

## Antecedents of successful internationalization in family and non-family firms: How knowledge resources and collaboration intensity shape international performance

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### ABSTRACT

The internationalization of family firms has increasingly been recognized as an important field of inquiry for international business scholars. And yet, there is a noticeable paucity of original research on key issues, including the differences in antecedents of international performance between family and non-family firms. By drawing on the revised Uppsala model of internationalization from 2009 and the concept of socio-emotional wealth, the present study applies Fuzzy Set Qualitative Comparative Analysis as a methodological approach to identify different configurational sets of antecedents for international performance. Our results suggest that differences in causal configurations of certain antecedents (education, international market knowledge, international business experience, and collaboration intensity) between family and non-family firms exist. Furthermore, we found that the specific characteristics of family firms explain these differences.

### Introduction

The importance of family firms for national economies has long been recognized and their idiosyncrasies have been widely discussed in the literature (e.g., Ahluwalia, Mahto, & Walsh, 2017; Chrisman & Holt, 2016; Gedajlovic, Carney, Chrisman, & Kellermanns, 2012; Schulze & Gedajlovic, 2010). Family businesses are commonly defined as businesses “governed and/or managed with the intention to shape and pursue the vision of the business held by a dominant coalition controlled by members of the same family or a small number of families in a manner that is potentially sustainable across generations of the family or families” (Chua, Chrisman, & Sharma, 1999, p. 28). Control and sustainability of financial and non-monetary wealth are therefore defining characteristics of family firms (Berrone, Cruz, & Gómez-Mejía, 2012). Further, the impacts family ownership and family management have on structures, behavior, and goal-setting differentiate family from non-family firms (Kraus, Fink, & Harms, 2011; Xi, Kraus, Kellermanns, & Filser, 2015). Extant literature attributes the unique strategic behavior of family firms to the pres-

ervation of non-financial or affective utilities, commonly known as socio-emotional wealth (SEW) (Debicki, Van de Graaff, & Sobczak, 2017; De Massis, Kotlar, Chua, & Chrisman, 2014).

Extant literature acknowledges that family firms increasingly break the boundaries of domestic markets and engage in activities directed toward foreign markets (e.g., Kraus, Mensching, Calabrò, Cheng, & Filser, 2016; Lin, 2012; Pukall & Calabrò, 2014; Sciascia, Mazzola, Astrachan, & Pieper, 2012). Recent literature reviews (Arregle, Duran, Hitt, & Essen, 2017; Pukall & Calabrò, 2014) further show that internationalization is an important strategic element in the pursuit of growth for family firms, yet the majority of studies describe family firm internationalization as following the Uppsala model of internationalization (Johanson & Vahlne, 1977). The stepwise approach supports the long-term orientation of family firms with regard to both business and the family (Brigham, Lumpkin, Payne, & Zachary, 2014; Mitter, Duller, Feldbauer-Durstmüller, & Kraus, 2014).

International performance results of family businesses compared with non-family businesses however are mixed (O’Boyle, Pollack, & Rutherford, 2012; Wagner, Block, Miller, Schwens, & Xi, 2015). Several studies have reported no differences (e.g., Crick, Bradshaw, & Chaudhry, 2006;

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Muñoz-Bullón & Sánchez-Bueno, 2012), while others have found higher (Graves & Shan, 2014; Tsao & Lien, 2013) or lower levels of international performance for family firms (Thomas & Graves, 2005; Zahra 2003). Traditionally, international business research has discussed a variety of antecedents that are positively associated with international performance, such as education, international experience, commitment, risk propensity, perceived benefits, or market knowledge (see Game & Apfelthaler, 2016 or Leonidou, Katsikeas, & Piercy, 1998 for overviews). These, however, were identified without controlling for ownership and therefore do not provide specific insights into family firms. Of the few studies that are specific to family firms, several have identified family ownership and involvement (e.g., Cerrato & Piva, 2012; Sciascia et al., 2012), the role and influence of networks (e.g., Arregle, Naldi, Nordqvist, & Hitt, 2012; Cesinger, Hughes, Mensching, Bouncken, Fredrich, & Kraus, 2016; Kontinen & Ojala, 2011a), and international market knowledge (Basly, 2007) as relevant antecedents for international performance differences between family businesses and non-family businesses. A clear picture of which antecedents are more or less important for family firms compared with non-family firms is missing.

Family firms rarely possess sufficient international market knowledge, and particularly not in the pre-internationalization phase (e.g., Cesinger et al., 2016; Chirico & Salvato, 2008; Graves & Thomas, 2008). They accumulate knowledge incrementally and slowly (e.g., Casillas & Acedo, 2005; Claver, Rienda, & Quer, 2007; Graves & Thomas, 2008), which may be due to the fact that family firms are reluctant to enter new networks and to form new relationships (Gómez-Mejía, Haynes, Núñez-Nickel, Jacobson, & Moyano-Fuentes, 2007). Their preference for intimate and familiar sources of foreign market information makes them rely on well-established, lasting, and identity-based network ties (Kontinen & Ojala, 2011a; 2011b; Musteen, Francis, & Datta, 2010). Furthermore, family firms do not exhibit great collaboration intensity (Cesinger et al., 2016), defined as the strength and frequency of any formal and informal relational interaction via personal meetings, the cultivation of close relationships, or informal communication (Lin & Germain, 1998). In addition, there is evidence that international performance in family firms is associated with the owner's or the succeeding generation's level of education (Davis & Harveston, 2000; Fernandez & Nieto, 2005).

