Family Mindset as Predictor of Entrepreneurship in German Family Firms

DISSERTATION
of the University of St. Galllen,
Graduate School of Business Administration,
Economics, Law and Social Sciences (HSG)
to obtain the title of
Doctor Oeconomiae

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Dissertation Nr. 3725

Difo-Druck GmbH, Bamberg 2009

The University of St. Gallen, Graduate School of Business Administration, Economics, Law and Social Sciences (HSG) hereby consents to the printing of the present dissertation, without hereby expressing any opinion on the views herein expressed.

St. Gallen, November 23, 2009

The President:

Prof. Ernst Mohr, PhD

Acknowledgements

Without the backing and cooperation from various individuals through various means, this dissertation would not have been possible.

First of all, I would like to thank my dissertation advisor, Prof. Dr. Thomas Zellweger and my co-advisor Prof. Dr. Urs Fueglistaller. Both have been wonderful advisers and I am very grateful for the way they assured and supported me in my project. While I was granted enormous freedom in finding my niche and shaping my topic, they were always available to provide valuable feedback, necessary guidance and inspiration when I needed it.

Furthermore, I would like to express my deep appreciation for the business families who dedicated their precious time to share their situation and participate in my survey. In this context, I would also like to name those families which I got to know better in the process of this dissertation. The personal interaction and the opportunity to directly hear their views and learn from their experience was highly rewarding and perfectly complemented my quantitative study.

Last but not least, my special thanks go to my family and all the friends that accompanied me on my way towards the doctorate and supported me with their help in words and deeds. In particular, I would like to mention my parents Heinrich and Renate and my fiancé Christoph for their constant encouragement and great support in every possible way. It is therefore that I dedicate this dissertation to them.

London, December 2009 Julia Valerie Hofmann

To my parents Heinrich and Renate

and my fiancé Christoph

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List of Abbreviations

CE	Corporate entrepreneurship
EO	Entrepreneurial orientation
EO3	Entrepreneurship construct of innovativeness, risk taking, proactiveness
EO5	Entrepreneurship construct including innovativeness, risk taking, proactiveness, competitive aggressiveness and autonomy
I	Innovativeness
RT	Risk taking
P	Proactiveness
CA	Competitive aggressiveness
A	Autonomy
FF	Family firm
NFF	Non family firm
FM	Family active in management
FO	Family orientation
FTE	Full time employees
GT	At least one generational transfer completed in the past
IGI	Involvement of multiple generations of family in management
O	Family ownership

P	Self-perception as family business
SME	Small and medium sized enterprises
TI	Transfer intention
V	Consistency of family and firm vision
AU	Australia
BL	Belgium
CH	Switzerland
GER	Germany
ES	Spain
EU	Europe
NL	Netherlands
SE	Sweden
UK	United Kingdom
US	United States
N.s.	Not significant
N.a.	Not applicable
Fo	Forthcoming

Executive Summary

Both family business and entrepreneurship are well established topics that attract considerable attention in research and practice. Yet the overlap of both topics – entrepreneurship in family firms – is still a relatively young and unexplored field. The aim of this dissertation is to study the predictors of entrepreneurship in family firms and specifically to explore how the family mindset impacts the entrepreneurial behaviour of family firms.

To this end, agency and stewardship theory are employed to form a complementary framework where each theory is used to depict one of two idealized, opposing family mindsets which are then linked with entrepreneurial behaviours of the family business.

In accordance with these theoretical assumptions, a research model to predict entrepreneurship is developed and tested on a sample of 134 family businesses from the German speaking region.

Using multiple regression and correlation analyses, the study demonstrates the importance of family mindset for entrepreneurship in family firms. Moreover, the findings illustrate that the impact of a particular family orientation is not univocal for all family firms but conditional to the characteristics of the family business at stake which supports the general need for a more differentiated treatment of family influenced firms.

On a theoretical level, the study supports the complementary use of stewardship and agency theory to model business family mindset and corresponding behaviours. Yet in contrast to the prevailing opinion, this study shows that agency elements can have positive implications for entrepreneurship in family firms, while stewardship elements can indeed have negative consequences in certain settings.

1 Introduction

The aim of this chapter is to provide the reader with an outline of the dissertation project. The audience is first introduced to the present situation where both entrepreneurship and family business research attract substantial attention, but where the overlap of these topics – entrepreneurship in family firms – remains a largely understudied field. In the following, the objective of the study, namely to contribute to the understanding of the predictors of entrepreneurship in family firms, will be presented. The chapter concludes with an overview of the course of investigation throughout this manuscript.

In the following study, firms will be denominated as family firms or family businesses under the condition that a kinship group of people exercises significant influence with a minimum of 50 percent ownership in private firms or 30 percent in publicly listed firms. The term entrepreneurship is defined to include acts of organizational creation, strategic renewal, or innovation that occur within or outside an existing organization[1].

1.1 Problem outline

The conventional notion of entrepreneurship is often confined to the founding phase of organizations where it is associated with creative ideas, courageous individuals and the difficulties of financing and setting up a business.

Yet entrepreneurship does not end with a successful initial establishment in the market. Rather, entrepreneurial qualities such as innovativeness, the willingness to take risks and demonstrate initiative in shaping the firm's markets need to be

[1] See Chapter 2 for detailed discussion of family firm and entrepreneurship definitions.

as much considered in their value to established organizations, where they are key ingredients to the pivotal processes of strategic renewal and change. These capabilities are particularly relevant in times where the only constant thing in business is change (Drucker, 1985). The globalization of markets and rapid technological progress put immense demands on firms to cope with uncertainty and keep up with competition (Hamel, 2000). Without an entrepreneurial orientation, firms fail to identify new opportunities and adapt to changes in the market – which ultimately signifies the end of their existence (Ahuja & Lampert, 2001; Sirmon & Hitt, 2003). This situation applies to businesses in Western Europe all the more, which, unlike many emerging economies, can typically not compete with cheap labour or raw materials. In fact, these companies depend on the ability to innovate in order to sustain their market position and ensure their long-term prosperity (Lumpkin & Dess, 1996; Zahra, 1996; Zahra, Neubaum & Huse, 2000). The positive impact of entrepreneurial orientation for business performance has also been tested in quantitative empirical research. In a meta analysis reviewing 51 relevant studies, Rauch et al. (2009) report that entrepreneurial orientation and business performance are overall positively related and that this relationship is robust both to different operationalizations of key constructs and cultural contexts.

An entrepreneurial orientation is by no means a matter of chance. Of course, various aspects within the organization and its environment affect its formation. But at the core, an entrepreneurial orientation is an active strategic position that is adopted by the firm leadership and promoted across the organization (Child, 1972). That is, organizations and their leaders have a choice and can influence and change their level of entrepreneurial orientation and corresponding behaviour (Ireland, Covin & Kuratko, 2009; Kuratko & Audretsch, 2009).

In line with the general desirability of an entrepreneurial orientation and the possibility to actively change of firm's profile in that respect, there is a proper boom in the literature on corporate entrepreneurship – the umbrella term for

studies that aim to identify the characteristics and antecedents of entrepreneurship in established organizations (Phan, Wright, Ucbasaran & Tan, 2009). However, there is still little research that addresses the drivers of entrepreneurship in family businesses (Kellermanns & Eddleston, 2006).

This is surprising, given that businesses with dominant family influence, rather than those without, constitute the most frequent organizational setting around the world (Cappuyns, Astrachan & Klein, 2003; La Porta, Lopez-de-Silanes, Shleifer, 1999). Moreover, there is a substantial body of literature which affirms that the interplay between family and business in family influenced organizations creates a distinct setting that requires specific consideration and study in its own right (Gersick, Davis, Hampton & Lansberg, 1997; Habbershon, Williamson & MacMillan, 2003; Tagiuri & Davis, 1996).

The gravity of this neglect is very well captured by Dyer (2003) who recounts an article titled "Tracking Strategy in an Entrepreneurial Firm", written by the prominent management professors Mintzberg and Waters and published in the venerable Academy of Management Journal (1982). The article is a case study on the rise of Steinberg, Inc., a large family owned business in Canada. Therein, every detail of company history from the humble beginnings as a small fruit and vegetable store to the large supermarket and retail conglomerate with revenues in excess of $1 billion is meticulously analyzed. Only the fact that the business was family owned seemed not relevant to anybody at the time and was thus not further considered. At the end of the article, Steinberg is pictured as a "giant with a powerful economic position" (p. 491) and sound prospects for a bright future. Yet in reality, the story continued slightly different: Soon after the death of the founder and patriarch of the family, Sam Steinberg, the business fell apart – according to Dyer (2003), mainly, due to the dynamics in the Steinberg family, a factor that was totally ignored in the case study. In particular, Dyer cites Sam Steinberg's pride and his consideration of the business as an extended family that had caused him to settle too generously with his striking workers, an agreement

which later put the firm at a serious cost disadvantage against its competitors. Moreover, he suggests that nepotism was at work when Sam Steinberg appointed his son-in-law as president against the advice of his entire senior management team. Last but not least, the ongoing hostilities between Sam Steinberg's heirs, his three daughters, must have paralyzed the steering and control of the company. Ultimately, as it was impossible for the family to settle for a common goal and amid escalating problems, the course of events forced the family to sell the family business (Dyer, 2003).

This anecdote illustrates how ignoring the family variable in a family business context means failing to identify one of the greatest challenges of family influenced businesses on their way to long-term prosperity.

Instead of thorough research and theories to explain the role of the family in the entrepreneurial process, often, conventional wisdom on family influence is called upon to assert family businesses as either risk averse and lacking the boldness to exploit new business opportunities (Morris, 1998) because of wealth preservation motives (Carney, 2005), the strong need for independence witnessed in patriarchal leaders or the lack of talent in the family offspring (Donckels & Fröhlich, 1991; Kets de Vries, 1996; Ward, 1997). Alternatively, exceptional commitment from the family network, long-term orientation, personal modesty and informal decision making practices may be singled out to explain very entrepreneurial behaviours (Barney, Clark & Alvarez, 2003; Carney, 2005; Davis, 1983; Donnelley, 1964; Tagiuri & Davis, 1996). Evidently, familyness is an ambivalent quality and family firms may exhibit a broad range of behaviours. Admittedly, many clichés are also well founded and true. Yet by serving conventional wisdom, one fails to answer why certain business families continue to excel in the virtue of entrepreneurship over many generations as much as one fails to elaborate the very qualities that make these business families so successful. Rather than exceptional luck in circumstances, these families are

likely to have certain orientations and guidelines for their behaviour – embedded in the family mindset – that facilitate entrepreneurial behaviour and success.

