by previous research. Thus, a lack of communication among family members could lead to a lower innovation capability (Sciascia et al., 2013). Drawing on these arguments, we formulate the following proposition:

Proposition 1. The lack of intrafamily communication negatively affects family firm innovation.

4.1.2. Role confusion

Role confusion, that is, the distinction between serving the family and serving the firm, acts as a barrier to innovation. Kammerlander et al. (2015) refer to the conflicts that can arise when the shared stories within the family prefer "the old over the new, and (..) as a consequence, younger family members become dissatisfied because of their lack of influence (p. 347)" in reference to the common stories that are shared among family members across generations (p.332).

A manager of the HOST company commented, "*The second generation exerts a significant influence, and there is a confusion of executive and family roles, which sometimes means that decisions are not made to avoid disturbing the current family status*". (HOST; financial manager and owner, 3rd gen.). It is difficult to understand that the innovation decisions in the firm can be limited to the oldest members of the family; two members of the top management team have no prior experience in the business and are involved in the business only because of their deceased spouses. Given that, in the case of HOST, two out of the three brothers who expanded the company died; thus, the board is composed of the only member of the second generation and the widows of his brothers. Consequently, the youngest member of the board is over 70 years old, with the third generation waiting for the former generation to step down. This situation can lead to confusion stemming from conflicting interests between the family and the business. As noted by the manager at another instance, "*The confusion of family and executive roles and the ascendency of family interests over business interests could represent a hindrance to the implementation of change processes in CHIL*" (CHIL; production manager and future successor, 2nd gen.).

We consider that the confusion of family roles with company roles reduces managerial discretion. In the HOST case, the role of the widows can be relevant in terms of their emotional links within the family, but they probably do not have the most appropriate profile or ability required for directors of an innovative company. In contrast, only two of the owners of UNO work in the company, with a clear role to perform. Similarly, RKAM has only two owners, with no other relatives in the company with a clear role definition. A precise distinction between family roles and company roles can contribute to clearing the way to innovation. Consequently, we propose the following proposition:

Proposition 2. The confusion of family and executive roles of family business owners negatively affects family firm innovation.

4.1.3. Generational conflicts

The disagreements between the different generations managing the company can hinder innovation processes (Kammerlander et al., 2015) by reducing the managerial discretion of the generation in charge. As noted above (see Table 1), HOST is owned by several members of different branches of the second and third generations. Some are owners by heritage, and others are owners because they bought some shares of the company in several capital increases. CHIL also presents the risk of breaking the current state of the art when the second generation replaces the founders. One of the owners of HOST stated, "*The response to our company continuity will need to come more from third- than from second-generation members, who are nearing the end of their working lives*" (HOST administration manager and owner, 3rd gen.). As stated by the HOST family manager on page 16, there is also a serious risk of family conflicts that could occur when the second generation disappears. In the case of HOST, it is not so much a problem of qualification of the next generation as one of a generational conflict between the generation that asks for the relief and the generation that does not consider its retirement. In the case of CHIL, the next generation is gaining experience to take over, although the takeover has no scheduled date, nor does it seem that the generation in charge is willing to give up command. Conversely, generational conflicts are not a problem in the case of RKAM: *"My father delegated me the decision making, so there are no disagreements when analysing company questions"* (RKAM general manager and successor, 2nd gen.). The CEO has created his own management team by incorporating younger professionals into the company. The incorporation of external talent reinforced the knowledge resources of the company, and the CEO has improved his own professional qualifications, adding an executive MBA alongside his business and marketing degrees. UNO does not present generational conflicts because all owners belong to the second generation, ranging from 58 to 39 years old. These conflicts between generations can be derived from the diversity of family goals (Davis & Harveston, 1999) or by the different degrees of participation in the business (Greenhaus & Beutell, 1985) and generate high agency costs in the company. As a consequence, the family business dedicates fewer resources to research and development (Chrisman & Patel, 2012; Gomez-Mejia et al., 2014), reducing its innovation activities. Generational conflicts have a clear influence on the delay or stagnation of innovation. The influence of generational conflicts on innovation processes is expressed in the following proposition:

Proposition 3. Generational conflicts negatively affect family firm innovation.

4.2. Family lock-in

During the life of the family business, events appear that eventually lead to an organizational lock-in, fixing a dominant pattern that will not be modified later. Many of the triggers of this situation are caused by conflicts of interest between family members that result in blocking initiatives, conflicts with relatives of the family business owners that limit the company's development, and the presence of nepotism in decision making that closes a step. Lock-in implies that actors are unable to move to a new state (Garud et al., 2010) (Table 2).