What is therefore missing is a coherent approach that explains antecedents critical for family businesses compared with non-family businesses when achieving high levels of international performance. We posit that the reasons lie in the fact that international business theory does not explicitly take the dominant position of the family and the need to protect family control (Berrone et al., 2012; Pukall & Calabrò, 2014) into account. Consequently, from a conceptual point of view, we supplement Johanson and Vahlne's work with the concept of SEW. In line with the revised Uppsala model (Johanson & Vahlne, 2009), we suggest that each antecedent alone will have an influence on

internationalization success for family firms and non-family firms, but due to the idiosyncrasies of family firms we propose that combinations of various antecedents will differ between both groups. Widely applied quantitative methods (e.g., regression or structural equation modelling) predict the effects of one or more independent variables on one or more dependent variables, but fall short in describing the complex interaction of multiple factors that affect the results, particularly in emerging fields of interest (e.g., Cesinger et al., 2016; Vis, 2012). We therefore apply Fuzzy Set Qualitative Comparative Analysis (fsQCA) as an alternative to investigate the complexity of differences in antecedents of family firms' and non-family firms' international performance.

The results of our study offer two primary contributions to the existing literature: we provide a rich, comparative view of antecedents of international performance for family and non-family firms by supplementing traditional international business theory with the perspective of SEW. From the SEW perspective, our results highlight that family firms either rely on collaboration intensity or individual-level knowledge resources to preserve control and alleviate the fear of losing SEW.

Our present contribution is structured as follows: after a brief overview on the current state of research concerning differences in the international performances of family firms and non-family firms, we theoretically ground our research. Next, we will discuss independent variables, followed by a description of our research model, the characteristics of our sample, descriptive statistics, and the fsQCA method, before we describe our results. Our article will close with a discussion of our findings, possible directions for future research, and limitations of our research.

## Theory

### Socio-emotional Wealth and International Performance in Family Firms and Non-family Firms

SEW has become a proven and commonly accepted construct that explains the distinct behavior of family firms (e.g., Berrone, Cruz, Gómez-Mejía, & Larraza-Kintana, 2010) by emphasizing that potential gains or losses of SEW constitute the primary frame of reference in their strategy formulation and strategic decision-making (Berrone et al., 2012; Gómez-Mejía et al., 2007; Kraus et al., 2016; Vandekerckhof, Steijvers, Hendriks, & Voordeckers, 2015). A family firm's SEW is described by the extent of the family's control and influence on the firm (Zellweger, Kellermanns, Chrisman, & Chua, 2012) and can be characterized as the non-financial and affective value of the family firm, which is achieved using the family's dominant position (Berrone et al., 2012; Gómez-Mejía et al., 2007). The preservation and the increase in SEW frequently is top priority in strategic choices, decisions, and actions of the family (Berrone et al., 2010; Gómez-Mejía et al., 2007). Family firms thus often demonstrate behavior that is not purely driven by economic rationale, in particular when the family's SEW is threat-

ened (Berrone et al., 2012; DeTienne & Chirico, 2013). SEW therefore may affect the likeliness for and speed of internationalization, the number of countries entered, or the entry modes selected (Kontinen & Ojala, 2010). Out of fear of loss of SEW, internationalization may be perceived as risky and therefore be approached with more caution, at a slower pace, or completely avoided.

The Uppsala model characterizes internationalization as an incremental process, where the extent of internationalization increases over time (Johanson & Vahlne, 1977). The model thus views successful internationalization as a function of gradually intensifying commitments to markets, along with increasing experiential knowledge. Each phase produces certain outcomes or levels of international performance. In 2009, Johanson and Vahlne added the concept of insidership to the model, assuming that being inside a network is a necessary condition for successful foreign market entry. Empirical evidence indeed suggests that family firms follow the establishment chain proposed by Johanson and Vahlne (1977) – they progress incrementally along a continuum from low-commitment modes to high-commitment modes (Child, Ng, & Wong, 2002; Claver et al., 2007; Game & Apfelthaler, 2016; Graves & Thomas, 2008; Janjuha-Jivraj, Martin, & Danko, 2012), each of which produces distinct outcomes and different levels of international performance (Claver et al., 2007; Puig & Pérez, 2009).

International performance is commonly understood as a set of quantitative or attitudinal measures, such as the percentage of international revenues as a part of total revenue, growth of international revenue, growth of international profits, growth of international market share, or growth of employees in international markets (Sousa, 2004). Much scholarly attention has recently been given to the investigation of performance differentials between family firms and non-family firms, and it can be assumed that international diversification has a positive impact on a family firm's performance (Carney, Van Essen, Gedajlovic, & Heugens, 2013). When considering the defining features of family firms, such as control or family ownership, empirical evidence on international performance of family firms is equivocal (Pukall & Calabrò, 2014) and results are mixed when comparing the international performance of family firms and non-family firms (O'Boyle et al., 2012; Wagner, Block, Miller, Schwens, & Xi, 2015). For example, Crick, Bradshaw, and Chaudhry (2006) and Muñoz-Bullón and Sánchez-Bueno (2012) have not reported any significant differences in international performance among family firms and non-family firms. Graves and Shan (2014), as well as Tsao and Lien (2013), have even demonstrated that family firms exhibit stronger international performance than non-family firms. Roida and Sunarjanto (2012) have shown that family firms and non-family firms do not differ in their export intensity, whereas the studies by Thomas and Graves (2005) and Zahra (2003) have revealed that international performance is lower in family firms compared with non-family businesses.

