

A Configurational Approach to Family Firm Innovation

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Abstract

This article develops an integrated framework for the examination of innovation drivers in small and privately owned family firms. Drawing from the family-driven innovation model, we study how factors at the family, the firm, and the environment level combine into distinct configurations that spur innovation. Analyzing 277 family firms using fuzzy-set qualitative comparative analysis, we find six configurations leading to high innovation and show that none of the antecedents is necessary for it. Building inductively on our configurations, we also derive propositions about the combinations of factors leading to high innovation. Implications for research and practice are discussed.

Keywords

innovation, survey data, fuzzy-set qualitative comparative analysis (fsQCA), socioemotional wealth (SEW)

Introduction

In recent years, scholars have well established innovation as critical for family firm survival across generations (Kellermanns & Eddleston, 2006; Salvato, 2004), growth (Casillas, Moreno, & Barbero, 2011), and success in the competitive business landscape (Spriggs, Yu, Deeds, & Sorenson, 2013). Given that innovation is an important means by which family firms can grow and renew themselves, its antecedents have received a lot of research attention. Using both quantitative (Craig & Moores, 2006; De Massis, Frattini, & Lichtenthaler, 2012) and qualitative (Cassia, De Massis, & Pizzurno, 2011; Kammerlander, Dessi, Bird, Floris, & Murru, 2015) designs, scholars have empirically shown that innovation antecedents operate at the levels of the family, the firm, and the environment. Specifically, not involving later generation family members in the firm management leads to lower innovation (Beck, Janssens, Debruyne, & Lommelen, 2011; Cruz & Nordqvist, 2012; Kellermanns & Eddleston, 2006). Additionally, professionalization positively influences innovation because nonfamily managers add knowledge and expertise to the firm (Gedajlovic, Lubatkin, & Schulze, 2004; Miller, Minichilli, & Corbetta, 2013) and help resolve conflicts that arise between family members during innovation decision-making processes (Yoo & Sung,

2015). Last, factors external to the firm such as environmental dynamism and munificence also have an effect on innovation through their influence on resourcefulness (Casillas et al., 2011; Chirico, Naldi, Bau, & Criaco, 2014; Cruz & Nordqvist, 2012).

Although there is extensive research on the individual aforementioned antecedents of innovation, we know little about how they interrelate with each other. Prior studies have mostly focused on interactions between pairs of factors and have often generated inconclusive results. Specifically, Casillas et al. (2011) hypothesized that environmental dynamism strengthens the negative effect of generational involvement on family firm innovation. In contrast, Cruz and Nordqvist (2012) have shown empirically that environmental dynamism strengthens the positive effect of involvement on innovation. These studies have undoubtedly underscored the interdependence between family- and environment-level drivers of family firm innovation. However, it is still difficult to understand under what conditions the

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interaction between generational involvement and environmental dynamism affects innovation positively versus negatively. This suggests that we still have a partial understanding of the decision of family firms to innovate which is likely contingent on the interdependence of more than these two factors.

Our main premise is that combinations of multiple individual factors drive family firm innovation. Surprisingly, such combinations have not yet been adequately examined—perhaps due to the statistical and interpretative challenges that higher order interactions pose (Vis, 2012)—pointing to a need for a better understanding of the interdependence among family firm innovation antecedents. We aim to develop this understanding using fuzzy-set qualitative comparative analysis (fsQCA) on a sample of 277 U.S. family firms. We believe that developing this understanding is important for two reasons. First, we suggest that understanding what spurs innovation in family firms has important implications given the essence of innovation for firm survival, long-term growth, and success in the ever-increasing competitive business landscape (Kellermanns & Eddleston, 2006; Salvato, 2004; Spriggs et al., 2013). Innovative family firms are able to better exploit their existing competitive advantages (Spriggs et al., 2013) and to use innovation as a basis for the development of new ones (Ireland & Webb, 2007). Through innovation, family firms also empower their employees, increase their revenues, and enhance profitability (Kellermanns & Eddleston, 2006). Second, examining combinations of multiple innovation antecedents using fsQCA may help inform current findings about family firm innovation which have so far yielded inconclusive and often contradictory predictions about direct effects (Chirico & Salvato, 2016; Salvato & Melin, 2008) as well as two-way interactions (Casillas et al., 2011; Cruz & Nordqvist, 2012). For instance, it is possible that socio-emotional wealth (SEW) could help explain the contradictory findings regarding the combined effect of environmental dynamism and generational involvement on innovation. Specifically, the need of family firms to preserve their SEW may make them more likely to pursue higher innovation under certain conditions, and not in other situations. In this regard, we suggest that family firms with generational involvement will more likely pursue high innovation if they operate in an environmentally dynamic context, because in such a context they will not be able to afford complacency for the sake of preserving SEW.

Three features of fsQCA underlie our reasons for using it in this study. First, fsQCA is a well-suited method when researchers examine attributes that are dependent with each other and as a result, conventional linear methodologies are not appropriate due to their assumptions of independence (Greckhamer, Misangyi, Elms, & Lacey, 2008). Second, fsQCA facilitates the interpretation of multiple interaction effects at the same time (Harms, Kraus, & Schwarz, 2009) which would have been challenging using regression techniques (Vis, 2012). Most important, such interaction effects can involve not only multiple variables but also ones operating at different levels of analysis (Misangyi et al., 2017), like in this study. Last, configurational approaches including fsQCA allow for a more fine-grained understanding of phenomena because organizations are studied as sets of firms that are similar across relevant dimensions rather than as exhibiting relationships that manifest across all organizations (Short, Payne, & Ketchen, 2008).

The purpose of our study is to examine how the interrelationships among family-level factors (such as SEW), firm-level factors (such as professionalization and generational involvement), and environment-level factors (such as munificence and dynamism) influence family firm innovation. We define innovation as the implementation of “an idea, practice, or project perceived as new by an individual or other unit of adoption” (Rogers, 2003, p. 12), conceptualizing it as family firms’ readiness and willingness to carry out changes and deviate from established activities and procedures (Kammerlander et al., 2015). Recognizing that set-theoretic studies are limited in the number of attributes that they can include (Fiss, 2011; Greckhamer, 2016; Harms et al., 2009), we have selected these innovation antecedents drawing from the family-driven innovation model (De Massis, Di Minin, & Frattini, 2015).