In these situations, when the family faces more efficient alternatives or requires critical changes, decision processes and established practices tend to continue to reproduce a single line of action that has been generated over time, becoming immovable and blocking other initiatives. In general, a lock-in is predominantly cognitive, normative, or resource based. The actual organizational blocks are probably combinations of these three types of lock-in (Schreyögg & Sydow, 2011). Employers, even those who are locked-in, who have proven themselves to be successful for quite some time may be challenged by new and more efficient alternatives, or changing internal or external circumstances may demand new solutions. Here, the system has lost its flexibility and is limited to the existing path that replicates inefficient solutions

Table 2
Reduction of Managerial Discretion.

2nd-order concept	Reduction of managerial discretion: Intrafamily communication, generational conflicts, and role confusion
RKAM	"The company is owned and managed jointly by my father and me, and the roles are clearly defined and business oriented; other family members are not involved and fully accept this situation..." (RKAM General Manager and successor, 2nd Gen.) "Our management team has been renewed with people from the successor's generation, thus excluding potential problems with older employees…" (RKAM Founder) A more conservative partner outside of the company allows the development of the innovative vision of the remaining partner, who, in turn, gave room to his son to manage the company. (Observation) Reduced number of owners managing the company. (Observation)
UNO	"The second generation has expanded the company's range of products, maintaining traditional lines while introducing innovation in the form of new products. Also, activities have expanded from producing solely for their own brand to meeting large orders for important store brands…" (UNO Production Manager and owner, 2nd Gen.) Although it is a second-generation company, the fact that the principal shareholder is the co-founder, an elder brother who has held an executive role since the business was founded and has headed the company since the death of the founder, renders the situation more like that of a first-generation company. (Observation)
HOST	The entrepreneurial spirit of the first and second generations has led the company to constitute itself as a group of companies with related activities. "The third generation is still waiting for the second to step down, which for reasons of age will occur soon. Uncertainty about the future may be a deterrent to new activities…" (HOST Administration Manager and owner, 3rd Gen.) Furthermore, those in charge indicated the existence of a lack of communication, more within the business than in the family, "This is a matter that would need to be addressed for the company to be able to face the future…" (HOST Administration Manager and owner, 3rd Gen.)
CHIL	"The company founders have a significant influence, and there is confusion of executive and family roles, which sometimes means that decisions are not made to avoid upsetting the current family status" (HOST Financial Manager and owner, 3rd Gen.). Ownership is concentrated. "A succession process has emerged spontaneously rather than having been planned for…" (CHIL Members of the 2nd Gen.). However, it is not urgent (Observation). Certain communication problems were observed between family members. There is a lack of information on business matters given to the family, together with a confusion of family and executive roles (Observation). Generational shadow may be an important factor in this case. The direction taken by the company seems to depend more on the vision of the founders than on that of the second generation: "Our good family relationship suggests that we will eventually arrive at a shared vision…" (CHIL Members of the 2nd Gen.). There are signs of communication problems in the family that may affect the company's business (Observation).

(Leonard-Barton, 1995; Schreyögg & Kliesch-Eberl, 2007). Additionally, according to the three-circle model developed by Tagiuri and Davis (1992), there are three different groups of stakeholders in family businesses, with each having its own particular vision. The different priorities among the three groups can create a lock-in of the decision-making process and produce family conflicts that act as important obstacles to change within organizations (Santiago, 2015).

4.2.1. Interest conflicts

We identified interest conflicts—that is, conflicts regarding the prioritization of a family logic or a business logic—as a main source of lock-in, observing that in the more innovative companies, there were no conflicts of interest, which was the opposite of the less innovative firms. For instance, the RKAM general manager reflected, "*A difference of opinion between a conservative partner and a partner with a more innovative spirit led to the establishment of the family business. My father brought the whole company to his conservative partner, giving part of the shares to me, thus creating a family business. This innovative vision remains as a hallmark of the company, shared by my father, who founded the business, and by me, who is currently managing*" (RKAM general manager and successor, 2nd gen.). RKAM was able to resolve the differences regarding innovation by understanding that the company would have a difficult future under two different ways of running the business. The natural solution was the exit of one of the partners, allowing the other partner to redirect the firm along a more innovative path. The interest conflict was resolved by keeping only one vision in the company, occasioning the lock-in.

On the other hand, some members of the second generation in CHIL were afraid of changes that could affect the current status of the family relationships. As noted by the 2nd generation manager, "*There may be a certain lack of motivation towards innovation in this case because a change in the current status could lead us to family conflict*". (CHIL members of 2nd gen.). Block et al. (2013) and Berrone et al. (2010) highlighted that the desire to maintain the family status may divert resources from economic to social purposes. The theoretical approach highlights that prioritizing family interests over business interests could adversely affect the capacity of family businesses to innovate. In the study, the less innovative cases – HOST and CHIL – explicitly stated that family interests took precedence over business interests. By contrast, RKAM and UNO, which expressed their total opposition to prioritizing family interests over business interests, presented a stronger innovative nature.