Despite the empirical evidence shown using the Uppsala model's value for family firms, neither the original

model from 1977 nor its revised version from 2009 take into account the family firms' tendency to prioritize SEW, which may explain the varying outcomes observed when the model is applied to family firms' internationalization behavior.

### **Antecedents of International Performance in Family- and Non-family Businesses**

At the core of the internationalization model by Johanson and Vahlne from 1977 and 2009 is the concept of international market knowledge as the primary and most critical enabler of internationalization and international performance. International market knowledge refers to knowledge about international markets and knowledge about the process of internationalization (Eriksson, Johanson, Majkgård, & Sharma, 1997). And, indeed, the empirical literature on the antecedents of internationalization and performance confirms the importance of knowledge-based factors. Previous research shows that international market knowledge (e.g., Calof & Beamish, 1995; Canabal & White, 2008) or the knowledge of culture (e.g., Game & Apfelthaler, 2016; Brouthers & Brouthers, 2000) enhances internationalization and performance. Extant internationalization literature suggests that the level of education of a firm's management (e.g., Katsikeas, 1996) and the amount of international experience (e.g., Bloodgood, Sapienza, & Almeida, 1996) augment a firm's internal stock of knowledge, which then correlates positively with a firm's international performance. Under the primacy of SEW and in line with the theoretical assumptions of the Uppsala model (Johanson & Vahlne, 1977; 2009), we suggest that family firms and non-family firms alike achieve international performance if they hold sufficient levels of education, international business experience, and international market knowledge. Yet, the particularities of family firms and their desire to safeguard SEW may position them differently.

Education is one aspect of individual human capital and is positively related to knowledge, skills, and problem-solving ability (Cooper, Gimeno-Gascon, & Woo, 1994). A higher level of education can accelerate the firms level of innovation (Sonfield & Lussier, 2016) and, moreover, can be useful when making internationalization decisions because they facilitate analysis of the international environment (Cerrato & Piva, 2012) and they enhance understanding of foreign markets and cultures (Fernandez-Ortiz & Lombardo, 2009; Kyvik, Saris, Bonet, & Felício, 2013). The international business literature has thus acknowledged it as a managerial characteristic of importance for international performance (Beamish, Craig, & McLellan, 1993; Katsikeas, 1996; Zou & Stan, 1998). The SEW perspective implies that family relationships dominate in family firms (i.e., there is a long history of shared knowledge and experiences, which shape current strategy) (Berrone et al., 2012). The maintenance of family ties and knowledge sharing among family members may substitute for formal education or depreciate the need for human capital development (Granovetter, 1985), although this limits access to novel information and

innovative business approaches, as well as new ways of doing things (Coleman, 1988). The level of education – due to SEW in family firms – may therefore have a different effect in family firms compared with non-family firms. Existing research on family firms' internationalization has indeed found that lower levels of human capital result in a lower degree of internationalization (Casillas & Acedo, 2005; Cerato & Piva, 2012) or that the level of foreign sales is strongly associated with the owner's level of education (Casillas & Acedo, 2005; Davis & Harveston, 2000; Sundaramurthy & Dean, 2008).

International business experience is an important antecedent in the context of international performance (Cavusgil & Zou, 1994; Gray & McNaughton, 2010; Madsen, 1988; Miesenböck, 1988; Nielsen & Nielsen, 2010; Rocha, Cotta de Mello, Pacheco, & Farias, 2012). Individuals with international experience have the ability to systematize and generalize their knowledge of the internationalization process and transfer their experience to other cases and environments (Blomstermo, Eriksson, Lindstrand, & Sharma, 2004). This reduces the level of uncertainty and risk related to foreign market decision-making (Armario, Ruiz, & Armario, 2008). Overall, family firms are equipped with less advanced management skills than non-family firms (Graves & Thomas, 2008) and typically have lower levels of international business experience than non-family firms (e.g., Banalieva & Eddleston, 2011; George, Wiklund, & Zahra, 2005; Kuo, Kao, Chang, & Chiu, 2012). According to Boellis, Mariotti, Minichilli, and Piscitello (2016), this may be the result of a lower and less diversified shareholder and managerial base that makes a family firm per se less informed compared with non-family firms. Gallo and Pont (1996) have suggested that family firms also tend to hire managers without international experience. Gómez-Mejía, Makri, and Larraza Kintana (2010) have demonstrated that family firms are less internationally diversified than non-family firms, and assume that this is a result of the family leaders' lack of international experience. From the SEW perspective, the family's desire to maintain control of the firm and avoid risk leads family firms not to hire internationally experienced non-family managers, resulting in lower levels of international performance (Banalieva & Eddleston, 2011).

