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PORTFOLIO ENTREPRENEURSHIP IN FAMILY FIRMS: A RESOURCE-BASED PERSPECTIVE

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The phenomenon of portfolio entrepreneurship has attracted considerable scholarly attention and is particularly relevant in the family firm context. However, there is a lack of knowledge of the process through which portfolio entrepreneurship develops in family firms. We address this gap by analyzing four in-depth, longitudinal family firm case studies from Europe and Latin America. Using a resource-based perspective, we identify six distinct resource categories that are relevant to the portfolio entrepreneurship process. Furthermore, we reveal that their importance varies across time. Our resulting resource-based process model of portfolio entrepreneurship in family firms makes valuable contributions to both theory and practice. Copyright © 2011 Strategic Management Society.

INTRODUCTION

In recent years, scholarly interest in portfolio entrepreneurship has increased (cf. Westhead and Wright, 1999; Wiklund and Shepherd, 2008; Iacobucci and Rosa, 2010). Portfolio entrepreneurship commonly refers to individuals who simultaneously own and engage in a multitude of entrepreneurial interests (Carter and Ram, 2003). The study of portfolio entrepreneurship has been justified due to its role in value creation (Rosa and Scott, 1999) and its relevance to the broader entrepreneurship field (cf. MacMillan, 1986). Portfolio entrepreneurship is particularly relevant in the family firm context because of the distinct motivations of those firms to engage in portfolio behavior, such as risk diversification, seeking growth while protecting the firm's core activity, and facilitating succession (Carter and Ram, 2003). In addition, family firms' long time horizons may support entrepreneurial activity (Sirmon and Hitt, 2003; Miller and Le Breton-Miller, 2005; Zellweger, 2007) and family dynamics often influence portfolio entrepreneurship processes (Carter and Ram, 2003).

Existing research has focused primarily on investigating motivations for engaging in portfolio entrepreneurship (Ram, 1994; Mulholland, 1997; Rosa, 1998; Carter and Ram, 2003). However, the process through which portfolio entrepreneurship actually develops has been insufficiently addressed (cf. Westhead and Wright, 1998; Iacobucci and Rosa, 2010). According to Carter and Ram (2003: 378), 'existing research has rarely broached the processes

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that may be involved in the development of portfolio ownership approaches.' By examining how the portfolio entrepreneurship process unfolds in family firms, meaning how a business portfolio is built up across time, we address an important research gap which leads to significant contributions to both theory and practice (cf. also Westhead and Wright, 1998; Carter and Ram, 2003).

To address this gap in the literature, we investigate four longitudinal in-depth family firm case studies from Europe and Latin America.[1] We chose the resource-based view (RBV) as our theoretical lens for two reasons. First, resources such as human and social capital have been identified as key drivers of portfolio entrepreneurship (Wiklund and Shepherd, 2008). Second, familiness, or unique family-influenced resources and capabilities, may explain family firms' entrepreneurial behavior (Habbershon and Williams, 1999; Nordqvist and Zellweger, 2010). However, the role of family-influenced resources in the portfolio entrepreneurship process has not yet been explored. Since controlling families are believed to significantly impact the resource base of their firms (Sirmon and Hitt, 2003; Sharma, 2008), we opt for a trans-level unit of analysis that integrates family and firm levels. This is in line with Davidsson and Wiklund (2001), who called for more multilevel studies in entrepreneurship research. As our main finding, we identify six distinct resource categories that are relevant to the portfolio entrepreneurship process in family firms. Furthermore, we reveal that the importance of particular resources changes over time, which allows us to build a corresponding process model.

The contribution of this paper is fourfold. *First*, we add to portfolio entrepreneurship literature by taking a longitudinal approach and by explicitly investigating processes as opposed to motivations for the portfolio entrepreneurship phenomenon (cf. Carter and Ram, 2003). In addition, we focus on the particularly relevant context of family firms (cf. Carter and Ram, 2003; Wiklund and Shepherd, 2008). This leads to a model of the portfolio entrepreneurship process in family firms, which advances our understanding of how portfolio entrepreneurship evolves in the family firm context. *Second*, we contribute to the discussion about the use of RBV in the context of family firms and entrepreneurship (Sirmon and Hitt, 2003; Arregle *et al*., 2007) by offering a more detailed categorization of human and social capital as the main drivers of portfolio entrepreneurship (Cooper, Gimeno-Gascon, and Woo, 1994) and by identifying reputation as an additional key resource. Furthermore, our longitudinal case studies show that the importance of the each resource pool changes across time, which advocates for a dynamic perspective of resources in the family portfolio entrepreneurship context.

Third, we contribute to family business literature by illustrating how family-influenced resources drive portfolio entrepreneurship across family and firm levels of analysis. We add to the ongoing debate about the appropriate content and form of familiness (Habbershon and Williams, 1999; Pearson, Carr, and Shaw, 2008; Sharma, 2008; Zellweger, Eddleston, and Kellermanns, 2010). *Fourth*, we contribute to practice by helping family firm owners prioritize resource development and management, depending on which phase of the portfolio entrepreneurship process they are in. Additionally, we strongly encourage family business practitioners to intentionally transfer relevant resources to the next generation, as the families in our case studies have done.

In this paper, we first discuss the phenomenon of portfolio entrepreneurship in the family firm context and introduce RBV as our theoretical lens. Second, we describe our case study methodology. Third, we present our findings and develop testable propositions. We then combine our insights and introduce our process model of portfolio entrepreneurship in family firms. Last, we discuss our findings, address limitations, and highlight avenues for future research.

THEORETICAL FOUNDATIONS

Portfolio entrepreneurship

The emergence of portfolio entrepreneurship research is based on the realization that many entrepreneurs own more than one firm (e.g., Birley and Westhead, 1993; Howorth, Tempest, and Coupland, 2005). While several definitions exist, Carter and Ram (2003: 374) state that all describe 'the core activity of portfolio entrepreneurship as an individual(s) simultaneously owning and engaging in a portfolio of entrepreneurial interests.' Similarly, Wiklund and Shepherd (2008: 703) define it as 'the

[1] These case studies are part of the STEP Project (Successful Transgenerational Entrepreneurship Practices) that investigates transgenerational value creation of family firms around the globe. See also www.stepproject.org

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discovery and exploitation of two or more business opportunities.' Portfolio entrepreneurship was largely ignored by researchers until the level of analysis shifted from the firm to the individual (cf. Birley and Westhead, 1994; Ucbasaran *et al*., 2008). Scott and Rosa (1996) proposed that using the firm as unit of analysis might lead to underestimating the prevalence of portfolio entrepreneurship. Westhead and Wright (1999) suggested that studying the entrepreneur as the unit of analysis may provide a more accurate picture of the entrepreneurship phenomenon. Today, portfolio entrepreneurship is a 'ubiquitous feature of the economic landscape' (Carter and Ram, 2003: 375), and entrepreneurship scholars agree on its economic and social importance (cf. Rosa, 1998; Westhead and Wright, 1998; Wiklund and Shepherd, 2008). MacMillan (1986) advocates investigating portfolio entrepreneurship due to its high value for the entrepreneurship field, as it may allow a clearer view of the entrepreneurial process, free of first-time mistakes. Reasons for engaging in portfolio entrepreneurship may include growth aspirations, wealth and risk diversification, value maximization, and providing career opportunities for family members (Ram, 1994; Mulholland, 1997; Rosa, 1998). However, there is a lack of knowledge of how the process of portfolio entrepreneurship actually unfolds, which is regarded as an important research gap (Carter and Ram, 2003).

Portfolio entrepreneurship needs to be distinguished from strategic diversification. The strategic diversification literature (e.g., Rumelt, 1982; Wernerfelt, 1984; Anderson and Reeb, 2003; Gomez-Mejia, Makri, and Kintana, 2010) regards the creation and management of multiple ventures as a routine corporate managerial strategy of large companies. The ultimate goal of strategic diversification is to maximize managerial efficiency (Fry, 1998). In contrast, literature on portfolio entrepreneurs regards entrepreneurial creativity as the driving force of multiple venture creation (Rosa, 1998). The creation of a portfolio of businesses is thus entrepreneurially motivated and not a routine managerial strategy (Robson, Gallagher, and Daly, 1993). It has been labeled entrepreneurial diversification (Rosa, 1998; Rosa and Scott, 1999) and is described as a mechanism to exploit market niches and regionally segmented markets, which is especially relevant in the small business and family firm context (Iacobucci and Rosa, 2010). In sum, portfolio entrepreneurship is a process through which entrepreneurial diversification occurs.

The phenomenon of portfolio entrepreneurship is especially relevant in the family firm context for at least three reasons. First, family dynamics have a significant effect 'on both the decision to engage in portfolio strategies and also the processes which are used in the portfolio approach' (Carter and Ram, 2003: 372). Second, time horizons of family firms are typically long (Miller and Le Breton-Miller, 2005; Zellweger, 2007), which allows for the complex patterns of portfolio entrepreneurship to emerge. Third, family firms are thought to have a particular propensity toward portfolio behavior due to their desire to diversify risk, generate income opportunities, and secure employment for family members (Carter and Ram, 2003).