We contribute to family business research in three ways. First, we take a holistic approach to family firm innovation and identify combinations of conditions leading to high levels of it. This way, we account for the interrelationships among family-, firm-, and environment-level innovation antecedents and contribute to the ongoing conversation about the ways in which factors such as generational involvement and environmental dynamism interact to influence innovation. In specific, our results show that SEW is a critical, core factor that helps explain the conditions under which generational involvement and environmental dynamism interact

positively (Cruz & Nordqvist, 2012) versus negatively (Casillas et al., 2011) to affect family firm innovation. Such a finding also responds to recent calls to study SEW taking into consideration the environmental context within which it is often pursued (Newbert & Craig, 2017). Second, our findings advance our understanding of the role of professionalization for family firm innovation. Although some researchers have indicated that the presence of nonfamily managers on the management team increases innovation (Gedajlovic et al., 2004; Miller et al., 2013; Yoo & Sung, 2015), others have found that innovation is higher when family firms are managed by a later-generation family member as opposed to a professional, nonfamily one (Duran, Kammerlander, Van Essen, & Zellweger, 2016). We add an important contribution to the findings of Duran et al. (2016) by demonstrating that the absence of professionalization is beneficial for innovation when SEW is highly important to family firms.¹ Our finding suggests that the critical role of SEW in the relationship between professionalization and family firm innovation has been overlooked. Last, we empirically show that not all three SEW dimensions need to be present for high family firm innovation. This way we contribute to a growing body of literature arguing that SEW is not a monolithic concept and that it has nuanced impacts on firm behavior through its distinct dimensions (Berrone, Cruz, & Gómez-Mejía, 2012; Cennamo, Berrone, Cruz, & Gómez-Mejía, 2012; Vardaman & Gondo, 2014).

Literature Review

Family-Driven Innovation Model

According to the family-driven innovation model, the heterogeneity of family firms regarding their innovation is captured by three factors including family willingness, family ability as discretion, and family ability as resources (De Massis et al., 2015). The family willingness factor embraces the aspirations and goals of family business owners regarding *where* they want their firm to go (De Massis et al., 2015). SEW, defined as a family's "affective needs, such as identity, the ability to exercise family influence, and the perpetuation of the family dynasty" (Gómez-Mejía, Haynes, Núñez-Nickel, Jacobson, & Moyano-Fuentes, 2007, p. 106), captures family willingness because family firms often care more about noneconomic, affective goals than economic ones

(Gómez-Mejía et al., 2007; Ma, Mattingly, Kushev, & Ahuja, 2013). Specifically, some family firms are determined to maintain family harmony and social status (Gómez-Mejía, Cruz, Berrone, & De Castro, 2011; Kotlar & De Massis, 2013), to build and preserve a strong reputation (Deephouse & Jaskiewicz, 2013), or to maintain family control (Klein, Astrachan, & Smyrnios, 2005). In contrast, others strive to exercise authority (Jones, Makri, & Gómez-Mejía, 2008) or to employ family members (Cruz, Justo, & De Castro, 2012). All these goals fall under the umbrella of SEW.

The second factor, family ability as discretion, represents *how* family firms can take a specific direction (De Massis et al., 2015). Given that a family's discretion in decision making is a function of firm governance, we examine generational involvement and professionalization to capture the *how* factor. We define generational involvement as the number of generations involved in a firm's management (Cruz & Nordqvist, 2012) and professionalization as the presence of nonfamily managers on the top management team (Stockmans, Lybaert, & Voordeckers, 2010), and we examine both of them in conjunction with SEW. In this regard, the more a professionalized family firm increases its generational involvement, the more it strengthens both its organizational authority over strategic decision making (De Massis et al., 2015) and its innovation (Beck et al., 2011). Research shows that professionalization limits family discretion the most when family firms replace family members (Gedajlovic et al., 2004) or a CEO (Lin & Hu, 2007) with nonfamily members. Involvement of later generations is expected to foster family firm innovation because younger family members identify more entrepreneurial opportunities (Salvato, 2004), are more formally educated (Cruz & Nordqvist, 2012; Sonfield & Lussier, 2004), and are more concerned about financial considerations than they are about emotional ones such as SEW (Stockmans et al., 2010). Similarly, the presence of nonfamily managers on the top management team of family firms with generational involvement has been found to increase the pursuit of innovation and entrepreneurship (Miller et al., 2013; Salvato, 2004) and to constrain a family's ability to exercise discretion regarding the satisfaction of emotional goals such as SEW. In specific, despite the importance of SEW for most family firms (Gómez-Mejía et al., 2007; Gómez-Mejía et al., 2011), nonfamily managers restrict family firms' ability to pursue the satisfaction of emotional considerations,

because they engage in a decision-making process through acts of rationalization and objectivity (Blumentritt, Keyt, & Astrachan, 2007).

The last factor, family ability as resources, addresses *what* kinds of resources are needed for family firms to take a certain strategic direction (De Massis et al., 2015). Researchers have previously used CEOs' perceptions of environmental dynamism as a proxy for resourcefulness (Cruz & Nordqvist, 2012) because the resources available to family firms largely depend on the environmental context in which they operate. Although other types of resources, such as talented employees or financial capital, may also affect family firm innovation (Carney, 2005; Salvato, 2004), we decided to examine environmental resources captured by munificence and dynamism because they are considered to be two of the most accurate proxies for CEOs' perceptions of resourcefulness (Cruz & Nordqvist, 2012). It is perhaps due to this that munificence and dynamism represent the most investigated environment-level antecedents of family firm innovation, especially with regard to their interactions with other factors that we examine such as generational involvement (Casillas et al., 2011; Chirico et al., 2014; Cruz & Nordqvist, 2012) and SEW (Schulze & Kellermanns, 2015).

To date, although many researchers have examined the effect on family firm innovation of each factor separately (Beck et al., 2011; Cruz & Nordqvist, 2012; De Massis et al., 2012) or that of the interaction between two factors (Casillas et al., 2011; Cruz & Nordqvist, 2012), no research has looked into all of them together despite evidence that the decision of family firms to innovate is complex and most likely driven by multiple, interdependent factors. We study how all these factors combine to influence innovation in family firms.

Socioemotional Wealth and Family Firm Innovation

Gómez-Mejía et al. (2007) have been the first to highlight the distinct role of family firms' SEW for strategic decision making and found that family firms take performance risks in order to protect it. Based on this finding, researchers have called for a closer examination of the influence of SEW on innovation. De Massis et al. (2012) noted a possible relationship between SEW and disruptive innovation. Berrone et al. (2012), similarly, pointed to a need for more research on the role of SEW for innovation and entrepreneurial orientation. Other

researchers, likewise, have stressed the importance of SEW for innovation highlighting that

. . . dimensions of social capital and SEW, such as perceptions, values, attitudes, identities and intentions of the dominant coalition in the organization (Argote and Greve, 2007), should be measured and included as antecedents or moderators in the study of family firms' strategic behavior. (Nordqvist, Melin, Waldkirch, & Kumeto, 2015, p. 51)

Responding to such research calls, scholars have studied how SEW influences innovation. Kammerlander and Ganter (2015) found that the decision of family firms to adapt a new technology depends on the noneconomic goals of the family CEO. Similarly, Strike, Berrone, Sapp, and Congiu (2015) showed that family CEOs tend to forgo risky long-term investments due to their concern of protecting their SEW.