Firms must possess sufficient stocks of idiosyncratic, rare, and valuable knowledge to achieve international performance (Grant, Jammine, & Thomas, 1988; Kogut & Zander, 1993). In the same vein, international market knowledge, i.e., international business knowledge specific to a market or culture, is crucial for successful internationalization (Fletcher & Harris, 2012) and serves as the basis for international competitiveness (Lu & Beamish, 2006). Although it has been shown that international market knowledge has a positive impact on the degree of internationalization of family firms (Basly, 2007; Calabrò & Mussolino, 2013), family firms typically have lower levels of international market knowledge than non-family firms due to less developed managerial skills (e.g., Banalieva & Eddleston, 2011; Chirico & Salvato, 2008; Claver, Rienda, & Quer, 2009; Gómez-Mejía et al., 2010; Kuo et al., 2012). Results

from extant family literature also suggest that family firms struggle to develop internal capabilities based on knowledge resources (Dyer & Singh, 1998; Hoy & Verser, 1994). Instead, family members have deep levels of firm-specific tacit knowledge (Chirico & Salvato, 2008; Zahra, Neubaum, & Larrañeta, 2007) and family firms integrate family members' individual specialized knowledge (Arregle, Hitt, Sirmon, & Very, 2007). Lower levels of education, international experience, and international market knowledge necessitate more external human resources to mitigate family firms' deficiencies in international market knowledge (e.g., Graves & Thomas, 2006). The appointment of non-family CEOs and managers (Arregle et al., 2012), however, may sacrifice the family's SEW and minimize the possibility to exercise authority and maintain influence over business activity (Chang & Shim, 2015; Banalieva & Eddleston, 2011; Gómez-Mejía et al., 2007). As a result, family firms tend to accumulate international market knowledge within the firm and among family members, safeguarding SEW, and preserving family control and ownership (Pukall & Calabrò, 2014).

Large and small firms increasingly engage in collaboration to successfully compete in global markets (Etemad, Wright, & Dana, 2001). Whereas the original Uppsala model (Johanson & Vahlne, 1977) predicts that knowledge is internally developed as an outcome of experiential learning, the extension of the model (Johanson & Vahlne, 2009), as well as the extensive literature on international entrepreneurship (e.g., Ratten, Dana, Han, & Welpe, 2007; Young, Dimitratos, & Dana, 2003; Wright & Dana, 2003) argues that firms may access and generate international market knowledge through exchange and collaboration with network partners. Specifically, intensive inter-firm collaborations increase a firm's understanding of both prospects and constraints of going international (e.g., Chetty & Holm, 2000; Musteen et al., 2010). Further, in highly dynamic and fast changing international environments, being involved in networks can also shorten the time span to market (Zhu, Hitt, & Tihanyi, 2006)

Collaboration intensity then mitigates a firm's liability of outsidership – the disadvantage stemming from the lack of specific international market knowledge (Schweizer, 2013). These theoretical foundations also apply to family firms. Network relationships held by family firms allow them to develop and accumulate international market knowledge from domestic and international collaborations with customers, business partners, governmental institutions, and others. Such collaborations provide family firms with access to foreign markets (Zahra, 2005), to international market knowledge, and to other resources of their network partners (Bhaumik, Driffield, & Pal, 2010). This triggers internationalization, helps the firm to gain competitive advantage, and to achieve international performance. While this theoretical prediction holds in principle, empirical research has shown that family firms are reluctant to enter new networks (Basly, 2007; Gómez-Mejía et al., 2007) and overall to cooperate less than non-family firms (Donckels & Fröhlich, 1991; Graves & Thomas, 2004). Com-

pared with non-family firms, family firms prioritize deep internal relations (Arregle et al., 2007). They often show low collaboration intensity (Lin & Germain, 1998), which creates barriers to external networks (e.g., Bubolz, 2001). The empirical literature on family firm internationalization also demonstrates their tendency to preferably connect with other family firms, instead of just any business enterprise, because they prefer to develop strong ties that cater to their aspiration for personal information safeguarding of SEW (Basly, 2007; Eddleston, Chrisman, Steier, & Chua, 2010; Kontinen & Ojala, 2012; 2011a; 2011b; Musteen et al., 2010; Pukall & Calabrò, 2014; Swinth & Vinton, 1993). Family firms may only then overcome the fear of losing SEW by relying on intensive collaborations; i.e., the cultivation of close relationships is coherent with the affective value the family places on its business because collaboration intensity does not threaten SEW. Rather, intense collaborations can enable family firms to overcome the fear of losing SEW and, in turn enhance international performance.

### Method

The goal of our research is to identify combinations of antecedents that enhance international performance in family and non-family firms. Conventional multivariate methods such as regressions have limitations in this regard, and we therefore utilize fsQCA. As outlined by Ragin (2008a), fsQCA is a comparative research technique that uses the concept of Boolean algebra for systematic cross-case analysis (Gonzalez, Rodriguez, & Sossa, 2017; Rihoux & Ragin, 2009). Rather than investigating linear relationships, fsQCA tries to understand asymmetric set relationships (Covin, Eggers, Kraus, Cheng, & Chang, 2016) in a combinatorial way. It is based on set theory, in which causal claims are developed by means of supersets and subsets.