With a better understanding of this mindset, one could help family businesses around the world in taking advantage of business opportunities in their environment and thereby increase their chances of long-term survival, profitability and growth as well as overall economic development.

1.2 Objective of study

The objective of this dissertation is to contribute to the understanding of the predictors of entrepreneurial behaviour in family firms by exploring how the family mindset impacts the entrepreneurial orientation of family firms. By family mindset, this study understands essentially the family's philosophy of life – the set of assumptions, beliefs, feelings and values that are collectively held by the family members and provide the guidelines for their attitudes, decisions and behaviours (Bernal & Ysern, 1986; Dunn, 1999; Guttman, 1991; Lumpkin et al., 2008; Reiss, 1981; Rodgers & White, 1993). The family mindset is assumed to be a key driver of orientations and behaviours of the family business organization, even if it is a phenomenon that originates from outside the business system – namely in the family group and at the family level (Aldrich & Cliff, 2003; Habbershon & Pistrui, 2002; Miller & LeBreton-Miller, 2005).

The existence and effects of such a family mindset are unique to family businesses which are characterized by the very interaction of the family and the business system (Hollander & Elman, 1988; Lansberg, 1983; Luhmann, 2002; McCollom, 1990; Whiteside & Herz-Brown, 1991). In non-family firms, there is no comparable phenomenon to affect the organizational behaviour in such a long-lasting, significant way. Non-family employees, directors or shareholders of a business organization are unlikely to have a comparable transgenerational

perspective and impact. Even in special cases such as partnerships – a common set-up with law firms and consultants – partners tend to have a temporary stake in the business (expiring with retirement). They are also most likely to influence their organizations as individuals, not as groups and with business logic rather than family logic, more from within the business system than from a system outside the business-level. This is of course not to say that non-family firms generally lack culture and an identifiable organizational mindset – every organization has a distinct identity embodied in its structures, practices, rituals, anecdotes and possibly its leadership figures (Albert & Whetten, 1985, Dutton & Dukerich, 1991; Fiol & Huff, 1992; Trice & Beyer, 1993). But as non-family firms generally lack a similar source of influence from a non-business level system, general management research models tend to ignore variables outside the business system in research on organizational culture, orientations and behaviour (Dyer, 2003; Rogoff & Heck, 2003). Even in dedicated family business research, there are hardly any concepts and theories that integrate the complex role of family mindset for the entrepreneurship of family influenced firms (Rogoff et al., 2003) and thus extend beyond the business system of analysis. The aim of this dissertation "Family Mindset as Predictor of Entrepreneurship in German Family Firms" is indeed to fill the gap and integrate the family mindset, a phenomenon at the family level, in research on family firm entrepreneurship, a firm-level behaviour, and identify the patterns in family mindset that promote entrepreneurial behaviour in family firms.

In pursuit of this research project, the study aims to achieve the following sub-goals:

(1) Firstly, to provide a thorough review of the relevant literature. Since the research interest is at the overlap of family business and entrepreneurship research, theoretical and conceptual contributions from both fields shall be taken into account. Furthermore, a comprehensive analysis of the scattered evidence from past empirical studies on family firm entrepreneurship shall be completed.

(2) The second aim is to find an appropriate theoretical explanatory framework that links family mindsets with firm entrepreneurial behaviours. For this purpose, a combination of agency and stewardship theory shall be tested. This study will firstly elaborate the rationale of this approach and subsequently employ the framework for the development of hypotheses.

(3) Consecutively, this study aims to validate the hypotheses in an empirical analysis. In order to do so, the realization of a quantitative, cross-sectional survey among family firms is intended. As for the sample, the study targets to include different types of family firms with regard to size, ownership generation and ownership concentration in order to compare their characteristics and relationships. The geographical origin of the sample will be the German speaking region, on which very little empirical research has been conducted so far.

(4) The fourth aim is to interpret the empirical evidence and discuss the conclusions for the research framework. These conclusions will then be summarized to form the implications for theory and practice. Specifically, the study may contribute to family business and entrepreneurship research with regard to the concepts and theories applied in this study as well as its additional empirical evidence. To practitioners, precise recommendations to enhance the entrepreneurial activities in their businesses shall be provided on the basis of this study's findings.

The dissertation offers novelty value in four areas:

(1) Firstly, in its dedicated focus on family-level phenomena. Most often, studies in family firm and entrepreneurship research have adopted a firm-level view (Davidsson & Wiklund, 2001; Nordqvist, 2008). Yet this conventional focus on the business-level has been criticized to neglect relevant family dynamics such as family functioning which are located at the family level but have the potential to affect firm-level behaviours (Chua, Chrisman & Sharma, 1999; Habbershon & Pistrui, 2002; Lumpkin et al., 2008; Martin & Lumpkin, 2003; Nordqvist, 2008).

By addressing the phenomena at the family-level and including them in an extended research framework on firm behaviour, this study moves on new ground.

(2) Secondly, in the application of agency and stewardship theory as combined framework to explain the impact of family mindset and dynamics on entrepreneurial behaviour of the family firm. Extant research has employed a number of theoretical approaches to the study of family firm entrepreneurship; many researchers even refrained from using any theoretical explanatory model. Testing the recent suggestion to use agency and stewardship theory as explanatory approach to understand how family orientations influence entrepreneurial behaviour may contribute to the search for suitable theoretical frameworks in family firm entrepreneurship (Nordqvist, 2008).

(3) Thirdly, in its particular attention to different types of family firms. The family attitude and influence on businesses may vary significantly depending on the specific forming of the family firm ownership structure, the family's operational involvement, the size of the operations and the generation of ownership. Although Miller (1983), who is a point of reference for most researchers in the field, calls for a distinction by type of firm when investigating entrepreneurial behaviours, previous empirical studies have generally not made such a distinction (Nordqvist, 2008). The pioneering efforts of Craig & Moores (2006), Salvato (2004) and Martin & Lumpkin (2003) clearly demonstrate the distinctive nature of entrepreneurial patterns depending on the type of firm at stake. Their results shed new light on the disparity of former findings and questions the reliability of undifferentiated analyses overall. In line with this, this dissertation aims to discern among different types of family firms and to provide a more differentiated, precise analysis in studying predictors of entrepreneurship in family firms.

(4) The study may also provide novelty value in the characteristics of its sample. In the past, the cultural and societal background of family businesses was identified to influence key characteristics of the business family and their entrepreneurial behaviours (Gundry & Ben-Yoseph, 1998; Pistrui, Welsch, Wintermantel, Liao & Pohl, 2000). In a similar way, the size of operations was identified as relevant context determinant for family firm behaviour (Smith, 2007). Yet up to present, most evidence on entrepreneurship in family firms originates from small firms in the U.S., while studies from other regions and larger businesses is scarce (Nordqvist, 2008). Thus, by conducting an empirical analysis on the German speaking region, one of the most important economic regions in the world and by observing especially large and old firms, this dissertation attempts to fill another gap in the literature.

Having discussed the goals and potential contributions of this dissertation project, it is also important to outline its boundaries.

(1) The dissertation will not develop new theory but seeks to test and contribute to advancement of an existing theory. Specifically, in a deductive approach, it aims to employ a recently suggested combination of existing theory to guide the development of the research framework and hypotheses and subsequently test this theory in an empirical survey.

(2) Since the aim of this dissertation is to test theory, quantitative research with its objectivity and rigorous statistical methods is given preference over qualitative research. As a consequence, this study does not provide the rich, anecdotal and in-depth description of the phenomenon which would be available from the examination of case studies.

(3) Moreover, the survey design employed will be cross-sectional and not longitudinal[2]. Evidently, by virtue of knowing the temporal order of events, a longitudinal study would be superior to a cross-sectional analysis since it infers causality rather then associations in the observed relationships. However, the efforts to conduct a longitudinal study were beyond the means and time frame available in this dissertation project.

(4) Furthermore, the empirical part of this study will not afford a comparison with non-family firms, but only between different types of family firms. Since the focus of the study is to assess the impact of family mindset on entrepreneurial behaviours, a comparison with non-family firms – which by definition, do not have significant family influence – would be of little relevance. In contrast, as this dissertation aims to provide a comprehensive review of extant evidence, the study will include information on the differences between family and non-family firms in the review of former empirical efforts.

(5) Last but not least, the study will not provide a holistic model on the drivers of entrepreneurship. Instead, the study focuses specifically on the effects related to the family mindset and attitudes. Of course, entrepreneurship is really the result of the complex interplay of multiple influences and this study's focus will only account for a fraction of the entire phenomenon.

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[2] A cross-sectional design is like a 'snapshot' of the frequency and characteristics of the items under study – data from some subset of a population is collected at one particular moment in time. A longitudinal study involves the repeated observation of individual cases over a period of time (Norman, 1975).

1.3 Course of investigation

The dissertation is divided in five structural parts: (I) Introduction, (II) Literature review, (III) Research framework, (IV) Empirical analysis and (V) Concluding part.

Part	Chapter	Content
I INTRO-DUCTION	Chapter 1:	Introduction to research interest, object of study and course of investigation
II LITERATURE REVIEW	Chapter 2:	Foundations, definitions and concepts for the study of entrepreneurship in family firms
	Chapter 3:	Literature review of findings from past empirical studies on entrepreneurship in family firms
III RESEARCH FRAMEWORK	Chapter 4:	Development of theoretical framework and hypotheses
IV EMPIRICAL PART	Chapter 5:	Design and description of empirical study
	Chapter 6:	Presentation and discussion of empirical results
V CONCLUDING PART	Chapter 7:	Conclusions, limitations and implications of study

Figure 1: Structure of the dissertation manuscript

Chapter one, the introductory part of this dissertation, provided an overview of the research problem, established the objective of the study and outlines the intended course of investigation.

The second part of the dissertation, the literature review, consists of two chapters. The first one, chapter two, provides the theoretical frame of reference in family business and entrepreneurship research. The next one, chapter three, proceeds with a review of findings from empirical studies.

