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## Entrepreneurial paths to family firm performance

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## ABSTRACT

This article draws upon a new framework, proposing that family firm financial performance does not depend on single distinctive antecedents, but rather on the combination (configurations) of multiple entrepreneurial, governance- and family-related factors (innovativeness, proactiveness, risk-taking, transfer intentions and family involvement). Drawing on a sample of 149 family firms, this study employs a fuzzy-set qualitative comparative analysis (fsQCA) to investigate these configurations as antecedents of firm performance. Its findings show four common configurations which strongly relate to above-average performance. In seven qualitative follow-up interviews, the study discusses these four configurations and three additional contrarian cases that also lead to positive performance.

## 1. Introduction

Research is increasingly interested in explaining family firm performance (Xi, Kraus, Kellermanns, & Filser, 2015) with a particular focus on entrepreneurial behavior and attitudes (Chirico & Nordqvist, 2010) as the main antecedents of family firm performance. Because “family dynamics affect entrepreneurial processes” (Aldrich & Cliff, 2003, p. 574), investigating the connections between family firm and entrepreneurship research is of the utmost importance (Salvato, 2004). Prior literature also shows that entrepreneurial behavior helps explain variations in family firm performance, suggesting their dependence upon complex family dynamics (Kallmuenzer, 2016; Nordqvist, Habbershon, & Melin, 2008; Zellweger & Sieger, 2012).

This article attempts to explore the interplay among entrepreneurial behavior and family firm dynamics, aiming to identify the multiple possible configurations of entrepreneurial (innovativeness, proactiveness, risk-taking), governance (transfer intentions), and family-related factors (family involvement) leading to above-average firm performance. A sample of 149 Austrian family firms employs the novel method fuzzy-set qualitative comparative analysis (fsQCA) to offer counterintuitive insights into these respective configurations as antecedents of family firm performance (Kraus, Ribeiro-Soriano, & Schüssler, 2017). A subsequent qualitative verification of seven follow-up interviews (Woodside, 2014) provides further insights into the identified configurations and additional uncommon constellations (remainders). Findings show that four main configurations of

entrepreneurial behavior and family firm dynamics lead to above-average results. The additional investigated remainders lead to above-average firm performance when the succession process is planned in spite of unclear transfer intentions (remainder cases 1 and 3), or when the firm is taking an appropriate amount of risk when facing hostile environments (remainder cases 2 and 3).

## 2. Literature review/theoretical part

## 2.1. The significance of family firm entrepreneurship

Families own or manage about two-thirds of all enterprises worldwide (Short, Payne, Brigham, Lumpkin, & Broberg, 2009); they dominate most economies around the world (Chrisman, Kellermanns, Chan, & Liano, 2010). Family firms are typically firms where ownership and management operate within one or more families (Chua, Chrisman, & Sharma, 1999), and frequently for several generations. The major challenge is often to keep the entrepreneurial spirit alive across generations (Cruz & Nordqvist, 2012). Despite the fact that each generation attempts to be competitive and innovative by adapting their entrepreneurial behavior (Kellermanns & Eddleston, 2006), family firms face specific entrepreneurial challenges (Zahra, Hayton, & Salvato, 2004). Naldi, Nordqvist, Sjöberg, and Wiklund (2007). This suggests that family firms display specific entrepreneurial behavior and are robust sources of entrepreneurial activity.

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## 2.2. Entrepreneurial orientation in family firms

Research sees entrepreneurial behavior as a decisive antecedent of firms' strategic renewal, growth, and performance (Miller & Le Breton-Miller, 2011; Semrau, Ambos, & Kraus, 2016). Entrepreneurial behavior is also present in family firms, and family dynamics influence this behavior (Nordqvist et al., 2008). Due to the growing interest in family firms' entrepreneurial behavior, the concept of entrepreneurial orientation (EO) (Miller, 1983) and its dimensions (innovativeness, proactiveness, and risk-taking) have become increasingly relevant in family business research (e.g., Naldi et al., 2007). Family dynamics such as passing on the business to the next generation or maintaining family control over the firm affect the entrepreneurial behavior of family owner-managers (Berrone, Cruz, & Gómez-Mejía, 2012; Habbershon, Williams, & MacMillan, 2003).