The basic approach of fsQCA is to count all types of cases that occur. Types of cases are defined by their own unique combination of values for independent and dependent variables. For example, if there were four variables of interest, with the first two being dichotomous, the third having three values, and the fourth having five, the result would be a total of 60 possible and unique combinations or types of observations. Each one of those 60 paths is relevant in a distinct way as it leads to the same or similar outcomes. Therefore, rather than testing an assumed path relationship, fsQCA allows for the detection of multiple causal paths. By counting the number of observations for each unique combination of variables, fsQCA determines which descriptive inferences or implications are empirically supported by the dataset. fsQCA is particularly suited when evaluating both the number and the complexity of alternative paths that lead to a desired outcome (Felicio, Rodrigues, Samagaio, 2016; Fiss, 2011; Greckhamer, Misangyi, Elms, & Lacey, 2008; Ragin, 2008a). Marx, Rihoux, and Ragin (2013) and Ragin (2008a) have argued that the logic of the comparative study is configurational, whereby firms are considered to be the combination of causal conditions and an outcome. Fuzzy sets allow researchers to ac-

count for the varying degrees of membership of cases in a set by using the anchor 0.95 to designate full membership in a particular set and 0.05 for non-membership. As most firms will not meet those ideal types, 0.5 is the crossover point that defines the anchor for being neither in nor out of a particular set.

For this, the original values of the 95th percentile, the 50th percentile, and the 5th percentile from the ordinary data corresponding to full membership (fuzzy score = 0.95), cross-over anchors (fuzzy score = 0.5), and full non-membership (fuzzy score = 0.05) are set to transform ordinary data into fuzzy sets (Misangyi & Acharya, 2014; Ragin, 2008a). Following Chang and Cheng (2014), Fiss (2011), and Ragin (2008b), a data matrix, known as a truth table with 16 rows with four causal conditions, is then constructed. In addition, Ragin (2008a) strictly suggested that the configurations selected should have at least 75% to 80% of the cases included in the analysis. Accordingly, this study captures and recognizes configurations that are sufficient to the outcome from those that are not sufficient by specifying the consistent cut off value as 0.80. Ragin (2008a) further suggested that complex solutions are based on a different treatment of the remainder combinations (i.e., there is no logical remainder used in complex solutions, but all logical remainders may be used in parsimonious solutions without any evaluation of their plausibility). Therefore, in line with Ragin (2008a), this study explores the configurations of antecedents of international performance by comparing family and non-family firms based on an intermediate solution (only the logical remainders that make sense given the researcher's substantive and theoretical knowledge are incorporated into the solution) and uses a minimum acceptable overall solution consistency of 0.80.

### Operationalization of Predictor Conditions

Based on our review of the existing literature, we investigate four antecedents of international performance for family firms and non-family firms: education, international business experience, international market knowledge, and collaboration intensity. In this study, we define a firm as a family firm if the majority (>50%) of all assets or control are in the hands of one or two families.

In alignment with previous studies (e.g., Calof & Beamish, 1995; Sommer, 2010), we measure education in the form of the highest educational attainment of respondents on an 8-point scale, ranging from no diploma, compulsory education, secondary school, university-entrance diploma, master craftsman's diploma, university of applied sciences, and university diploma to PhD.

As a measure for international business experience, we use the number of years a respondent has worked in international operations (Sommer, 2012).

As proposed by Zhou (2007), we operationalize international market knowledge as international institutional knowledge (knowledge of (1) foreign laws, norms, and standards and (2) host government agencies), international business knowledge (knowledge of (1) the needs of foreign

clients/customers; (2) foreign distribution channels; (3) effective marketing in foreign markets; (4) foreign competitors; and (5) foreign languages), and internationalization knowledge (knowledge about (1) determining foreign business opportunities; (2) dealing with foreign business contacts; and (3) managing international operations) on a 5-point Likert-type scale.

Collaboration intensity represents the magnitude of ongoing interactions between network partners (Lin & Germain, 1998). In our research, we measure collaboration intensity in line with Paulraj (2011), Chen, Tzeng, Ou, and Chang (2007), or Kotabe, Martin, and Domoto (2003) by using three items: (1) before internationalizing, I had frequent exchange with my network partners; (2) before internationalizing, I maintained close relationships with my network partners; and (3) informal discussion between my network partners and me existed before internationalizing. We measure these by using a 5-point Likert scale.

Measuring organizational performance using objective data is inherently difficult in privately held firms. Various authors have therefore suggested perceptual measures as an alternative (Dess & Robinson, 1984; Glaister & Buckley, 1998). Davis and Harveston (2000) have proposed using growth related performance measurements because family firms focus more on long-term growth than on achieving high profits in the short term. Following this assumption, Chen et al. (2007) have provided a set of measurements for international performance, including growth of international revenue and profit, as well as a growth of international employees and market share. In line with these suggestions, international performance in our research is measured as a subjective, perceptual, and composite index, with the following four components: (1) compared with our direct and indirect competitors, we realized higher growth of international revenue; (2) higher growth of international profit; (3) higher growth of international employees; and (4) higher growth of international market share. All were measured on a 5-point Likert scale.

### Sample

We collected our data via an online survey. First, we randomly selected a cross-sectional sample of 10,000 firms from Germany and three other predominantly German-speaking countries: Austria, Switzerland, and Liechtenstein. Responses from companies without international business activities were not recorded, which resulted in a total of 501 valid questionnaires from Germany and 561 completed questionnaires from the other three countries. Respondents were CEOs, founders, owners, or top-level managers responsible for internationalization. These key informants (Lechner, Dowling, & Welpel, 2006) are commonly used in family business research (e.g., Kraus et al., 2016). The resulting response rate of 5.3% is comparable to other online surveys (e.g., Rigtering, Kraus, Eggers, & Jensen, 2014). Out of our total of 1,062 firms, 792 are family firms (74.6%) and 270 are non-family firms (25.4%). The majority of firms in our sample are small- and medium-sized companies with less than 250 employees (96.3% in family firms and 93.4% in non-family firms). Family firms in our sample are on average 41.3 years old and non-family firms are 32.9 years old. The average firm’s internationalization experience is 14.8 years in family firms compared with 11.3 years in non-family firms. The majority of the respondents in the firms have a degree from a tertiary institution (31.8% in family firms and 38.1% in non-family firms).