However, there are two reasons why there is still a need to consider the role of SEW for innovation. First, it has rarely been measured empirically. Empirical researchers have mostly relied on proxies, including the percentage of shares owned by the family (Deephouse & Jaskiewicz, 2013) or the CEO's career horizon (Strike et al., 2015). Berrone et al. (2012) have developed a multidimensional measure of SEW but acknowledged the challenges that its validation would impose. This lack of SEW measurement has prompted scholars to call for more research on measures rather than speculations about SEW (Sharma & Carney, 2012; Vandekerckhof, Steijvers, Hendriks, & Voordeckers, 2015). For this reason, we use the multidimensional SEW importance scale (SEWi) that has recently been developed and validated by Debicki, Kellermanns, Chrisman, Pearson, and Spencer (2016). Second, even though SEW is rarely pursued "in a vacuum," but rather, within the environmental context of family firms (Newbert & Craig, 2017, p. 344), researchers who have studied its role for family firm decision making have mostly controlled for it (Schulze & Kellermanns, 2015), leaving any interactions between the two unexplained. We study such interactions using fsQCA, which permits the examination of effects of combinations of factors.

Generational Involvement and Family Firm Innovation

Family firms with multiple generations involved in firm management tend to be more innovative because of the

“fresh momentum” added by younger generations (Salvato, 2004, p. 73) and their easiness to internalize collective knowledge and develop a mutual understanding of who knows what (Chirico & Salvato, 2016; Salvato & Melin, 2008). However, the relationship between generational involvement and innovation in family firms is far from understood for two reasons.

First, despite the majority of authors suggesting a positive relationship, there are authors who counterargue about a negative one. Nepotism issues (Dyer, 2006), competing emerging interests (Kellermanns, Eddleston, Sarathy, & Murphy, 2012), and the “pattern of rising conflicts with each succession in family firms” (Davis & Harveston, 1999, p. 319), can all pave the ground for the creation of a dysfunctional and detrimental-for-innovation business environment. Thus, examining contingent factors could help explain these conflicting findings. Second, although research has established interactions among generational involvement, SEW, and professionalization, generational involvement has never been studied in conjunction with them. Understanding such interactions is essential because family firms with higher generational involvement are found to be less concerned about SEW (Gómez-Mejía et al., 2011; Stockmans et al., 2010) and more likely to professionalize than those with lower generational involvement (Bammens, Voordeckers, & Van Gils, 2008; Dyer, 1988). Thus, we examine generational involvement coupled with SEW and professionalization to better understand their complex interrelationships.

Professionalization and Family Firm Innovation

Professionalization of family firms fosters innovativeness for several reasons. First, nonfamily managers bring to family firms knowledge and expertise that may not be readily available within the family (Miller et al., 2013). Nonfamily managers often have new ideas to share with the family because of their different backgrounds (Nicholson, 2008) and improve significantly a firm’s prospects for innovation and growth with their skills and expertise (Gedajlovic et al., 2004). Nonfamily managers also expedite knowledge transfer with their diverse networks and help firms enhance their learning experience and raise financial resources in a timely manner (Fried, Bruton, & Hisrich, 1998), both of which are necessary for innovation. Second, professionalization helps in

cases of family conflicts that can hold innovative efforts back (Yoo & Sung, 2015) because nonfamily managers are more distant from emotional considerations in their decision making and help reconcile differences that may arise between family members (Yoo & Sung, 2015).

However, the intriguing ways in which SEW and professionalization of family firms are interconnected remain understudied. Nonfamily managers engage in a decision-making process through acts of rationalization and objectivity (Blumentritt et al., 2007) and do not take into consideration SEW because they are less emotionally attached to the family firms. Based on this, Perry, Ring, and Broberg (2015) have submitted the logic that family firms emphasizing their SEW will even be less likely to professionalize. Similarly, Vandekerckhof et al. (2015) argue that family firms resist the integration of nonfamily managers to their top management teams because of their need to preserve their SEW. In other words, family firms that do not integrate external managers to their top management teams protect their SEW by maintaining their strategic and operational control and avoiding the loss of identity (Gersick, Hampton, Lansberg, & Davis, 1997; Vandekerckhof et al., 2015).

Environmental Munificence and Dynamism and Family Firm Innovation

The environmental conditions within which family firms operate influence their ability to innovate through the effect they have on resource abundance and CEOs’ perceived resourcefulness (Cruz & Nordqvist, 2012). Researchers have established that family firms in uncertain environments are more innovative than those in stable ones (Blake & Saleh, 1995). Similarly, family firms operating in hostile or dynamic environments are more innovative than those operating in less dynamic and less competitive environments (Casillas et al., 2011). These findings are consistent with research on nonfamily firms, which has shown that innovation increases when nonfamily firms face higher uncertainty or operate in turbulent, unstable environments (Weerawardena, O’Cass, & Julian, 2006). Last, family firms tend to adopt a more innovation-oriented culture when they perceive their environment to be munificent or rich in terms of resources and opportunities (Dess & Lumpkin, 2005).

Given that the effects of environmental factors on firms’ strategic decision making have been highlighted,

researchers call for their inclusion as control variables to research models not directly examining them (Hiebl, 2012; Schulze & Kellermanns, 2015). However, there is a need to integrate environmental factors in the examination of family firm conduct because they are found to interact with SEW. In specific, SEW is rarely pursued in isolation of the environmental conditions and the ability of family firms to satisfy their SEW goals largely depends on the environment within which they operate (Newbert & Craig, 2017). Chirico et al. (2014) have underscored that family involvement fosters (inhibits) innovation when environmental munificence is low (high). As a result, we seek to unravel the ways in which SEW interacts with environmental munificence and dynamism in affecting family firm innovation.

Methodology and Data

Method

To identify the optimal configurations leading to high innovation in family firms, we applied fsQCA which treats cases as configurations, that is, as combinations of attributes (Fiss, 2007). The main idea of configurational thinking is that causality is not easy to demonstrate because outcomes of interest have usually multiple, interdependent causes (Greckhamer et al., 2008). QCA is a set-theoretic approach that acknowledges such interdependence among factors causing an outcome of interest. Although linear methodologies such as regression techniques have enhanced our understanding of net effects of antecedents of family firm innovation (Beck et al., 2011; Cruz & Nordqvist, 2012), we were interested in examining “causal complexity,” or “the variety of ways a common outcome is reached” (Ragin, 2000, p. 88). In that sense, we were more interested in understanding “whole recipes” for family firm innovation than “single ingredients” (Meyer, Tsui, & Hinings, 1993), and QCA was a powerful technique that facilitated such understanding.

Causal complexity is based on three main characteristics, including conjunction, equifinality, and asymmetry (Meyer et al., 1993; Misangyi et al., 2017). Conjunction means that no single cause can produce an outcome of interest (Meyer et al., 1993). In other words, conjunctural causation assumes that attributes need to combine into distinct configurations to cause an outcome of interest (Misangyi et al., 2017). For instance, highly innovative family firms may share high or low

levels in a combination of attributes such as SEW, generational involvement, professionalization, environmental munificence, and dynamism. Configurational researchers are more interested in understanding such a combination of attributes than in examining each attribute separately. The fact that there is more than one possible configuration leading to the outcome of interest is called equifinality (Meyer et al., 1993). In the words of Katz and Kahn (1978, p. 30), equifinality means that “a system can reach the same final state, from different initial conditions and by a variety of different paths.” This characteristic contrasts QCA with traditional linear methodologies which are based on the assumption of unifinality, or the existence of only one optimal model that best fits the empirical data. Last, asymmetry in QCA means that factors that relate with each other in one configuration can be inversely related or even unrelated with each other under a different configuration (Meyer et al., 1993). Although both equifinality and asymmetry are relevant for innovation (Ganter & Hecker, 2014), few scholars have applied fsQCA to examine it in the context of family firms.