While shifting the level of analysis from the firm to the individual entrepreneur is helpful to further understand the prevalence of portfolio entrepreneurship activity, it is not sufficient in the context of family firms. It has been shown that family dynamics and resources can be highly influential in start-up and portfolio processes (Rosa and Hamilton, 1994; Rosa, 1998; Carter and Ram, 2003). For example, the social capital involved in portfolio behavior may be nurtured by familial connections (Steier, 2007; Hoy and Sharma, 2009) but may not be uniquely attributed to solely the family or the firm. Social networks often emerge precisely through the interplay of the family and the firm. For these reasons, a trans-level unit of analysis, combining both family and firm levels, is required to fully understand the emerging role of resources in portfolio entrepreneurship in the family firm context (Davidsson and Wiklund, 2001).

Resource-based view (RBV)

According to the RBV, a firm's competitiveness is based on its access to valuable and rare resources that are difficult to replicate. Firms develop a competitive advantage based on their ability to exploit the value potential of these resources (Barney, 1991). Our study in the context of family firms relies on the RBV for two reasons. First, a key role is attributed to resources available to and influenced by the family in the process of portfolio entrepreneurship in family firms (Carter and Ram, 2003). These resources are critical for both the opportunity exploration and exploitation components of portfolio entrepreneurship (Alvarez and Barney, 2004; Wiklund and Shepherd, 2008). Second, the RBV is an established theoretical perspective used to

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examine family firm behavior (Habbershon and Williams, 1999; Arregle *et al.*, 2007). Families may provide and use both family-related and business-related resources for entrepreneurial activities beyond a single business unit (Aldrich and Cliff, 2003; Pearson *et al.*, 2008). Existing portfolio entrepreneurship literature claims that resource categories such as human and social capital are important in the portfolio entrepreneurship process (Carter and Ram, 2003; Alvarez and Barney, 2004; Wiklund and Shepherd, 2008; Plate, Schiede, and von Schlippe, 2010). However, the role of resources in the longitudinal process of portfolio entrepreneurship has yet to be fully explored.

Human capital in the portfolio entrepreneurship context refers to the knowledge, abilities, and skills that positively contribute to exploring and exploiting opportunities (Davidsson and Honig, 2003; Alvarez and Barney, 2004; Wiklund and Shepherd, 2008) and is often divided into general and specific forms. General human capital is the knowledge, skills, and problem-solving capabilities that are applicable across numerous contexts, usually measured by level of education (Rauch and Frese, 2000; Wiklund and Shepherd, 2008). Specific human capital refers to the knowledge, skills, and experience that are valuable solely in the context of entrepreneurial activities, usually measured by previous start-up experience (Carter, Williams, and Reynolds, 1997; Wiklund and Shepherd, 2008). Human capital is seen as an aid in judging the real value of new entry (Davidsson and Honig, 2003; Wiklund and Shepherd, 2008). Recently, habitual entrepreneurship scholars have claimed that human capital's relevance for portfolio entrepreneurship may erode over time (e.g., Shepherd, Zacharakis, and Baron, 2003; Baron and Ward, 2004; Ucbasaran *et al.*, forthcoming).

Social capital is defined as '. . . the sum of actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit' (Nahapiet and Ghoshal, 1998: 243). A person's social capital is based on networks of interpersonal relationships (Granovetter, 1985; Coleman, 1988). These networks are characterized by individuals, organizations, and the set of linkages between them (Brass, 1992; Hoang and Antoncic, 2003). Social capital builds trust between actors and provides access to valuable intangible resources and knowledge (Hoang and Antoncic, 2003). It may lead to opportunity discovery (Burt, 1992), opportunity exploitation (Birley, 1985; Johannisson, 2000), and venture creation (Cooper and Dunkelberg, 1986). Wiklund and Shepherd (2008) measured social capital by business contacts and ties with government agencies and found that both had a positive effect on the likelihood to engage in portfolio entrepreneurship. In the family firm context, social capital has primarily been explored as an internal resource emerging from the linkages and bonds between family members that help explain collective action (Adler and Kwon, 2002; Pearson *et al.*, 2008).

Although research has shown a positive link between human and social capital and portfolio entrepreneurship (Alvarez and Barney, 2004; Wiklund and Shepherd, 2008), the longitudinal deployment of these resources has been insufficiently explored (Carter and Ram, 2003). According to Barney (1991), resource combinations must be changed over time to maintain a competitive advantage. A longitudinal approach to resources is especially pertinent in the family firm context, as these firms have a longer time horizon and entrepreneurial endeavors take time to materialize (Zahra, Kuratko, and Jennings, 1999; Lumpkin, Brigham, and Moss, 2010). Furthermore, the current conceptualization of human and social capital appears to be inappropriate to explain portfolio entrepreneurship. Specifically, using education level and number of previous start-ups as the sole indicators for human capital seems unsatisfactory, as high levels of education and experience can become a liability for habitual entrepreneurs due to overconfidence biases, excessive reliance on previously successful 'recipes,' or 'constraints by the familiar' (e.g., Shepherd *et al.*, 2003; Ucbasaran, Westhead, and Wright, 2009). It would be valuable to identify specific types of knowledge, skills, and abilities and their role in the portfolio entrepreneurship process over time (cf. Unger *et al.*, 2011). In a similar way, operationalizing social capital by considering links in only business and political networks (Wiklund and Shepherd, 2008) also seems insufficient. This is not able to capture the diverse nature, scope, and characteristics of networks that may support portfolio entrepreneurship. In addition, even though reputation is considered to be conducive to entrepreneurial ventures (Shane and Cable, 2002), this resource has not yet been investigated in the portfolio entrepreneurship context. As we focus on portfolio entrepreneurship in the specific family firm context, we believe that reputation should be particularly considered, given that reputation is advantageous to family firms and relevant for corporate strategy in those firms (Miller and Le

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Breton-Miller, 2005; Craig, Dibbrell, and Davis, 2008). Last, although Carter and Ram (2003) have strongly advocated its further investigation, the family as a level of analysis has not been sufficiently considered in portfolio entrepreneurship research. An approach that incorporates the family level would be valuable because of the unique role of the family in resource development and management, a critical process for portfolio entrepreneurship activities (Aldrich and Cliff, 2003; Habbershon, Williams, and MacMillan, 2003). We address these gaps in the literature by exploring the role of different resources in the portfolio entrepreneurship process in four longitudinal case studies of family firms using a trans-level unit of analysis.

CASE STUDY METHODOLOGY

Exploratory case study research is recommended when knowledge about a phenomenon is shallow, fragmentary, or incomplete, and when current perspectives seem inadequate (Eisenhardt, 1989; Punch, 2005). This is the case for the portfolio entrepreneurship process in family firms (cf. Carter and Ram, 2003). Furthermore, literature has encouraged the use of qualitative studies to explore the complexity of the familiness construct and to address the challenge of investigating entrepreneurial processes across levels of analysis (Nordqvist and Zellweger, 2010). In general, case studies are regarded as appropriate for procedural and longitudinal studies (Hartley, 1994). For these reasons, we have chosen a qualitative approach which allows us to explore the longitudinal deployment of resources for portfolio entrepreneurship in family firms and to develop propositions (Punch, 2005).

We theoretically sampled cases out of the STEP case pool (cf. Corbin and Strauss, 1990), which consists of more than 70 case studies. Based on our initial knowledge of numerous case studies and with the aid of a master document that lists all STEP cases, we selected the four richest cases on family firms with explicit portfolio entrepreneurship activities. The latter means that the owning family has controlling ownership in several operating companies, which they have founded or cofounded (Carter and Ram, 2003; Wiklund and Shepherd, 2008). These cases came from multiple countries, reflecting the global nature of the phenomenon and helping overcome cultural biases (cf. Sharma and Manikutty, 2005). The STEP project began in 2005, and there has been an increasing stream of research output on family firms' entrepreneurial behavior in recent years (e.g., Nordqvist, Habbershon, and Melin, 2008; Nordqvist and Zellweger 2010; Plate *et al.*, 2010; Salvato, Chirico, and Sharma, 2010; Zellweger and Sieger, forthcoming). Table 1 provides an overview of our cases from Ireland, France, Chile, and Guatemala, though the names have been made anonymous.

For a family firm to be included in the STEP case pool, it has to meet the following criteria: (1) self-perception as a family business; (2) at least one active operating business; (3) majority family ownership in the main operating business; (4) at least second generation involved in management; (5) at least 50 employees in the main operating business; and (6) an ambition to pass on the business to the next generation (cf. Nordqvist and Zellweger 2010). The theoretical research framework of STEP is based on established works in the fields of entrepreneurship (e.g., Lumpkin and Dess, 1996; Lyon, Lumpkin, and Dess, 2000), RBV (Barney, 1991; Sirmon and Hitt, 2003) and familiness (Habbershon and Williams, 1999; Habbershon *et al.*, 2003). The project intends to explore the impact of resources and attitudes on entrepreneurial performance across time.