Innovativeness refers to a firm's will to act creatively and progressively toward new product development (Covin, Eggers, Kraus, Cheng, & Chang, 2016; Filser, De Massis, Gast, Kraus, & Niemand, 2017). Bergfeld and Weber (2011) observe that family involvement enhances the innovative behavior of family firms. Proactiveness is the opportunity-seeking attitude that introduces new products and services in the market before competitors do (Knight, 1997). Within family firms, proactiveness often occurs in “carefully selected proactive moves” (Zellweger & Sieger, 2012, p. 78). Risk-taking means acting courageously in uncertain business activities with uncertain outcomes, returns or costs (Hughes & Morgan, 2007). This behavior is less prevalent in family firms, where keeping family control over generations is often more important (Craig, Pohjola, Kraus, & Jensen, 2014).

## 2.3. Governance in family firms

Family firm research extends Jensen and Meckling's (1976) conclusion that the alignment of ownership and management avoids agency problems. Indeed, other agency problems arise from the altruistic and relational preferences of family members (Mustakallio, Autio, & Zahra, 2002) originating from self-control issues (Sieger, Zellweger, & Aquino, 2013) such as keeping family control in the firm and preferring certain family members when selecting successors. This behavior can lead to moral hazards and adverse selection problems resulting from information asymmetries between family members and the abuse of strong family relationships (Mitter, Duller, Feldbauer-Durstmüller, & Kraus, 2014; Schulze, Lubatkin, Dino, & Buchholtz, 2001) which negatively affect family firms' performance. This is why family firms aim to reduce agency behavior by aligning individual preferences with family firm goals (Fama & Jensen, 1983; Jensen & Meckling, 1976); socio-emotional wealth (Gómez-Mejía, Haynes, Núñez-Nickel, Jacobson, & Moyano-Fuentes, 2007) and stewardship behavior (Davis, Schoorman, & Donaldson, 1997) are driving forces behind this. One way to reduce agency behavior is to express clear transfer intentions (Schulze et al., 2001). After all, uncertainty regarding succession increases agency threats. Finally, governance and agency behavior also depend on the presence of (external) non-family managers (Anderson & Reeb, 2003; Jaskiewicz & Klein, 2007). In this case, despite the benefits externals bring to the firm (e.g., additional knowledge), agency problems can still come into play, depending on the degree of separation between ownership, control, and the diverging individual preferences that result.

Summing up, although previous research clearly shows that family firm performance (Anderson & Reeb, 2003; Nordqvist et al., 2008) depends on multiple (but individually analyzed) entrepreneurial, governance, and family-related factors, there to date is a lack of understanding of the relationship among these factors. Do different configurations of these factors impact family firm performance, and if so, to what extent? This study aims to answer the question of what prevalent factor configurations in family firms lead to high financial performance. We specifically propose that different configurations of entrepreneurial

(innovativeness, proactiveness, risk-taking), governance-related (transfer intentions), and family-related (family involvement) factors lead to above-average family firm financial performance.

## 3. Methodology/empirical analysis

This study applies a set-theoretic approach employing fsQCA, an analytical set-membership technique from complexity theory (Ragin, 2008; Woodside, 2014). It stands in contrast to correlation-based methods. The method has recently gained attention in management (Fiss, 2011), innovation (Ordanini, Parasuraman, & Rubera, 2014), and marketing (Grohs, Raies, Koll, & Mühlbacher, 2016). Its use in family firm research is scarce, with only two studies applying this method to date: Garcia-Castro and Casasola (2011), who analyze the relationship of components of family involvement; and Kraus, Mensching, Calabrò, Cheng, and Filser (2016), who investigate success paths to family firm internationalization.

Whereas most traditional methods presume that causal conditions are independent variables, modeled in a linear and additive manner (e.g. main-effects with two-way interaction models, etc.), QCA logically represents and analyzes causal conditions, with its cases serving as configurations of conditions. This approach allows an examination of “how” variable combinations explain an outcome, and even account for more than one combination of conditions (i.e. alternative mechanisms) that lead to high outcome variable values (Woodside, 2013). This is why we refer to a configuration as one alternate explanation path among many; this is a logical statement placing only essential variables within a relationship. This study employs QCA to describe and explain high scores in financial performance by identifying typical configurations or profiles of family firms. It also identifies contrarian cases that counter the generalized causal relationship (Woodside, 2014). We propose that multiple paths are observable and have to be taken into account.

### 3.1. Measures and reporting

As recommended by QCA literature (Woodside, 2014), our data result from a survey conducted in Austria in 2014 in a first step, with follow-up interviews providing deeper insights into the identified configurations in a second step. For the survey, we invited 1000 family firms of all sizes, industries and ages to participate. The Austrian Chamber of Commerce database helped identify and locate them, and introductory defining questions helped make sure that these firms met common definitions of family firms. These questions included the alignment of ownership and management in the same families, a majority of shares held by the families, and at least two family members being active in the firm (Miller, Le Breton-Miller, & Scholnick, 2007; Westhead & Cowling, 1998). This approach yielded 149 valid responses, equaling a response rate of 14.9%.