The third part of the manuscript, chapter four, synthesizes the findings from the literature review and proposes the research framework for the consecutive

empirical analysis. Specifically, it engages in the development of hypotheses and offers a rationale for the distinction between different types of family firms.

Part four is dedicated to the empirical study and consists of two chapters. In chapter five, the study design, the operationalization of the research framework and descriptive information of the sample are given. Chapter six contains the detailed presentation and consecutive discussion of the empirical findings.

To conclude, part five and chapter seven summarizes the findings from the empirical study, points out implications for theory and practice and advises against the limitations of the study.

2 Theoretical Foundations

The purpose of this chapter is to provide the theoretical foundations of this dissertation project. The first part of this chapter, 2.1, is dedicated to family business research and commences with an overview of the economic relevance of family firms followed by an appraisal of family business as field of research. Subsequently, central contributions regarding the appropriate definition of family firms will be reviewed in order to place the approach chosen for the dissertation in its context. Furthermore, this chapter presents the rationale and conceptual efforts supporting the distinctiveness of family firms. Finally, the role of family as variable in general organization theory will be reviewed. The second part of this chapter, 2.2, addresses the theoretical basics in entrepreneurship research. The chapter begins with a review of entrepreneurship research. The next section is dedicated to the definition of entrepreneurship. After this, attention is directed to the research area that investigates entrepreneurship in established businesses and as organizational process. In line with this theoretical stance, the section terminates with the presentation of the construct of entrepreneurial orientation. The third part, chapter 2.3, attends to the theoretical contributions to study entrepreneurship in family firms – a research focus literally at the intersection between family business and entrepreneurship research. In this context, three major suggestions will be presented and critically discussed.

2.1 Foundations in family business research

This chapter addresses first the economic relevance of family businesses in chapter 2.1.1. In the next step, a brief summary of family business as field of research is given in chapter 2.1.2. The subsequent section, chapter 2.1.3, deals with the definitional debate of the term family business which is followed by the

rationale for the distinctive nature of family businesses in chapter 2.1.4. Chapter 2.1.5 concludes the foundations of family business research with a discourse over the role of family as variable in general organization theory.

2.1.1 Economic relevance of family businesses

In the notion of the general public and academic researchers alike, family businesses have long had a shadowy existence (Dyer, 2003). Since the conceptualization of the modern corporation by Berle & Means (1932), attention focused on the presumably prevailing organizational form of the widely held corporation, in which ownership is dispersed among a large group of unrelated shareholders and control is concentrated in the hands of hired managers[3]. In reality, only a minority of firms are widely held but are controlled by either families or governmental institutions (La Porta et al., 1999). International studies report that families control between 60 to 95 percent of businesses in nearly every nation, that they contribute 40 to 50 percent to GDP and employ between 40 and 80 percent of the total work force (Cappuyns et al., 2003).

Little precise information exists on the economic relevance of family businesses in Germany. Recent efforts of the Institut für Mittelstandsforschung (IfM) in Bonn and Klein (2000) significantly contribute to that matter[4]. The IfM (2007) defines family firms as businesses where 50 percent of equity and voting rights are controlled by a family. Starting with the business registers of 2003, they find a total of 3.2 million legal business entities in Germany[5]. Out of these, they estimate that 3.0 million or 95 percent are owner-led family businesses, which

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[3] In 1932, Berle and Means wrote their classic “The Modern Corporation and Private Property” where they called to attention the prevalence of widely held corporations in the United States. This perspective dominated decades of subsequent management research around the world.

[4] For earlier studies on Germany see also Edwards &Fisher (1994) and Gorton & Schmid (1996).

corresponds to 41.5 percent (EUR 1.9 trillion) of revenues and 57.3 percent (13.4 million) of jobs in Germany.

Businesses with revenues of .... €	Businesses with … employees with social insurance in Germany					Businesses total
	0 – 9	10 - 49	50 - 249	50 - 499	500 and more	
Up to 1 Mio.	2,766,697	99,481	13,292	1,555	967	2,881,992
1 Mio. - 2 Mio.	73,899	54,555	1,494	154	134	130,236
2 Mio. - 10 Mio.	37,090	68,866	14,657	401	251	121,265
10 Mio. - 25 Mio.	2,957	6,563	11,802	511	239	22,072
25 Mio. - 50 Mio.	790	1,181	5,162	1,182	248	8,563
50 Mio. and more	515	651	2,459	2,182	2,836	8,643
Companies total	2,881,948	231,297	48,866	5,985	4,675	3,172,771

Figure 2: Size distribution of German businesses

Source: Statistisches Bundesamt for Institut für Mittelstandsforschung (2007)

In this context, it is important to note that the large majority of companies are small. As illustrated in the figure above, approximately 87 percent (2,766,697 companies) generate up to 1 Mio. EUR revenues with not more than 9 employees. Only 0.5 percent or 17,206 companies achieve revenues of 25 Mio. EUR and above.

The importance of family firms differs with firm size. Klein (2000) defined family firms as businesses where the family has a decisive influence on the firm through ownership, control *or* management. She finds that the share of family firms among companies with 1 to 50 Mio. EUR revenues is close to 70 percent. Among firms with revenues of 50 to 250 Mio. EUR, she assumes about 50 percent to be family businesses. Among firms with more than 250 Mio. EUR revenues, she reckons only about 30 percent to be family businesses. Klein's

[5] Note that a company may hold more than one legal entity; hence the total number of legal entities is likely to overstate the number of total companies in a business sense.

result is affirmed by the IfM (2007), which reports the share of family firms in the segment of large companies with revenues of 50 Mio. EUR and above to be at 34 percent.[6] In the graphic below, the findings from both studies are added together so that an illustrative overview of the relevance of the family firms by firm size in Germany is achieved.

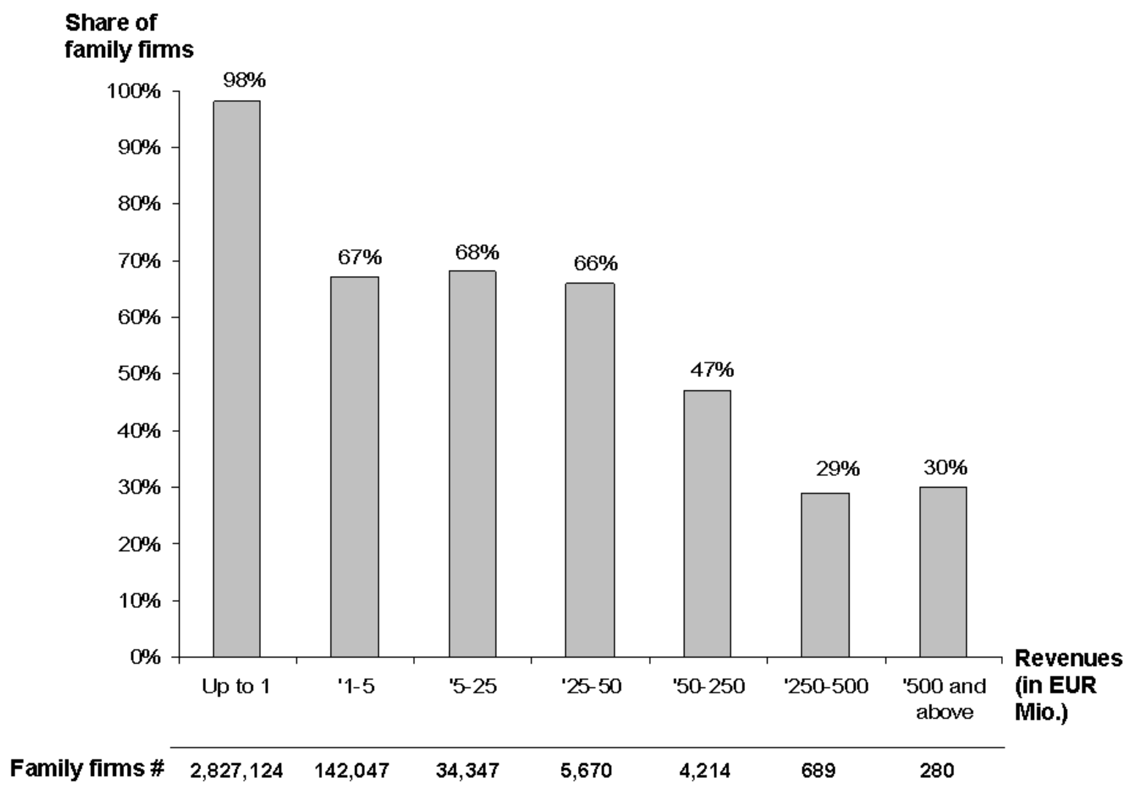

Figure 3: Relevance of family firms in Germany by firm size (in percent)

Source: Own graph based on Klein (2000) and IfM (2007)

The largest family-controlled businesses in Germany are Metro AG with 257,000 employees and 55 billion EUR revenues[7], followed by BMW AG with 103,000

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[6] The IfM (2007) reports a total of 8,643 legal entities equaling around 3,500 business groups with revenues at or above EUR 50 Mio. Out of these, around 1,200 or 34 percent are classified as family businesses with the condition that 50 percent of their equity and voting rights are controlled by families.

[7] Currently, 34.2 percent of the voting rights are jointly held by the Haniel family, 15.6 percent by Schmidt-Ruthenbeck family. and further 15.8 percent by Otto Beisheim according to Schlautmann (2008).

employees and 46 billion EUR revenues[8]. Both companies are listed at the stock-exchange and form part of the DAX 30.

The relevance of family firms for the prosperity and economic development of nations is huge. Family firms were identified as one of the most important sources of start-up capital and drivers of new job creation (Cappuyns et al. 2003; Steier, 2003). Furthermore, numerous studies indicate that family firms achieve superior financial performance (Allouche & Amann, 1995; Anderson & Reeb, 2003; McConaughy, Matthews & Fialko, 2001; Mishra, Randoy & Jenssen, 2001; Poutziouris, 2005; Villalonga & Amit, 2006). As for Germany, the 500 largest family businesses were found to employ more people per unit of revenue, to create more jobs both in Germany and abroad and to achieve higher growth rates than non-family firms (IfM, 2007)[9]. The financial outperformance of German family firms was confirmed by Jaskiewicz (2006), who reports a performance difference of 3 percent in return on assets (ROA) for stock listed German family firms in contrast to their non-family counterparts.