An interview guideline that is used for all STEP cases was developed based on both conceptual and empirical papers in the aforementioned fields (e.g., Barney, 1991; Covin and Slevin, 1991; Lumpkin and Dess, 1996, 2001; Sirmon and Hitt, 2003). The guideline captures resource categories, entrepreneurial attitudes and activities, the family's influence, performance dimensions, and environmental factors across company history.[2] Examples of resource-related questions include *'What specific knowledge and competencies are crucial to develop your business?'* and *'In what way does the controlling family impact the knowledge and skills in your firm?'* for human capital, and *'How do external networks and personal connections play a role in the development of your business and/or for generating entrepreneurial opportunities?'* for social capital. Further questions investigated reputational resources, such as *'What role does the family's history, reputation and goodwill play . . . for development or generating entrepreneurial opportunity?'* Thus, these

[2]The interview guideline with the main questions related to resources and entrepreneurial performance can be found in the Appendix. For further information please refer to Nordqvist and Zellweger (2010).

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Table 1. Description of case studies

Family name	Smith	Vidal	Sanchez	Dupont
Business name	MLS	Vidal Holding	Sanchez S.A.	AZUR
Country	Ireland	Chile	Guatemala	France
# of businesses	5	13	6	7
Business added through	Founding (2), joint venture (2), acquisition (1)	Founding (5), joint venture (8)	Founding (5), franchising (1)	Founding (5), acquisition (2)
Industries per 2009	Renewable energy, waste management; water; infrastructure	IT services; agriculture; construction; mining; retail; real estate	Fast food franchise; motorcycles; baking/food distributor	Taxi service, car rental, logistics, self-storage, information systems
# of employees	3,300	1,800	1,600	2,200
Family's average ownership stake	Controlling ownership in MLS and portfolio companies	100% of holding that owns 71.5% of six biggest portfolio companies (average)	100% of holding that owns majority in portfolio companies	100% of AZUR that owns 91.9% on average in portfolio companies
Total revenue 2007	$600 million	$280 million	$75 million	$270 million
Age oldest business unit	32 years	66 years	64 years	48 years
Generation in ownership	3	2	3	2
# of family members active in management	2	4	16+	2
Positions of family members	Chairman, business development manager, board member	Vice chairman of board, president of the board, company directors	Executive committee, board of directors, company directors	CEO, members of supervisory board
Ownership structure	Equally owned among third generation	Equally owned by three children	Equally owned by 16 family shareholders	Equally owned by four family shareholders

Names changed for anonymity purposes.

questions not only capture the level of resource endowments, but also the family's influence on the resources.

In the STEP project, each participating University collects case study data on multiple family firms from their country. STEP teams from the same continent met biannually over three years. In these meetings, scholars discussed the research model, concepts and theories and conducted training on the use of interview guidelines and the development of case study reports. Exemplary case study reports and best practices were discussed to ensure the highest possible level of quality and consistency among all involved researchers. At least two researchers per country team then conducted five to 10 semi-structured interviews per firm with family and non-family members who were owners, members of the top management team, and/or strategic advisors (see Table 2).

All interviews were recorded and transcribed. Interviewers also gathered secondary data to describe contingencies (industry, tax structure, or environment) and for triangulation purposes (i.e., corroborate information gathered through interviews). Examples include Web sites, annual reports, press articles, and available internal documents. This enabled the teams to get a more comprehensive picture of the families, the firms, and their activities as a whole. The country teams then wrote one case study report per family, using a common template

Table 2. Overview of interviews

Company	Name	Position	Family member	Shareholder	Length (min)	Period
MLS	Ryan Smith Jr.	Founding director / nonexecutive chairman	Yes	Yes	90	January-April 2008
	Sean Smith	Business development manager	Yes (third gen.)	Yes	90	
	Frank Miller	CEO	No	No	80	
	Markus Hill	Financial advisor	No	No	90	
	Jamie Fisher	Financial advisor	No	No	70	
	Denzel Chipfield	Nonexecutive director, board member	Yes (nephew)	Yes	80	
Vidal	Gil Vidal	Executive vice president	Yes (son of founder)	Yes	180	June 2007
	Roberto Vidal	Director of holding	Yes (son of founder)	Yes	200	
	Sahra Vidal	Member of family council	Yes (daughter of founder)	Yes	130	
	Eduardo Fuentes	Portfolio company director	Yes (son-in-law)	Yes	150	
	Carmelo Tiago	CEO	No	No	120	
Sanchez	Jesus Sanchez	Director portfolio company, board member	Yes (son of founder)	Yes	90	Summer/Fall 2007
	Pablo Sanchez	Director portfolio company, board member	Yes (son of founder)	Yes	70	
	Jaime Sanchez	Board member	Yes (son of founder)	Yes	80	
	Bernardo Gilles	Financial director	No	Yes	80	
	Alberto Sanchez	General manager	Yes (third gen.)	No	60	
	Esteban Breno	General manager	No	No	60	
	Naomi Kilmer	Administrative manager	No	No	60	
	Franco Sanchez	Business development	Yes (third gen.)	No	70	
	Jennifer Sanchez	Not active	Yes (second gen.)	Yes	60	
	Pedro Sanchez	Not active	Yes (second gen.)	Yes	60	
Dupont	Paul Dupont	Founder, supervisory board	Yes	Yes	110	May/June 2006
	Pierre Dupont	CEO	Yes	Yes	65	
	Gerard Milles	President's counselor	No	No	60	
	Bertrand Hiver	Portfolio company director	No	No	70	
	Claire Picard	Portfolio company director	No	No	65	

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following STEP's theoretical framework and the interview guideline. Following Yin (1998), these reports (length between 30 and 40 pages) were organized by the sequence of interview topics. The case research reports allow researchers to rapidly identify constructs under investigation, spare the use of coding software, help in becoming intimately familiar with each case, and enable unique patterns to emerge before cross-case comparison (Eisenhardt, 1989). This overall research process was designed to assure quality in terms of data collection, reliability, and comparability of findings. To further increase reliability and allay confidentiality concerns, the reports were reviewed by the interviewed families. Only minor adaptations were made based on the families' feedback.

For the purpose of the present study, two researchers used the four case study protocols and the limited guidance from the portfolio entrepreneurship literature to create dictionary codes of specific resource categories that seemed to impact the portfolio entrepreneurship process. Thus, we performed a secondary analysis of qualitative data to allow for different perspectives and new conceptual interpretations (Goulding, 2002). Starting with previously used categorizations of human and social capital (e.g., Wiklund and Shepherd, 2008), the researchers soon realized that these concepts did not fit the data well. With human capital, for example, our evidence could not be properly allocated to general human capital in the form of education level (Rauch and Frese, 2000; Wiklund and Shepherd, 2008) and to specific human capital measured in terms of previous start-up experience (Carter *et al.*, 1997; Wiklund and Shepherd, 2008). Consequently, we developed new corresponding resource categories (Corbin and Strauss, 1990), namely industry-specific and meta-industry human capital. Similarly, industry-specific and meta-industry social capital and reputation emerged as resources contributing to portfolio entrepreneurship, resulting in a total of six resource categories. Two other researchers then independently coded the case study protocols. The initial fine-grained coding scheme consisted of 417 text pieces and quotations from the four case studies. In the next step, the two coders independently allocated the 417 pieces to the six resource categories in a spreadsheet to view data at a higher level of theoretical abstraction (Corbin and Strauss, 1990). These two researchers were encouraged to be open to emerging aspects and dimensions in the context of the portfolio entrepreneurship process. However, no additional resource category emerged. This abductive approach allowed for an iterative process between theory development, data collection, and analysis (Alvesson and Sköldberg, 2000; Suddaby, 2006; Nordqvist and Zellweger 2010). More generally, our research approach is situated in the interpretive research tradition (Goulding, 2002) through which we aim to uncover, describe, and interpret meanings and understandings in relation to family-influenced resources in the context of the portfolio entrepreneurship process (Gephart, 2004).

Once developed, this coding scheme was assessed by a third researcher. If both initial coders did not agree on the allocation of a statement or text piece to a resource category, the third researcher made the final decision to either allocate it to one of the categories or to omit it. This led to an interrater agreement of 0.76, which is above the suggested threshold of 0.70 (Cohen, 1960; Kreiner, Hollensbe, and Sheep, 2009) and supports the reliability of our findings. Furthermore, to check if we missed a resource category and to check for cultural biases, two of the authors who did not create the original six resource categories reviewed two additional STEP cases from Germany and Italy. However, no additional resource appeared to be relevant. The final spreadsheet formed the basis for Table 3. To better illustrate the main elements of the different resource categories, we aggregated the main case study evidence reported in Table 3 *ex post* to 14 concepts which form the basis for the final six resource categories. For instance, we found several pieces of evidence that the families developed business networks beyond their core industry, which was aggregated to one concept. Together with other concepts, such as political networks, the resource category of meta-industry social capital is formed.

