



# Family Firm Configurations for High Performance: The Role of Entrepreneurship and Ambidexterity

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**The performance drivers of family firms have spawned considerable research interest. Almost exclusively this research has relied on independent sets of explanatory variables in linear analyses. These analyses mask the complex interdependencies that are likely to exist among key success factors, leading to faulty theory and misspecified implications for practice. As treatment, the authors propose a configuration approach to family firm performance that accounts for complex interdependencies among entrepreneurial, innovation and family influence conditions. Using a fuzzy set qualitative comparative analysis of a sample of 129 Finnish family firms, the authors identify sufficient conditions with regard to the existence or absence of antecedent conditions to family firm performance. These conditions include entrepreneurial orientation, exploration and exploitation activities that form causal paths towards family firm performance. To enrich the analysis, the authors theorize and empirically analyse how these conditions might differ in family firms with high and low levels of family influence. They deepen the current understanding of configurations that promote the performance of family firms, offer important implications for theory and practice, and set new directions for future research on the strategic management of family firms. The results are also virtually identical and insensitive to change across subjective and objective performance measures.**

## Introduction

Family-specific conditions ‘allow many family businesses not only to reap advantages of continuity and focus (“exploitation”), but also to reorient themselves when needed (“exploration”)’ (Le Breton-Miller and Miller, 2006, p. 215). This suggests that high performing family firms tend to innovate based on both exploitation and exploration, known as ‘ambidexterity’ (He and Wong, 2004; O’Reilly and Tushman, 2013; Raisch and Birkinshaw, 2008). Literature suggests a positive relationship between ambidexterity and firm performance (Allison McKenny and Short, 2014;

Moss, Payne and Moore, 2014). Yet we know little about how ambidexterity configures with other organizational factors to influence firm performance (Stettner and Lavie, 2014), particularly when the firm’s context is atypical to that of traditional, large public and private firms that dominate the current literature (Chang and Hughes, 2012; Hughes *et al.*, 2010). We propose that exploration and exploitation alone, and various combinations thereof, together with additional dimensions can be antecedents to family firm performance (Junni *et al.*, 2013). Neglecting such dimensions would result in an incomplete treatise with inadequate predictive capacities. This problem is exacerbated

by investigations that study only the individual effects of such conditions. To overcome this, thought must be given to how these conditions configure together for family firm performance.

Not all family firms may enjoy the same success in exploration and exploitation (Sharma and Salvato, 2011). Performance differences may be due to different realizations of the family context, leading to agency problems (Carney, 2005) and different emphasis on the non-financial objectives that shape family firm strategy (Berrone, Cruz and Gomez-Mejia, 2012; Frank *et al.*, 2010; Gómez-Mejía *et al.*, 2007). This is a product of family influence, or 'familiness', a resource unique to a family firm because of the interactions between the family, its individual members and the business (Habbershon, 1999). Familiness brings forth a family business identity that has grown historically and can alter the firm's ability to innovate (Frank *et al.*, 2010). Specifically, greater family influence can lead to strategies not conducive to entrepreneurship or performance unless systematically mitigated (Carney, 2005). As such, a linear analysis of factors antecedent to family firm performance risks understating patterns of interdependencies and particularly when accounting for the context of each family firm (by way of their degree of familiness). Instead, a configuration of factors might be at play in explaining the success of high-performing family firms beyond just the presence of exploration or exploitation. Family firm literature points to not only family influence, but also entrepreneurial orientation (EO) as further components of such a configuration.

Entrepreneurial orientation is a strategic orientation consisting of risk-taking, innovativeness and proactiveness (Covin and Slevin, 1989; Miller, 1983). Family firm researchers have linked EO to superior performance (Craig *et al.*, 2014; Cruz and Nordquist, 2012). However, scholars also report that family influence can compromise EO by diminishing the appetite for risk-taking, prioritizing the family's financial and social well-being (Naldi *et al.*, 2007), parochial interests (Miller *et al.*, 2015) and their desire to maintain and protect control over the business (Carney, 2005). The theoretical background of these findings appears to be grounded in agency logic and principles associated with the preservation of family influence.

This collective ambiguity surrounding the composition of exploration, exploitation and EO as likely drivers of performance in family

firms indicates that a non-traditional approach is necessary to analyse their relationship more effectively. We use a configuration analysis grounded in fuzzy-set qualitative comparative analysis (fsQCA) to resolve this ambiguity by categorizing these performance antecedents into groups of family firms that exhibit high and low levels of family influence. Our research question is: What are the sufficient configurations of antecedents (EO, exploration and exploitation, and family influence) to family firm performance?

This study offers three contributions. First, we use configuration theory and draw together expectations from agency and socioemotional wealth (SEW) theories of family firms to set out new propositions about configurations of family firms' EO, exploration and exploitation activities and how these might contribute to family firm performance under high and low levels of family influence. We contribute to theory by revealing the unexpected substitutability of EO and exploration, the primacy of adaptive theory to explain configurations and its use in explaining family firm performance in ways agency and socioemotional logics fail to do, and reveal the local character of configurations of family firm performance and when specialization might be better than ambidexterity. Second, the study offers an empirical contribution by providing new data on specific configurations of exploration and exploitation, EO and family influence as causal conditions that yield high performance for family firms. Finally, the study offers a further empirical contribution by extending the fsQCA method into the family firm literature, illustrating how quantitative data on family firms can be converted by Boolean algebra to facilitate more nuanced empirical analysis than is available through more traditional quantitative methods (Ragin, 2000; Woodside, 2010a, 2010b). The power of this approach lies in its ability to determine sufficient conditions within several causal paths (configurations) that elicit a desired outcome. As a general contribution, we evidence that fsQCA results are robust across subjective and objective performance measures to increase scholars' and managers' confidence in fsQCA results.