Sample

The sample of this study has been collected via an online survey using Qualtrics. We narrowed our sample to privately owned and small-sized (<500 employees) family firms in the United States. We operationally defined family firms as those that satisfied the following three conditions. First, two or more managers should have a family relationship and second, those family managers should share at least 50% of the firm’s ownership (Classen, Carree, Van Gils, & Peters, 2014; De Massis et al., 2015; Vandekerckhof et al., 2015). Third, family business owners should perceive and classify their firms as family firms, a requirement that was consistent with common research practice (Bammens et al., 2008; Craig, Dibrell, & Davis, 2008). Participants were allowed to take our survey only if they satisfied all three conditions.

In addition, following a key informant approach, we surveyed only family business owners (Covin, Eggers, Kraus, Cheng, & Chang, 2016; Sonfield & Lussier, 2004). To ensure the quality of our data, we provided respondents with a unique username and password that guarded against multiple submissions and we recorded response times to identify “speeders.” We also included two attention checks in our survey instrument to identify careless respondents. A total of 807 business owners

Table 1. Nonresponse Bias Testing.

Variable	Respondents group	N	Mean score	F	Significance
SEWi_Family Continuity	Early	138	4.20	0.162	.688
	Late	139	4.16		
SEWi_Family Enrichment	Early	138	3.68	0.001	.980
	Late	139	3.68		
SEWi_Family Prominence	Early	138	4.01	1.336	.249
	Late	139	3.90		
Innovativeness	Early	138	5.27	2.391	.123
	Late	139	5.48		
Generational Involvement	Early	138	1.93	0.205	.651
	Late	139	1.90		
Presence of Nonfamily Managers	Early	138	0.27	2.307	.130
	Late	139	0.35		
Environmental Dynamism	Early	138	4.77	7.970	.005
	Late	139	5.12		
Environmental Munificence	Early	138	3.88	4.196	.041
	Late	139	4.19		

who were registered in the opt-in databases of Qualtrics self-selected to take our survey. Of those, 367 were screened out because they did not satisfy all three screening criteria for our family business definition. Additionally, 73 family business owners were screened out because they failed our survey attention/stimulus questions and another 90 family business owners because they quit the survey at some point. Qualtrics automatically terminated “straight-liners,” that is, respondents with minimal or no variation in their responses, as well as those with a response time that was lower than one third the median completion time during a “soft launch” of our survey (16 minutes).

We collected 277 completed and fully usable questionnaires that we used for our analysis for a response rate of 34.32%. To further ensure that our received responses were representative of the population of family firms, we examined nonresponse bias by comparing early and late respondents across our variables under study. The F values for the means of the two groups were not statistically significant ($p > .005$) for all our variables except for environmental dynamism ($p = .005$).² This suggests that nonresponse bias is not a concern in this study (Table 1).

Measures

The dependent variable of our study was measured adopting the innovation scale by Zahra (2005). Our

innovation antecedents included SEW, generational involvement, presence of nonfamily managers, environmental munificence, and environmental dynamism. We measured SEW using the three dimensions of the valid and reliable SEWi scale by Debicki et al. (2016). Following prior research in generational involvement, we assigned the value 1 to family firms where multiple generations were involved in the management and the value 0 to family firms where only one generation was involved (Cruz & Nordqvist, 2012; Kellermanns & Eddleston, 2006). Similarly, for presence of nonfamily managers in the family firm, 1 indicated the presence whereas 0 the absence of managers external to the family from the firm’s top management team (Stockmans et al., 2010). Last, environmental munificence was measured using the scale by Covin, Slevin, and Heeley (2000) and environmental dynamism using the scale by Anderson, Covin, and Slevin (2009).

The items of environmental dynamism and environmental munificence were rated on a 7-point Likert-type scale that was anchored on *strongly disagree* and *strongly agree*. The items of all three SEWi dimensions (family continuity, family enrichment, and family prominence) were rated on a 5-point Likert-type scale that was anchored on *not at all important* and *extremely important*. Last, the items of our dependent variable were rated on a 7-point Likert-type scale that was anchored on *far too little emphasis* and *far too much emphasis*. The items of all scales are provided in Table 2.

Table 2. Measurement of Constructs Used in the Study.

Construct (reference)	Measurement items
Innovation (Zahra, 2005)	To what extent has your company placed emphasis on the following activities over the past 3 years? a. Developing radically new products b. Introducing radically new products to the market c. Incrementally upgrading existing products d. Leading the industry in introducing breakthrough products to the market
SEWi (Debicki, Kellermanns, Chrisman, Pearson, & Spencer, 2016)	
Family Continuity Dimension	a. How important is it that the business gives the members of your family an opportunity to work as a unit? b. How important is it that the business gives the members of your family an opportunity to make decisions together? c. How important is it that the business gives the members of your family an opportunity to work toward agreement? d. How important is it that the firm remains in the hands of the family and that the business decisions are directed at developing and motivating future generations toward taking over the control of the firm? e. How important is it that the company serves as a vessel through which your family values are maintained and promoted to younger generations of family members?
Family Enrichment Dimension	a. How important is it that through operating a business enterprise, you can ensure the enhancement of happiness of your family not directly involved in the business? b. How important is improving the family life and the relationships among family members through operating your business? c. To what extent do the needs of your family, such as the need for employment, affect the business-related decisions? d. To what extent do the needs of your family, such as the need for financial stability, affect the business-related decisions? e. To what extent do the needs of your family, such as the need for belonging, affect the business-related decisions? f. To what extent do the needs of your family, such as the need for intimacy, affect the business-related decisions?
Family Prominence Dimension	a. If it is important that the family gain recognition and appreciation in your community, as a company you will engage in actions that have the greatest potential to benefit the family in this regard. b. How important is it that the family can benefit from social relationships developed through your business? c. How important is it that the business can benefit from your family relationships? d. If family reputation is important, as a family you will strive to conduct business in ways that do not jeopardize the family's reputation (i.e., ethically, honestly, respectfully)
Generational Involvement (Cruz & Nordqvist, 2012)	How many generations are currently involved in the management of the firm?
Presence of Nonfamily Managers (Stockmans, Lybaert, & Voordeckers, 2010)	Does the top management team of your firm include managers who are external to the family?