Table 3 also shows that there is a varying amount of evidence for the different resource pools across time. Consequently, two of the authors crafted longitudinal timelines of portfolio entrepreneurship activities for all four cases, incorporating critical portfolio events, dates, and resources involved at specific points of time, using the same resource categorization as in the coding spreadsheet. These timelines were then reviewed by the other researchers and led to insights on the relevance of the six resource categories across time. Table 4 is also based on the timelines and helped us develop our propositions and illuminate potential relationships between categories (Corbin and Strauss, 1990). Combining these factors lead to our process model. Table 4

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Table 3. Case study evidence, concepts, and resource categories

Time	Evidence from cases	Concepts	Resource categories	Aggregate resources
1960s	Paul Dupont develops intimate knowledge of the taxi industry (AZUR).	Knowledge about stakeholders / industries in general	Industry-specific human capital	Human capital
1980s	As Ryan Smith Jr. states: *'Infrastructure by its nature involves interaction with the public authorities'*. First public private partnership (PPP) signed.			
1940s	Miguel Sanchez Sr. worked as a salesman in the industry where he founds own business later on; gets to know retail business and products in detail.	Skills and experience about technologies and product lines		
1940s	Hernando Vidal accumulates knowledge and skills in the construction industry.			
1980s	Ryan Smith sr. traveled to foreign countries to learn more about technologies (MLS)			
1960s-1970s	*'I am a gambler, I love the risk, I love the adventure, therefore I became an entrepreneur'* (Paul Dupont).	General entrepreneurial skills, competencies, and attitudes	Meta-industry human capital	
Since 1970s	Hernando Vidal is described as *'an entrepreneur, an adventurer, resourceful, of great trust, empathy and willingness to delegate'* (Carmelo Tiago).			
1980s-1990s	Sanchez family member: *'despite all efforts to stimulate creativity in our employees, we feel that the organization is not creative enough and that the innovative ideas always come from the family members.'*			
1990s-2000s	Sean comments that his father *'loves new businesses, he loves getting stuck in there, working at a corporate level.'*			
1990s-2000s	Pierre Dupont develops knowledge and skills as business developer (software; self-storage; logistics).			
2000s	Ryan Smith Jr. says: *'where Sean has had some money he decided to start up ventures as opposed to investing his money into a secure option like a bank account.'*			
2000s	Ryan Smith Jr. contends that *'his leadership style was visionary and boundaries were not something he recognized. We can do this if we want to, was his attitude.'* Ryan Smith Sr. is described as *'the foremost entrepreneur of his generation'* (Frank Miller).			
2000s	Ryan Smith Jr. from MLS contends that a major competency is *'the ability to make judgments on whether the business we are investing in is a viable business'* and to *'know how to do business and fundamentally who to do business with.'*	Knowledge about how to do business in general		

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Table 3. (*Continued*)

Time	Evidence from cases	Concepts	Resource categories	Aggregate resources
1960s	Pierre Dupont builds alliance with other taxi companies to increase political pressure.	Industry player networks	Industry-specific social capital	Social capital
1980s-1990s	Sean Smith, referring to his grandfather, adds: *'Many people like dealing with MLS because they like dealing with the old man.'*	Build political networks to sign PPPs		
2000s	At MLS, *'top management is given huge autonomy to come up with new ideas, to research new projects, to network and talk to people that might generate new business'* (Ryan Smith Jr.).	Employees encouraged to actively network in their area		
Since 1950s	Hernando Vidal's son states: *'my father turned around a stone and a friend would come out.'*	General networking and social skills	Meta-industry social capital	Social capital
Since 1960s	Hernando Vidal invited to consortiums and joint ventures by partners in different industries.	Development of business networks beyond the core industry		
Since 1970s	Activities of the Vidal family with business people in the German-Chilean community.			
1980s-1990s	Franchise business opened due to industry contact to Honduras; business contacts developed to other industries such as shoes (Sanchez).			
1990s-2000s	*'Ryan has been invaluable in developing relationships with business owners, many of whom are family businesses, in North America'* (Frank Miller).			
Since 1960s	Pierre Dupont develops close friendships with top-tier French politicians.	Political networks that help in different industries later on		
2000s	Sean Smith claims that *'the network established by my grandfather and father opens up many doors for me . . . As a business development manager, I am in continual contact with banks and governance bodies, acquiring firms.'*	Transfer of networks to the next generation		
1950s	Sanchez family/company well-known as a reliable supplier (tire patches, printers, etc.).	Evolvement of favorable reputation in specific industry	Industry-specific reputation	Reputation
1970s	Hernando Vidal builds reputation and credibility due to his achievements in the metro construction in the country's capital.			

Table 3. (*Continued*)

Time	Evidence from cases	Concepts	Resource categories	Aggregate resources
1980s-2000s	Sean Smith (MLS): *'the Smith family has been well respected in the infrastructure industry in Ireland. This Smith family reputation adds credibility to business transactions and propositions.'*			
Since 1970s	Hernando Vidal and his company are invited to different ventures and consortiums in related industries (construction and assembly).	Attraction of opportunities in related industries		
1980s	Hernando Vidal is invited to executive positions in nonrelated industries due to his reputation as an entrepreneurial doer; access to business opportunities.	Reputation as business family attracts diverse business opportunities	Meta-industry reputation	
1980s-1990s	Sanchez' reputation attracted business opportunities from abroad (pizza franchise), growing distribution business.			
2000s	Ryan Smith Jr. states that *'the reputation of MLS as a family firm is a huge selling point when conducting ventures with other family firms.'*			
2000s	*'When firms are to be acquired hear that t*he *primary shareholder is a family called the Smith family (. . .) they like the values we possess and what we stand for'* (Ryan Smith Jr.).			
2000s	CEO Frank Miller: *'It is like a full time job trying to review the business proposals we receive.'*			
2000s	Markus Hill: *'The family reputation as a good business partner will be immensely beneficial to MLS' future aspirations'*.			

presents the different phases where particularly strong evidence for specific resource pools in the portfolio entrepreneurship process exists, that is, when resource pools seem to be most important for portfolio entrepreneurship activities.

Next, we drafted a follow-up questionnaire that was sent to the country teams who wrote the case studies. To complement our timelines, we asked for dates of specific events and additional relevant milestones. To substantiate our interpretation of the role and importance of the different resource pools, we asked additional detailed questions on different aspects and characteristics of these six resource pools. The information generated through this member check (cf. Denzin and Lincoln, 2000) showed that our interpretations and findings are valid and reliable (cf. also Yin, 1998), and it was integrated into our master data document. This document served as the basis for building our propositions.

FINDINGS AND DEVELOPMENT OF PROPOSITIONS

Next, we present the six resource categories that emerged as main drivers in the portfolio entrepreneurship process: human capital, social capital, and

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Table 4. Phases of evidence of resource categories in the portfolio entrepreneurship process

		Industry-specific human capital	Industry-specific reputation	Industry-specific social capital	First wave of portfolio activity	Meta-industry human capital	Meta-industry reputation	Meta-industry social capital	Extended portfolio activity
MLS (est. 1978)	**Year**	**End of 1970s-1980s**	**1980s**	**End of 1980s-1990s**	**End of 1990s**	**2000s**	**2000s**	**Mid-2000s**	**End of 2000s**
	Years since est.	***1–10***	***5–10***	***10–15***	***20–25*** (e.g., waste management, renewable energy, communications, third PPP)	***22–25***	***22–30***	***25–30***	***27–30*** (e.g., wind energy, bio fuels, solar energy)
Sanchez (est. 1947)	**Year**	**1940s**	**1940s**	**End of 1960s-1970s**	**1970s**	**1980s**	**Mid-1980s**	**End of 1980s-1990s**	**End of 1980s-1990s**
	Years since est.	***1–5***	***5–15***	***20–25***	***20–30*** (e.g., distribution activities in pharmaceuticals, shoes, printers, automotive parts)	***33–43***	***35–45***	***43–45***	***40–50*** (e.g., pizza, ice cream, bakery goods, motorbike distribution, food supplies)
Vidal (est. 1945)	**Year**	**1940s**	**Early-mid 1960s**	**1960s**	**Late 1960s-1970s**	**Since early 1980s**	**Since mid-1980s**	**End 1980s**	**1990s**
	Years since est.	***1–5***	***15–20***	***15–25***	***20–30*** (e.g., agriculture and automotive retail, tunneling, mining)	***30–45***	***35–45***	***40–45***	***45–55*** (e.g., real estate, technology)
AZUR (est. 1963)	**Year**	**1960s**	**1960s**	**1960s**	**Mid 1970s**	**1990s**	**Early 1990s**	**Mid 1990s**	**End of 1990s- Mid 2000s**
	Years since est.	***1–7***	***5–7***	***5–7***	***10–15*** (e.g., sports magazine, art gallery)	***25–30***	***27–32***	***30–35***	***35–45*** (e.g., logistics operations, archival services, logistics alliance)

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reputation, each with industry-specific and meta-industry subdimensions. We also illustrate their changing relevance across time, which leads to a number of propositions and finally to our process model.