Yet there is also the adage ‘from shirtsleeves to shirtsleeves in three generations’, which has translations in almost every language[10]. Indeed, evidence suggests that family firms have a limited life span of only 24 years (Dyer, 1986). Only about 30 percent of family firms are estimated to make it to the second generation, 10 to 15 percent to reach the third generation, while only 3 to 5 percent survive to the fourth generation of family ownership (Aronoff, 1999).

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[8] At BMW, the Quandt family controls 46.6 percent of voting shares according to the company website (accessed 1/2009).

[9] Between 2003 and 2005, total workforce employment in the top 500 family firms increased by 13 percent (400,000) globally and 10 percent (200,000) in Germany. At the same time, DAX listed companies were stable overall, but with slight growth abroad at the expense of German jobs (-3.5percent) in line with the overall negative trend (-3 percent) for the entire economy (IfM, 2007).

[10] Ward (2008), conference presentation at Otto Beisheim School of Management (WHU), Familienunternehmen 2008.

2.1.2 Family business as field of research

The beginnings of family business as research discipline date back to the mid/late 1970s (Handler, 1989), yet the topic was still largely ignored well into the 1980s (Casillas & Acedo, 2007; Neubauer & Lank, 1998). Only then, on the back of a growing awareness of family firms' important role in economic development, new job and business creation, family business consolidated as an area of study and started evolving towards a distinct research field (Zahra & Sharma, 2004). Hence, most research on family businesses is indeed quite young, having been written over the course of the past 20 years (Astrachan, Zahra & Sharma, 2003; Bird, Welsch, Astrachan & Pistrui, 2002; Casillas & Acedo, 2007; Institut für Mittelstandsforschung, 2007; Klein, 2000).

The increasing attention and the resources put into family business research are also manifest in the articles in leading academic journals[11], special issues[12], dedicated journal publications[13], and a multitude of chaired professorships[14] and institutionalized conferences[15].

Today the literature on family businesses is substantial. Yet despite significant advances, family business research still struggles for emancipation and acceptance as stand-alone research field (Lumpkin et al., 2008). Up to present, there is no universally accepted definition and theory of the family firm (Pieper

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[11] See for example *Academy of Management Journal* (Gomez-Mejia, Larraza-Kintana & Makri, 2003; Litz, 1995), *Academy of Management Review* (Lee, Lim & Lim, 2003), *Journal of Finance* (Almeida & Wolfenzon, 2006; La Porta, et al., 1999), *Journal of Financial Economics* (Anderson, Mansi & Reeb, 2003; Vilalonga et al., 2006) and *Organization Science* (Chung & Luo, 2008; Wasserman, 2003).

[12] Examples include *Entrepreneurship Theory and Practice* 30(6), 29(3), 28 (4) and 27(4) and *Journal of Business Venturing* 18(4) and 18(5).

[13] See the *Family Business Review*, the primary scholarly journal of the field.

[14] The association to Advance Collegiate Schools of Business lists 50 accredited business schools with family business programs based in the U.S., Canada and the U.K at www.aacsb.edu/members/communities/interestgrps/familybusndoc.asp (accessed 09.03.2009).

[15] Renowned international conference networks include IFERA, FBN, FFI.

& Klein, 2007). Instead, there is a multitude of different approaches in use as will be discussed in the subsequent chapters. Moreover, family business research still draws heavily on other disciplines including psychology, sociology, economics, law and anthropology (Bird et al., 2002; Sharma, 2004; Wortmann, 1994). In line with this, its predominant theoretical perspectives are imported from general management research. One example is the resource-based-view of the firm (RBV), a concept from strategic management. It is primarily employed to model the distinctiveness of family businesses (Chrisman, Chua & Steier, 2003), arguing that family firms dispose of hard-to-duplicate capabilities and resources that originate from the reciprocal relationship of the family and business systems – also referred to as the familiness of the firm (Habbershon et al., 2003). A second example is agency theory, a popular framework from the field of corporate governance. In the family firm context, it has been applied to problems associated with close kinship, ownership and management such as altruism, entrenchment and self-control (Gomez-Mejia, Nunez-Nickel, & Gutierrez, 2001; Morck & Yeung, 2004; Schulze, Lubatkin, & Dino, 2002/2003; Schulze, Lubatkin, Dino, & Buchholtz, 2001). Evidently, such proceedings are a predicament to family business researchers. On the one hand, borrowing established theories from other fields implies swift applicability and results. On the other hand, the lack of own theories may undermine the credibility of family business research. Furthermore, it risks to insufficiently address the family-business dynamics and to remain overly attached to the thinking of the original constructs (Aldrich & Cliff, 2003; Astrachan, 2003; Chrisman, Chua & Sharma, 2003; Dyer, 2003; Habbershon et al., 2003; Olson, Zuiker, Danes, Stafford, Heck, & Duncan, 2003; Rogoff & Heck, 2003). Yet there are also signs of an increasing internal orientation in more recent research. Examples in the family firm entrepreneurship context include the family embeddedness perspective of Kellermanns & Eddleston (2006) and the concept of enterprising families (Habbershon & Pistrui, 2002) which proposes shifting the focus of observation from the business to the family level.

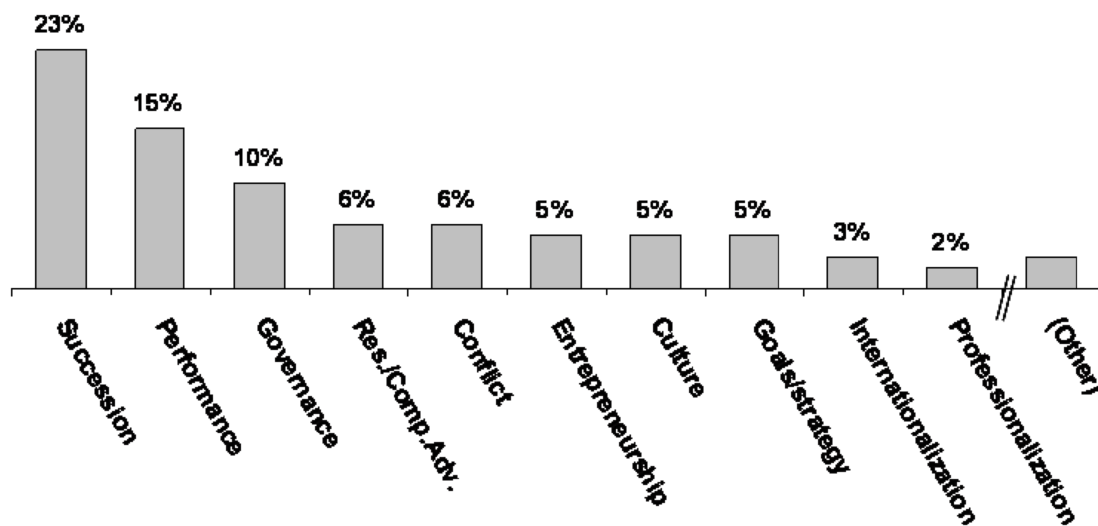

Figure 4: **Ranking of topics in family business research**

Source: **Own graph based on Chrisman, Chua, Sharma (2003:50)**

As for the research topics, extant family firm literature is still centred on the issues that have dominated the scientific discourse from early on: succession, performance and governance (Casillas & Acedo, 2007; Chrisman, Chua & Sharma, 2003/2005; Handler, 1989; Wortmann, 1994; Zahra & Sharma, 2004). According to the bibliometric study of Chrisman, Chua & Sharma (2003), only a minority of scholars address aspects such as conflict, strategy and culture in family firms. Only about 5 percent of family business literature deals with topics that relate to entrepreneurship. The graphic below illustrates this point [16].

2.1.3 Definition of the term family business

As the nature and characteristics of family involvement in businesses vary to a great deal (Klein et al., 2005; Tsang, 2002), scholarly writers struggle to find a simple and unambiguous definition for the term family business. In fact, Habbershon & Williams (1999) found that between 1989 and 1999, as many as 44 different definitions of family business were used in research papers.

[16] Based on an analysis of 190 articles published between 1996 and 2003 in relevant international journals.

Moreover, views among practitioners differ just as much, as is evident from an insightful field study report:

> *"The CEO of a firm with minority public shareholders and managed by a family for three generations denies that it is a family business while another with similar attributes declares itself to be one. Members of the same family who, together, fully own and manage the business vehemently argue that theirs is not because they believe that only a business fully owned by the family and without a single non-family worker is a family business. Meanwhile, siblings and in-laws who own and govern but do not manage another insist theirs is" (Chua et al., 1999:19).*

The aim of this chapter is thus to provide an overview of relevant definitional approaches and put the definition for the subsequent research project into perspective.

2.1.3.1 Notion of family in family business research

Before proceeding to the definition of family business, it is important to establish a common understanding of the term *family*. Depending on the perspective and the matter at stake, the meaning and definition of family can differ substantially (Klein, 2000). In a legal context for instance, family most often refers to the modern nuclear family of parents and their children that form a household community (Petzold, 1999). In contrast, the notion of family in family business research centres on the involvement of individuals with a business in, for instance, its ownership, control or management, as well as their genealogical descent from a common entrepreneurial ancestor (Petzold, 1999). Members of a particular kinship group without a stake in the business – perhaps, because they were not entitled for inheritance or opted to sell-off their shares – may not be subsumed in the family group considered by family business researchers when

they are without relevance for the dynamics between the family and the business. In contrast, grandparents, cousins, more distant relatives as well as in-laws and spouses may be subsumed as family, provided that they have a relationship with the business. This way, the notion of family may range from a single founding individual to several hundred people that are only distantly related but involved in the same business enterprise (Institut für Mittelstandsforschung, 2007; Klein, 2000).

2.1.3.2 Presentation of key definitional approaches

Following the definition of the term family, this chapter presents three fundamental approaches to define *family business*. These are firstly, the components-of-involvement approach, secondly, the essence approach and finally, continuous definitions.