## **Configurational nature of family firm performance**

We first illustrate the performance impact of EO and then argue that performance is driven by

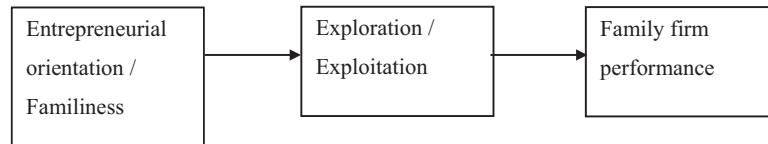
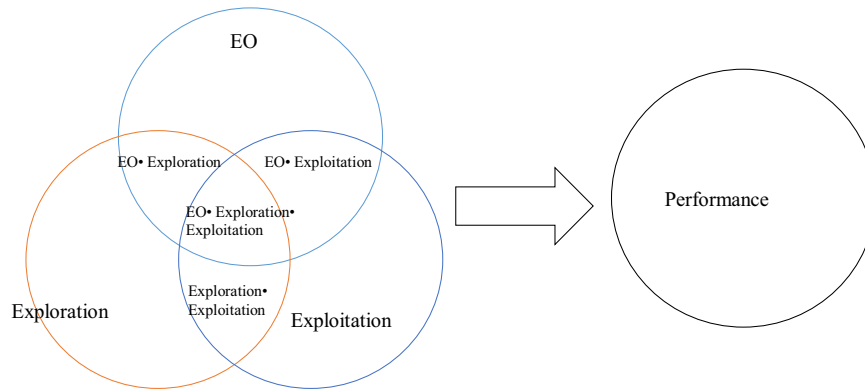


Figure 1. Basic framework

Figure 2. Set-theoretic framework [Colour figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]

configurations of EO and exploration and exploitation activities. We follow this with arguments that well-performing configurations differ between family firms with a high vs. low degree of family influence (or familiness): increasing family influence changes the circumstances at play inside the firm (Frank *et al.*, 2010), thereby causing it to require different recipes for high performance.

A configuration is a model of a firm that ‘contains relationships among elements or items representing multiple domains’ (Dess, Newport and Rasheed, 1993, p. 776). By modelling a firm with multiple domains simultaneously, we can build more detailed models and move beyond bivariate ‘success factor’ research (Harms, Kraus and Schwarz, 2009; Kraus, Ribeiro-Soriano and Schüssler, 2017). In configurations, elements are embedded in a web of relationships with others, often creating complex relationships.

Traditionally, the strategic orientation literature (Hakala, 2011; Venkatraman, 1989) posits that a strategic orientation is a general pattern of various means: an antecedent to achieve business goals that ultimately affects performance. In particular, EO has an impact on exploration and exploitation, which leads to family firm performance. Drawing on the basic framework from Gibson and Birkinshaw (2004, p. 210), which asserts that a firm’s context influences the relative value of exploration and exploitation activities to firm

performance, familiness and EO are regarded as antecedents to, and family firm performance as a consequence of, ambidexterity (see Figure 1).

However, in line with configuration theory and based on fsQCA logic, we propose that EO, exploration and exploitation are combined in a set of conditions for family firm performance (see Figure 2). The circles of the Venn diagram illustrate conditions that, in isolation or in combination (overlap), may lead to family firm performance.

### *EO and performance*

Entrepreneurial orientation reflects a proclivity towards organizational processes, methods and decision-making styles that managers use to act entrepreneurially (Lumpkin and Dess, 1996). In doing so, the firm exhibits a propensity to engage in (1) risk-taking, (2) innovativeness and (3) proactive initiatives (Covin and Slevin, 1989). Risk-taking is the degree to which the firm (usually through its senior managers) is willing to try out new or different ideas by making resource commitments to projects with uncertain outcomes that bear a danger of costly failure. Innovativeness is a willingness and tendency to engage in, develop and support new ideas, novelty, experimentation and creative processes that may bring about new or adapted product, process, administrative or technological

outcomes (Semrau, Ambos and Kraus, 2016). Proactiveness is a forward-looking approach to running the business in which the firm seeks to pre-empt and act in advance of opportunities and threats (Hughes and Morgan, 2007; Lumpkin and Dess, 1996; Miller, 1983). We adopt the Miller (1983) and Covin and Slevin (1989) position that a firm must exhibit all three dimension ultimately to possess an EO.

The literature supports a positive effect by EO on firm performance. For example, Rauch *et al.*'s (2009) meta-analysis found a moderately large and robust correlation with performance ( $r = 0.242$ ), but there is still a lot of unexplained variance. The interpretation of this can be that EO can be an ingredient of successful firms, but does not have to be one. Previous research on EO–performance configurations give support to this interpretation in that both Lisboa, Skarmeas and Saridakis (2016) and Linton and Kask (2017) found high-performance configurations that do not include EO, while Hughes, Hughes and Morgan (2007) found that the promise of EO for firm performance may depend on its configuration with additional factors. This literature also points towards and for family firms. Naldi *et al.* (2007) suggest that they often exhibit lower levels of EO as they prioritize organizational and social well-being not just financial performance.

To explain these findings, we draw on the dispositional perspective of EO. Under this perspective, EO illustrates the propensity of firms toward entrepreneurship, but does not reflect entrepreneurial action *per se* (Anderson and Covin, 2014). Ultimately, it is entrepreneurial action such as exploration and exploitation (and not unrealized propensity) that leads to performance. This is particularly so for family firms, as a study by Wright *et al.* (2016) into UK family firms found that, while family firms reported a strong orientation towards creativity, innovating new products and proactively initiating change, their actual investments in high-risk projects was much lower. A test of disposition vs. behaviour perspective could entail mediation analyses in which EO is conceptualized as a propensity, and a behavioural mediator shapes its effects on performance. A recent overview of EO–mediator studies found at least partial mediation of the EO–performance relationship (Harms, 2013). The notion that additional ingredients are needed in any organizational recipe that translates EO

into firm performance is one that has emerged as a research priority since Rauch *et al.*'s (2009) meta-analysis. This is best illustrated in works calling on scholars to disentangle its wider system of effects and dependencies (Wales, 2016; Wales, Monsen and McKelvie, 2011). In the language of fsQCA, then, the theoretical background that draws on the dispositional perspective of EO as well as the empirical evidence described above point towards the assumption that EO can be, but does not have to be, related to firm performance. In and of itself, then, EO may not present a sole sufficient condition for family firm performance. Thus:

*PI:* EO can be an element of family firm performance, but is not a sufficient component on its own.