We also observed that in terms of interest conflict, the number of shareholders may lead to lock-in. RKAM has only two owners, a father and son. UNO has seven owners; they are siblings, and one of them holds 48% of the shares. The implication is that this owner can rule the company with the support of only one of the other shareholders, avoiding complex negotiations and the need for a general consensus. In the case of HOST, ownership is dispersed between the second and third generations, with more than ten shareholders with different ideas about the company. Accordingly, we consider that a reduced number of shareholders must foster an innovative orientation within the company because it is easy to reach a consensus and doing so is more difficult in the case of more and, in particular, different owners (Craig & Dibrell, 2006). Formally:

Proposition 4. Prioritizing family interests over business interests (interest conflicts) negatively affects family firm innovation

4.2.2. Emotional family conflicts between relatives

According to Cabrera-Suárez et al. (2014: 296), "both families and organisations are social systems comprised of people where relational and emotional issues such as climate, cohesion, conflict, and identity are critical to understand the process of decisionmaking". Furthermore, emotional family conflicts may lead senior members of the organization to transmit less information to the next generation (Zahra et al., 2007), and some members of the family may have no interest in the business or in acquiring new knowledge (Breton-Miller & Miller, 2006). Conflicts with relatives usually end by avoiding modifications of the previous status, lock-in initiatives. These conflicts are a "taboo" matter for family members because of their high emotional cost. Family feuds are considered as one of the greatest threats to family firms (Gordon & Nicholson, 2010). All of the above will lead to the inability to respond to the need for change demanded by the environment, resulting in a lock-in situation. The general manager of UNO noted, "*There is a latent risk of conflict between the siblings, as sensitive issues will not be addressed while the mother is alive*". (UNO general manager and owner, 2nd gen.). Similarly, as noted by the financial manager of HOST, "*There is a latent conflict between the various branches of the family that will inevitably arise when the second generation steps down. Each branch is responsible for one part of the business; thus, there is some risk that the company will be broken up when the generation currently in control leaves. Organizational conflict between the group's various activities may be an important obstacle in terms of finding a common way forward for this group of companies*". (HOST financial

manager and owner, 3rd gen.). Drawing on the above arguments, we infer that emotional conflicts are a source of inertia that act as a barrier to innovation processes. We argue that the conflicts among family members, especially in connection with emotions, may destroy a family firm's ability to innovate (Frank et al., 2011; Nordqvist, 2005). Thus, we propose the following:

Proposition 5. Emotional family conflicts between relatives negatively affect family firm innovation.

4.2.3. Nepotism

According to Jaskiewicz et al. (2013), nepotism is defined as "hiring based on family ties and thus it discriminates against nonfamily members". If nepotism is strongly felt, there is no meritocracy in an organization (Arasli et al., 2006), which affects employee motivation and satisfaction. Furthermore, within a family business, nepotism may arise in recruitment and promotion processes (Padgett & Morris, 2005). New projects are often slowed down or even halted to avoid upsetting the status quo within the organization of family members who may aspire to promotion in the new projects over the heads of better qualified non-family employees, who may consequently hold a poorer opinion of justice in the company (Barnett & Kellermanns, 2006). Therefore, lock-in could be occasioned not only for family members but also for non-family members who perceive an unfair situation or nepotism. This leaves workers unmotivated to start new projects. Lock-in also arises from conflicts between family and non-family employees generated by nepotism in decision making (Webb et al., 2010), hindering the implementation of innovation processes in the family business and leading to compromise solutions that undermine the essence of the desired change. Based on the interviewee reports, some evidence of nepotism was observed in case 3. However, where it exists, nepotism is a difficult factor for family businesses themselves to identify and, above all, to acknowledge (Table 3).

This situation may have been the case for case 3, HOST, where those in charge acknowledged shortcomings in the training of family member managers, who in some cases were appointed to their posts more for family-related than for business reasons. As noted by the financial manager of HOST, "*The entrepreneurial spirit of the first and second generations has led our company to constitute itself as a group of companies with related activities. The third generation is still waiting for the second to step down, which for reasons of age will occur soon. Uncertainty about the future may be a deterrent to new activities. This negatively affects innovation from the dual roles and a certain degree of nepotism because most of the functions are in the hands of family members, who do not always have appropriate training*" (HOST financial manager and owner, 3rd gen.).