Components-of-involvement approach

The components-of-involvement approach is a very basic way to define a family business (Chrisman, Chua, Sharma, 2003; Chua et al., 1999). Researchers following this approach apply a variety of manifest indications of family influence in the business (Chua et al., 1999; Neubauer & Lank, 1998). The most prominent criterions are, in order of importance, controlling ownership (Cromie, Stephenson & Montieth, 1995; Donckels & Fröhlich, 1991), the presence of the family in management of the business (Beckhard & Dyer, 1983; Daily & Dollinger, 1992), intergenerational succession and power transfer in the family (Churchill & Hatten, 1987; Gasson, Crow, Errington Hutson, Marsden & Winter, 1988) as well as the involvement of multiple generations in the business (Shanker & Astrachan, 1996). The modes of application observable in the literature are flexible – both what regards the exact choice of conditions and their potential combination as well as precise thresholds (Martin & Lumpkin, 2003;

Naldi et al., 2007; Zahra, Hayton & Salvato, 2004). Due to its simplicity, transparency and convenient handling, the components-of-involvement approach is the dominant choice in empirical research (Chua et al., 1999). The figure below summarizes the key components in order of importance together with select references in the literature.

#	Key components-of-involvement	Examples
1.	Controlling ownership by single family	Donckels & Fröhlich (1991); Cromie et al. (1995)
2.	Family in management function	Daily & Dollinger (1992); Beckhard & Dyer (1983)
3.	Intergenerational succession and power transfer	Churchill & Hatten (1987); Gasson et al. (1988)
4.	Involvement of multiple generations in business	Shanker & Astrachan (1996)

Figure 5: Overview of key components-of-involvement conditions
Source: Chrisman et al. (2003), Chua et al. (1999) and Neubauer & Lank (1998)

Essence approach

The second major approach to define a family business is the essence approach. Proponents of this approach argue that the defining elements of a family business may not be captured in the present level of family involvement. They propose that a company is a family business and distinct from non-family firms because of the particular behaviours and intentions of the business family (Chrisman et al., 2003; Chua et al., 1999). For instance, a kinship group of people may control the ownership of a particular business asset at a certain point in time – a sufficient condition in the components-of-involvement approach to classify this case as a family business. Yet to essence proponents, such a definition fails to address whether this family has indeed the (presumably) characteristic long-term strategic agenda shaping business perspective of family businesses or may rather treat the business as a passive portfolio investment (Chua et al., 1999).

Consequently, the essence approach suggests that elements of family involvement should only be a necessary, but not a sufficient condition to define a family business (Chrisman et al., 2003). As essential, defining behaviours and intentions, Chrisman et al. (2003) cites firstly the intention of the family, to maintain control of the business (Litz, 1995). Secondly, the existence of unique, inseparable, and synergistic resources and capabilities that originate from family involvement and interaction (Habberson et al., 2003). Thirdly, the existence of a family vision for the strategic direction of the business (Davis & Tagiuri, 1989; Donnelley, 1964; Handler, 1989). And fourth, the actual pursuit and implementation of this strategic agenda through the family (Chrisman, Chua, & Litz, 2003; Habbershon et al., 2003). A summary of these essential elements of family firms and respective examples is provided below.

#	Elements of family business essence	Examples
1.	Intention to retain control of business	Litz (1995)
2.	Existence of unique 'familyness' resources	Habbershon et al. (2003)
3.	Family vision for strategic direction of firm	Donnelley (1964); Handler (1989)
4.	Family influence on strategic direction of firm	Chrisman et al. (2003); Habbershon et al. (2003)

Figure 6: Overview of key family business essence conditions

Source: Chrisman et al. (2003) and Chua et al. (1999)

Continuous definitions

A fundamentally different approach to the definitional debate constitutes the departure from dichotomous classifications in either family or non-family firms. One of first attempts towards a gradual definition of family firms was made by Shanker & Astrachan (1996). With their “Bull-eye”-approach, they propose to categorize businesses to meet broad, middle or narrow standards of family firm definitions. The minimum threshold of very broad definitions is set to include at

least the control of voting rights over the strategic direction of the firm. Mid-range definitions additionally require direct family involvement in the day-to-day operations of the business. The category for most restrictive definitions demands furthermore the involvement of multiple generations of the family (Astrachan & Shanker, 2003). A few years later, Astrachan, Klein & Smyrnos (2002) refine the idea of gradual definitions and propose to measure family influence on a continuous scale. In their proposition, the influence of a family is evaluated in the three separate dimensions of power, experience and culture. Family power refers to the family's control of the ownership, governance and management positions of a business. The experience subscale addresses the continuity and lengths of family influence with the number of contributing individuals and their generation. The culture subscale inquires the extent to which family and business values overlap and the degree of family commitment to the business. The individual results of these subscales are then compiled to form the F-PEC index (further edited by Klein, Astrachan & Smyrnios, 2005).

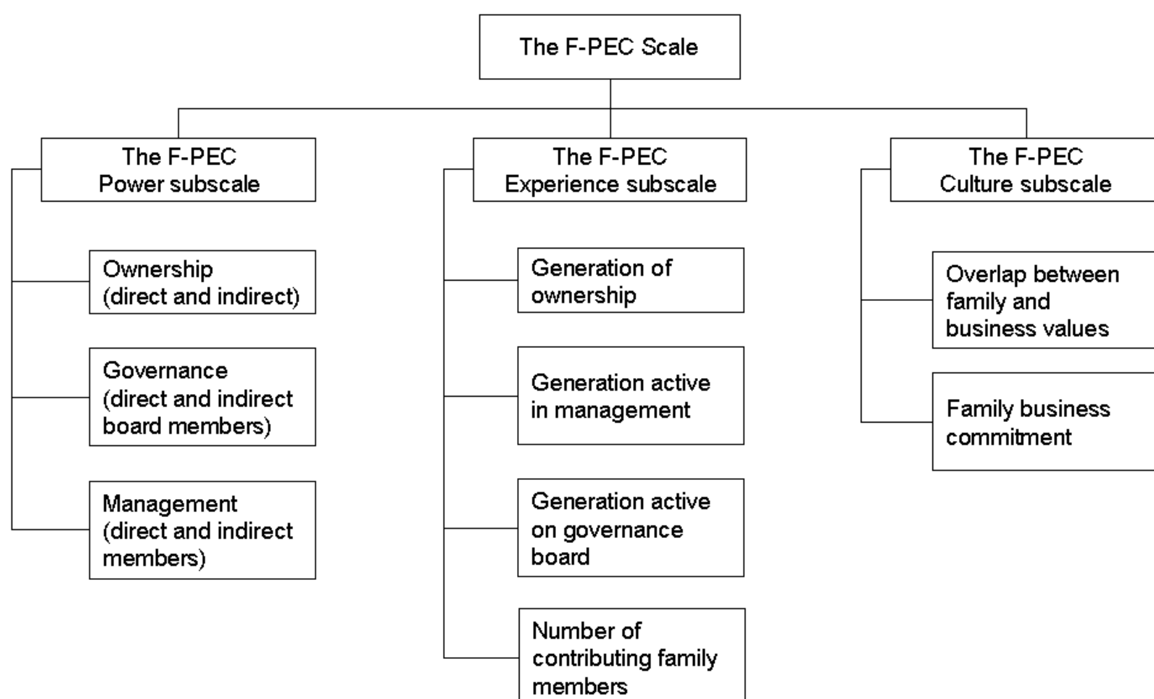

Figure 7: F-PEC scale of family influence

Source: Astrachan et al. (2002:52)

2.1.3.3 Assessment and definition for this dissertation

This section evaluates the suitability of the three definitional approaches presented above for this research project and subsequently proposes a definition for this dissertation.

The first step towards the evaluation of potential definitional approaches is the recapitulation of the research project at stake: a quantitative, empirical study of entrepreneurial behaviours which aims, among other things, to examine differences between specific types of family firms. As a consequence, a suitable definition needs to be operational in the sense that it draws on easily measurable characteristics that are feasible, quantifiable, transparent and unambiguous. Evidently such an operational definition may differ from a theoretical definition which aims for a coherent conceptual foundation and the conceptual advancement of research (Chua et al., 1999). Moreover, it is important not to eliminate specific types of family firms with overly restrictive definitional clauses. Instead, a rather inclusive definition will be favoured within which different types of family businesses can be classified and compared at a later stage.

With this in mind, the essence approach appears problematic for two reasons. Firstly, due to its rather limited relevance in empirical research, one risks comparability with other empirical studies. Secondly and substantially more important is the strict association of the business family with a particular business asset as proposed in its conditions. Essence definitions exclude business families that are willing to consider the sale of particular business asset and successive reinvestments. Yet some of the most entrepreneurial families might not have a transgenerational perspective for a particular business asset but would be willing to adjust their engagement to market outlook and opportunities (Habbershon & Pistrui, 2002; Nordqvist, 2008; Westhead, Ucbasaran & Wright, 2005). On these grounds, the essence approach will be rejected for this dissertation on entrepreneurship in family firms.

Likewise, the continuous definition of the F-PEC scale appears less than ideal for this research project. The multitude of input measures requires an excessive amount of information from respondents. Furthermore, because of the way the scale is composed, the compensation for the lack of family influence in one dimension while maintaining reasonably high cut-off points for overall family influence is virtually impossible as was criticized in previous empirical work (Höppner, 2006). Another disadvantage relevant for this research project is that the resulting scale constitutes an aggregate of many different aspects of family influence which reduces transparency over the specific features of the family firms in the sample. For instance, an overall family influence of 0.7 might stem from very different constellations in the different dimensions, and even the use of a single aggregated dimension may still contain such distinct aspects as management, ownership and control (Jaskiewicz, 2006). Especially in a study that seeks to address potential differences among particular family firm profiles, such a level of aggregation may inhibit the consecutive interpretation.