### Results

Table 1 provides a summary of our results in the form of combinatorial causal configurations of different paths for firms in our dataset. As consistency scores should be as close to 1.0 as possible, we only included those configurations that have values exceeding 0.7, overall solution consistency values above 0.68, and overall solution coverage values above 0.74. These configurations offer the best explanations for how international performance is achieved. The results of fsQCA reveal five such causal configurations for family firms and four causal configurations for non-family firms.

Table 1  
Casual configurations for international performance

	Path	Collaboration Intensity	International Market Knowledge	Education	International Business Experience	Raw Coverage	Unique Coverage	Consistency	Solution Coverage	Solution Consistency
Family firms (n=792)	1a	●		○		0.46	0.02	0.76		
	2a		●		○	0.52	0.08	0.75		
	3a	○		●		0.45	0.06	0.73	0.81	0.68
	4a		○		●	0.37	0.04	0.75		
	5a		●		○	0.44	0.01	0.77		
Non-family firms (n=270)	1b	●	●			0.54	0.05	0.74		
	2b		●	●		0.51	0.04	0.81	0.74	0.73
	3b		●		●	0.51	0.05	0.78		
	4b	○		●	●	0.34	0.05	0.81		

Table 1 shows that five causal configurations exist which lead to a high level of international performance in family firms. Black circles in Table 1 indicate the presence of a necessary condition, white circles indicate the absence of a condition in the solution path, and empty cells indicate “don’t care/doesn’t matter” conditions (Ragin, 2008a). The latter may be present, but do not show a significant impact on international performance. According to Ragin’s guide of fsQCA (Ragin, 2008b), presence and absence are major states in Boolean algebra. The typical Boolean-based comparative analysis addresses the presence/absence conditions under which a certain outcome can be accomplished. Presence indicates that the outcome is achieved when the causal condition is existent and the absence of a condition means that the outcome can be obtained without this condition (Chang & Cheng, 2014; Fiss, 2011; Kraus et al., 2016).

For family firms, path 1a shows a configuration under which collaboration intensity is a single antecedent to international performance; international market knowledge or international business experience may be of importance, whereas education is of no relevance in this configuration. In other words, this configuration (i.e., a logical statement is “Collaboration Intensity\*~Education”) shows that when CEOs, founders, owners, or top-level managers responsible

for internationalization do not have high levels of education, they can still produce high levels of international performance for their firms by means of a high level of ongoing interactions between network partners (i.e., collaboration intensity). Path 2a demonstrates a similar configuration with international market knowledge being the necessary condition, collaboration intensity and education being sufficient, and international business experience being of no importance. With the highest unique coverage among all paths, path 2a offers the best explanation of international performance in family firms. Path 3a shows education as a necessary and collaboration intensity as an absent condition. Path 4a demonstrates that international business experience is a necessary antecedent, with education and collaboration intensity being potential contributors to international performance. Path 5a shows international market knowledge as a necessary condition, international business experience and collaboration intensity as sufficient conditions, and education as absent.

What we can therefore conclude is that over all paths for family firms, single antecedents can be the source of international performance or, in other words, that family firms rely on a single source of international performance. Figure 1 summarizes these configurations for family firms.