In contrast, UNO maintains a small structure that is complemented by external suppliers rather than through the inclusion of family members when they do not provide the appropriate solutions. The production manager of UNO noted, "*The small company structure is offset by external collaborators who are called in when needed, such as engineering services when* UNO *made a relevant investment in new facilities*" (UNO production manager and owner, 2nd gen.). According to these arguments, we state the following:

Proposition 6. Nepotism negatively affects family firm innovation.

Table 3
Family Lock-in.

2º order concept	Family lock-in: Interest conflicts, conflicts between relatives, and nepotism
RKAM	The company is owned and managed jointly by a father and son whose roles are clearly defined and business-oriented; other family members are not involved and fully accept this situation (Observation). "Our management team has been renewed with people from the successor's generation, thus excluding potential problems with older employees…" (RKAM Founder)
UNO	There is a latent risk of conflict between the siblings, as "sensitive issues will not be addressed while the mother is alive" (UNO General Manager and owner, 2nd Gen.) "There are no financial problems, the company is healthy and has good future prospects…" (UNO General Manager and owner, 2nd Gen.).
HOST	There may be some distorted perception, derived from dual roles and a certain degree of nepotism because most of the functions are in the hands of family members, who do not always have appropriate training (Observation). Dispersed ownership may be a factor that slows innovation in this case. "There may be a lack of motivation due to the uncertainty of the succession process, which must be resolved in the medium term and which will have an unknown impact on the various family branches and owners…" (HOST Financial Manager and owner, 3rd Gen.)
CHIL	"A change in the current status could lead to family conflict…" (CHIL Members of 2nd Gen.)

4.3. Conservative attitude of the family

Within this dimension, called the *conservative attitude of the family*, we integrate all the observations in the case studies related to either a standardized view of the business or fear of change.

4.3.1. Standardized view

One barrier to the perception of the need for innovation appears when a majority group inside the firm imposes a standardized opinion, thereby limiting creative thinking. This standardized path is reinforced inside the company, becoming the only path to follow. Therefore, family businesses promote a conservative attitude, rejecting projects and changes. Additionally, this conservative attitude could be created by paternalism (Llach et al., 2012), i.e., excessively protecting people to the extent of interfering in their decisions and autonomy (Chirico & Nordqvist, 2010) (Table 4).

Finally, excessive importance may be given to one individual, leading to a widespread belief within the organization that if the founder cannot find a solution, then it does not exist (Davis & Harveston, 1999; Webb et al., 2010), thus preventing the emergence of creative responses to demands. On the other hand, the generational shadow (Davis & Harveston, 1999) may adversely affect the capacity to innovate in family businesses. The founders' influence in the RKAM and CHIL cases may be considered an example of generational shadow but in a positive sense, as the founders have been and continue to be the driving force behind innovation in their companies. A certain degree of generational shadow existed in the HOST case due to the still fresh memories of the now deceased members of the second generation, but it did not seem to be the most influential factor hindering innovation. Furthermore, the rigid mental model used by top management could induce a type of "tunnel vision" and reinforce commitment to the status quo (König et al., 2013), avoiding the perception of the need for innovation. We note a statement by a non-family employee of RKAM, "*A clear direction has been marked by*

Table 4
Conservative Attitude of the Family.

2nd-order concept	Conservative attitude of the family
RKAM	"There was difference of opinion between a conservative partner and a partner with a more innovative spirit, which led to the establishment of the family business…" (RKAM General Manager and successor, 2nd Gen.). This innovative vision remains a hallmark of the company, shared by the father, who founded the business, and the son, who manages it (Observation).
HOST	The company founders has a significant influence. "There is a confusion of executive and family roles, which sometimes means that decisions are not made to avoid upsetting the current family status…" (HOST Financial Manager and owner, 3rd Gen.)
CHIL	"There may be a certain lack of motivation in our family business because a change in the current status could lead to family conflict…" (CHIL Members of 2nd Gen.)

the founder, and this is maintained with the successor's full support. The founder's entrepreneurial spirit is still present in the company, encouraged by his successor, who has a more managerial profile. There is some indication of a generational shadow but in a positive sense. It is not generating obstacles to responding to innovation demands". (RKAM non-family deputy general manager). A CHIL family member noted, "*The direction taken by the company depends more on the vision of the founders than on the view of the second generation, although we have good family relationships, which suggests that we will eventually arrive at a shared vision*" (CHIL members of 2nd gen.).