A broad components-of-involvement approach appears best suited for the requirements of this study. In order to obtain a very inclusive definition and facilitate the subsequent classification and comparison of different types of family firms, the study's definition will centre on the control of ownership and voting rights[17]. The rationale for this choice is that in an investigation of family firm entrepreneurial behaviours, the family's influence, as a minimum, needs to allow the family to determine the strategic direction of the business, which in turn, is approximated through ownership control. The family's involvement in management is purposefully ignored since the presence of family members in the

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[17] Technically, the power over the strategic direction is exercised through the voting rights which are typically attached to ownership. As a matter of fact, it is important to note that this is not always the case. In incorporated firms the founding families may have sold the actual ownership – that is, risk bearing and profit rights – to external common stockholders but retain the voting rights and thereby the control of strategic direction for the firm[17]. An example of this would be the constellations at The Washington Post, The New York Times and The Wall Street Journal (Becker & Posner, 2007).

day-to-day operations has been found to decline in subsequent generations of ownership and with increasing firm size (Martin & Lumpkin, 2003). The inclusion of a corresponding condition would result in the elimination of many old and large family influenced firms. In a similar vein, the definition passes on conditions related to a completed generational transfer (Churchill & Hatten, 1997), which would imply the elimination of the founding generation type of family firms from the study.

Arguably, tying the family firm definition to the ownership of a business is still somewhat at odds with the 'enterprising families' perspective (Habbershon & Pistrui, 2002) which states that the focus should be on the families, not on the ownership of particular business assets. Yet this flaw needs to be accepted with the nature of the quantitative empirical study. Firstly, because accessible directories list businesses rather than families; obtaining a substantial list of entrepreneurial families would make the data gathering process immensely difficult. Moreover, even if business families could be selected, entrepreneurial behaviour still needs to be measured in some operational asset which is currently controlled by the business family. Thus, the sole but important benefit of the chosen approach over the conditions stated in the essence approach resides in the fact that the family is allowed to consider a future separation from a particular business asset and reconfiguration of its investments.

Informative, rather than a deciding factor, it is also worth mentioning that the control of ownership has been central to most previous empirical efforts addressing entrepreneurship in family firms (Brunninge & Nordqvist, 2004; Kellermanns & Eddleston, 2006; Martin & Lupkin , 2003; Salvato, 2004; Zahra, 2005; Zahra, Hayton & Salvato, 2004).

In line with former studies, the threshold level for inclusion will be set at 50 percent of the ownership control for private firms and 30 percent for public firms. In doing so, the definition is similar to Astrachan & Kolenko (1994), who

require family control to be at 50 percent in private firms or 10 percent in a public company in order to qualify as family business. Deliberately and in contrast to Astrachan & Kolenko, the threshold for public companies was raised from 10 to 30 percent in order to ensure that the family maintains strategic control of the firm.

Thus, the family firm definition for this dissertation is:

A family firm is a company where members of a kinship group hold at least 50 percent of the equity in a company and 30 percent in publicly listed firms.

Having completed the discussion of family firm definition, the discussion will now turn to the conceptualization of family firm distinctiveness.

2.1.4 Distinctiveness of family businesses

The purpose of this section is to show how researchers attempt to conceptualize the distinctive yet complex nature of the family firms. To this end, the perspective of systems theory will be introduced as it is fundamental to most family firm frameworks. After this, a brief overview of the key developmental stages of family firm conceptual frameworks will be given.

2.1.4.1 Family and business as distinct social systems

The predominant approach to explain the distinctiveness of family firms is grounded in general systems theory (Luhmann, 2002). The world is depicted as a meta-system consisting of discrete social systems with permeable boundaries. Both the family and the business are regarded as social systems. However, they exist for fundamentally different reasons, which is perpetuated in their

contrasting agendas and guiding principles (Davis & Stern, 1988; Lansberg, 1983; Kepner, 1991; Simon, 1999/2002; Swartz, 1989).

Businesses are rational task-oriented systems. The aim for profit maximization is their constituting attribute (Davis & Stern, 1988). For a business, the right to exist depends on the sufficient generation of output, profit and growth. If the business fails to perform on these targets, it is shut down and ceases to exist (Simon, 2002). Families on the other hand, are sentient systems which, affirmed by custom and law, exist to support the needs of their members (Kepner, 1991). Thus, the family has primarily a social function, namely to assure the well-being and to fulfil the social and emotional needs for belonging, affection and intimacy of its members (Kepner, 1991). In the business system, affiliation is purely driven by the task-related skill-set of individuals; it is temporary and deliberate in nature. In contrast, the affiliation with a family is hereditary, permanent, and affective (Swartz, 1989). Similarly, the idea of man in the business is that of individuals as means of production. In case of insufficient performance, individuals are replaceable. In the family however, each individual is fundamental to its raison d'être (Simon, 2002). Relationships in firms are mainly driven by a rational strategy of getting-along professionally. Relationships in families are long-term oriented and more intense in terms of emotional involvement. The norms for decision making are likewise disparate. While the behaviour of families is guided by trust and love, irrespective of rational considerations, individuals in the business system are guided by norms of a productive process. In the business system, individuals act on rational, political and economical motivations (Lansberg, 1983). Their antipodal characters even extend to their respective communication style (Simon, 1999). In families, communication is usually informal and not necessarily obliging. In the business system, the communication is geared towards the task. It is fact-based, formal, written, and generally binding. Lastly, the two systems have very different appraisal and compensation schemes. Families view the behaviour of their

members against the norms of loyalty and reciprocity (Swartz, 1989) and reward them with (quasi) unconditional love and support. In the business system, remuneration is based on performance and draws on money, status and power or the loss of the same (Lansberg, 1983). The figure below summarizes the contrasting characteristics of family and business system.

System / Dimension	Family system	Business system
Right to exist/goals	Mutual protection and support of family offspring	Output and profit generation
Affiliation of members	Hereditary, permanent and non-selectable	Skill-based, temporary and deliberate
View of individual and relationships	Fundamental, holistic, long-term, emotional	Partial, functional, replaceable
Norms of behavior	Emotional solidarity, love, trust, harmony	Rational, economic and political reasoning
Communication	Oral, informal, individual-related	Written, formal, factual
Compensation	(Quasi) unconditional love and support	Performance-based, monetary, promotion/dismissal

Figure 8: Distinct characteristics of family and business systems

Source: Dyer (1992:147), Lansberg (1983:40), Simon (2002:18) and Swartz (1989:331)

In the contentions of systems theory, the family firm exists on the overlap of distinct but interacting systems and is shaped by their influence. Evidently, due to the contradicting nature of family and business elements, family firms are confronted with numerous conflicts and struggle to establish values, norms and principles that meet the needs of both family and task system (Davis & Stern, 1988; Lansberg, 1983). In the next chapter, key propositions to capture this interplay of family and business system will be presented.

2.1.4.2 Key developments in family firm conceptualizations

Family firm research has produced numerous helpful and important frameworks to account for and explain their distinctive nature and the complex interrelation of family and business in the family firm.

Stage 1: Dual system thinking

In the simplest versions, the family firm is conceptualized exactly as the overlap of two distinct social systems. Both family and business are described as separate entities with diverging goals, attitudes and structures that coincide in the family firm (Lansberg, 1983; Swartz, 1989). The interdependence of these entities is considered as the trait that differentiates family firms from other forms of organizations (McCollom, 1990). Scholars soon adopted a view that the sum is more than its parts. That is, that the family firm evolves from the combination of family and business elements as a single entity sui generis with unique characteristics in its own rights (Hollander & Elman, 1988; Whiteside & Herz-Brown, 1991). Graphically, the dual systems approach (Swartz, 1989) is portrayed as two overlapping circles (Benson, Crego, Drucker, 1990).

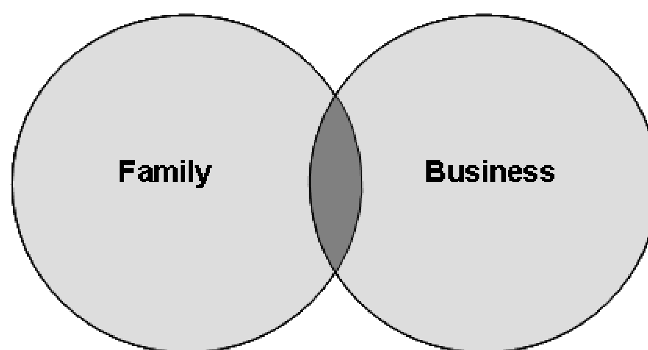

Figure 9: Visualization of the dual systems approach
Source: Benson et al. (1990)

Stage 2: Capturing roles and interrelationships

In the second stage, family and business spheres are still the main building blocks of family firm concepts (Pieper & Klein, 2007). Their novelty is that they begin to reflect potential roles and interrelationships of individuals within in the family firm and break down the bi-polar world of business and family spheres. Examples include Tagiuri & Davis (1996), who suggest a family firm model based on the overlap of three separate systems: (1) family, (2) management and (3) ownership (Tagiuri & Davis, 1996). Based on this subdivision, individuals can be considered in their roles as relatives, managers or owners of the firm. This way, divergent motivations and competing needs of individuals that originate from their respective affiliation with the family firm become evident (Aronoff, 1996). Another approach is that of Beckhard & Dyer (1983), who propose four subsystems consisting of (1) family, (2) business, (3) founder, and (4) "linking organizations such as board of directors" (1983:6). Very similar is the model of Donckels & Fröhlich (1991), who suggest (1) family, (2) business, (3) management, and (4) equity as building blocks to depict a family business. Graphically, these concepts are represented as three or four overlapping circles, as is illustrated with Tagiuri & Davis's (1996) version below.

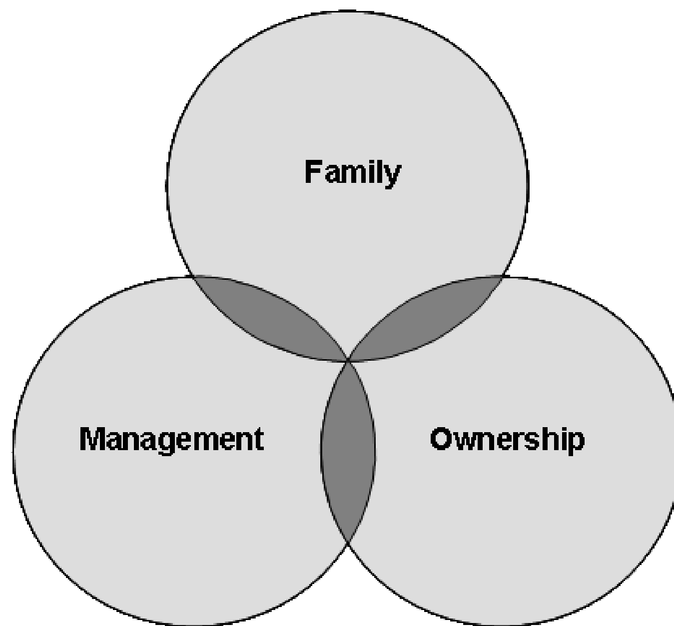

Figure 10: Visualization of the three circle family business model
Source: Tagiuri & Davis (1996)

Stage 3: Dynamic concepts

The third developmental stage of family firm frameworks is characterized by the emergence of the process-oriented and dynamic view of the family firm (Pieper & Klein, 2007). Their particular contribution is the addition of a temporal dimension for each subsystem. The benefit of dynamic models is that they allow for a more differentiated analysis of family-firms based on their life-cycle status in each of the systems. Examples of dynamic models include Adize et al. (1979), Lester & Parnell (2006) and Litz (2008), but especially, Gersick et al. (1997), whose framework, developed more than a decade ago, became a point of reference for many researchers in the field (e.g. Fletcher, 2004; Höppner, 2006; Rutherford, Muse & Oswald, 2006; Salvato, 2004).