Six items measured the dependent variable “financial performance”, evaluating financial indicators in the past three years (e.g., return on sales, net profit) on a 7-point Likert scale (Lumpkin & Dess, 2001). 7-point Likert scales of three items for each dimension (Lumpkin & Dess, 2001) also measured the EO's dimensions of: innovativeness (example item: “In general, the top managers of my firm favor a strong emphasis on R and D, technological leadership, and innovations”), proactiveness (example item: “In dealing with competitors, my firm typically initiates actions which competitors then respond to”), and risk-taking (example item: “In general, the top managers of my firm have a strong proclivity for high-risk projects (with chances of very high returns)”). The question on clear transfer intentions as the dichotomous variable (variable “Clear Transfer Intentions”) came from Schulze et al. (2001). Another dichotomous variable accounted for was the presence of non-family members in the management team (variable “FamOnly”) (Jaskiewicz & Klein, 2007).

We evaluated convergent validity of all scales of the analysis by

applying factor analysis and Cronbach's alpha. Scales had three items per dimension, respectively leading to an alpha of 0.73 (Innovativeness), 0.68 (Proactiveness), 0.82 (Risk-taking) and 0.95 (Financial performance). These levels are acceptable for the relatively untested family firm context of EO (Naldi et al., 2007). Whereas interval or ratio scales should undergo the calibration procedure to create fuzzy sets, dichotomous variables (“Clear Transfer Intentions”, “Family Only”) do not need any calibration. We applied Ragin's (2008) direct calibration method for 7-point Likert scales when widening the range of variables to make cases more distinguishable. We multiplied all items of the multi-item scales and then proportionally transformed them into fuzzy scores between 0 and 1.

We conducted follow-up narrative interviews, approaching family firms from the survey (respondents had provided their email addresses) in 2014 following the survey data analyses. FsQCA allows a researcher to generalize beyond single cases and at the same time extend knowledge by focusing on specific cases in the sample to gain further insights (Ragin, 2008; Woodside, 2014). So-called “remainders”, which are essentially the contrarian cases countering the generalized causal relationship, are also of particular research interest. Typically, when applying correlation-based methods, “researchers ignore these contrarian cases in most reports even though examining such cases is highly informative” (Woodside, 2014, p. 2496).

This approach resulted in interviews lasting between 45 and 60 min with seven family firm owner-managers, with one interview conducted for each of the configurations leading to above-average performance and three further interviews with the remainders/contrarian cases. These remainders are configurations that indicated an above-average performance, but showed unique performance combinations and were therefore not allocated to any of the main configurations. The aim of these interviews was to understand the presence and value of measured factors by identifying core quotes illustrating peculiarities and differences in comparison to common configurations. With the help of narrative interviews and relevant literature, we derived performance-enhancing patterns of family firm behavior. We then transcribed the interviews and structured them into meaningful text units. Data and analysis were based on the original data in German. Relevant quotes were translated into English, and a professional language editor ensured accurate and meaningful translation. To increase the validity and reliability of results, a second author critically reviewed the first author's data work (Eisenhardt, 1989).

## 4. Results

We first analyze configurations that can act as sufficient conditions to achieve above-average family firm financial performance. In accordance with Fiss's (2011) recommendation, we apply a consistency level of 0.8, which is above the minimum recommended threshold of 0.75 by Ragin (2008). The consistency level of analysis is assessed by the portion of consistent cases divided by the total number of cases in the causal set (Ordanini et al., 2014). Furthermore, six single samples set the minimum acceptable solution, amounting to 4% of the full sample size (Fiss, 2011). At least six cases have to be similar to achieve a configuration. Second, sufficient configurations are pruned (logical reduction) by eliminating redundant elements (Ordanini et al., 2014), keeping only necessary fuzzy sets.

Overall, and supporting our proposition from the literature review, four configurations of entrepreneurial, governance-related and family-related factors strongly related to above-average family firm financial performance emerge after this step (see Table 1), accounting for 69.8% of the outcomes (Ragin, 2008). Woodside (2013) recommends consistency levels above 0.74 and coverage between 0.25 and 0.65 as informative.