Industry-specific and meta-industry human capital

We describe industry-specific human capital as the knowledge, skills, and experience that are directly tied to a particular industry, such as knowledge of specific products, technologies, industry stakeholders, industry players, technical skills, and experience with industry-related projects. These industry-specific assets represent an important component of the human capital stock (Neal, 1995) and are critical in the founding phase of firms (Cooper *et al.*, 1994).

In the early stages of MLS at the end of the 1970s, founder Ryan Smith Sr. developed an in-depth understanding of the infrastructure industry. He regularly travelled to Germany and the U.S. to extend his technological knowledge. In the infrastructure industry, knowledge of the various stakeholders is essential. To be able to exploit relevant opportunities, one has to know whom to talk to. Ryan Smith Jr. is aware of this: *'Infrastructure by its nature involves interaction with the public authorities'*. This, combined with entrepreneurial foresight, led Ryan Smith Sr. to establish the first infrastructure public-private partnership (PPP) with the Irish government in 1979. Knowledge about technologies and stakeholders was also helpful at a later stage, when opportunities in the energy and waste management industries appeared in the 1990s. Miguel Sanchez provides another example of in-depth industry-specific knowledge. Sanchez worked as a salesman before he established his own company in the same industry. Equipped with intimate knowledge of different product lines, Miguel saw an opportunity to create his own business by the end of the 1940s and started portfolio entrepreneurship activities later on, especially in the 1960s. In 1996, Miguel's sons' detailed knowledge of the supply chain in the pizza franchise industry enabled them to identify the opportunity to establish a service shop for the motorcycles they used as delivery vehicles. Subsequently, in 1998, they started importing and selling motorcycles. These two seemingly unrelated ventures were thus very closely connected and evolved opportunistically from industry-specific knowledge. In another example, Hernando Vidal, who graduated as an engineer in 1945, accumulated knowledge and vast experience in the construction industry, which enabled him to engage in portfolio entrepreneurship. Due to Hernando's skills in overcoming technical challenges, his company was asked to join a consortium in the 1960s to build a new international airport. In the 1970s, Hernando and his son, Gil, decided to take advantage of their experience in tunnel construction and entered the mining industry. Further demonstrating the critical importance of industry-specific human capital, especially in the initial stages of a firm, Paul Dupont acquired in-depth knowledge of the taxi industry after he bought the AZUR taxi company in the 1960s. He quickly understood that the only way to entice taxi drivers to affiliate with his company was to offer them centrally managed and radio dispatched taxi requests. This led to the foundation of AZUR Taxi Services in 1963. This service company is still one of the seven portfolio companies of the AZUR group today.

Across our cases, we observe the attempt to develop industry-specific human capital among younger generations. At MLS, Sean Smith (third generation) recalls how his first job in the company involved *'removing dead animals from the sides of the motorways.'* Today, he develops knowledge at a managerial level. Gil Vidal, the son of Hernando Vidal, is an engineer and joined the company in 1975. His brother Roberto is an architect. Jesus Sanchez, Miguel Sanchez's eldest son, received training in machine maintenance, began working as a technician, and later became an assistant in the technical department. Miguel's son Pablo worked as a radio technologist before he joined the family firm. At AZUR, a new CEO was hired in 1987 with the explicit mission to train the founder's son, Pierre Dupont.

In contrast to industry-specific human capital, meta-industry human capital consists of the knowledge, skills, and experiences that refer to general entrepreneurial activities, independent of context and industry. Examples include knowledge and skills about how to start a firm, run a business, or manage a portfolio of businesses. Such knowledge is applicable in a wide array of contexts. Ryan Smith Jr. from MLS contends that a major competency is *'the ability to make judgments on whether the business we are investing in is a viable business',* and to *'know how to do business and fundamentally who to do business with.'* General entrepreneurial capabilities were a key characteristic of Ryan Smith Sr. His son contends: *'his leadership style was visionary*

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and boundaries were not something he recognized. 'We can do this if we want to' was his attitude.' Ryan Smith Sr. is described as *'the foremost entrepreneur of his generation'* (Frank Miller, CEO). Sean comments that his father, Ryan Jr., *'loves new businesses; he loves getting stuck in there, working at a corporate level.'* Ryan Smith, in turn, illustrates the entrepreneurial capabilities of his son by stating that *'where Sean has had some money, he decided to start up ventures as opposed to investing his money into a secure option like a bank account.'* Referring to the Smith family as a whole, Ryan Smith Jr. emphasizes its entrepreneurial attitude: *'opportunistic would describe us in a business sense . . . We are not mainstream in our thinking; we would want to break the mold. We want to grow the business; we want to exploit opportunities.'*

Similarly, Sanchez family members are highly proficient in starting and running different businesses. For example, while the company's main business in the 1970s was importing and distributing products, Cristiano, one of Miguel's sons who was working in the business at that time, founded a manufacturing company to enter the business fields of eiderdown manufacturing and the production and sale of plastics. The motivation behind this move was to take advantage of the Central American Common Market (CACM), established in the 1960s. In the 1990s, the family recognized the opportunity to enter the franchise business in the ice cream industry. Business knowledge in the Sanchez family is being actively transferred to the third generation using, for example, an annual forum for younger family members introduced by the family council. Today, each family member in the company's executive committee is involved in at least two different businesses. According to one family member, *'despite all efforts to stimulate creativity in our employees, we feel that the organization is not creative enough and that the innovative ideas always come from the family members.'*

Hernando Vidal is described as *'an entrepreneur, an adventurer, resourceful, of great thrust, empathy and willingness to delegate'* (Carmelo Tiago, CEO). He demonstrated entrepreneurial capacity by exploiting opportunities in a broad variety of industries, such as construction, mining, agriculture, and real estate. Similarly, his son Gil saw opportunities in the IT sector in the 1990s, which led to the foundation of almost 10 new technology- and service-oriented start-ups. AZUR's founder, Paul Dupont, also showed entrepreneurial capacities by creating a sports magazine and by his involvement in an art gallery in the 1970s. Both of these ventures did not follow strategic considerations, as Paul Dupont illustrates: *'I am a gambler, I love the risk, I love the adventure, therefore I became an entrepreneur.'* His son Pierre, who joined AZUR in 1991 and became CEO in 1996, is also an explicit business developer. His pursuit of entrepreneurial adventures has led to diversification from the taxi business into the software (1993), self-storage (1996), and logistics (2004) industries. Emphasizing this entrepreneurial posture, Pierre Dupont states that *'we have to continue grasping opportunities.'* Gerard Milles, advisor to the president at AZUR, adds that *'when there is an opportunity to grasp quickly, the Board can be gathered in 15 minutes and the decision is as quickly made.'* This evidence leads us to support the basic notion that human capital can be conducive to portfolio entrepreneurship (Davidsson and Honig, 2003; Alvarez and Barney, 2004; Plate *et al.*, 2010), but we do not consider general and specific human capital to be main drivers, as conceptualized by Gimeno *et al*. (1997), Becker (1975), and Wiklund and Shepherd (2008). Rather, we distinguish between human capital that is tied to a specific industry and that which refers to general entrepreneurial activities across contexts. Furthermore, we see how the families try to transfer both types of human capital between individuals and across generations. This view is in line with the observation that families have an advantage in sharing and building human capital (Coleman, 1988; Sirmon and Hitt, 2003). The resulting cognitive structures serve as templates for the identification and exploitation of new entrepreneurial opportunities (Gaglio and Katz, 2001; Ucbasaran *et al.*, 2009). We theorize that industry-specific human capital is particularly beneficial to early portfolio activity. In all of our cases, the founders got to know their initial industry intimately, and this knowledge was stored within the family and the firm and later exploited for portfolio entrepreneurship activities. However, we saw in our cases that industry-specific human capital's importance for portfolio entrepreneurship became less prevalent over time, especially with new generations. In contrast to industry-specific human capital, and as shown in Tables 3 and 4, we found that human capital on a meta-industry level, reflective of general knowledge of how to do business and whom to do it with, appeared to be of crucial importance at the later stages of the portfolio entrepreneurship process. This leads us to the following propositions:

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> *Proposition 1: Industry-specific human capital is positively related to portfolio entrepreneurship in family firms, with decreasing relevance at later stages of the portfolio entrepreneurship process.*

> *Proposition 2: Meta-industry human capital is positively related to portfolio entrepreneurship activities in family firms, with increasing relevance at later stages of the portfolio entrepreneurship process.*

Industry-specific and meta-industry social capital

Industry-specific social capital refers to networks in the context of a single industry through which actual and potential resources can be accessed (Granovetter, 1985; Coleman, 1988; Nahapiet and Ghoshal, 1998). Examples include contacts to stakeholders, competitors, industry players, and politicians in a specific industry.