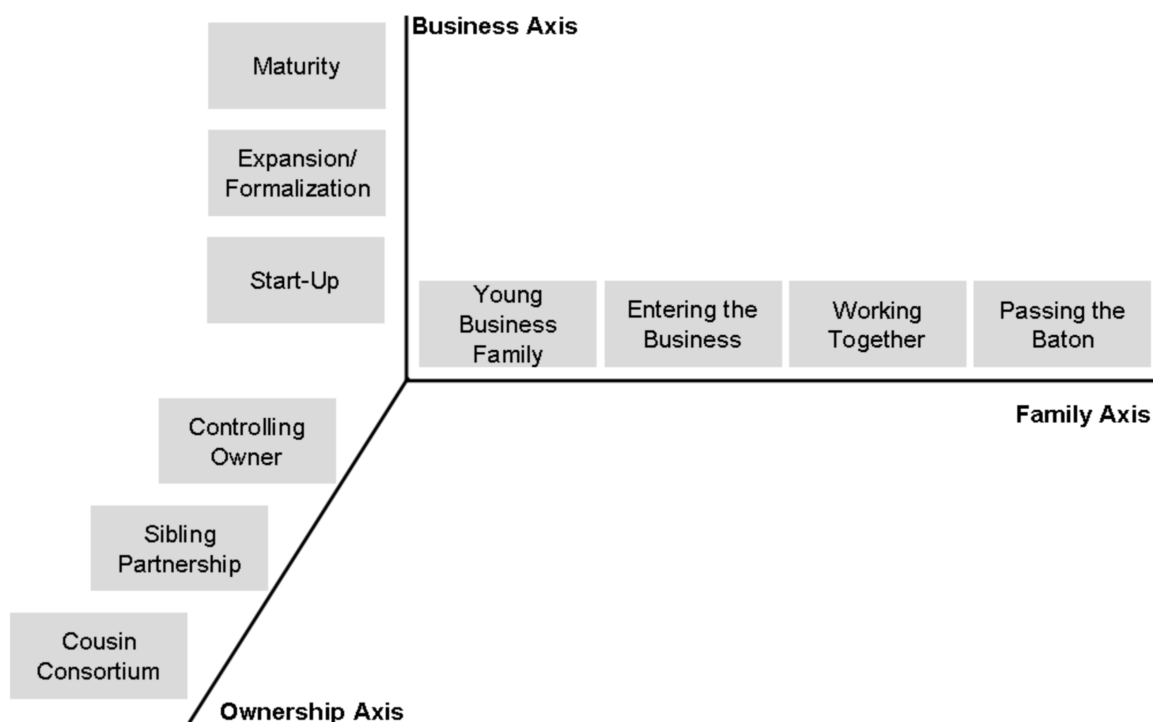

Figure 11: Visualization of the life-cycle model of family firms
Source: Gersick et al. (1997:17)

More specifically, Gersick et al.'s life-cycle model consists of three dimensions, the business, the family and the ownership, each of which is displayed as distinct axis and considered at different life-cycle stages. In the ownership dimension, firms can be distinguished in "controlling owner", "sibling partnership" and "cousin consortiums" depending on the number of individuals involved in the ownership of the business. The business dimension classifies companies as being in the "start up", "expansion/formalization" and "maturity" phase. The family dimension finally features the "young business family", "entering the business", "working together" and "passing the baton" stages which relate to situation of the family, its involvement in the business and generational succession phases.

Stage 4: Holistic and specific concepts

The fourth wave of conceptual efforts may best be classified as complex frameworks. Characteristic for this stage is that researchers centre their models on particular aspects of family business theory or extend the conceptualizations to offer global solutions that integrate contextual issues such as social and economic forces. For instance, concepts based on the resource-based view of the family firm focus on how familyness may provide a competitive advantage to the firm (Habbershon et al., 2003; Habbershon & Williams, 1999; Mühlebach, 2004). For instance, Danes, Rueter, Kwon & Doherty (2002) suggest a model that concentrates on change and interpersonal dynamics in family firms (Fundamental Interpersonal Relationship Orientation – FIRO model), while Lambrecht (2005) proposes an explanatory model on succession. A recent example of a holistic model is another "Bulleye", this time proposed by Pieper & Klein (2007), which adds environment and the individual sphere as dimension to the family and business systems. Evidently, entrepreneurship is not a relevant dimension in the existing conceptualizations.

The introduction to family firm conceptualizations completes the review of theoretical foundations in family business research. Yet before proceeding to the equivalent discussion in entrepreneurship research, it shall be attempted to locate the family influence as variable in general organizational research.

2.1.5 Family as variable in general organization theory

Within the family business literature and beyond all definitional debate, it may be agreed that the term family business is typically used to describe organizations in which a familial relationships exercise significant influence on the behaviour of organizations and their actors (Dyer, 2003). However, while many prominent family business researchers do not hesitate to refer to the family business as an 'organizational form' (Astrachan et al., 2003; Schulze et al., 2001; Zahra, 2005),

it is difficult to find evidence of the family as a relevant variable in general organization theory (Dyer, 2003).

The original meaning of the term 'organizational form' as in the seminal writings of twentieth century organization theorists such as Ulrich (1949) and Kosiol (1976) refers to the specific configuration of the operational and organizational structure of a firm; for instance, a line organization, line-staff organization or functional organization. Although the paradigms of organization have evolved over time from hierarchical, bureaucratic and centralized structures towards flatter hierarchies, decentralized decision making, permeable organizational boundaries, empowerment of employees, teamwork, capacity for renewal and learning, the term organizational form still seems reserved to work flow design and the structuring of tasks (Daft & Lewin, 1993; Palmer, Beneviste & Dunford, 2007). As something of a rarity, Pugh, Hickson, Hinings & Turner (1969) mention family as an organizational context that can be manifest in the ownership and control of a firm and through this may influence its organizational structure.

Furthermore, Dyer (2003) reports from a review of the Academy of Management Journal and Academy of Management Review that "the family as a variable, was virtually non-existent in either a theoretical framework or in the research design of the articles published" (p. 402). His screening of select textbooks from strategy, organization theory, organizational behaviour, organizational development and human resource management yielded comparable results.

In the literature, the total neglect of family influence in mainstream organization research is explained with the focus of organization theorists in the twentieth century which were, for practical[18] (Litz, 1997) and ideological[19] (Perrow, 1972)

[18] Practical considerations to give a preference to large public companies over family businesses include (1) the availability of information (2) the greater willingness for cooperation and

considerations, concentrated on large stock-listed corporations rather than on private and/or family influenced firms (Aldrich & Ruef 2006; Davis & Marquis, 2005; Walsh, Meyer & Schoonhoven, 2006).

Yet organization theory has long ceased to be a dogmatic field with closed theoretical perspectives (Walsh et al., 2006). The phenomenon of organization has become increasingly complex – for instance, due to globalization, new technologies and hybrid business structures, importance of knowledge, and take-over activity (Davis & Marquis, 2005). As a consequence, organization scholars often abandon the established theories and pursue a theoretically agnostic real-life problem driven work (Walsh et al., 2006). In line with this, general organization theorists might consider the influence of family on organization at some point. Certainly, what may inhibit the consideration is the complex nature of family influence on businesses which is also reflected in the lack of consensus among family business scholars for a single universally accepted definition.

For the time being, it must be kept in mind that the use of language is not consistent across family business and mainstream organizational research – which, by the way, is not an unusual thing to happen in the social sciences (Alexander, Schallert & Hare, 1991; Kopple, 1991).

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generalization of results; and (3) higher personal and institutional rewards such as funding (Litz, 1997).

[19] As for the ideological aspect – the bureaucratic and scientific management concepts that are the foundations of organizational theory have a clear negative view on the impact of particularistic criteria such as family relationships on efficiency and organizational performance (Perrow, 1972). By definition, family firms were regarded as inefficient and not likely to survive in the marketplace.

2.2 Foundations in entrepreneurship research

The purpose of this section is to introduce the fundaments in entrepreneurship research relevant for this study. This chapter begins in 2.2.1 with a short appraisal of entrepreneurship as field of research. Next, the understanding of entrepreneurship in the seminal writings of Schumpeter is reviewed in chapter 2.2.2. In line with the focus of this study, attention is then directed to the research stream that investigates corporate entrepreneurship, that is, entrepreneurial behaviours in established businesses in chapter 2.2.3. Subsequently and in line with this theoretical stance, the construct of entrepreneurial orientation is introduced in chapter 2.2.4. The section terminates with a brief review of the relationship between entrepreneurship and strategic management research in chapter 2.2.5.

2.2.1 Entrepreneurship as field of research

Research on entrepreneurship covers a fast field. It "involves the study of sources of opportunities, the processes of discovery, evaluation, and exploitation of opportunities" [as well as] "the set of individuals who discover, evaluate, and exploit them" (Shane & Venkatraman, 2000:218).