**Table 1**  
Configurations strongly related to high financial performance.

	Key paths to financial performance			
	Family firms (n = 149)			
Conditions/configurations	C1	C2	C3	C4
Innovativeness		●	●	○
Proactiveness	●	●	●	
Risk-taking	○		○	○
Clear transfer intentions		●	●	●
Family only (purely family-managed)	●	●		●
Raw coverage	0.49	0.28	0.33	0.34
Unique coverage	0.18	0.04	0.09	0.08
Consistency	0.87	0.89	0.93	0.80
Solution coverage	0.70			
Solution consistency	0.80			

Notes: Black circles “●” indicate the presence of causal conditions (i.e., antecedents). White circles “○” indicate the absence or negation of causal conditions. The blank cells represent “don't care” conditions, which means that the variable is not necessary for that condition/configuration.

## 5. Discussion and conclusion

### 5.1. Configuration 1

These firms show management behavior that tends to be resistant to change and professional management: they rely on their family as a key resource, not fully trusting external non-family managers. They have unclear or unarticulated succession plans and consider themselves proactive and risk-averse. These firms (“proactive but family-based”) with mostly unsystematic innovative behavior (Table 2, Quote 1) can often be found in the hospitality industry (Hjalager, 2002). Proactivity in those firms targets stability (Table 2, Quote 2), not growth: many businesses know that from time to time it is necessary to react to market changes (De Massis, Chirico, Kotlar, & Naldi, 2014).

Risk-averse behavior in these firms dominates (Table 2, Quote 3), which might be due to their later phases of business development (Legohérel, Callot, Gallopel, & Peters, 2004; Zahra, 2005). Even though these firms may have potential successors in mind, they do not show clear transfer intentions (Table 2, Quote 4).

### 5.2. Configuration 2

These innovative (Table 2, Quote 5), proactive, and renewing, ownership-focused (“renewing and ownership-focused”) firms have no clear tendency toward or against risk-taking, while all other three configurations are risk-averse. We expect that in this configuration, risk-taking occurs in the form of ownership risk (Xiao, Alhabeeb, Gong-Soog, & Haynes, 2001) due to exclusive, undiversified, and therefore committed family ownership (Table 2, Quote 6). These companies show clear transfer intentions and want to keep their business in family hands (Table 2, Quote 7).

### 5.3. Configuration 3

These firms tend to be risk-averse and are open-minded (“open-minded but risk-averse”) when it comes to allowing for external, non-family managers in the business. Showing entrepreneurial mindsets, they consider themselves to be innovative and proactive firms (Table 2, Quote 8). They avoid risks, and only take them on certain occasions (Table 2, Quote 9) in an effort to defend the family firm and survive long-term (Gómez-Mejía et al., 2007). The family clearly articulates intentions to transfer, although these firms are different in comparison to all other configurations when it comes to non-family managers; if successors do not display the necessary skills, the owner-managers prefer to appoint skilled non-family managers (Table 2, Quote 10).

**Table 2**  
Example quotes from follow-up interviews with configurations' cases.

Configuration	Interviewee: industry/size	Example quotes
1 “proactive but family-based”	Hospitality/15 employees	1: “We have a solid structure with many loyal guests and adapted our business very well to the low season. When you are able to save some money there, you made a good business.” 2: “Our way calls for constant change (...) our goals are to sustain and to improve. Change is necessary.” 3: “We only take secure investments. Ok, when we started up and built this hotel, there was risk. We were the first ones out here (...). Today, my goal is to sleep well (...) and to not be under too much pressure; I leave these decisions to my successor.” 4: “I want to pass on a well-working business to my children – if they decide to take it over. They should not feel pressured to take it over, though.”
2 “renewing and ownership-focused”	Retail/94 employees	5: “We like to take on new challenges, market changes, and to develop a strategy which fits to our company. Innovation is important. By nature, it is not that easy for such a small company like ours to manage this very professionally, compared to a large firm.” 6: “I think that careful risk management is very important. (...) 10 years ago we had no shops in malls. Thank god we took the risks, and now we have two shops in the big malls.” 7: “(...) this value has been built over generations (...). It is my goal to pass on the business to the next generation. I would be very happy if my child would want to take over our business.”
3 “open-minded but risk-averse”	Wholesaler/250 employees	8: “In our industry with a stagnating, saturated market we manage to experience sound growth rates. We compete with large international companies. We offer different products than they do and market ourselves as a family firm.” 9: “This switch to selling organic food was certainly a big risk, and it could have failed. However, it was a big success, and it basically was the biggest decision for the company within the last 20 years. (...) As a family firm, you sometimes just refrain from the last 5% because you know the family is more important.” 10: “Is the next generation able to take over the company? If they are not, more problems arise. (...) It is important to have skilled long-term employees in the company. (...) They can also very well be role models.”
4 “maintaining and transgenerational”	Manufacturing/520 employees	11: “It is hard for us to be innovative with such traditional products. Still, we never thought about doing something new (...). We sometimes see in other firms that the young generation has no interest to take over their parents' business (...). In our family, we all have learned that the family is most important.” 12: “Passing on the business is my goal. There are four potential successors in the ‘pipeline’ (...) Selling the business, no, this is not an option for us. We created this business with a lot of blood, sweat, and tears.” 13: “We are not taking each business – we can focus on the important steps. Our plants are busy, and our workers have enough to do. But with 520 mostly local employees we also feel a strong responsibility for our region.”