#### *Ambidexterity and performance*

Exploration implies processes engaging the firm in search, discovery, experimentation and variation to generate new products (Kyriakopoulos and Moorman, 2004; March, 1991). Exploitation implies processes that engage the firm in productivity, refinement and efficiency that reduce variance so as to adapt, extend and gradually improve existing products (He and Wong, 2004). Ambidexterity theory holds that firms that excel in both exploration and exploitation achieve superior performance (Cao, Gedajlovic and Zhang, 2009; Junni *et al.*, 2013; O'Reilly and Tushman, 2013), since failure to do so risks trapping the firm in a suboptimal state in which it neither innovates for the future nor refines its existing offerings (March, 1991).

We argue that, if EO may be dispositional, exploration, exploitation and ambidexterity may be behavioural and thus more immediately linked to performance. For example, Lumpkin and Dess (2001) argue that EO is not only linked to (exploratory) product market innovations, but also to (exploitative) innovations in the fields of technology and operations (Kollmann and Stöckmann, 2014). Ireland and Webb (2007, p. 50) further argue that EO is likened also to ambidexterity in that EO balances 'between opportunity seeking (i.e. exploration) and advantage-seeking (i.e. exploitation) behaviors'.

Prevailing empirical evidence suggest that exploitation, exploration and combinations thereof

are related to a large variety of performance indicators (O'Reilly and Tushman, 2013). This is supported by the meta-analysis of Junni *et al.* (2013), who found effect sizes of 0.26 for both exploration and exploitation, and about 0.45 for ambidexterity. Still, there may be contextual influences on these relationships. Exploration and exploitation are resource intensive, which is why balancing both dimensions might be better than efforts to excel at both (Cao, Gedajlovis and Zhang, 2009; March, 1991), both exploration and exploitation can have their own individual effects as well (Auh and Menguc, 2005), and evidence of the context sensitivity of ambidexterity (e.g. to resource availability, size and age of the firm) exists (Chang and Hughes, 2012; Menguc and Auh, 2008; Voss and Voss, 2013). For family firms, we know very little about ambidexterity (De Massis, Frattini and Lichtenthaler, 2013a), but suspect that their longer-term perspective may favour exploration while, in the short term, their general conservative and cautious behaviour to preserve family wealth may be oriented towards exploitation (Carney, 2005; Wright *et al.*, 2016).

In summary, while general evidence points towards a significant relationship, we propose the following:

*P2:* Exploration, exploitation or ambidexterity can be elements of family firm performance, but are not a sufficient component on their own.

#### *Linking EO, ambidexterity and performance*

Theoretical arguments and empirical evidence point to relationships between EO, exploration, exploitation, ambidexterity and performance. Yet, previous studies (that were based mainly on regression logic) do not suggest how these come together to form sufficient conditions (in configurational comparative logic). We expect that the key constructs will form multiple configurations combining at least two conditions. Entrepreneurial orientation, exploration and exploitation may be 'insufficient but nonredundant parts of different configurations which are themselves unnecessary but sufficient for the occurrence' (Jacobs *et al.*, 2016, p. 9) of family firm performance.

The possibility that the functioning and effects of EO rely on its configuration with and without other organizational conditions was put forward

by Hughes, Hughes and Morgan (2007). In their paper, using the more traditional regression-based form of configuration analysis, those authors found that EO (described as a form of exploration) clashed with exploitative learning (a form of exploitation) such that firms cannot sustain both. These authors also reported that the effects of EO were particularly strong for those firms whose exploitative learning was weak. This speaks to March's (1991) concern that exploration- and exploitation-type activities exhibit a trade-off, although it is against beliefs elsewhere in this literature that the two are independent (Cao, Gedajlovis and Zhang, 2009). Hughes, Hughes and Morgan (2007) studied young, resource-constrained firms, and Voss and Voss (2013), in a study of SMEs, found that, as resource constraints are alleviated, SMEs tend to shift attention from exploitation to exploration. There are only two empirical QCA papers on EO and ambidexterity to date, and these lend provisional support to their configurational nature, but also highlight inconsistency. For example, Lisboa, Skarmeas and Saridakis (2016) find four types of well-performing firms (two with EO elements, exploration and exploitation present; one with only risk-taking present and other constructs absent; and one with proactiveness and ambidexterity present and with innovativeness and risk-taking absent). Jacobs *et al.* (2016) find, among others, four types of well-performing configurations (one with EO, exploration and exploitation present; one with EO and exploitation present and exploration absent; one with EO and exploration present and exploitation absent; and one with exploration present and exploitation absent).

Theory points to the configurational nature of EO, exploration and exploitation, but at the same time there is uncertainty in how they may organize into configurations of high firm performance, and particularly when accounting for the nature of the firm of interest (a feature caused by the local character of adaptation; March, 2006). Thus:

*P3:* EO, exploration, exploitation and ambidexterity can form multiple configurations for the occurrence of family firm performance. It is expected that these conditions are insufficient but non-redundant parts of different configurations that are themselves unnecessary, but sufficient for the occurrence of family firm performance.

*Family influence and configurations of EO, exploration and exploitation*

Family firms exhibit specific behaviour (De Massis *et al.*, 2014b), owing to family influence. Through power, experience and control over the functioning, direction and culture of the family firm (known as F-PEC, Astrachan, Klein and Smyrnios, 2002), families impact firm strategy in general and innovation strategy in particular (Frank *et al.*, 2010). Miller *et al.* (2015) suggest that familiness and its influence is one reason why some family firms appear to strive to create a strong business they can pass on to the next generation (resulting in innovation-promoting resources forming in the firm), while others cater heavily to family desires for nepotistic appointments, generosity towards often undeserving kin, and appropriation of firm assets to fulfil parochial desires, which deplete or prevent innovation resources from forming. Both agency consideration and non-financial wealth considerations stand out (Carney, 2005; De Massis *et al.*, 2013b). Thus, variations in family influence have the potential to reconfigure exploration, exploitation and entrepreneurship.