At MLS, *'top management is given huge autonomy to come up with new ideas, to research new projects, to network, and to talk to people that might generate new businesses'* (Ryan Smith Jr.). MLS developed networks in the political sphere that are related to the infrastructure industry, which facilitated the signing of three PPP in 1979, 1984, and 1996. The personal aspect is essential in that process. Sean Smith, referring to his grandfather, adds that *'many people like dealing with MLS because they like dealing with the old man.'* Today, MLS is actively involved in the government´s latest National Development Plan, access and influence which provides important information for emerging business opportunities. In the Vidal case, industry-specific networks are essential as well. Upon graduating from college, Hernando Vidal and his brother-in-law founded a company in the construction industry. In 1969, some of his industry partners asked Hernando to help with the selection of machinery, which eventually led him to enter the automotive parts retail business. In 1970, some of Hernando's contacts in the construction industry recognized an opportunity in the mining industry and invited his company to join a consortium. Twenty years later, another new company was created, extending the product range to construction and forestry machinery, with Hernando on board.

In contrast, meta-industry networks are those that grant access to resources that span industry boundaries. Examples include relationships with business families from different industries, global stakeholders, and general business contacts outside one specific industry. Building relationships across industries is an essential skill of the Smith family. The network had been built by founder Ryan Smith Sr., with Ryan Smith Jr. further extending it. *'Ryan Jr. has been invaluable in developing relationships with business owners, many of whom are family businesses, in North America'* (Frank Miller, CEO). These networks have been transferred to the next generation. Today, Sean Smith states that *'as a business development manager, I am in continual contact with banks and governance bodies, acquiring firms.'* In a similar vein, when founder Miguel Sanchez left Guatemala in the 1950s, his brother, Hector, ran the company until Miguel returned in 1956. Along with the distribution of tire patches and printing machines, Hector introduced different product lines and started new ventures (e.g., in the shoe industry) through his own business connections. In 1988, a Honduran firm was looking for a franchise partner for a pizza chain in Guatemala and contacted the Sanchez family. The same pattern is also visible in Hernando Vidal's case, where networking skills have played an important role in building the business portfolio. From the beginning, Hernando acquired business contacts that either invited or followed him into new ventures and collaborations in different industries. Establishing such a network is a core competence of Hernando Vidal. His son Gil states that *'my father turned around a stone and a friend would come out.'* In the early 1990s, numerous ventures were launched in the real estate and technology sectors, with Hernando receiving encouragement from various business partners. A particularly important aspect of the Vidal family and the firm's meta-industry network is the family's close relationship with other members of the German-Chilean community. Much of their business is done using contacts from this close-knit community. Networks independent of industry also helped the Dupont family grow and expand their business. In particular, Paul Dupont is famous for his connection with senior French politicians, with AZUR benefitting from this connection. This was particularly helpful to navigate media regulation as Paul Dupont founded a television channel in 1984.

Taken together, we saw a common desire of families to pass on both industry-specific and meta-industry networks to younger generations. At MLS, for example, Ryan Smith Sr. established and passed

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on both industry-related and meta-industry networks to his son and grandson. Sean Smith gives an example: *'The chairman of our holding company, Frank Dillon, was my grandfather's lawyer and has introduced me into his vast network.'* The joint family and firm network is passed down and developed across generations, providing access to many new business opportunities. Sean Smith claims that *'the network established by my grandfather and father opens up many doors for me.'* The Sanchez family is also aware of the importance of its industry-spanning network. They consciously introduce family members from different generations to their network so that it is not dependent on a single person, but on the family as a whole.

Our findings show that new subdimensions of social capital are key drivers of portfolio entrepreneurship, namely industry-specific networks and meta-industry networks. Business contacts and ties with government agencies, the subdimensions used by Wiklund and Shepherd (2008), are included in both of these dimensions. Within these dimensions, however, we were not able to detect clear-cut differences regarding structural, cognitive, or relational aspects, as suggested by Nahapiet and Ghoshal (1998). However, once again, the longitudinal aspect of resources is important. Across time, we find constant evidence for the critical role of industry-specific social capital in the development of portfolio entrepreneurship activities. It helps in initializing the first steps in the portfolio entrepreneurship process and remains relevant at later stages through the access to business opportunities. Regarding meta-industry social capital, we observe that this resource category's importance increases over time, providing access to more and more industry-spanning business opportunities at later stages (see Tables 3 and 4). Networks beyond the core industry need time to develop and grow with portfolio entrepreneurship activities. Thus, we suggest:

Proposition 3: Industry-specific social capital is positively related to portfolio entrepreneurship activities in family firms, with constant relevance in the portfolio entrepreneurship process over time.

Proposition 4: Meta-industry social capital is positively related to portfolio entrepreneurship activities in family firms, with increasing relevance at later stages of the portfolio entrepreneurship process.

Industry-specific and meta-industry reputation

In the course of our data analysis, we recognized that the family and the firm reputation are additional drivers of portfolio entrepreneurship (see Tables 3 and 4). While numerous definitions of reputation can be found in the literature (for an overview, see Rindova, Williamson, and Petkova, 2010), Rindova *et al*. (2010: 1033) define it as 'stakeholders' perceptions about an organization's ability to create value relative to competitors.' Similarly, Fombrun (1996: 72) defines reputation as 'a perceptual representation of a company's past actions and future prospects that describes the firm's overall appeal to all of its key constituents when compared to other leading rivals.' Reputation has been recognized as 'one of the most important strategic resources (of an organization)' (Flanagan and O'Shaughnessy, 2005: 445). Consequently, it has received considerable scholarly attention (Fombrun and Shanley, 1990; Deephouse, 2000; Pfarrer, Pollock, and Rindova, 2010). Most importantly, it is regarded as an intangible resource that leads to favorable outcomes, such as improved performance and value creation (Roberts and Dowling, 2002; Shane and Cable, 2002; Shamsie, 2003; Rindova *et al.*, 2010). In the family firm context, reputation plays an especially important role due to identity overlaps between family and firm (cf. Dyer and Whetten, 2006; Zellweger *et al*., forthcoming). Consequently, family members are especially concerned about the firm's reputation in public, as this affects their own reputation as well. Reputation can be regarded as a unique family-influenced resource with numerous benefits at the firm level (Habbershon *et al.*, 2003; Pearson *et al.*, 2008). In general, family firms offer favorable conditions for reputation to develop due to their stability, long-term orientation, continuity in ownership, and long tenure of key employees (Dyer and Whetten, 2006). Similarly to social and human capital, we find that reputation has both industry-specific and meta-industry dimensions.

Industry-specific reputation refers to stakeholders' perceptions about a firms' or an owning family's abilities within a single industry. For example, a family and/or a firm can be well known as a competent provider of IT services, construction materials, or renewable energy solutions. Sean Smith (MLS) states that *'the Smith family has been well respected in the infrastructure industry in Ireland. This Smith family reputation adds credibility to business transactions and propositions.'* Here, the reputations of

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the family and the firm are inextricably intertwined. Sean Smith states: *'When most people think of MLS, they associate it with the Smith family.'* Hernando Vidal established a favorable industry-specific reputation upon completing the construction of Santiago's metro in 1975 on schedule, despite enormous difficulties. The family's reputation in the construction industry is still favorable today, which helps attract new business opportunities. Hernando's strong industry-specific reputation helped him obtain invitations to a number of consortia and projects in different industries in the 1970s, 1980s, and 1990s. This illustrates that reputation can attract outsiders who are looking for partners for their own entrepreneurial ventures.