#### 5.4. Configuration 4

These firms are purely family-managed with a strong focus on succession. They resist being innovative or risk-taking. Their focus is on the family and they clearly plan to hand over the company to the next generation (Table 2, Quote 11). These are the “*maintaining and transgenerational*” family firms. They trust in non-innovative products and prioritize long-term stable brand promises (Table 2, Quote 11). These firms also carefully plan the succession process by formulating clear transfer intentions and actively involving the successor (Table 2, Quote 12), facilitating the transfer of management control from one family member to another (Sharma, 1997). Proactiveness only occurs in certain, important situations (Martin & Lumpkin, 2003; Table 2, Quote 13).

#### 5.5. Remainders

We also identified a number of contrarian cases with the firms who achieve above-average performance but do not fit into one of the four identified configurations. They show uncommon configurations and provide insights for developing new theories (Woodside, 2014).

The first case (Remainder 1), a restaurant business, shows similarities to configuration 1, but differs in being successful despite unclear transfer intentions, a relatively high degree of risk-taking, and the presence of non-family managers. In particular, this firm treats succession planning differently: while it is not clear who will take over the business, the family manager knows precisely how the succession process will take place; it should take place internally and not be visible to outsiders (Table 3, Quote 1). Risk-taking is a necessary part of the business, particularly when it comes to fostering constant renewal

(Table 3, Quote 2). Finally, it's possible for non-family managers to become part of the family and receive familial treatment (Table 3, Quote 3).

The second case (Remainder 2), a shipping company, is very similar to configuration 3 but differs in its success despite showing risk-taking tendencies. This firm only takes risks in situations with strong competitive pressure and environmental changes (Table 3, Quote 4).

The third case (Remainder 3), a hotel business, shows some similarities to configuration 2, but mainly differs in being successful despite unclear transfer intentions and a high degree of risk-taking, particularly in difficult situations. This business tries to take the pressure from the successor, letting him freely decide whether he wants to take over (Table 3, Quote 5). Furthermore, there is a willingness to take risks to survive and to take care of the family. This business does not aim to grow per se, although business development is in fact essential for market survival and being able to afford a comfortable family life (Table 3, Quote 6).

The follow-up interviews offered deeper insights into the four identified configurations that lead to above-average firm performance. The remainders/contrarian cases offered insights into uncommon configurations and additionally relevant variables. Topics particularly revolve around the need to plan the succession process despite unclear transfer intentions (see the remainder cases 1 and 3 as well as Chrisman et al., 2010), and taking the appropriate amount of risk to survive in an often hostile environment (see in particular the remainder cases 2 and 3 and also Lumpkin & Dess, 2001).

By using fsQCA in this study, we moved away from the automatic use of regression analysis and statistical testing for net effects by reporting alternative explanations and paths. This approach provides more than one single recipe for managers and researchers alike. After