Agency theory suggests that families exhibit strong control over their firm's strategic activities (Anderson and Reeb, 2003; Shanker and Astrachan, 1996), which includes EO and exploration and exploitation (Short *et al.*, 2009). Ownership and control are not separate in family firms. The controlling owner or family has considerable power over assets and resources and their allocation (Carney, 2005). It can minimize opportunism (Anderson and Reeb, 2003), but result in greater authoritarianism, centralization and high monitoring with little delegation (Dyer and Handler, 1994).

Carney (2005) identified family influence as a defining characteristic of its governance in comparison with non-family firms. With no separation of ownership and control in family firms, their governance exhibits 'parsimony' (a frugality caused by strategic decisions being tied to the family's personal wealth), 'personalism' (the concentration of authority into the hands of family managers) and 'particularism' (where the family sees the business as an extension of themselves leading to decision-making that is particular rather than economically rational). Particularism is important because it is reflected in the priority given to SEW, such that strategic decisions became oriented towards

preserving or growing that wealth over and above their financial value (Berrone, Cruz and Gomez-Meija, 2012; Gómez-Mejía *et al.*, 2007).

Family influence can personalise the identity of the family firm, but it is not inevitable that its strategic orientation becomes so control oriented. Strategic decisions are made with the family's personal wealth, and incentives exist to grow that wealth, despite the fact that, under agency theory, an incentive exists to minimize costs (Alchian and Demsetz, 1972) and monitor managers (as agents of the family) to prevent diversion of resources to activities that might be perceived to compromise wealth or put it at risk (Anderson and Reeb, 2003). This 'personalism', underpinning the influence of family owner-managers, means that family agents operate under fewer internal constraints and have latitude to implement practices that innovate to increased family wealth (Carney, 2005).

Family firms are concerned with much more than just financial wealth. They prioritize non-financial SEW, and a bias to protect and grow SEW directly informs their strategic actions (Cesinger *et al.*, 2016; Gómez-Mejía *et al.*, 2007). Family control and influence reflect two aspects of a family firm's stock of SEW (Zellweger *et al.*, 2012). Family firms are expected to exhibit different patterns of strategic activity (such as their emphasis on EO, exploration and exploitation) depending on their desire to sustain family control and influence (Berrone, 2012). Short *et al.* (2009) observe that, in the family firm, the risk-taking and proactiveness dimensions of EO are lower than in non-family firms, but innovativeness is not. They do exhibit entrepreneurial tendencies, with a particular emphasis on innovation.

Exploration, exploitation or both have the potential to affect family firms' performance. Exploration and exploitation are unlikely to be the sole drivers of performance because, from both agency and SEW theoretical perspectives, EO and family influence are meaningful to how family owners might exercise their authority and degrees of freedom to generate wealth. This indicates that relying on independent sets of explanatory variables in linear analyses masks the complex interdependencies that are likely to exist among key success factors. Neglecting how relevant factors might differ when placed in a configuration of all such variables may lead to faulty theory and wrong implications for practice.

This is not to say that all family firms are then the same. We deduce that family influence plays a significant role in shaping EO, exploration and exploitation configurations. These configurations may differ between family firms with a low degree of family influence and those with a high degree of family firm influence. Control over strategic decisions is mainly due to ownership, and ownership in the family context is the *sine qua non* condition to exceed any other influence on strategic decisions. We propose that there is an impact of family influence on configurations involving EO and might explain the mixed support for EO found among studies of family firms (Casillas and Moreno, 2010; De Massis *et al.*, 2013b, 2014a; Martin and Lumpkin, 2004; Melin and Nordqvist, 2007; Zellweger and Sieger, 2012). In line with this debate, it has been suggested that a major economic goal of family firms is to develop high-quality, innovative and sellable products that will help grow the firm (Tagiuri and Davis, 1992). This suggests that family firm managers will pursue exploration activities to facilitate product development, and exploitation activities to use current and future products to increase the sales and growth of the firm. This observation is captured in the conceptual work of Miller and Le Breton-Miller (2006), who argue for the potential advantages of exploration and exploitation for family firms. Early empirical studies have again pointed towards the degree of family influence as a relevant factor for exploration and exploitation. A high F-PEC seems to be one of the factors that lead to a higher level of ambidexterity (Stubner *et al.*, 2012), especially through family power and cultural alignment between family and firm interests, and higher levels of innovation in turn, to better financial performance. Nevertheless, Moss, Payne and Moore (2014) highlight that family firms are relatively heterogeneous, which lends further credence to the idea that exploration and exploitation, at best, only explain a part of the configuration of causal models that exist among comparable cases (Berg-Schlusser *et al.*, 2009).

The literature has treated the impact of family influence on EO and exploration and exploitation activities separately. We see current empirical results pointing to an effect of family influence in these contexts, but foresee that configurations of EO and exploration and exploitation across groups of family firms that exhibit high and low levels of family influence will emerge and be quite

different from each other. Fundamentally, we expect that the sufficient conditions surrounding configurations of EO, exploration and exploitation associated with firm performance (1) will not be the same across groups of family firms exhibiting high and low levels of family finance, and (2) that more than one route to performance (by way of more than one configuration of these conditions) will exist. We now move to discuss our research methodology prior to an analysis of our empirically derived configurations. Thus:

*P4:* Configurations for high family firm performance will differ between groups of low vs. high family influence.

## Methodology

### Sample

The sample is composed of 348 firms that were listed in the membership list of the Finnish Family Firms Association, the largest network of family firms in Finland. Membership criteria are that the majority of voting rights are in the hand of one family and that at least one family member is involved in the firm's management or administration. Based on these membership criteria, these firms qualify as family firms (Miller *et al.*, 2007). We further required firms to be older than six years, to show a certain level of maturity and to recognize the time lags between innovation and their financial returns (Kraus, Schwarz and Harms, 2008). Ultimately, the family firms in our sample had an average age of 53.06 years with a standard deviation of 28.892. The majority of our family firms are now in their second generation, with the second generation accounting for 52.7%, 57.4% and 55.8% of the ownership of the family firm, active in its top management team and active on the board of directors, respectively. Respondents were required to be a member of the owner family to ensure valid responses to questions about strategic and financial matters (John and Reve, 1982).