The issue could also be a matter of the out-of-date sense of innovation of the founder. The founders were innovators at the beginning and then showed the way to the next generation. Perhaps the next generation is not at the same level as the founder, in the sense that the members of this generation are incapable of finding their own way to innovate and do not know how to follow the path of innovation marked by the founder in an updated manner. In this sense, we propose the following proposition:

Proposition 7. The persistence of a standardized view generated by the founder negatively affects family firm innovation.

4.3.2. Fear to change

The conservative attitude is also occasioned by problems in the perception of the need to innovate that can also stem from the rejection of any information that contradicts what is expected or desired due to fear. In addition, as Hopkins et al. (2013) stated, the idea of maintaining the current status quo acts as a barrier and allows the business to avoid identifying market opportunities. Family members want to continue in the same position, generating an immovable position. Furthermore, they fear that change may affect the status of family members, and consequently, fear decreases the company's motivation to undertake innovation activities. This aspect could be related to the desire to maintain harmony within the family or to the fear of losing their status. Family businesses can have lower expectations of financial benefit, paying greater attention to social and emotional variables (Berrone et al., 2010; Block et al., 2013; Gómez-Mejía et al., 2007) and finding less incentive to undertake innovation activities or to make entrepreneurial decisions (Meek, 2010). As noted by the administration manager of HOST, "*Therefore, there is a danger of paralysis due to a lack of initiative through excessive prudence on the part of the third generation, which is worried about the changes in the company and a risk of conflict among the various branches of the family when deciding on the company's future direction and the individuals who will be responsible for leading the process of renewal*" (HOST administration manager and owner, 3rd gen.).

According to the information provided by the companies, we observed fear of change in the HOST and CHIL cases, where the interviewees responded that they "strongly agree" with the statement "Sometimes, decisions are not made for fear of loss of status of family members". By contrast, RKAM and UNO responded, "strongly disagree" to the same statement. RKAM has a new management team, selected by the CEO, in search of young people who can provide the talent that the company needs to address its future challenges. Because these latter companies (RKAM and UNO) presented a stronger innovative nature in this multiple case study, it seems that fear of change appears to be a relevant barrier to innovation. The companies' responses regarding this issue were all similar, although UNO did not comment. Consequently, we propose the following:

Proposition 8. The family's fear to change negatively affects family firm innovation.

4.4. Inefficient paths

The necessary capability to respond to challenges that impose innovation processes can be hindered by the lack of training and external experience of the executives of a family firm, in addition to the lack of clear leadership. When the family business has lost its flexibility, it is confined to the existing path that replicates inefficient solutions (Leonard-Barton, 1995; Schreyögg & Kliesch-Eberl, 2007). The lack of training and external experience and the lack of clear leadership limit the capacity to respond, generating inefficient solutions that are discarded.

4.4.1. Lack of training and external experience

Knowledge is an asset that allows an organization to be innovative and remain competitive in the market (Grant, 1996). Knowledge in family businesses is defined as the explicit and tacit knowledge that family members have acquired and developed through training and experience inside and outside the organization (Chirico & Salvato, 2008, 2016). Family businesses can present a certain degree of inbreeding due to lack of training or experience outside the family business since, as Koellinger (2008) observed, a low level of training acts as a brake on innovation. As a result of which a company may lack the creative capacity to respond to environmental demands (Miller & Breton-Miller, 2006), generating inefficient paths to solve the demands of innovation. Sometimes, family members have some personal skills and some qualifications to take over family firms, but they need more training and experience to manage firms. They can meet some of the requirements, but they must improve their capacities in order to identify opportunities and foster innovation. A lack of sufficient training and professional experience outside the family business could adversely affect the capacity to innovate in family businesses. In the study, HOST expressly stated that the lack of training and external experience acted as a brake on innovation, while some indications of the same were observed in CHIL regarding experience rather than training. As reflected by the financial manager of HOST, "*The lack of training and experience outside the family business represents an additional weakness*" (HOST financial manager and owner, 3rd gen.) (Table 5).

This may have been the case for HOST, where those in charge acknowledged shortcomings in the training of family member managers, who in some cases were appointed to their positions for family-related rather than for business reasons. In this way, incommensurable beliefs among groups that act as a brake on innovative initiatives may be generated. By contrast, there is no evidence of this kind of barrier in RKAM. As noted by the founder, "*The company is undergoing a process of renovation, expanding its activities and attracting talent to consolidate its expansion. Funding is not an issue, succession is clearly under way, ownership is concentrated, and there are no family problems*" (RKAM founder).

Table 5
Inefficient Paths.