**Table 3**  
Example quotes from follow-up interviews with remainder case.

Remainder	Interviewee: industry/size	Example quotes
1	Hospitality/85 employees	1: “We often see a typical development in other firms: the entrepreneur has a strong personality and is thus well-known to the customers. The successor then has immense problems to create his own style when taking over. This problem will not happen to us, as nobody knows me and my successor can handle the start much easier.” 2: “In the last 24 years we invested and rebuilt 23 times. I guess we are a bit crazy, but this is what characterizes entrepreneurs: we do not want to get richer, but always reinvest and start over again.” 3: “If we did not work well with each other anymore, we would have to go separate ways. He is not only my left and right hand, but he is also my friend.”
2	Logistics/60 employees	4: “With the creation of the EU we faced hard times. The disappearance of customs took away 50% of our business, and we had to lay off 70 employees. We managed the turnaround through acquiring another insolvent firm. We did that together with another family firm. At that time many actions were quite risky, today I would maybe act more cautious, would lease employees before taking them over completely. In these years we had to change our whole structure.”
3	Hospitality/30 employees	5: “Certainly I want to hand over this business to my son. However, I will do it like my father who said ‘You decide whether you want it (...)’. Natural pressure to take over the firm exists anyways. Just think about the history of the firm, the energy from all the generations that built this place; the close connections to the village (...), the employees, the guests...with whom you all grew up. I don't think I need to put additional pressure on him.” 6: “It was a risky situation when I took over the business because the whole destination was close to bankruptcy. Then again, I couldn't really lose much. It was dramatic (...). I am still prone to take risks, yes. We work hard and try to save money and reinvest this money efficiently (...) I am still heavily indebted, but concerning sales and cash flow we improved a lot. (...) I have worked the last 10 years 24/7 and because of that, I stabilized our company. Now, I am able to afford to employ a ‘right hand’ to personally put more time and efforts into my family life.”

all, there are multiple configurations of entrepreneurial, governance-related and firm-related factors explaining family firm financial performance. Employing follow-up interviews helped us to better characterize equifinal configurations and learn from alternate solutions (remainders), providing direction for theory development and future testing.

This study also has limitations that present opportunities for future research. QCA analysis cannot offer rigorous quality indicators established from correlation-based methods. To provide solid generalizability of results, future studies in entrepreneurship and family firm research could evaluate the predictive validity of this study's solutions. The focus of this research could particularly be on integrating family dynamics (Nordqvist et al., 2008) such as the management of succession and the diversity of risk-taking dimensions (Zellweger & Sieger, 2012). These factors are important for understanding family firm performance.

The findings from this study also have practical implications. They suggest the necessity of fostering entrepreneurial behavior professionalization in family firms when it comes to new product development, opportunity-seeking behavior and courageous action (Bouncken, Plüschke, Pesch, & Kraus, 2016), which are all essential in hostile environments (Lumpkin & Dess, 2001). Individually tailored solutions for firm governance and succession planning are also necessary.

## References

- Aldrich, H. E., & Cliff, J. E. (2003). The pervasive effects of family on entrepreneurship: Toward a family embeddedness perspective. *The Evolving Family/Entrepreneurship Business Relationship*, 18(5), 573–596.
- Anderson, R. C., & Reeb, D. M. (2003). Founding-family ownership and firm performance: Evidence from the S&P 500. *The Journal of Finance*, 58(3), 1301–1327.
- Bergfeld, M. M. H., & Weber, F. M. (2011). Dynasties of innovation: Highly performing German family firms and the owners' role for innovation. *International Journal of Entrepreneurship and Innovation Management*, 13(1), 80–94.
- Berrone, P., Cruz, C., & Gómez-Mejía, L. R. (2012). Socioemotional wealth in family firms: Theoretical dimensions, assessment approaches, and agenda for future research. *Family Business Review*, 25(3), 258–279.
- Bouncken, R. B., Plüschke, B. D., Pesch, R., & Kraus, S. (2016). Entrepreneurial orientation in vertical alliances: Joint product innovation and learning from allies. *Review of Managerial Science*, 10(2), 381–409.
- Chirico, F., & Nordqvist, M. (2010). Dynamic capabilities and trans-generational value creation in family firms: The role of organizational culture. *International Small Business Journal*, 28(5), 487–504.
- Chrisman, J. J., Kellermanns, F. W., Chan, K. C., & Liano, K. (2010). Intellectual foundations of current research in family business: An identification and review of 25 influential articles. *Family Business Review*, 23(1), 9–26.
- Chua, J. H., Chrisman, J. J., & Sharma, P. (1999). Defining the family business by behavior. *Entrepreneurship: Theory and Practice*, 23(4), 19–39.