After sending out the online questionnaire twice in 2013, we received 129 fully completed responses, a response rate of 37.07%. This compares favourably with other studies of Finnish family firms (Makkonen *et al.*, 2014), and particularly well with online surveys in general. Analyses of non-response bias (Rogelberg and Stanton, 2007)

Table 1. Sample characteristics

Characteristic		Sample (%)	Sample population (%)
% of shares owned by family members	51–75%	10.1	
	76–100%	89.9	
Size of firms (employees)	Micro business = 10 employees or less	20.2	24.7
	Small business = Between 10 and 50 employees	38.8	38.8
	Medium business = Between 51 and 250 employees	36.4	26.4
	Large business = Above 250 employees	4.6	10.1
Industry	Agriculture, forestry and fishing	1.6	2.0
	Manufacturing	40.3	27.4
	Electricity, gas, steam and air conditioning supply	2.3	1.8
	Building and construction	5.4	5.5
	Wholesale and retail trade	27.1	29.6
	Transportation and storage	3.9	4.4
	Accommodation and food service activities	2.3	3.3
	Information and communication activities	1.6	2.4
	Financial and insurance activities	0.8	4.8
	Real estate activities	2.3	2.9
	Administrative and support service activities	3.1	4.4
	Human health and social work activities	0.8	1.1
	Arts, entertainment and recreation	0.8	1.1
Legal form	Other service activities	7.8	9.3
	Private limited liability company	96.1	96.3
	Public limited liability company	3.9	3.7

$$\frac{\text{Growth rate (year } x \text{ /year } y) - \mu}{\sigma_x}$$

Figure 3. Formula to calculate objective profit growth rate

did not reveal any issues. The sample demographics (see Table 1) are not significantly different from the Finnish Family Firms Association in general.

A summary of main characteristics (Table 1) shows that the majority ownership of each individual business is in family hands. Most of the family firms are private liability small and medium-sized enterprises (SMEs). The firms operate primarily in manufacturing, wholesale and retail.

### Operationalization

To measure family firm performance, we follow previous research and use sales growth, profit growth and market share growth (Cronbach alpha [ $\alpha$ ] 0.88). These are among the most commonly used measures of success in entrepreneurship research (Carton and Hofer, 2006; Davidsson, Steffens and Fitzsimmons, 2009). To test the robustness of our results, we also use secondary performance data derived from the ORBIS database, which consists of the growth of a family firm's profit relative to mean growth in the sector (see Figure 3) on the assumption that relative

growth captures the central idea of high performance (Makkonen *et al.*, 2014). The measure of objective profit growth reflects an average score of three lapses of time (2011–2014; 2012–2014; 2013–2014).

To measure family influence, we use the F-PEC scale of Astrachan, Klein and Smyrniotis (2002). It consists of three items for measuring power ( $\alpha$  0.75), three items for measuring experience ( $\alpha$  0.94), and 11 items for measuring culture ( $\alpha$  0.88).

To assess exploration and exploitation, we used the scales of Lubatkin *et al.* (2006), which measure exploration ( $\alpha$  0.79) and exploitation ( $\alpha$  0.85) with six items each. To measure EO, we use the items for the three-dimensional representation of EO of Eggers *et al.* (2013), who developed and validated an alternative operationalization of EO suitable for SMEs by adapting items from the established EO scales of Miller (1983) and Covin and Slevin (1988, 1986) and excluding items that focused only on large or larger firms (Roskos and Klandt, 2007; Sciascia, Naldi and Hunter, 2006). Five items each measure innovativeness ( $\alpha$  0.80) and proactiveness ( $\alpha$  0.78), and four items measure risk-taking ( $\alpha$  0.79).

All items were scored using a 5-point Likert-type scale, with higher scores indicating higher levels of agreement on the item in question. The survey was



subjected to double-blind translation to improve the validity and reliability of the measurement instruments (Brislin, 1980).

### *Method of analysis*

Fuzzy-set qualitative comparative analysis is a normative model of set-theoretic connections and is applied as an analytical tool in social sciences. Since several problems of social science can be formulated in terms of sets and set relations (Ragin, 2008a), in which high values of a causal statement are not necessarily sufficient for high values of a dependent variable to occur (Woodside, 2013), the fsQCA method can identify these asymmetric relationships. It has been applied throughout management and innovation research to test set-theoretic relationships in social science models (Aversa, Furnari and Haefliger, 2015; Bell, Filatotchev and Aguilera, 2014; Brenes, Ciravegna and Woodside, 2017; Chang and Cheng, 2014; Cheng, Chang and Li, 2013; Woodside, 2013).

Unlike linear analytical methods such as regression, fsQCA establishes logical connections between combinations of causal conditions and an outcome at the same time, the result being a set of configurations that summarize the sufficiency between subsets of all the possible combinations of the conditions and the outcome (Mendel and Korjani, 2012). Fuzzy-set qualitative comparative analysis therefore focuses on identifying several (not just a single) combinations of conditions explanatory factors that are sufficient to elicit a particular outcome (Bell, Filatotchev and Aguilera, 2014; Chang and Cheng, 2014). The only article within family firm research using fsQCA so far (Garcia-Castro and Casasola, 2011) identifies different configurations of family firms on the basis of four components of family involvement, namely ownership, governance, management and succession. But we use the method to probe inside our sample of family firms to determine combinations of EO, exploration and exploitation that elicit high performance in groups defined by their high or low levels of family influence.