In contrast, meta-industry reputation does not refer to a specific industry, but rather refers to stakeholders' perceptions about a firm's or an owning family's general business and entrepreneurial abilities. It is independent of industry and may, for instance, refer to the reputation as an entrepreneurial business family that is active across many different contexts. Put differently, its reputation is not built on a particular industry-specific competence, such as tunnel construction, but on its general entrepreneurial capabilities. In his national and international ventures, Ryan Smith Jr. illustrates meta-industry reputation's key role: *'The reputation of MLS as a family firm is a huge selling point when conducting ventures with other family firms.'* Sean Smith supports this view: *'The ability to use the Smith name and its link with MLS instantly gets you a foot in the door.'* When acquisition target firms hear that the *'primary shareholder is a family called the Smith family, and they hear about our legacy, they like the values we possess and what we stand for'* (Ryan Smith Jr.). Markus Hill, financial advisor to MLS, adds: *'The family reputation as a good business partner will be immensely beneficial to MLS' future aspirations.'* He also states that a favorable reputation independent of contexts is helpful when funds need to be raised for entrepreneurial activities: *'All we have to do is put up our hands, and the executive banks are eager to do business with us.'* The favorable meta-industry reputation of the Smith family is also visible in outsiders' statements. For instance, Irish media describe Ryan Smith Sr. as 'one of the outstanding businessmen of his generation.'[3] The widely known entrepreneurial reputation of MLS and the Smith family attracts a magnitude of offers and business ideas. CEO Frank Miller contends: *'There is an endless stream of people trying to sell ideas and investment opportunities to the Smith family. It is like a full-time job trying to review the business proposals we receive.'* At Vidal, general business reputation led to Hernando being invited to become the chairman of a large Chilean corporation in the energy and natural resources sectors. Hernando Vidal's reputation as an entrepreneurial *'doer'* and the general family reputation helped the firm gain access to business opportunities. Today the family receives numerous potential business proposals from different industries every year. Similarly, the Sanchez family's activities in the 1970s and 1980s resulted in an excellent reputation in Guatemala's business world. It helped in attracting business opportunities, such as the pizza franchise in Guatemala in 1988.

Our case studies, thus, show that family firms offer a favorable context for establishing reputation (Dyer and Whetten, 2006; Zellweger *et al*., 2010), which is, in turn, conducive to portfolio entrepreneurship activities. So far, however, reputation has not been considered as a key driver of portfolio entrepreneurship activities (Alvarez and Barney, 2004; Wiklund and Shepherd, 2008). In addition, distinguishing between industry-specific and meta-industry reputation seems appropriate in our cases. While our case study evidence indicates that the importance of industry-specific reputation is constant over time, the importance of meta-industry reputation increases. As exemplified by MLS, a reputation that reflects general business capabilities and depicts families and firms as truly entrepreneurial takes time to evolve and is extremely valuable at later stages, attracting rich streams of business proposals across industries and countries. Building on this reasoning and as evidenced in Tables 3 and 4, we suggest the following propositions:

Proposition 5: Industry-specific reputation is positively related to portfolio entrepreneurship activities in family firms, with constant relevance in the portfolio entrepreneurship process over time.

Proposition 6: Meta-industry reputation is positively related to portfolio entrepreneurship activities in family firms, with increasing relevance at later stages of the portfolio entrepreneurship process.

[3] This quote stems from an article in the Irish *Evening Herald*. Due to confidentiality reasons we are not able to provide a more accurate citation.

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Combining the pieces: toward a process model of portfolio entrepreneurship

Summarizing our findings, we have identified six distinct resource categories that contribute to the portfolio entrepreneurship process in family firms. Our longitudinal case studies, supported by the timelines depicted in Tables 3 and 4, show that the importance of each resource category varies over time. Across all cases we are able to identify a general underlying pattern of how the different resource categories follow each other in the portfolio entrepreneurship process. Our cases suggest that building up industry-specific human capital is the first step in this process. This initial knowledge leads to a credibility and competence advantage in a specific industry. This advantage, in turn, creates a favorable reputation of the firm and its family representatives. Such a reputation aids in building and extending industry-related networks, which provides access to business opportunities and leads to the first wave of portfolio entrepreneurship activities. With the first entrepreneurial activities beyond the original industry, family firms acquire knowledge about how to do business across industries and how to manage a portfolio of firms. Consequently, these firms and their families develop a reputation for being highly entrepreneurial with broad interests beyond a single industry. This meta-industry reputation helps in building global networks to other firms and, more specifically, to other business families, further attracting business opportunities and ultimately leading to a second wave of portfolio entrepreneurship activities (Table 4).

Taken together, and as an extension to Tables 3 and 4, our findings regarding the longitudinal portfolio entrepreneurship process in family firms are depicted in Figure 1. The figure is built on our propositions and illustrates the sequence of when each resource pool appears to be most relevantly deployed. In addition, the changing importance of each resource pool across time is reflected in the thickness of each bar. Even

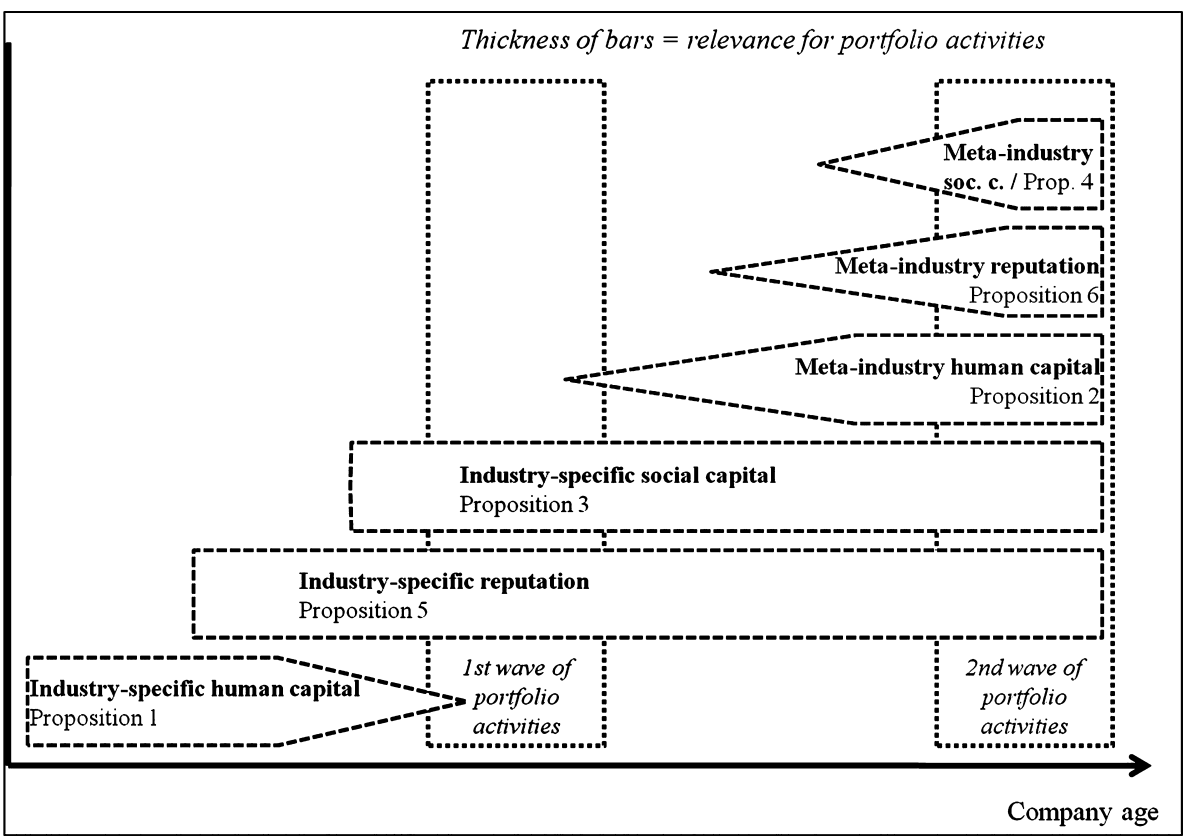

Figure 1. Process model of portfolio entrepreneurship in family firms

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though it is possible that this evolutionary process may not be strictly sequential and may overlap at times, our analysis suggests this underlying pattern.

DISCUSSION

How do family firms develop a portfolio of businesses? We analyze four longitudinal case studies from Europe and Latin America using an RBV perspective in order to gain new answers to this question. As a result, we make several contributions to theory and practice.

First, we add to portfolio entrepreneurship literature by explicitly investigating the process of portfolio entrepreneurship in family firms. This addresses a very important research gap, as knowledge about this process is scarce and portfolio entrepreneurship plays an important role in the economic landscape (MacMillan, 1986; Westhead and Wright, 1998; Rosa and Scott, 1999; Carter and Ram, 2003; Iacobucci and Rosa, 2010). Moreover, this process is particularly relevant but largely unexplored in the family firm context (Carter and Ram, 2003). Our resource-based approach with four longitudinal case studies enabled us to develop a resource-based process model of portfolio entrepreneurship in family firms. While we agree that there may be overlaps and differences from case to case (for instance, in terms of speed), we are able to illustrate an underlying general pattern of the sequence of resource deployment in the portfolio process and their interdependencies. This advances our general understanding of how business portfolios emerge in family firms.