- Covin, J. G., Eggers, F., Kraus, S., Cheng, C. F., & Chang, M. L. (2016). Marketing-related resources and radical innovativeness in family and non-family firms: A configurational approach. *Journal of Business Research*, 69(12), 5620–5627.
- Craig, J. B., Pohjola, M., Kraus, S., & Jensen, S. H. (2014). Exploring relationships among proactiveness, risk-taking and innovation output in family and non-family firms. *Creativity and Innovation Management*, 23(2), 199–210.
- Cruz, C., & Nordqvist, M. (2012). Entrepreneurial orientation in family firms: A generational perspective. *Small Business Economics*, 38(1), 33–49.
- Davis, J. H., Schoorman, F. D., & Donaldson, L. (1997). Toward a stewardship theory of management. *Academy of Management Review*, 22(1), 20–47.
- De Massis, A., Chirico, F., Kotlar, J., & Naldi, L. (2014). The temporal evolution of proactiveness in family firms: The horizontal s-curve hypothesis. *Family Business Review*, 27(1), 35–50.
- Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of Management Review*, 14(4), 532–550.
- Fama, E. F., & Jensen, M. C. (1983). Agency problems and residual claims. *Journal of Law and Economics*, 26(2), 327–349.
- Filser, M., De Massis, A., Gast, J., Kraus, S., & Niemand, T. (2017). Tracing the roots of innovativeness in family SMEs: The effect of family functionality and socioemotional wealth. *Journal of Product Innovation Management*. <http://dx.doi.org/10.1111/jpim.12433> (in press).
- Fiss, P. C. (2011). Building better causal theories: A fuzzy-set approach to typologies in organization research. *Academy of Management Journal*, 54(2), 393–420.
- García-Castro, R., & Casasola, M. J. (2011). A set-theoretic analysis of the components of family involvement in publicly listed and major unlisted firms. *Journal of Family Business Strategy*, 2(1), 15–25.
- Gómez-Mejía, L. R., Haynes, K. T., Núñez-Nickel, M., Jacobson, K. J. L., & Moyano-Fuentes, J. (2007). Socioemotional wealth and business risks in family-controlled firms: Evidence from Spanish olive oil mills. *Administrative Science Quarterly*, 52(1), 106–137.
- Grohs, R., Raies, K., Koll, O., & Mühlbacher, H. (2016). One pie, many recipes: Alternative paths to high brand strength. *Journal of Business Research*, 69(6), 2244–2251.
- Habbershon, T. G., Williams, M., & MacMillan, I. C. (2003). A unified systems perspective of family firm performance. *Theories of Family Business*, 18(4), 451–465.
- Hjalager, A.-M. (2002). Repairing innovation defectiveness in tourism. *Tourism Management*, 23(5), 465–474.
- Hughes, M., & Morgan, R. E. (2007). Deconstructing the relationship between entrepreneurial orientation and business performance at the embryonic stage of firm growth. *Industrial Marketing Management*, 36(5), 651–661.
- Jaskiewicz, P., & Klein, S. B. (2007). The impact of goal alignment on board composition and board size in family businesses. *Journal of Business Research*, 60(10), 1080–1089.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360.
- Kallmuenzer, A. (2016). The divergent transmission of entrepreneurial orientation in family business research. *International Journal of Entrepreneurial Venturing*, 8(4), 378–399.
- Kellermanns, F. W., & Eddleston, K. A. (2006). Corporate entrepreneurship in family firms: A family perspective. *Entrepreneurship: Theory and Practice*, 30(6), 809–830.
- Knight, G. A. (1997). Cross-cultural reliability and validity of a scale to measure firm entrepreneurial orientation. *Journal of Business Venturing*, 12(3), 213–225.
- Kraus, S., Mensching, H., Calabrò, A., Cheng, C.-F., & Filser, M. (2016). Family firm internationalization: A configurational approach. *Journal of Business Research*, 69(11), 5473–5478.
- Kraus, S., Ribeiro-Soriano, D., & Schüssler, M. (2017). Fuzzy-set qualitative comparative analysis (fsQCA) in entrepreneurship and innovation research—the rise of a method. *International Entrepreneurship and Management Journal*. in press <https://doi.org/10.1007/s11365-017-0461-8>.