Following fsQCA best practice (Ragin, 2008b; Schneider and Wagemann, 2010), we examine for the configurations for achieving high performance for two groups (that is, high F-PEC and low F-PEC) step-by-step. The first step is to transform the data into fuzzy sets (Ragin, 2008a, 2009; Woodside, 2013). To transform our constructs

into ‘fuzzy scores’, it is necessary to calibrate them from interval scales to membership scores ranging from 0.0 to 1.0. The process of calibrating variables requires specifying the values of an interval-scale variable that correspond to full membership (95%), crossover anchors (50%) and full non-membership (5%), which are three qualitative breakpoints structuring a fuzzy set. Following prior work using fsQCA to study social sciences, this study set the original values of 5.0 and 1.0 from the five-point Likert scales to correspond to full membership and full non-membership for all variables, except for objective performance. The default of fsQCA neglects the cases with a membership of 0.50, because this membership is the crossover that cannot indicate the presence or absence of the condition. Normally, many cases responded the values of 3.0. In order not to neglect too many cases, we calibrated values of 2.99 as a membership of 0.50 to avoid variables being dropped during the analysis (Frazier, Tupper and Fainshmidt, 2016). In terms of calibration of objective performance, values at 5, 50 and 95 percentiles served as the threshold for three memberships (Fiss, 2011).

The second step is to construct the truth table (Schneider and Wagemann, 2010), which lists the logically possible combinations of conditions by specifying the number-of-cases threshold as 1 and the consistent cut-off value as 0.80. These two thresholds are used to distinguish configurations that are sufficient to the outcome from those that are not.

The third step is the construction of the ‘solution’. A ‘complex’ solution (in which no logical remainders, or zero cases, are used), a ‘parsimonious’ solution (in which all logical remainders may be used) and an ‘intermediate’ solution (in which partial logical remainders are incorporated into the solution so long as they are theoretically sensible) are three solutions produced for each analysis (Ragin, 2008b). Intermediate solutions are superior to both the complex and parsimonious solutions, because they will not allow removal of necessary conditions (Ragin, 2009). Thus, we selected the intermediate solution.

## **Results**

Before conducting fsQCA, we split the sample firms into two groups according to their F-PEC

Table 2. Truth table

EO	Exploration	Exploitation	Number of cases	Raw consistency	PRI consistency
<i>Low F-PEC group (n = 65)<sup>a</sup></i>					
High	High	High	60	0.92	0.89
High	Low	High	1	0.97	0.89
Low	High	High	1	0.98	0.90
Low	Low	High	1	0.98	0.88
High	High	Low	0		
High	Low	Low	0		
Low	High	Low	0		
Low	Low	Low	0		
<i>High F-PEC group (n = 64)</i>					
High	High	High	61	0.91	0.87
Low	High	High	2	0.95	0.83
High	Low	High	1	0.97	0.91
High	High	Low	0		
High	Low	Low	0		
Low	High	Low	0		
Low	Low	High	0		
Low	Low	Low	0		

<sup>a</sup> Two cases with a membership of 0.50 in causal conditions or outcome were excluded from the truth table.

Table 3. The causal configurations for the overall performance<sup>a</sup>

	Low F-PEC group (n = 65)		High F-PEC group (n = 64)	
	Path 1a	Path 2a	Path 1b	Path 2b
Entrepreneurial orientation	◦		●	
Exploration		◦		●
Exploitation	●	●	●	●
Raw coverage	0.26	0.25	0.92	0.92
Unique coverage	00.05	0.04	0.03	0.02
Consistency	0.97	0.96	0.90	0.88
Solution coverage	0.30		0.94	
Solution consistency	0.95		0.87	

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.

<sup>a</sup> Overall performance was measured on sales growth, profit growth and market share growth.

summed scores to compare the results across different levels of F-PEC. The intermediate solutions for the two groups produced by fsQCA are summarized in Table 3. According to Ragin's (2008a) suggestion, the presence of a condition is signified by a black circle, whereas the absence of a condition is signified by a white circle. Blank spaces denote a 'don't care' situation in which either presence or absence of a condition may not affect the outcome. To easily compare the causal configurations between these two groups, those configurations that are similar are labelled by the same number with different letters (e.g. Path 1a vs. Path 1b).

Two types of measures assess the strength of configurations leading to the outcome. First, the

consistency gauges the extent to which the cases share a given configuration leading to the outcome, and the coverage, like a coefficient of determination, indicates the extent to which the outcome is explained by a given configuration (Ragin, 2008a; Woodside, 2013). Second, unique coverage assesses the degree to which the outcome is covered solely by each individual configuration (Ragin, 2008b). Table 3 shows that the consistency values for each configuration, and overall solutions exceed 0.85, indicating that these configurations are sufficient recipes leading to high overall performance. Also, the overall solution coverage approximates to or exceeds 0.30, suggesting that these solutions can explain a certain proportion of high overall performance.

Table 4. Causal configurations for the objective profit growth

	Low F-PEC group ( <i>n</i> = 65)		High F-PEC group ( <i>n</i> = 64)	
	Path 1c	Path 2c	Path 1d	Path 2d
Entrepreneurial orientation	◦		●	◦
Exploration		◦	◦	●
Exploitation	●	●	●	●
Raw coverage	0.38	0.36	0.37	0.40
Unique coverage	0.08	0.06	0.06	0.09
Consistency	0.93	0.92	0.86	0.87
Solution coverage	0.44		0.46	
Solution consistency	0.93		0.84	

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.

To examine whether our findings are robust, we conducted another fsQCA analysis for objective profit growth. Table 4 displays the results and indicates that all of paths are the same as those for the overall performance measure for the low F-PEC firms. In terms of the high F-PEC firms, these paths are similar to those for the overall performance measure. Among others, the 'don't care' conditions are changed to the negation of conditions in terms of Path 1b vs. 1d and Path 2b vs. 2d. This indicates that the absolute trade-offs between EO and exploration give a high level of exploitation. In sum, minor changes are observed, but the interpretation remains unchanged. The results are similar between both outcomes, suggesting the validity and robustness of the results.