2nd-order concept	Inefficient paths: Lack of training and experience, lack of clear leadership
RKAM	"Our company is owned and managed jointly by my father and me. Our roles are clearly defined and business oriented…" (RKAM General Manager and successor, 2nd Gen.) The management team has been renewed with people from the successor's generation, thus excluding potential problems with older employees (Observation).
UNO	"The second generation has expanded the company's range of products, maintaining traditional lines while introducing innovation in the form of new products…" (UNO Production Manager and owner, 2nd Gen.). Similarly, activities have expanded from producing solely for their own brand to meeting large orders for important store brands (Observation)
CHIL	"The arrival of the second generation has provided an impetus to business endeavors, with an active search for new market. Our intention is to maintain and extend current activities through new investment to replace machinery…" (CHIL Founder). The company structure is very small, with all executive functions in the hands of the husband and wife founders. The challenge is to transfer these functions, currently shared between two people, to the future successor, who may need an external management team that presently does not exist (Observation).

Similarly, "*The company is owned and managed jointly by a father and son whose roles are clearly defined. The management team has been renewed with people from the successor's generation, thus excluding potential problems with older employees*" (RKAM non-family deputy general manager). Accordingly, we formulate the following proposition:

Proposition 9. A lack of training and experience outside the family business negatively affects family firm innovation.

4.4.2. Lack of clear leadership

The four cases allow us to obtain some important information that reflects the influence of clear leadership regarding efficient solutions to innovation processes. The production manager stated, "*The main partner's decision-making capacity favours a clear and firm direction, which is endorsed by the siblings, co-owners of the company*" (UNO production manager and owner, 2nd gen.). Furthermore, the HOST company administration manager noted, "*The company is not currently undergoing a process of succession, although the laws of life clearly indicate that the second generation's leadership role should not continue much longer. When the second generation steps down, however, the present balance between branches of the family may be disturbed*" (HOST administration manager and owner, 3rd gen.). In HOST, this lack of clear leadership may be related to some role confusion between family members and family managers, as studied above. However, role confusion is not the only source of a lack of clear leadership. The role of members of the third generation is not a leadership role, as they are passively waiting for the second generation to step down. Due to the advanced age of the second generation, it could be expected that new leadership would emerge to take over the company. However, it seems that this is not the case. There is high uncertainty about the future leadership in HOST because of a lack of succession plans.

There are no clear succession plans in CHIL. A new successor, the male sibling, is expected to emerge, but he has not yet shown his character as a future leader.

On the other hand, there is shared leadership in RKAM. The father fostered the development of the son as a leader, and the son assumed the challenge of leading the firm. UNO has clear leadership, represented by the older sibling, who has managed the firm since its establishment; he shared leadership with his father in the first stages and then led the firm on his own with family support.

All these reasons lead us to point to the lack of leadership as a barrier to innovation:

Proposition 10. A lack of clear leadership negatively affects family firm innovation.

5. Discussion

The analysis of our four polar cases of family businesses, two highly innovative and two less innovative, enables us to conduct an initial assessment of the appropriateness of several premises that would explain the presence of barriers to innovation derived from the family character of these organizations. Grounded in path dependence, the patterns generated in our study of four family businesses allow us to identify dimensions portrayed as main barriers to innovate: 1) a reduction of managerial discretion, 2) family lock-in, 3) a conservative family attitude, and 4) inefficient paths.

Through the insights that emerged, first, we reveal that a *reduction of managerial discretion* leads to low levels of engagement in innovation. For instance, the CEO of the firm is obligated to make decisions according to the dominant pattern, losing flexibility and reducing his managerial discretion, generating a barrier to innovation. In HOST and CHIL, this barrier originated from three factors: first, intrafamily communication. A lack of transmission of information inside the family could be generated by family conflicts, which were present in the less innovative companies and affected their innovative capacity. Furthermore, those in charge indicated the existence of a lack of communication within the family business as a matter that would need to be addressed to be able to face the future. On the other hand, the analysis of CHIL determines that a lack of structural clarity and the confusion of both family and executive roles also reduced managerial discretion. Family members were confused about their role in the business, acting first as a family and then as business people. In this regard, firm founders have a significant influence, creating a dominant pattern that may promote the confusion of executive and family roles of family members, and business decisions are not made to avoid upsetting the current family status. In addition, the reduction of managerial discretion could be linked to generational conflicts that appear when two generations are cohabiting in the family business, specifically with differences in approaches between both generations. This situation generates a reduction in the managerial discretion of the CEO, and if these differences are not solved, then they could create a barrier to innovation processes.