(continued)

Table 2. (continued)

Construct (reference)	Measurement items
Environmental Munificence (Covin, Slevin, & Heeley, 2000)	On a 7-point scale ranging from <i>strongly disagree</i> (=1) to <i>strongly agree</i> (=7), please respond to the following statements: a. Competitive intensity is high in my firm's industry. b. Customer loyalty is low in my firm's industry. c. Severe price wars are characteristic of my firm's industry. d. Low-profit margins are characteristic of my firm's industry. e. Attractive market opportunities are scarce in my firm's industry.
Environmental Dynamism (Anderson, Covin, & Slevin, 2009)	a. Actions of competitors are generally quite easy to predict. b. The set of competitors in my industry has remained relatively constant over the past 3 years. c. Product demand is easy to forecast. d. Customer requirements/preferences are easy to forecast.

Validation of the Measures

We assessed our scales reliability using Cronbach's alpha coefficients (α) as well as composite reliabilities (CRs) and validated our constructs with multiple items using confirmatory factor analysis. As the last two columns of Table 3 show, all scales provided high reliability with both α and CR values exceeding the recommended .70 thresholds. In addition, the items of each construct demonstrated adequate correlations with each other. Specifically, the items of family continuity, family enrichment, and family prominence were highly correlated (respectively, $r = .44-.60, p < .005$; $r = .37-.50, p < .005$; $r = .42-.58, p < .005$). Similarly, the items of environmental dynamism, environmental munificence, and innovativeness were all sufficiently correlated (respectively, $r = .35-.56, p < .005$; $r = [.22-.49, p < .005$; $r = .36-.63, p < .005$). Moreover, using confirmatory factor analysis, we examined how well our measurement model fit the data. As the first column of Table 3 shows, all factor loadings (λ) were either very close (.68) or well above the recommended .70 threshold. As a result, no item was excluded from our multi-item constructs.

We also measured convergent and discriminant validity. With regard to convergent validity, we calculated the average variance extracted (Table 3) and confirmed that it exceeded the recommended .50 value for all our constructs (Fornell & Larcker, 1987; Pittino, Visintin, & Lauto, 2018). Last, we also assessed discriminant validity. As shown in Table 3, the square root of each construct's average variance extracted exceeded the

correlations with the rest of the constructs³ (Fornell & Larcker, 1987; Pittino et al., 2018).

Analysis

We used fsQCA and ran our analysis via the fsQCA 3.0 software (Ragin & Davey, 2016). We followed three main steps in the application of fsQCA. The first step involved the calibration of our data (Cheng, Chang, & Li, 2013; Pittino, Visintin, & Lauto, 2017). We calibrated our raw data following prior work by Cheng et al. (2013) assigning full membership only to those cases that exhibited very high values of the antecedents and the outcome variable. For our binary variables such as presence of nonfamily managers, we simply assigned full membership when the attribute was present and nonmembership when the attribute was absent. For our continuous variables we assigned the values of 1, 0.75, 0.50, 0.25, and 0 to cases above the 90th percentile, between the 75th and the 90th percentile, between the 25th and the 75th percentile, between the 10th and the 25th percentile, and below the 10th percentile, respectively.

After the completion of the calibration process, we proceeded with the second step which involved the construction of the truth table (Ragin & Davey, 2016). Given that we considered the three dimensions of SEWi separately and we examined seven attributes in total, our initial truth table had 2⁷ or 128 rows. To refine it, we used the frequency metric as a criterion which captures the degree to which the combinations of attributes are empirically observed (Ragin, 2000). There is no

Table 3. Validation of Measures.

	Factor loadings (λ)	AVE	Square root of AVE	CR	Reliability coefficient (α)
SEWi—Family Continuity					
Family Continuity ₁	0.81	0.62	0.79	.89	.84
Family Continuity ₂	0.82				
Family Continuity ₃	0.82				
Family Continuity ₄	0.72				
Family Continuity ₅	0.75				
SEWi—Family Enrichment					
Family Enrichment ₁	0.68	0.55	0.74	.88	.83
Family Enrichment ₂	0.77				
Family Enrichment ₃	0.79				
Family Enrichment ₄	0.68				
Family Enrichment ₅	0.80				
Family Enrichment ₆	0.72				
SEWi—Family Prominence					
Family Prominence ₁	0.82	0.61	0.78	.86	.77
Family Prominence ₂	0.83				
Family Prominence ₃	0.78				
Family Prominence ₄	0.68				
Environmental Munificence					
Environmental Munificence ₁	0.68	0.53	0.73	.85	.76
Environmental Munificence ₂	0.76				
Environmental Munificence ₃	0.72				
Environmental Munificence ₄	0.71				
Environmental Munificence ₅	0.77				
Environmental Dynamism					
Environmental Dynamism ₁	0.82	0.60	0.78	.86	.74
Environmental Dynamism ₂	0.68				
Environmental Dynamism ₃	0.82				
Environmental Dynamism ₄	0.78				
Innovativeness					
Innovativeness ₁	0.81	0.59	0.77	.85	.80
Innovativeness ₂	0.84				
Innovativeness ₃	0.70				
Innovativeness ₄	0.71				

Note. AVE = average variance extracted; CR = composite reliability.

frequency cutoff threshold and researchers usually choose their cutoff point taking into account their sample sizes. For small sample sizes (up to 50 observations), researchers have set the threshold to one case (Cheng et al., 2013). For slightly larger samples (169 observations), the threshold has been set to two cases (Pittino et al., 2018). However, for very large sample sizes such as 1,671 firms, researchers have used a threshold of as high as 10 cases (Covin et al., 2016). Based on our

sample size of 277 family firms, we set our frequency cutoff to three cases. In other words, any configuration with fewer than three cases was not considered relevant for our analysis since its empirical evidence was not sufficient (Cheng et al., 2013; Ragin, 2000).

In our last step, we determined which configurations demonstrated high scores in our dependent variable. For that we relied on the consistency metric which reflects the degree to which configurations are subsets of high

Table 4. Descriptive Statistics of Measures.

	<i>M</i>	<i>SD</i>	Min	Max	1	2	3	4	5	6	7	8
1. SEWi—Family Continuity	4.18	0.71	1.20	5.00	1							
2. SEWi—Family Enrichment	3.68	0.77	1.50	5.00	.601	1						
3. SEWi—Family Prominence	3.96	0.79	1.50	5.00	.666	.648	1					
4. Generational Involvement	0.26	0.44	0.00	1.00	.167	.190	.167	1				
5. PNFM	0.31	0.46	0.00	1.00	-.210	.006	-.046	.086	1			
6. Environmental Munificence	4.03	1.25	1.00	7.00	-.049	.150	.089	-.016	.299	1		
7. Environmental Dynamism	4.94	1.06	1.75	7.00	.279	.314	.353	.114	.053	.171	1	
8. Innovativeness	4.14	1.02	1.00	7.00	.249	.310	.221	.132	.144*	.234	.326	1

Note. $N = 277$, correlations with $p < .005$ are presented in boldface. SEWi = socioemotional wealth importance; PNFM = presence of nonfamily managers.

scores in the outcome variable (Cheng et al., 2013). Researchers set a minimum threshold of .75 (Fiss, 2011; Kraus, Mensching, Calabrò, Cheng, & Filser, 2016) or .80 (Covin et al., 2016; Pittino et al., 2018). A threshold below .75 is considered suboptimal because there are not enough observed empirical cases in the data set with that particular combination of attributes. For this reason, we used a consistency threshold of .80.