## Discussion

Our research question inquired whether EO, exploration and exploitation form sufficient conditions of configurations for high performance among groups of family firms exhibiting high and low levels of family influence. Our analysis was motivated by the call of Miller and Le Breton-Miller (2006), who postulate that successful family firms are managing both exploration and exploitation, by Naldi *et al.* (2007) and Zellweger and Sieger (2012), who argue that EO is central to successful family firms, and by Miller *et al.* (2015), who argue that, despite the apparent dysfunction possible when family influence is high, many of these family firms continue to perform well. We identified an important and relevant gap in the literature, which requires these elements to be brought together in one model. This gap urgently needs to be addressed, because existing studies have almost

exclusively relied on treating EO, exploration, exploitation and family influence as independent sets of explanatory variables in linear analyses. These analyses mask the complex interdependencies that exist among these factors, leading to faulty theory and misspecified implications for practice. We addressed this gap by investigating the configuration of these strategically critical variables in family firms. We begin our discussion with general observations, before focusing on our propositions.

As general findings, we identify multiple configurational paths to superior family firm performance. The only construct consistent across all paths is exploitation. Exploitation is therefore a key ingredient of family firm performance. Surprisingly, we find that EO is not a general driver of family firm performance, as it is an element in only one of the configurations (Path 1b) and only then for those family firms that exhibit high family influence. The same is also found for exploration. Only in one Path (2b) and solely for those family firms with high family influence does exploration drive performance. Also, exploration does not co-occur with EO, suggesting that they are substitutes. Finally, because of these results, ambidexterity (the co-occurrence of exploration and exploitation within a specific configurational path) also occurs only once (Path 2b) and for family firms exhibiting high family influence only. For family firms exhibiting low family influence, neither EO nor exploration matter for configurations of high performance (Paths 1a and 2a) and in this instance, the results point to the absence or negation of EO and exploration as causal conditions. It seems, then, that family firms with low family influence create a set of conditions within themselves that negate the need for EO or exploration for high firm performance. Exploitation is always

present, however. Finally, we find that the configurational paths are almost identical across subjective (Table 3) and objective (Table 4) measures of firm performance, providing us with a high level of confidence that our results are not sensitive to the form of performance measurement. The latter is important, because studies of firm performance from a variety of management perspectives using fsQCA are increasing rapidly (Aversa, Furnari and Haefliger, 2015; Brenes, Ciravegna and Woodside, 2017; Kraus, Ribeiro-Soriano and Schüssler, 2017; Woodside, Bernal and Coduras, 2016). Scholars and managers need confidence that fsQCA results are robust across subjective and objective performance measures. We, therefore, offer a timely contribution to this endeavour that transcends our specific focus on family firms.

For our propositions, Proposition 1 suspected that EO can be an element of family firm performance, but is not a sufficient component on its own. We find evidence for this. Entrepreneurial orientation is not sufficient on its own, and it is not a particularly compelling ingredient in configurations of family firm performance either, playing no part in the configurational paths associated with high performance in family firms with low family influence, but playing a key role in one of the two paths for family firms exhibiting high family influence. An explanation might be that not all dimensions of EO are important or beneficial to family firms. For example, while family firm researchers have linked the three dimensions of EO individually and together to superior performance (Cruz and Nordquist, 2012; Naldi *et al.*, 2007), scholars also report that the peculiarities of family influence can compromise EO by diminishing the appetite for risk-taking, prioritizing the family's financial and social well-being, and lead it to exhibit lower levels of certain dimensions of EO (Naldi *et al.*, 2007), in part because of their desire to maintain and protect family control (Carney, 2005). Our findings align with this and provide an extension by suggesting that those family firms with high family influence require the whole of EO to offset the problems that excessive familiness causes. Yet, we cannot exclude the possibility that not all the dimensions of EO are necessarily beneficial for family firms (Hughes and Morgan, 2007; Lumpkin and Dess, 1996; Zellweger and Sieger, 2012).

For Proposition 2, we expected that exploration, exploitation or ambidexterity can be elements of family firm performance, but not a sufficient

component on their own. This proposition again holds well for family firms with high family influence. This may suggest a latent bias in the theorization of ambidexterity in family firms that fails to account for situations when family influence is not particularly present or prevalent. In Path 2b, both exploration and exploitation are part of a high-performance configuration for high F-PEC firms. Ambidexterity is vital to these types of firms in one of their two configurational paths. We suggest that this reveals a local character to ambidexterity in which exploration is needed to offset the dysfunctional effects of high family influence. But, for low F-PEC firms, high performance can consist of solely exploitation, which goes against the final part of our Proposition 2 that exploitation, exploration or ambidexterity are insufficient on their own. This is important for theory, because it suggests that, for these types of firms, specialization is better than ambidexterity. Gupta, Smith and Shalley (2006) questioned whether ambidexterity was inherently best for all firms, arguing that specialization in exploitation (or exploration) may yield higher gains, especially given March's (1991) insistence that exploitation and exploration represent a trade-off, owing to their competing resource and organizational needs. O'Reilly and Tushman (2013) and Junni *et al.* (2013) also suggest that, despite the supposed performance advantages of ambidexterity, it is not something that all firms can or should achieve, indicating a degree of context specificity. Our findings point to family firms and their degree of family influence as one such context, calling into question how theorizing about ambidexterity should treat family firms.

We find support for Proposition 3 that EO, exploration, exploitation and ambidexterity form multiple configurations for the occurrence of family firm performance. There are indeed multiple configurations, and these are robust across subjective and objective measures of family firm performance, being virtually identical and largely insensitive to the change in measure. Important in our results for Proposition 3, however, is that EO and exploration appear to be substitutes for each other for high F-PEC groups. This points to the local character of adaptation again. March (2006) insists that the survival of adaptive systems in environments that are changing and incompletely known requires firms to reproduce the attributes responsible for success (in this instance, that appears to be exploitation, given its

consistency across all paths) and generate sufficient variety to enable the firm to experiment with new opportunities. The latter, according to March (2006), would require the firm to have exploration, but EO appears to be a substitute for that, as both exploration and EO can create the requisite variety. This finding extends EO directly into the ambidexterity debate, but also suggests that ambidexterity in a firm might be 'hidden' by another construct substituting for one of its core elements (in this case EO for exploration). This lends support to a theoretical argument originally seen in Hughes, Hughes and Morgan (2007).