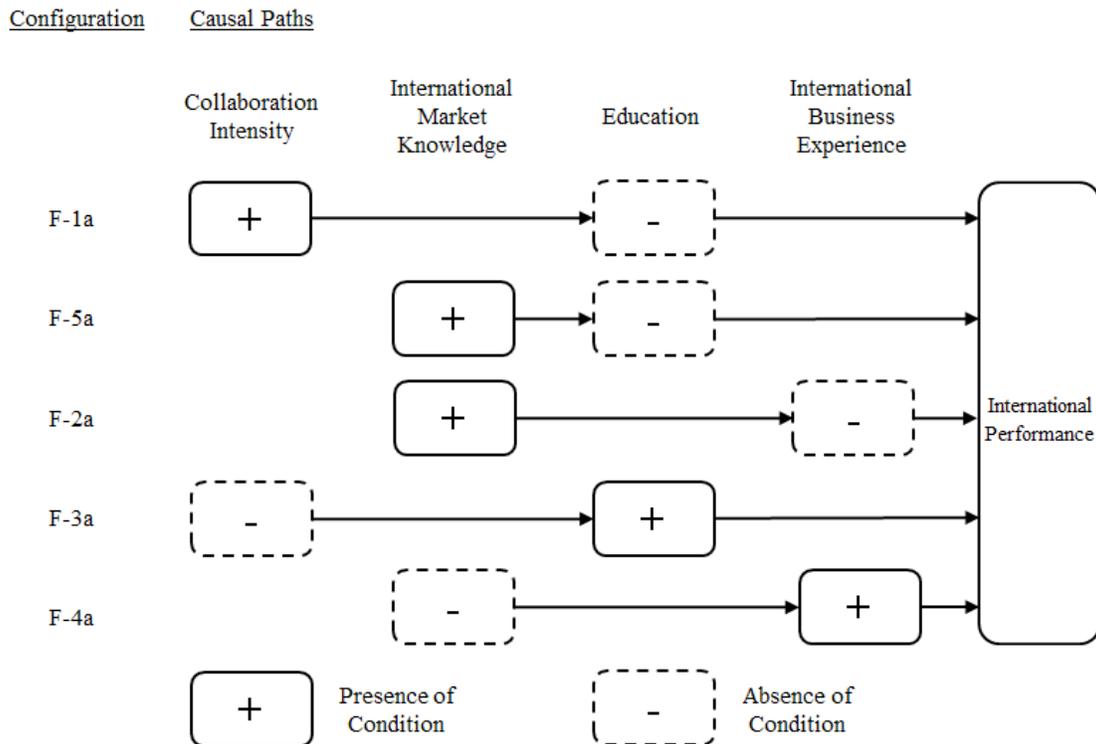


Figure 1. Causal configurations for international performance in family firms.

The results for non-family firms are quite different. In non-family firms, four causal configurations exist that produce high levels of international performance. For all paths (1b–4b), two conditions for high international performance are present: collaboration intensity and international market knowledge in path 1b, international market knowledge and education in path 2b, international market knowledge and international business experience in 3b, and education and international business experience in 4b. The presence of international market knowledge in paths 1b, 2b, and 3b

indicates that it is a critical condition for non-family firms to achieve superior international performance. Figure 2 summarizes these configurations for non-family firms.

Our data therefore suggest a fundamental difference in the paths to international performance between family firms and non-family firms. Where all combinatorial solution sets for family firms identify one single source for international performance, international performance in non-family firms is generally created from a combination of different antecedents.

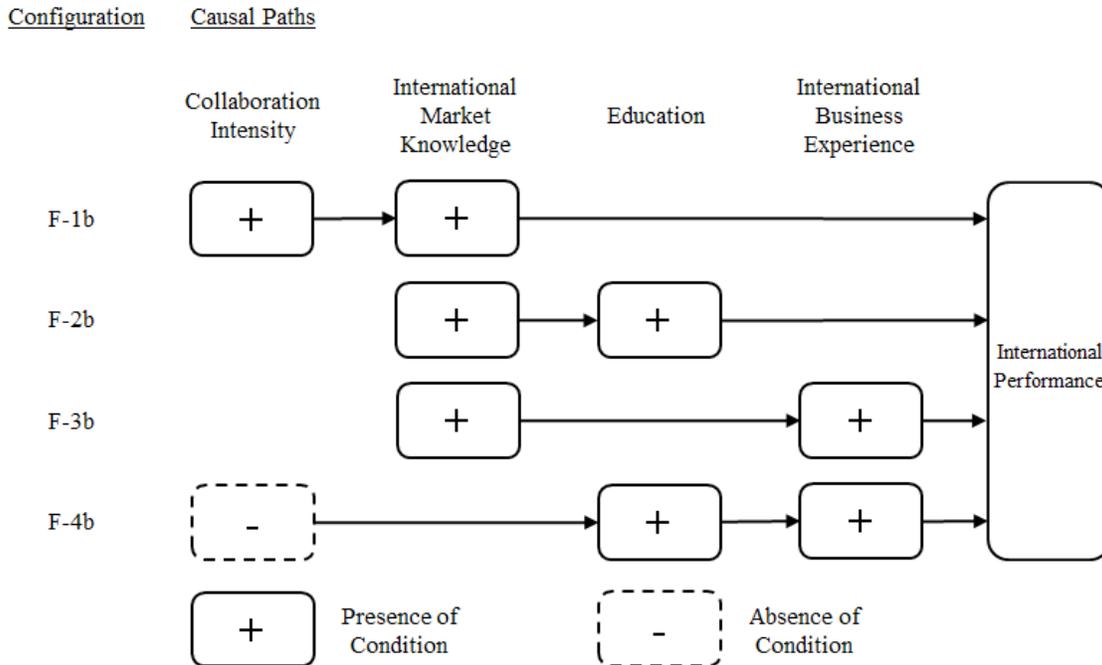


Figure 2. Causal configurations for international performance in non-family firms.

### Discussion and Conclusion

Our study explores four relevant antecedents – collaboration intensity, international market knowledge, education, and international business experience – with the purpose of revealing different causal configurations for achieving international performance in family firms vs. non-family firms. Based on the results of our fsQCA, we found the existence of five different paths to international performance for family firms and four different paths for non-family firms. Our data and analysis not only show that there is more than just one single path to international performance, but we were also able to identify clear differences in those paths between family and non-family firms. Family firms can achieve international performance with the presence of only one of the four investigated antecedents. One possible explanation of this result is that family firms are typically characterized by lower resource endowments compared with non-family firms. This forces

family firms to rely on a limited set of resources and capabilities in driving performance. Investing in other antecedents would also minimize their ability to maintain authority and control over the business and therefore threaten their SEW. Furthermore, the expansion across national borders is a committing and demanding step that is associated with risk that may endanger the family firm’s SEW. Therefore, family firms often try to reduce risk by reducing complexity via their reliance on antecedents that can be controlled internally. International market knowledge, education, and international business experience are all capabilities, which family firms can develop without external assistance. The focus on risk-minimizing antecedents combined with family firms’ lower resource endowments result in a reliance on one factor that appears most promising and – most importantly – safeguards SEW while preserving family control and ownership. This also aligns with the original Uppsala model (Johanson & Vahlne, 1977), which sees knowledge as being internally developed.