Second, we contribute to RBV literature in the context of portfolio entrepreneurship by identifying new resource subdimensions that are of relevance in the portfolio entrepreneurship process. We do not find a clear difference between general and specific human capital (see Gimeno *et al.*, 1997; Wiklund and Shepherd, 2008) or among the three subdimensions of social capital suggested by Nahapiet and Ghoshal (1998). Rather, we suggest a distinction along the lines of industry-specific and meta-industry dimensions for both human and social capital. In addition, we introduce reputation as a critical resource for portfolio entrepreneurship. As with human and social capital, we distinguish between industry-specific and meta-industry dimensions. We see how a favorable business and family reputation, both within and beyond a specific industry, can be a pull factor, attracting a high number of business opportunities, which facilitates the creation of business portfolios (cf. Miller and Le Breton-Miller, 2005; Lechner and Leyronas, 2009). While controlling families actively invest in human and social capital across generations to exploit new entrepreneurial ventures (portfolio push), reputation seems to serve as an opportunity attractor (portfolio pull).

Additionally, it became evident that the importance of certain resource categories changes over time. We find that industry-specific social capital and reputation have constant relevance across time; the three meta-industry resource categories' relevance increases over the years; and industry-specific human capital decreases in importance over time. This last finding generally supports the same contention made in habitual entrepreneurship research (Shepherd *et al.*, 2003; Baron and Ward, 2004; Ucbasaran *et al.*, 2009; Ucbasaran *et al.*, forthcoming). However, we extend these studies by creating a more nuanced picture of what type of human capital may be concerned and emphasize the need to overcome a static perspective on human capital (Unger *et al.*, 2011). On one hand, preserving and passing on highly context-specific knowledge among family members is a key strength of family firms (Hitt *et al.*, 2001; Sirmon and Hitt, 2003; Hatch and Dyer, 2004). On the other hand, human capital's ability to serve as a source of competitive advantage may erode over time and become obsolete. The unlearning of existing skills and learning of new skills becomes increasingly important over time because experienced individuals rely on heuristics, and mental shortcuts and, therefore, are more likely to fall prey to cognitive ruts (Shepherd *et al.*, 2003). These dangers associated with strong and deeply embedded industry-specific human capital passed down across family generations are heightened in a dynamic business environment in general (Bettis and Hitt, 1995) and in the portfolio context in particular, given that portfolio activity often crosses industry boundaries and requires adaptation. We suggest that the development of meta-business knowledge may be a way to overcome the liabilities of overly embedded industry-specific human capital.

Third, we contribute to family business research, as we are able to show how new entrepreneurial activity comes into being in the family firm context. While previous cross-sectional research has applied a stewardship (e.g., Eddleston and Kellermanns, 2007; Eddleston, Kellermanns, and Zellweger, 2008) or an agency perspective (Schulze, Lubatkin, and Dino, 2003), by using a resource-based perspective in a longitudinal setting we are able to shed new light on the processes that lead to entrepreneurial portfolios in

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family firms. Our findings on human, social, and reputational resources illustrate the unique context that family firms constitute in relation to resource management and the concept of familiness (Habbershon *et al.*, 2003; Zellweger *et al*., 2010).

Beyond the theoretical contributions, our paper also adds value to family business practitioners. Potential portfolio entrepreneurs can gain useful insights on how a business portfolio can actually be built up over the long term. We demonstrate which resources are most important for the portfolio entrepreneurship process at different points of time, and our findings emphasize the critical importance of transferring relevant resource pools to the next generation. These findings are also relevant for existing portfolio entrepreneurs who wish to enable their offspring to be portfolio entrepreneurs in the future. Furthermore, our study speaks to the scientific entrepreneurship community in general. Our research method of using qualitative data amassed in a global collaborative research project illustrates the potential of such research efforts and, at the same time, provides guidance for other large-scale research initiatives. We show that with a carefully developed research framework and a common methodology for all involved researchers, unique insights on a global level can be generated.

LIMITATIONS AND FUTURE RESEARCH

One limitation of our paper is that the case studies used have not all been developed by the authors. However, as illustrated in the method section, all possible precautions in terms of theoretical foundations, research instruments, reliability checks, training of involved researchers, and usage of a common data collection methodology were taken to assure the highest possible level of quality, reliability, and validity of our findings. While we admit that certain limitations (for example, about the field work of the individual researchers) remain, we believe this potential limitation needs to be weighed against the novelty of our findings. Similar arguments and counterarguments can be applied to other highly influential global research projects, such as Global Entrepreneurship Monitor (GEM)[4] or the Panel Study of Entrepreneurial Dynamics (PSED).[5]

Our study opens up numerous avenues for future research. Our resource categorizations and propositions could be tested in a quantitative study. For instance, years of family control could be tested as a moderator in the relationship between industry-specific human capital and the number of portfolio companies under control. A negative moderation effect would then demonstrate the decreasing importance of this resource pool across time. This procedure could also be applied to the other five resource pools. It would be particularly interesting to investigate the newly identified roles of reputation in more detail. Moreover, the process model as a whole could be tested, paying special attention to the proposed sequence of the resource deployment. In that regard, it could be worth investigating in detail how one resource category actually evolves into the other—for example, the important role of reputation in bridging human and social capital (see Coleman, 1988). Also, further research should explore how an industry-specific resource evolves into a meta-industry resource. For instance, our study suggests that human capital evolves from industry-specific to meta-industry through the accumulation of other types of resources (i.e., industry-specific social capital and reputation) and a first set of portfolio activities where broader business and portfolio management knowledge is developed. In addition, tacit knowledge as a dimension of human capital could be investigated. Even though we do not find evidence for the distinction between tacit and explicit knowledge in the portfolio entrepreneurship processes, it is a topic that has received scholarly attention in the family firm context (Sirmon and Hitt, 2003). Our findings may offer value in the nonfamily firm arena as well. While family firms constitute a very specific context, we encourage portfolio entrepreneurship scholars to investigate the relevance of each resource pool in the portfolio entrepreneurship process across time in the nonfamily firm context. This could lead to valuable insights about how these two types of organizations differ and what they could learn from each other. Lastly, and independent from our content stream, we hope to stimulate further global collaborative research efforts, as unique data and insights can be gained.

CONCLUSION

Our study investigates the process of portfolio entrepreneurship in family firms. Through the

[4] For more information and publications see http://www.gem-consortium.org.

[5] For more information and publications see http://www.psed.isr.umich.edu/psed/home.

investigation of four in-depth, longitudinal family firm case studies from Europe and Latin America, we identify six distinct resource pools that are relevant for the portfolio entrepreneurship process to develop. In addition, we suggest that the importance of these resources varies across time. These findings allow us to build a procedural model of portfolio entrepreneurship in family firms, which contributes to literature on portfolio entrepreneurship, the RBV, and family business, as well as to practice. Moreover, our study opens up numerous avenues for future research.

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APPENDIX

Interview guideline of the STEP Project (only sections relevant for this study)

History and externalities:

1. Describe the historical development of your business or business group with a *focus on the family members' roles and involvement*.
2. Describe the major *entrepreneurial events and initiatives* during your history that have made you what you are today—think in terms of 20-, 15-, 10-, and 5-year blocks.

Familiness resource categories (including all resources that were covered in the interviews)
Networks

1. Describe how external *networks and personal connections* play a role in the development of your business and/or for generating entrepreneurial opportunities.
2. Describe how particular family members (historically and today) play a role in initiating, maintaining, and/or exploiting opportunities in the networks.

Family relationships

3. How would you describe the *relationships between family members* and the impact on the development of your business or business group?
4. Describe how your family relationships *enhance or constrain your ability to act like entrepreneurs*.

Reputation

5. What role does the *family's history* play in creating and using the networks and connections for development or generating entrepreneurial opportunity?
6. What role does the *family's reputation and goodwill* play in creating and using the networks and connections for development or generating entrepreneurial opportunity?

Knowledge

7. What specific knowledge and competencies are crucial for *competing in your industry*?
8. In your business, how are these specific knowledge and competencies *related to the family's ownership and or involvement*?

Financial capital

9. Describe how your family ownership/control *enhances or constrains the allocation of capital* as it relates to growth and entrepreneurial opportunities.
10. How would you describe the *risk profile* of your family ownership group?

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Decision making

11. How would you describe *the decision making processes* in your businesses or business group?
12. How does your family's ownership and or management *enhance or constrain your decision making* as it relates to growth and entrepreneurial opportunities?

Leadership

13. Describe how your *family leadership* (ownership and management) plays a role in creating an *advantage or constraint* for your family business or group.
14. What distinct resources or capabilities do you associate with your family leadership for generating new entrepreneurial opportunities?

Culture

15. Describe your *family's core values* that are foundational for your family business or group and how they relate to growth and entrepreneurship.
16. Describe your *family's vision* for continued ownership and value creation and whether it includes entrepreneurial action.

Governance

17. Describe *the governance of the business or business group*—how you have organized the family's ownership in relation to management.
18. How strategic or intentional are the governance structures and business models *established in order to grow and act entrepreneurially* (versus more evolutionary as the family has changed over each generation)?

Entrepreneurial performance

19. What are the *family's goals* for the future as you understand them?
20. What are the most *important entrepreneurial outcomes* to the ownership and management of the business or group (i.e., traditional entrepreneurial activities: new products, new businesses, innovations)?

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