Our expectations behind Proposition 4 receive support. Configurations of high family firm performance do differ between groups of low vs. high family influence. This provides a first set of evidence to explain what Miller *et al.* (2015) referred to as the 'Janus-face' of socioemotional preferences in family firms. Some family firms strive to create strong businesses that can be passed to future generations, tending to be highly focused on innovative investment; others are excessively altruistic in which resources are misappropriated, and strategic decisions become dysfunctional and distorted. The latter firms focus disproportionately on SEW (Berrone, Cruz and Gomez-Meija, 2012) and are more likely to exhibit high F-PEC (Astrachan, Klein and Smyrniotis, 2002). Familiness can be positive (Miller *et al.*, 2015), but its attributes can undermine the innovation capacity of the family firm (Frank *et al.*, 2010), prioritizing nepotistic appointments, rewarding undeserving kin and misappropriating firm assets to fulfil parochial desires (depleting resources for innovation) (Carney, 2005; De Massis *et al.*, 2013b). These features explain why the configurational paths that we find for those family firms with high family influence require either EO or exploration to offset those dysfunctional conditions. These findings advance our understanding of family firms by demonstrating the error inherent in relying on theory developed from independent sets of explanatory variables examined in linear analyses. These analyses do indeed mask the complex interdependencies that are likely to exist among EO, exploration, exploitation and family influence, and our findings refine currently faulty theory, as revealed through our propositions.

Collectively, our findings point to an overlooked theoretical lens relevant to the study of family firms: adaptive theory (Baum and McKelvie,

1999; Campbell, 1985; March, 1991, 2006). In the family firm literature, agency theory and non-financial wealth considerations contained in the theory of SEW stand out as the chief means to predict the behaviour and outcomes of family firms (Berrone, Cruz and Gomez-Meija, 2012; Carney, 2005; De Massis, Frattini and Lichtenthaler, 2013a). Greater family influence changes the circumstances and attributes within the firm – attributes that are responsible for success and must be replicated, but also attributes that are dysfunctional and require action to overcome. In our case, exploitation must be replicated, but conditions to ensure variety generation (exploration) are relevant, but only when family firms exhibit high familiness. Outside that, EO appears to substitute for exploration, and family firms with low familiness may already contain sufficient conditions for innovation (if March's (2006) view is combined with theory of family firms). Thus, we reveal important conditions for understanding and developing better predictions of family firm performance.

To illustrate, greater familiness leads to greater desire to protect control with nepotistic appointments, misplaced altruism and misappropriation of assets. This has its roots in agency theory and SEW, which suggests that greater familiness leads to greater control over strategic initiatives (Anderson and Reeb, 2003; Carney, 2005; Shanker and Astrachan, 1996). Adaptive theory can help us to understand this more from the point of view of attributes being replicated, but also the local character of adaptation (i.e. it differs across high/low familiness). But adaptive theory is flawed on its own, because greater familiness changes the meaning of success away from purely economic goals and towards a mix of economic and non-economic ones (Berrone, Cruz and Gomez-Meija, 2012). Thus, its use in the study of family firms must account for their specific features.

At the outset of our paper, we argued that neglecting how critical factors might differ when placed in a configuration might lead to faulty theory and misspecified implications, and we find support for this. Bringing together adaptive theory and existing lenses in family firm management research provides a better solution. We find different configurational routes to performance and these differ, depending on the degree of familiness. Our study provides a basis for explaining Miller *et al.*'s (2015) position that, despite the apparent dysfunction caused by high familiness, successful examples

of such family firms exist, and we understand better both how and why this is the case.

## Implications

Implications for family firm managers are apparent: family firms with low family influence benefit by specializing in exploitation and not ambidexterity; EO appears to substitute for exploration in configurations of high performance for family firms with high family influence; ambidexterity is present in one of the two configurations for high performance for family firms exhibiting high family influence, while EO is present in the other (but neither are present in those for family firms with low family influence); and configurations of EO, exploration and exploitation are specific to the context, or local character, of the family firm, and managers must configure their firm accordingly after an analysis of the presence and effects of family influence in their firm. Entrepreneurial orientation is no silver bullet for family firm performance, and family managers should not blindly adopt an EO. It may be that other strategic orientations are more suitable (Altindag, Zehir and Acar, 2011) and managerial emphasis on the more proximal and actionable success factors of, in particular exploitation, seems to be a more promising way towards a high degree of family firm performance.

These implications are tempered by our study limitations. First, our variables refer to the same point in time, which does not allow us to infer causality, though we hasten to add that this is not the purpose of fsQCA. Fuzzy-set qualitative comparative analysis ascertains whether several plausible configurations associated with an outcome variable of interest can be observed, breaking the restraints of traditional regression analyses, which depend on identifying individual effects of independent variables on a dependent variable. Second, research needs to scrutinize whether the results can be transferred to other contexts beyond our sample. Third, researchers may have some leeway in how to implement fsQCA. As fsQCA is still nascent in the different fields of management research, there is no critical mass of studies to be used as reference points for the consistent choice of crossover points and membership criteria. Different crossover points might generate different conclusions, and thus a sophisticated approach to set

calibration is needed in which the calibration process is properly described and disclosed (Garcia-Castro and Casasola, 2011; Mendel and Korjani, 2012). This would further facilitate the comparison between different empirical fsQCA assessments to improve understanding and enrich the quality of theory building. Fourth, we were unable to return to our respondents to collect qualitative evidence about the ways in which our factors interact within each configuration.

Interesting questions for future research include a finer examination of the implications of adaptive theory for family firm performance, EO and ambidexterity. We find that family firms with low family influence can benefit from specializing in exploitation only, but this may jeopardize longer-term success if exploration is not provided through some other means. Examining EO and ambidexterity across time or within family firms of different ages or periods of next-generation succession may reveal further important information. Having empirically identified configurations of high-performing family firms, and begun to speculate about their internal consistency, we invite future research to explore further the processes that link EO, exploration, exploitation and family influence to superior family firm performance. In this way, the field can move to mid-range theories of family firm performance, and practitioners will learn about the sequence of implementing management practices.

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