Another dimension observed in our study is *family lock-in*. Organizational choices are embedded in institutions, reflecting the rules and culture constituting the organization. The lock-in may be predominantly cognitive, normative or resource based in nature; organizational lock-ins are most likely to be combinations of these three types of lock-in. In the cases studied, we observe lock-ins derived from the family nature of the company. Their origin was explained by Vergne and Durand (2010), who stated that when path dependence appears, a lock-in will occur as one possible outcome if no exogenous shock disturbs the system. Because paths are selected contingently, lock-in can occur on any path, i.e., not necessarily on the optimal path. Lock-in is an important concept that manifests in situations where actors cannot move to a new state even though all involved prefer to do so (in economics, the "penguin effect" (Katz & Shapiro, 1985).

We identified three factors acting as generators of family lock-in: first, interest conflict. We highlight that in the more innovative companies, there were no conflicts of this kind, while in the less innovative companies, there were several interest conflicts: "… *A difference of opinion between a conservative partner, and a partner with a more innovative spirit, led to the establishment of the family business. My father bought the whole company to his conservative partner, giving part of the shares to me, thus creating a family business. This innovative vision remains as a hallmark of the company, shared by my father, who founded the business, and by me, who is currently managing*" (RKAM general manager and successor, 2nd gen.). Thus, this innovative company avoided interest conflicts by buying the shares of the company owned by the more conservative partner, overcoming this barrier. On the other hand, there are members who desire to preserve the current family status and oppose any innovation that could represent a risk to the financial situation of the family, as in the case of HOST. Therefore, these interest conflicts were related to ownership and agency. Conflicts between relatives are the second factor acting as a generator of family lock-in. Jealousies and rivalries negatively affect the knowledge transmission inside the company, as occurred in our two less innovative polar cases: "There is a latent conflict between the various branches of the family that will inevitably arise when the second generation steps down" (HOST). The third factor is nepotism, which can also act as a barrier to innovation, for example, when non-family employees perceive nepotism in decision making. Furthermore, other members could perceive nepotism when other family members are not appropriately prepared to manage the company, making decisions that obstruct new entrepreneurial activities, as related by an interviewee in the HOST case. Additionally, nepotism can discourage external managers from taking the initiative in innovation processes.

The third dimension found in our study was the *family's conservative attitude*. The barriers to innovation mainly stemmed from two aspects. First, the founders established standardized views. For instance, once developed, routines and attitudes are hard to change and replace with new ideas and behaviours, which limits the creative thinking of family members. The decisions made in the founding phase generated a unique path that avoids the assessment of other alternatives, acting as a barrier

to innovation in the family business. This barrier is also linked to paternalism and a generational shadow that could induce tunnel vision, which hinders innovation processes. Second, fear of change regarding the situation or status quo, conditioned by the non-financial goals of the family, propitiates a conservative attitude, avoiding financial or reputational risks. The conservative nature and the desire to maintain harmony inside the family act as barriers and slow down innovation processes, as observed in the cases of HOST and CHIL.

A fourth dimension was also identified: *inefficient paths*. At the initial stage of the company, the founders established a pattern that was successful in the past, creating a path dependence that diminished the flexibility of the organization, confining it to the existing path (Leonard-Barton, 1995; Schreyögg & Kliesch-Eberl, 2007). The inefficient path is a consequence of the inability to identify new ways to develop innovation processes. The cases studied show two examples where the lack of training and experience outside of the family firm acted as an obstacle that prevented the evaluation of new innovation alternatives. Family businesses do not innovate because they do not have the capacity to creatively respond to environmental demands. HOST expressly stated that "we think that the lack of training and external experience is acting as a brake on innovation", while some indications of the same were observed in the other less innovative polar case, CHIL, regarding experience rather than training. However, members of UNO, a more innovative company, expressed their disagreement with this statement. A second element included in this dimension is leadership inaction. The dominant pattern was imposed, and there were problems with accepting alternative paths; reversing this established path became progressively more difficult. On the other hand, during transitional periods, family businesses utilize more conservative strategies and, after overcoming all the previous obstacles, remain inactive for this reason. This barrier could originate from the generation in charge; several authors have stated that the second and subsequent generations are more conservative. Additionally, the two less innovative cases present leadership issues. Therefore, CHIL did not have a clear succession plan, while HOST expressly stated that there was uncertainty about the future leadership of the company. We do not observe an "efficient" path in these two companies to perform innovation processes. By contrast, proactive leadership is clearly identified in the RKAM and UNO cases. These insights have important theoretical and practical implications.