After these three steps, we obtained a complex, a parsimonious, and an intermediate solution based on the Quine–McCluskey algorithm that the fsQCA software uses (Fiss, 2011). Following common practice (Cheng et al., 2013; Covin et al., 2016; Kraus et al., 2016; Pittino et al., 2018), we report here the intermediate solution because it is considered superior to both the complex and the parsimonious solutions as it does not permit the removal of necessary conditions (Ragin, 2000). However, to better understand the relative importance of our innovation antecedents, we also inspected the parsimonious solution which helped us distinguish between core and peripheral causal conditions leading to high family firm innovation (Fiss, 2011).⁴ In the words of Fiss (2011, p. 403), “core conditions are those that are part of both parsimonious and intermediate solutions, and peripheral conditions are those that are eliminated in the parsimonious solution and thus only appear in the intermediate solution.” In our study, core conditions are those that are essential for high family firm innovation to occur, whereas peripheral are those that are not, and that only support core conditions. Once these steps were completed, we repeated our analysis to also examine the conditions that were sufficient for the absence of our outcome of interest (Fiss, 2007). In other words, we also selected the negation of our outcome variable in the

software, in order to understand the factors that led to the absence of high family firm innovation.

Results

Table 4 provides the descriptive statistics of our measures along with their correlations. Our respondents had, on average, 78% of their firm’s ownership within family hands and needed approximately 22 minutes, on average, to fully complete the survey. A family firm in our sample had, on average, 69 employees and 22 years of age. The firms in our sample were 59% female-owned and the mean age of our respondents was 38 years. Respondents had also, on average, 10 years of tenure within their firms and 57.50% of them were founders.

Analysis of Necessary Conditions

Necessary causal conditions are those with a consistency score above .90 (Pittino et al., 2018; Ragin, 2008). Our results indicated that among all our causal conditions (and their absence) environmental dynamism had the highest consistency score with the value of .79 (Table 5). However, none of our conditions was found to be necessary for high innovation because consistency scores did not exceed the recommended .90 threshold.

Analysis of Sufficient Conditions

Table 6 presents our six configurations that were sufficient to cause high family firm innovation. We used two metrics to assess their strength including the consistency index and the coverage metric (Ragin, 2008). On one hand, the “consistency index” is analogous to the

Table 5. Analysis of Necessary Conditions.

	Consistency	Coverage
Family factors		
SEWi—Family Continuity	.77	.78
~SEWi—Family Continuity	.62	.74
SEWi—Family Enrichment	.78	.82
~SEWi—Family Enrichment	.64	.74
SEWi—Family Prominence	.77	.77
~SEWi—Family Prominence	.61	.75
Firm factors		
Generational Involvement	.73	.54
~Generational Involvement	.27	.57
Nonfamily Managers	.34	.60
~Nonfamily Managers	.66	.53
Environmental factors		
Environmental Dynamism	.79	.82
~Environmental Dynamism	.64	.75
Environmental Munificence	.72	.77
~Environmental Munificence	.69	.78

significance metric in regression techniques and describes the extent to which the cases support the sufficient conditions for innovation. On the other hand, the “coverage” metric is analogous to the coefficient of determination and indicates how much each of the six obtained configurations explains innovation (Covin et al., 2016). Table 6 shows that all our consistencies were beyond .80, indicating that our configurations included the sufficient conditions leading to high family firm innovation. In addition, “unique coverage” captures the ratio of memberships in the examined outcome that is explained only by a particular configuration (Ragin, 2008). Five of our configurations contributed uniquely to high family firm innovation as they had non-zero unique coverage values.

Configurations 1 and 2: Knowledge-Seeking Innovators. Our first configuration indicated that family firms with low SEW and high generational involvement operating in environments that lacked both dynamism and munificence were highly innovative. Our second configuration was substantially similar and demonstrated that family firms with low SEW and high professionalization operating in environments that were neither dynamic nor munificent, were highly innovative. These first two configurations corroborated that family firms that did not attach high importance to their SEW and did not operate in dynamic and munificent environments were highly innovative when they had the necessary human capital

in the form of either younger family members (Configuration 1) or nonfamily professionals (Configuration 2). For this reason, they represent the *knowledge-seeking innovators*.

Our first configuration represents the *transgenerational innovators*, that is, the family firms that are highly innovative mainly because of the presence of later-generation family members who are found to contribute increased knowledge diversity (Salvato, 2004) as well as to be more formally educated (Cruz & Nordqvist, 2012; Sonfield & Lussier, 2004) and more concerned about financial considerations than SEW preservation (Stockmans et al., 2010). Our second configuration represents the *professionalized innovators*, that is, the family firms that are highly innovative because of the increased knowledge and expertise that is brought to the firm by professional, nonfamily managers (Gedajlovic et al., 2004; Miller et al., 2013) who are less emotionally attached to their firm (Blumentritt et al., 2007).

Configuration 3: Adaptive Innovators. This configuration presented a completely different path for high family firm innovation. Specifically, family firms with high levels on all three dimensions of SEW that had low generational involvement, lacked professionalization, and operated in munificent environments were highly innovative. This path represents the *adaptive innovators*, that is, the family firms that are highly innovative in munificent environments despite their increased concern to maintain SEW and the absence of human resources in the form of either younger family members or professional, nonfamily managers. This configuration aligns with prior research findings showing that family firms tend to adapt to munificent environments that are rich in resources and opportunities by developing a highly innovation-oriented culture (Dess & Lumpkin, 2005).

Configuration 4: Family-Embedded Innovators. In this configuration, family firms with high levels on all three SEW dimensions and high generational involvement, lacking professionalization and operating in dynamic environments exhibited high levels of innovation. This path indicates that family firms in dynamic environments are highly innovative when there is a strong connection between the family and the business systems demonstrated by the absence of professionalization as well as the presence of SEW and generational involvement. Therefore, it represents the *family-embedded innovators*.

Table 6. Causal Configurations for Presence of High Family Firm Innovation.

Conditions	1. Transgenerational innovators	2. Professionalized innovators	3. Adaptive innovators	4. Family-embedded innovators	5. Attentive innovators	6. Aggressive innovators
Family factors						
SEWi—Family Continuity	◦	◦	●	●	●	◦
SEWi—Family Enrichment	◦	◦	●	●	●	◦
SEWi—Family Prominence	◦	◦	●	●	●	●
Firm factors						
Generational Involvement	●		◦	●	●	●
Nonfamily Managers		●	◦	◦		◦
Environmental factors						
Environmental Dynamism	◦	◦		●	●	●
Environmental Munificence	◦	◦	●		●	◦
Raw Coverage	.28	.13	.10	.29	.34	.17
Unique Coverage	.04	.03	.10	.03	.06	.00
Consistency	.85	.89	.90	.92	.93	.92
Overall solution coverage	.65					
Overall solution consistency	.89					

Note. Fuzzy-set qualitative comparative analysis (fsQCA) output. Black circles “●” indicate the presence of causal antecedents and white circles “◦” indicate the negation or absence of causal antecedents. Large circles indicate core conditions or conditions that are part of both parsimonious and intermediate solutions. Small circles refer to peripheral conditions or conditions that occur only in the intermediate solution. The cells that are left blank indicate the “irrelevant” ones.