The extension of the Uppsala model (Johanson & Vahlne, 2009) argues that firms may access and generate internationalization knowledge through exchange and collaboration with partners within their business networks. Family firms, however, only rely on such networks in the presence of two internal capabilities: international market knowledge and international business experience. Under the primacy of SEW, we suggest that internally developed capabilities may enable family firms to better judge the value and risk of collaborations. This will then also safeguard SEW. These results add further evidence to the predictive ability of the original Uppsala model (Johanson & Vahlne, 1977) and to the extended Uppsala school of thought (Johanson & Vahlne, 2009) for family firms. Family firms either rely only on internal capabilities as suggested by the original model or on networks and internal capabilities.

The fact that family firms can achieve international performance by relying only on single antecedents is important with regards to another area of difference between family and non-family firms that we found in the identified causal configurations. By applying fsQCA, we were able to identify conditions that must be present and conditions that are distinctly absent. Our comparison of family and non-family firms shows that each configuration for family firms contains both a present and an absent condition. In contrast, only one path exists with an absent condition for non-family firms. For example, path 4a indicates that international market knowledge is absent, which is in accordance with the results of previous research demonstrating that family firms typically have lower levels of international market knowledge (e.g., Banalieva & Eddleston, 2011; Gómez-Mejía et al., 2010; Kuo et al., 2012). Similarly, our results show the absence of international business experience in family firms' paths toward international performance. Overall, family firms are equipped with fewer specialized management skills than non-family firms (Graves & Thomas, 2008) and therefore typically have lower levels of international business experience compared with non-family firms (e.g., Banalieva & Eddleston, 2011; Kuo et al., 2012).

In contrast, non-family firms do not exclusively rely on one condition but combine more than one antecedent to achieve international performance. Their comparatively better resource base and distinct capabilities enable them to rely on a combination of factors, thus only showing an absent condition (that of collaboration intensity) in one solution set (i.e., 4b). The paths for non-family firms seem more homogenous compared with the family firm paths. Each set contains two present conditions for achieving sufficient international performance. One explanation may be that non-family firms recruit their (top-)management based on the current required skills and under the rationale that international business is an active part of the firms' strategies; non-family firms tend to employ c-level managers that are experienced in international business and/or have international education or international market knowledge, whereas for family firms, being a family member is the primary determinant. This also confirms previous research emphasizing the importance of educa-

tion (Cerrato & Piva, 2012; Fernandez-Ortiz & Lombardo, 2009; Kyvik et al., 2013), international business experience (Cavusgil & Zou, 1994; Gray & McNaughton, 2010; Madsen, 1988; Miesenböck, 1988; Nielsen & Nielsen, 2010; Rocha et al., 2012), and international market knowledge (Basly, 2007) in the internationalization process of a firm.

Overall, when looking at the configurational sets for both family firms and non-family firms, it is evident that international market knowledge is the most important antecedent for international performance. It appears in two family firm sets (2a, 5a) and three non-family firm sets (1b, 2b, 3b). This confirms the original Uppsala model and importance of international market knowledge widely acknowledged in research. We add further evidence to this with our results.

### Limitations and Future Research

This study presents an attempt to add a more nuanced understanding of differences in antecedents of international performances between family firms and non-family firms. Addressing this, our research drew on the Uppsala model and the concept of SEW, and it utilized fsQCA as a method. Compared with the traditional case study approach, fsQCA is highly appropriate for the study of complex causal relationships able to identify holistic causal recipes with a much higher level of formalization and rigor (Fiss, 2011). However, fsQCA has limitations. It can identify various combinations of conditions for a respective outcome, whereas multivariate analysis techniques predict a certain outcome by isolating single factors. Therefore, fsQCA findings may not be generalizable (Fiss, 2011). Furthermore, the number of antecedents we tested was limited to only four, with obvious factors such as the firms level of entrepreneurial orientation (Campbell, Line, Runyan, & Swinney, 2010) risk propensity, international commitment, or risk perception (Game & Apfelthaler, 2016) having been omitted. An additional limitation lies in the use of subjective measures for international performance only. Also, the relatively small size of companies in our sample may present an additional limitation; the larger companies are (both family and non-family businesses), the more they become alike. This, however, could also be a promising starting point for future research. As our study draws on the Uppsala school, we intentionally did not approach our research question from the more recent and somehow opposing perspective of international entrepreneurship (see the work of Acs & Yeung, 1999; Etemad & Wright, 1999; 2000; 2003; McDougall & Oviatt, 2000). Building on the groundwork of the McGill school (e.g., Etemad, 2004; Young et al., 2003; Wright & Dana, 2003; Dana, Etemad, & Wright, 1999) on the entrepreneurial dimension of internationalization, future research may address family firm internationalization from this perspective. Finally, our research was limited to German-speaking countries in Europe only and therefore may not be generalizable to other institutional contexts. Nonetheless, our empirical research has uncovered important new insights and we hope that it will further encourage

research in other institutional and cultural contexts, as well as inquiries that will address the present limitations.

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