Our study contributes to and affects research on innovation in family firms. For instance, as proposed by Matzler et al. (2015), innovation inputs are negatively affected by the nature of family businesses. We observed that two barriers could affect innovation inputs: motivational problems and a failed response that originates from inefficient paths. In relation to the model of Carnes and Ireland (2013), who stated that resource bundling was the missing link between family firms and innovation, we can highlight that the subprocess of pioneering could clearly be affected by two of the barriers that we formulate: the choice of inefficient paths and the appearance of family lock-in conditioning the development of new capabilities. Furthermore, as argued by Duran et al. (2016) and Cucculelli et al. (2016), the different behaviours of family firms regarding innovation were caused by the generation in charge. This view is also in line with our results because we identified that generational conflicts diminished managerial discretion. Finally, Casprini et al. (2017) stated that in innovation processes, the acquisition of external knowledge is impeded by the inability to identify valuable external sources, probably due to a lack of training and experience, factors that we included in the barrier of inefficient paths.

Our study also has implications for path dependence by studying how it limits innovation. As argued by Wright and Kellermanns (2011), there is a need for further assessment of whether family firms overcome the path dependence of the founding owners. Specifically, we described and highlighted the barriers to innovation in family firms. According to path dependence theory, the comparison between the two innovative family firms and the two less innovative firms shed light on the obstacles to innovation. By identifying four dimensions that act as inertial forces, i.e., a reduction of managerial discretion, family lock-in, the conservative attitude of the family, and inefficient paths, family businesses can respond to them to avoid negative effects on their innovation processes. Innovation activities imply organizational changes that can be limited or even halted by means of some barriers to change. In addition to the barriers that every firm must manage, family firms must face some specific obstacles that stem from their nature as family firms. For entrepreneurial families, detecting and delimiting issues such as a lack of communication, role confusion, generational conflicts, interest and family conflicts, nepotism, fear of change, and a lack of leadership capabilities, training or external managerial experience can allow them to undertake innovation processes with a higher probability of reaching the goals proposed. Instead of the cultural differences between the four cases, which show family firms from different countries and with different generations in charge and from different industries, these issues are common to the less innovative companies. Identifying these specific barriers to innovation in family firms contributes to reducing the uncertainties related to innovation processes. Overcoming these specific barriers should allow family firms to undertake innovation processes on a more reliable basis. This paper contributes to family firms by highlighting the explored issues in both their organizational and family aspects. By recognizing and addressing these issues, family firms can avoid some of the traps that can limit and even destroy their innovation projects and initiatives.

Family business owners may ask themselves whether they should therefore erase the footprint of the founder in the company's innovation processes. Our work provides clear guidelines regarding aspects that family entrepreneurs should avoid to make their companies more innovative. The series of barriers formulated in this work that affect the development of innovation processes is useful for family business analyses of whether such firms are conditioned by any of these barriers. First, family firms must understand whether there are decision patterns related to innovation that originated in the past, such as the founding phase of the company. If so, then it would be necessary to check whether these established patterns are reducing decision makers' capacity to make decisions, which could be caused by several reasons such as communication problems in the family business, confusion regarding which role they are acting in, i.e., entrepreneur or family, or, in cases where two generations coexist in the family business, situations in which each generation has a different vision of innovation paths.

On the other hand, decisions on innovation can be affected by family lock-in, which does not allow such decisions to develop, conflicts of interest, conflicts with relatives or nepotism, which are conditioning factors that block innovation processes. Another question to analyse is whether the family business is maintaining a conservative attitude that avoids undertaking new innovative projects, either because the founder established a standardized vision when the company originated or because the changes worry the decision makers due to the fear of losing their current status. A lack of communication between relatives about their idea of the company seems to be a major obstacle to finding an innovative orientation. If the company overcomes these obstacles, then to innovate, it will ultimately have to choose the right path to innovation, and for this task, family members must have adequate training, experience in other businesses and the ability to lead projects efficiently.

The use of four case studies is a limitation in itself. As such, we did our best to select heterogeneous family firms from different industries and socioeconomic contexts to establish comparisons between them. The study of innovative firms, as opposed to the less innovative firms, allowed us to contrast the presence of some obstacles to innovation in some companies and the absence of innovation in others. Our research could be extended by conducting a more comprehensive study that incorporates new family business cases, with the aim of refining and fine-tuning the premises that appear to be most accurate. Hypotheses could be formulated based on these premises for analysis in a more far-reaching empirical quantitative study. Regardless of the above, further research into the factors that hinder or prevent innovation in family

businesses is required to increase their capacity for innovation.

5.1. Concluding remarks

Family firms constitute the most widespread enterprise type worldwide, and it would be convenient for governmental policies to consider how to support innovation in family firms. To reinforce the viability of innovation processes in family firms, identifying the barriers to innovation becomes a critical issue. We hope that our findings can contribute to improving the innovation in family firms by avoiding some traps that are specific to the family nature of this type of company.

Author statement

The research is conducted according to the guidelines and no contradiction to any of the contextual norms and laws and no dispute among others.

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.scaman.2021.101182.

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