Configuration 5: Attentive Innovators. This configuration was similar to the previous one except that in this path, professionalization was irrelevant for high innovation but high munificence was also required. For this reason, Configuration 5 represents the *attentive innovators*, that is, the family firms that are highly innovative in dynamic environments not only when there is a strong connection between the family and the business systems but also when the environment is highly munificent. Configurations 3 to 5 indicated that family firms attaching high importance in SEW which was a core factor, were highly innovative when they had access to environmental resources in the form of high environmental munificence (*adaptive innovators*), human resources in the form of high generational involvement (*family-embedded innovators*), or both environmental and human resources (*attentive innovators*).

Configuration 6: Aggressive Innovators. Last, Path 6 presented an interesting alternative configuration, as it was the only one where two dimensions of SEW, continuity and enrichment, should be low whereas prominence should be high for family firm innovation to be high. In addition, family firms should have high generational

involvement, lack professionalization, and operate in a dynamic and nonmunificent environment to achieve high levels of innovation through this path. This configuration represents the *aggressive innovators*, that is, the family firms that are innovation oriented because of their concern to build and maintain a strong corporate reputation (family prominence dimension of SEW) even within an unfavorable environment that is highly dynamic and lacks resources.

We have also identified four configurations leading to the absence of high family firm innovation which are presented in Table 7. The first one indicated that family firms with high generational involvement as well as low levels of SEW, absence of nonfamily managers, and absence of environmental dynamism exhibited low innovation.

In the second configuration, family firms with high generational involvement coupled with high environmental munificence, low SEW, and low environmental dynamism exhibited low innovation. This was not surprising, given that Configuration 5 in Table 6 corroborated that family firms with high generational involvement and high munificence, needed also to be high in SEW, which was a core condition for high innovation. Similarly,

Table 7. Causal Configurations for Absence of High Family Firm Innovation.

Conditions	1	2	3	4
Family factors				
SEWi—Family Continuity	◦	◦	◦	•
SEWi—Family Enrichment	◦	◦	◦	•
SEWi—Family Prominence	◦	◦	◦	◦
Firm factors				
Generational Involvement	•	•	•	•
Nonfamily Managers	◦		◦	◦
Environmental factors				
Environmental Dynamism	◦	◦	•	•
Environmental Munificence		•	◦	◦
Raw Coverage	.29	.36	.20	.24
Unique Coverage	.02	.12	.00	.07
Consistency	.87	.88	.88	.77
Overall solution coverage	.52			
Overall solution consistency	.77			

Note. Fuzzy-set qualitative comparative analysis (fsQCA) output. Black circles “•” indicate the presence of causal antecedents and white circles “◦” indicate the negation or absence of causal antecedents. Large circles indicate core conditions or conditions that are part of both parsimonious and intermediate solutions. Small circles refer to peripheral conditions or conditions that occur only in the intermediate solution. The cells that are left blank indicate the “irrelevant” ones.

in Path 3, high generational involvement coupled with high environmental dynamism, low SEW, absence of nonfamily managers, and absence of environmental munificence led to low innovation. This was not an unexpected finding either, because Configuration 4 in Table 6 indicated that family firms with high generational involvement and high environmental dynamism, needed also to be high in SEW, which was a core condition for high innovation. Last, Path 4 revealed that a combination of high levels of continuity and enrichment, generational involvement, and environmental dynamism coupled with lack of professionalization and environmental munificence led to low innovation.

Discussion

Inductive Theorizing

Based on the results that we have obtained from our fsQCA, we use an “inductive top-down approach” (Pittino et al., 2017; Shepherd & Sutcliffe, 2011) to develop propositions regarding family firm innovation drivers.

Our findings indicate that SEW is a core factor whose presence plays a central role for high family firm innovation. Specifically, *adaptive, family-embedded, and*

attentive innovators require the presence of all three SEW dimensions and *aggressive innovators* require the presence of only family prominence for high innovation. Notably, in all configurations where SEW is present, either environmental munificence or environmental dynamism is also present, empirically confirming that SEW is rarely pursued “in a vacuum,” but rather, within the environmental context where family firms operate (Newbert & Craig, 2017, p. 344). In contrast, in our first two configurations where all three SEW dimensions are absent, namely the *knowledge-seeking innovators*, both environmental munificence and environmental dynamism are also absent highlighting that SEW interacts with environment-level variables to affect family firm innovation. As a result, we propose that

Proposition 1: High (low) SEW leads to high family firm innovation when the environment is either (neither) dynamic or (nor) munificent.

Additionally, our results shed light to inconclusive prior findings regarding the effect of the interaction between generational involvement and environmental dynamism on family firm innovation which has been hypothesized to be both negative (Casillas et al., 2011) and positive (Cruz & Nordqvist, 2012). We empirically show that the critical

factor that helps explain these findings is SEW. Specifically, family firms with high generational involvement and high environmental dynamism are highly innovative when one or more dimensions of SEW are also high (Configurations 4-6) indicating that when SEW is high, the positive interaction between generational involvement and environmental dynamism increases innovation. In contrast, family firms with high generational involvement and low environmental dynamism are highly innovative when SEW is low (Configuration 1) indicating that when SEW is low, the negative interaction between generational involvement and environmental dynamism increases innovation. Based on this, we propose the following:

Proposition 2: The positive (negative) interaction between generational involvement and environmental dynamism leads to high family firm innovation when SEW is high (low).

The results of our analysis yield also interesting findings regarding the role of nonfamily managers for family firm innovation. Specifically, despite prior evidence that nonfamily managers contribute positively to family firm innovation with their knowledge and expertise (Gedajlovic et al., 2004; Miller et al., 2013), as well as their ability to reduce conflicts between family members (Yoo & Sung, 2015), we find that their presence is needed for high family firm innovation only when SEW is absent (Configuration 2). In contrast, when all or some of the core conditions of SEW are present (Configurations 3, 4, and 6), it is the absence of nonfamily managers that leads to high innovation. These findings contribute to family business literature by reinforcing the effect of the interaction between SEW and the presence of nonfamily managers on firm innovation; an effect which has so far been overlooked. In other words, our results suggest that the influence of professionalization on innovation should be examined in conjunction with SEW. Prior research has discussed the nuanced influences of the negative interaction between SEW and professionalization. Specifically, family firms that care about their SEW are found to be less likely to appoint nonfamily managers in the first place because doing so comes at a SEW cost (Vandekerckhof et al., 2015). We contribute this discussion by revealing how the negative interaction between SEW and the presence of nonfamily managers influences positively family firm innovation. Family firms where SEW is highly important, are highly

innovative when they lack professionalization (Configurations 3 and 4) because nonfamily managers are emotionally distant from the firm and engage in rational and objective decision making ignoring SEW (Blumentritt et al., 2007):

Proposition 3: The absence (presence) of nonfamily managers from the top management team leads to high family firm innovation when SEW is highly important (not highly important).