- Legohérel, P., Callot, P., Gallopel, K., & Peters, M. (2004). Personality characteristics, attitude toward risk, and decisional orientation of the small business entrepreneur: A study of hospitality managers. *Journal of Hospitality and Tourism Research*, 28(1), 109–120.
- Lumpkin, G. T., & Dess, G. G. (2001). Linking two dimensions of entrepreneurial orientation to firm performance. *Journal of Business Venturing*, 16(5), 429–451.
- Martin, W. L., & Lumpkin, G. T. (2003). *From entrepreneurial orientation to “family orientation”*: Generational differences in the management of family businesses. MA, USA: Wellesley.
- Miller, D. (1983). The correlates of entrepreneurship in three types of firms. *Management Science*, 29(7), 770–791.
- Miller, D., & Le Breton-Miller, I. (2011). Governance, social identity, and entrepreneurial orientation in closely held public companies. *Entrepreneurship: Theory and Practice*, 35(5), 1051–1076.
- Miller, D., Le Breton-Miller, I., & Scholnick, B. (2007). Stewardship vs. stagnation: An empirical comparison of small family and non-family businesses. *Journal of Management Studies*, 45(1), 51–78.
- Mitter, C., Duller, C., Feldbauer-Durstmüller, B., & Kraus, S. (2014). Internationalization of family firms: The effect of ownership and governance. *Review of Managerial Science*, 8(1), 1–28.
- Mustakallio, M., Autio, E., & Zahra, S. A. (2002). Relational and contractual governance in family firms: Effects on strategic decision making. *Family Business Review*, 15(3), 205–222.
- Naldi, L., Nordqvist, M., Sjöberg, K., & Wiklund, J. (2007). Entrepreneurial orientation, risk taking, and performance in family firms. *Family Business Review*, 20(1), 33–47.
- Nordqvist, M., Habbershon, T. G., & Melin, L. (2008). Transgenerational entrepreneurship: Exploring entrepreneurial orientation in family firms. In H. Landström, D. Smallbone, H. Crijns, & E. Laveren (Eds.). *Entrepreneurship, sustainable growth and performance* (pp. 93–116). Cheltenham, UK; Northampton, MA: Edward Elgar.
- Ordanini, A., Parasuraman, A., & Rubera, G. (2014). When the recipe is more important than the ingredients: A qualitative comparative analysis (QCA) of service innovation configurations. *Journal of Service Research*, 17(2), 134–149.
- Ragin, C. C. (2008). *Redesigning social inquiry: Fuzzy sets and beyond*. Chicago: University of Chicago Press.
- Salvato, C. (2004). Predictors of entrepreneurship in family firms. *Journal of Private Equity*, 7(3), 68–76.
- Schulze, W. S., Lubatkin, M. H., Dino, R. N., & Buchholtz, A. K. (2001). Agency relationships in family firms: Theory and evidence. *Organization Science*, 12(2), 99–116.
- Semrau, T., Ambos, T., & Kraus, S. (2016). Entrepreneurial orientation and SME performance across societal cultures: An international study. *Journal of Business Research*, 69(5), 1928–1932.
- Sharma, P. (1997). *Determinants of the satisfaction of the primary stakeholders with the succession process in family firms*. University of Calgary (Doctoral Dissertation).
- Short, J. C., Payne, G. T., Brigham, K. H., Lumpkin, G. T., & Broberg, J. C. (2009). Family firms and entrepreneurial orientation in publicly traded firms: A comparative analysis of the S&P 500. *Family Business Review*, 22(1), 9–24.
- Sieger, P., Zellweger, T., & Aquino, K. (2013). Turning agents into psychological principals: Aligning interests of non-owners through psychological ownership. *Journal of Management Studies*, 50(3), 361–388.
- Westhead, P., & Cowling, M. (1998). Family firm research: The need for a methodological rethink. *Entrepreneurship: Theory and Practice*, 23(1), 31–56.
- Woodside, A. G. (2013). Moving beyond multiple regression analysis to algorithms: Calling for adoption of a paradigm shift from symmetric to asymmetric thinking in data analysis and crafting theory. *Journal of Business Research*, 66(4), 463–472.
- Woodside, A. G. (2014). Embrace-perform-model: Complexity theory, contrarian case analysis, and multiple realities. *Journal of Business Research*, 67(12), 2495–2503.
- Xi, J. M., Kraus, S., Kellermanns, F., & Filser, M. (2015). Mapping the field of family business research: Past trends and future directions. *International Entrepreneurship and Management Journal*, 11(1), 113–132.
- Xiao, J. J., Alhabeib, M. J., Gong-Soog, H., & Haynes, G. W. (2001). Attitude toward risk and risk-taking behavior of business-owning families. *Journal of Consumer Affairs*, 35(2), 307–325.
- Zahra, S. A. (2005). Entrepreneurial risk taking in family firms. *Family Business Review*, 18(1), 23–40.
- Zahra, S. A., Hayton, J. C., & Salvato, C. (2004). Entrepreneurship in family vs. non-family firms: A resource-based analysis of the effect of organizational culture. *Entrepreneurship: Theory and Practice*, 28(4), 363–381.
- Zellweger, T., & Sieger, P. (2012). Entrepreneurial orientation in long-lived family firms. *Small Business Economics*, 38(1), 67–84.