Last, our findings indicate that the three SEW dimensions are not always equally important for high or low family firm innovation contributing to the discussion of the nuanced influences of SEW on decision making (Vardaman & Gondo, 2014). Our last configuration on Table 6 and that on Table 7 revealed combinations of firm- and environment-level factors under which the presence of family prominence only was a core condition for high family firm innovation, and that of continuity and enrichment only for the absence of high family firm innovation. These findings complement prior research arguing that SEW is not a monolithic concept and that there may be differential impacts of its dimensions on firm behaviors (Cennamo et al., 2012; Miller & Le Breton-Miller, 2014). Specifically, researchers have distinguished between internal and external SEW (Cruz, Larraza-Kintana, Garcés-Galdeano, & Berrone, 2014; Vardaman & Gondo, 2014). External SEW of family firms captures a family's desire to have positive recognition (reputation and image) whereas, internal SEW captures a family's need to maintain family unity and control (Vardaman & Gondo, 2014). In other words, family prominence is considered external SEW whereas family continuity and family enrichment are considered internal SEW. Although a growing body of researchers has considered the effects of SEW as primarily positive for family firm outcomes (Berrone et al., 2012; Naldi, Cennamo, Corbetta, & Gomez-Mejia, 2013), there are researchers who emphasize the dark side of SEW (Kellermanns et al., 2012). Our findings show that low levels of external SEW coupled with high levels of internal SEW lead to the absence of high family firm innovation, empirically confirming such a dark side of SEW:

Proposition 4: The presence (absence) of external SEW combined with the absence (presence) of internal SEW leads to high (low) family firm innovation.

Discussion of Findings

The findings of our study yield important insights for family firm literature which has called for a deeper examination of the linkage between SEW and family firm innovation (Berrone et al., 2012; De Massis et al., 2012; Nordqvist et al., 2015). Specifically, our results highlight the core role of SEW for family firm innovation in three important ways. First and foremost, we contribute to the ongoing conversation on the role of SEW and professionalization for family firm innovation. While some researchers have found that nonfamily managers foster family firm innovation through their knowledge and expertise (Gedajlovic et al., 2004; Miller et al., 2013), others have shown that innovation increases when family firms are led by later generation family members as opposed to professional, nonfamily managers (Duran et al., 2016). We extend the finding of Duran et al. (2016) by showing that this lack of professionalization leads to increased innovation when family firms attach high importance to one or more dimensions of SEW. Doing so, we shift research attention to the combined effect of professionalization and SEW on family firm innovation as opposed to single, individual effects.

Second, the findings of our study show that the impact on innovation of the interaction between generational involvement and environmental dynamism should be viewed in conjunction with SEW. While our results confirm prior research showing that both the positive and the negative interaction between generational involvement and environmental dynamism leads to high innovation (Casillas et al., 2011; Cruz & Nordqvist, 2012), we contribute to this body of research by empirically showing that SEW helps reconcile the duality of these findings. In particular, the positive (negative) interaction between generational involvement and environmental dynamism is conducive to high family firm innovation when SEW is important (not important) for the managing family. These findings inform prior scholarly conversations regarding the important role of non-economic goals for strategic behavior of family firms including innovation (Berrone et al., 2012; Debicki et al., 2009; Gómez-Mejía et al., 2011).

Last, our findings advance the scholarly discussion on the “dark side” of SEW for family firm outcomes. Even though most scholars discuss the impact of noneconomic goals of family firms as primarily positive (Debicki et al., 2016; Naldi et al., 2013), SEW can act as both an endowment and a burden for family firm performance

(Berrone et al., 2012), proactive stakeholder engagement (Cennamo et al., 2012), or other firm outcomes (Kellermanns et al., 2012). Miller and Le Breton-Miller (2014) have highlighted that the effects of SEW on firm outcomes vary based on the dimension that is more important to the family. On a similar note, Vardaman and Gondo (2014) have distinguished between internal and external SEW and called for more research on the conditions under which the satisfaction of internal and external SEW is beneficial versus detrimental for family firm outcomes. Given these findings, we advance our understanding of the dual effects of SEW on an important family firm outcome such as innovation. Our results show that family firm innovation is high when external SEW is important for the owning family and internal SEW is not. In contrast, family firm innovation is low when internal SEW is important for the owning family and external SEW is not.

Conclusion

In this article, we sought to unravel the different paths that involve combinations of factors leading to the presence and absence of high innovation levels of family firms. Using fsQCA, we examined how the interplay of antecedents at the levels of the family, the firm, and the environment drive family firm innovation. Interestingly, our findings indicate that family firms do not need to be high in each of the examined antecedents to achieve high innovation. In other words, no factor is considered critical. Overall, we found six configurations involving combinations of factors such as SEW, generational involvement, professionalization, environmental munificence, and environmental dynamism leading to high family firm innovation.

With our findings we offer practical, strategic implications for family business owners by calling them to mindfully consider different paths that can increase firm innovation as opposed to individual factors. Specifically, family firm managers who can do little to alter the importance of their SEW or the environment within which their firms operate, should carefully consider their decisions to professionalize and to integrate in the firm family members belonging to later generations. For instance, when SEW is important and family firms are in environments that are either dynamic or munificent or both, higher innovation is achieved in the absence of professionalization, regardless of the presence of generational involvement (Configurations 3 and 4). In contrast, when

preserving SEW is not important and family firms are in environments that are neither dynamic nor munificent, higher innovation is achieved either through generational involvement (Configuration 1) or through the presence of nonfamily managers (Configuration 2).

Our findings should be interpreted in light of two limitations. First, the set of examined factors is not exhaustive given the trade-off between oversimplifying firm phenomena and adding complexity to the model (Meyer et al., 1993). Thus, although we have identified relevant factors based on the family-driven innovation model, there may be additional factors influencing family firm innovation. For instance, the decision to innovate may also be influenced by the availability of financial resources. Although environmental munificence is a proxy for such resources, future researchers may integrate this factor into their models. Second, fsQCA is not based on probability theory and as a result, its findings may have limited generalizability (Misangyi et al., 2017). As a result, the findings of this study may not generalize to larger, publicly traded, and non-U.S. firms.

Overall, we examined how the interplay of factors operating at different levels of analysis affect family firm innovation. The results of our study highlighted the need of future research to consider multilevel perspectives in the examination of family firm innovation and presented fsQCA as a fresh and interesting methodology for doing so. We believe that using such an approach in future research holds promise for a better understanding of not only innovation drivers but also broader decision making of family firms.

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Notes

1. We are grateful to the editors of the special issue for this insight.
2. In line with recent recommendations made by distinguished world statisticians, we used a more stringent threshold of .005 instead of .05 for p value significance

(Benjamin et al., 2018; Johnson, 2013). We are thankful to an anonymous reviewer for this suggestion.

3. Correlations are reported in Table 4.
4. We are grateful to an anonymous reviewer who suggested this analysis.

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