The first individual to define the term entrepreneurship in economic studies and to place the entrepreneur in the context of economic development is the Irish-born banker and economist Richard Cantillon. His article "Essai Sur la Nature du Commerce en Général" was published in 1755. Yet for a long time, classical economic thinking based on Adam Smith's "Inquiry into the Nature and Causes of the Wealth of Nations" (1776/1976), lorded over the intellectual development of economic science. As a consequence, the entrepreneurial function in the economy attracted little interest. Noteworthy exceptions include authors like Jean-Baptiste Say (1767–1832), Jeremy Bentham (1748–1832), John Stuart Mill (1806–1873), and Frank Knight (1885-1972). A shift in perspective was really

only achieved in the first half of the twentieth century when Joseph Schumpeter introduced an entirely new economic theory based on change and innovation – as opposed to the then prevailing equilibrium concepts – in his seminal "Theory of Economic Development" (1934)[20].

Despite this seemingly long history, the ascent of entrepreneurship as an academic research discipline only gained momentum in the 1970/80s (Cornelius, Landström & Persson, 2006). Its formation resembles the development of family business research. Just like in family business research, changing perspectives in the business world secured substantial interest in the topic. In the case of entrepreneurship, it was the growing awareness of the globalization of markets, rapid technological change and increasing uncertainty which require a much more entrepreneurial approach to doing business (Cornelius et al., 2006; Low, 2001). In fact, entrepreneurship became one of the fastest growing research areas in recent years (Katz, 2003), as is attested by the significant increase in dedicated articles[21], new entrepreneurship journals[22], educational programs, faculty positions[23] and related conferences[24].

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[20] For a more detailed review of 20th century contributions see e.g. Cooper, Hornaday & Vesper (1997).

[21] For instance, in *Administrative Science Quarterly*(e.g. Burgelman, 1983b; Greve, 2003), *Academy of Management Journal* (e.g. Brockhaus, 1980; Gartner, 1985), *Academy of Management Review* (e.g. Eisenhardt & Companys, 2002; Shane & Venkatraman, 2000), *Journal of Management* (e.g. Dess et al., 2003; Eddleston et al., 2008), *Strategic Management Journal* (e.g. Ahuja & Lampert, 2001; Barringer & Bluedorn, 1999), *Management Science* (e.g. Burgelman, 1983a; Damanour, 1996), *Organization Science* (e.g. Agarwal & Helfat, 2009; Wasserman, 2003).

[22] For instance, Entrepreneurship Theory and Practice, Entrepreneurship & Regional Development, Journal of Business Venturing, Journal of Small Business Management.

[23] http:/www.gwu.edu/~nes shows 1400 postsecondary schools with courses in entrepreneurship (Accessed 10.7.2008).

[24] Conferences include e.g. the Babson–Kauffman Entrepreneurship Research Conference and The Conference on Research in Entrepreneurship and Small Business, or, in Germany, the G-Forum.

Another parallel to family business, entrepreneurship research is not yet a mature research field. To date, there is no universal theory on entrepreneurship or clearly defined boundaries of the field. Despite an increasingly internal orientation (Cornelius et al., 2006), entrepreneurship is still a multidisciplinary and highly fragmented field of research to which authors from various backgrounds contribute different theoretical approaches and methodological traditions with distinct focal points (Bruyat & Julien, 2001; Cornelius et al., 2006; Cunningham & Lischeron, 1991; Hérbert & Link, 1989; Kirzner, 1979; Shane & Venkataraman, 2000). Maybe even more extreme than in family business research, entrepreneurship has been described by some as "a set of loosely connected research groups that lack an organizing framework or a dominant paradigm" (Gartner et al., 2006:323). Furthermore, just like in family business research, the absence of precise definitions is regarded as obstacle to the advancement and overall legitimacy of the field (Davidsson, Low, & Wright, 2001; Low, 2001; Low & MacMillan, 1988; Schildt, Zahra & Sillanpää, 2006; Wortman, 1987).

The broad nature of entrepreneurship research is also reflected in the stock-takings of investigated topics. An analysis for the period between 2000 and 2004 by Cornelius et al. (2006) identifies the following key topical clusters: (1) Innovation and regional development; (2) Sociology and capitalism; (3) Corporate entrepreneurship and resource management; (4) Ethnic entrepreneurship; (5) Policy/legal aspects on entrepreneurship; (6) Self-employment; (7) Venture capital and financing. The family firm does not play a significant role in this ranking or in comparable analyses conducted by Schildt, Zahra & Sillanpää (2006), Grégoire, Déry, Noël & Béchard (2006) and Reader & Watkins (2006). Of course, this does not signify that there are no studies related to family businesses at all – but they seem to constitute such a small fraction of publications that they are subsumed in other topical clusters. For instance, the research project of this dissertation would likely be classified in the topical

cluster of ‘corporate entrepreneurship and resource management’ – which deals with entrepreneurial behaviours and processes in existing organizations.

2.2.2 Schumpeter’s definition of entrepreneurship

An essential point of reference to most present day entrepreneurship research (Arena & Dangel, 2002) is the work of Joseph A. Schumpeter which is why it shall also be reviewed in this study. To Schumpeter, entrepreneurship means “carrying out new combinations”. More precisely and in his words, this includes:

> *“(1) The introduction of a new good – that is, one with which consumers are not yet familiar – or of a new quality of a good. (2) The introduction of a new method of production, that is one not yet tested by experience in the branch of manufacture concerned, which need by no means be founded upon a discovery scientifically new, and can also exist in a new way of handling a commodity commercially. (3) The opening of a new market, that is a market into which the particular branch of manufacture of the country in question has not previously entered, whether or not this market has existed before. (4) The conquest of a new source of supply of raw materials or half manufactured goods, again irrespective of whether this source already exists or whether it has first to be created. (5) The carrying out of new organization of any industry, like the creation of a monopoly position (for example through trustification) or the breaking up of a monopoly position.” (Schumpeter, 1934:66)*

Schumpeter’s definition is inclusive in the sense that entrepreneurship is not restricted to self-employed business men, but also applies to dependent employees such as managers or even controlling shareholders as long as they have the ability to perform the ‘entrepreneurial function’. Schumpeter also highlights the distinction between entrepreneurial and other activities. For instance, entrepreneurship is not about operating an established business. That is,

when an entrepreneur, the individual who carries out new combinations, ceases to be innovative and instead settles down to run his business in a routine, he may be a manager, but no longer an entrepreneur. Neither is entrepreneurship about controlling the resources necessary to carry out new combinations. A 'capitalist', that is the owner of capital, a financier or somebody who disposes of other valuable resources, is not per se an entrepreneur, but only if and as long as he engages in the carrying out of new combinations (Schumpeter, 1934).

Furthermore, with the concept of 'creative destruction', he links entrepreneurship to the formation of individual wealth and economic development. Schumpeter (1934) argues that entrepreneurs are in a constant process of bringing out new ideas to render their rivals' produce obsolete. The competitive struggle between creation and destruction permanently revolutionizes the economic structure from within and drives, as a consequence, the rise and fall of individual fortunes as much as overall economic development.

With the increasing presence of large corporations in industrial society, Schumpeter's view of entrepreneurship gradually evolved from being the achievement of a single individual to include also entrepreneurial processes in existing organizations (Schumpeter, 1942). A result of this shift in perspective is the research stream of corporate entrepreneurship – which will be focused on in the next section.

2.2.3 Corporate entrepreneurship

Corporate entrepreneurship is the research stream that deals with entrepreneurial behaviours in established organizations. The purpose of this chapter is to provide a definition of the corporate entrepreneurship and explain the fundamental approaches to study corporate entrepreneurship in order to localize the research perspective adopted in this dissertation.

The term corporate entrepreneurship has been defined by multiple authors and with changing connotations (Covin & Miles, 1999; Dess, Ireland, Zahra, Floyd, Janney & Lane, 2003; Phan, Wright, Ucbasaran & Tan, 2009). This dissertation builds on the widely accepted definition of Sharma & Chrisman (1999:17-18) which states that:

Corporate entrepreneurship is the process whereby an individual or a group of individuals, in association with an existing organization, create a new organization or instigate renewal or innovation within that organization.

In essence, Sharma & Chrisman (1999) propose novelty in structure *or* strategy as defining conditions to corporate entrepreneurship. Their definition may be described as inclusive and even a synthesis of several prior efforts. For instance, the definition integrates innovation in processes, products, and business models in line with the new combinations of resources suggested by Schumpeter (1934). Arguably, innovation is a matter of degree and the literature lacks precision as to where 'routine innovation' ends and entrepreneurship begins. For sure, entrepreneurial innovation may not affect the business set up, nor does it have to have an immediate effect on the fundamental nature of the organization or the industry structure (Stevenson & Jarillo, 1990; Jennings & Lumpkin, 1989). Likewise, the definition incorporates Gartner's (1988) notion of new organizational creation or corporate venturing, since this involves substantial strategic and structural newness. Some researchers point out that technically, corporate venturing may not even involve the formal set up of a new legal entity but could be driven by a new business unit within an existing organization (Block & MacMillan, 1993; Burgelman, 1983a/b; Guth & Ginsberg, 1990; Kuratko, Montagno & Hornsby, 1990; Sharma & Chrisman, 1999). The definition comprehends also the strategic renewal and change of an existing organization highlighted by Stopford & Baden-Fuller (1994). Strategic renewal pertains to corporate efforts that result in fundamental changes to the strategy or structure of

an organization. These changes entail a departure from pre-existing corporate level structures and strategies and modify the relationships within the organization and with its environment. Strategic renewal may also be related to innovation, but rather than effecting the creation of new organization, the change takes place within existing business (Guth & Ginsberg, 1990; Kanter, 1983; Stopford & Baden-Fuller, 1994; Zahra, 1993).

Each of the three above mentioned phenomena of innovation, new organization, and strategic renewal is a sufficient condition for entrepreneurship in the definition of Sharma & Chrisman (1999). That is, innovation may not be accompanied by new business creation or overall strategic renewal of the established organization. Likewise, the creation of a new business or a strategic renewal process is not necessarily accompanied by a Schumpeterian innovation in order to meet the standards of the definition.

Corporate entrepreneurship can be studied from different research perspectives and with different focal points. Stevenson & Jarillo (1990) suggest a basic classification in three main approaches: (1) The study of entrepreneurial action and outcomes in the context of the overall economic system; (2) The study of causes and motivations of individual entrepreneurial actors; (3) The study of entrepreneurship as organizational phenomenon. Each of these three approaches can be ascribed to a different disciplinary tradition. To researchers of the first category, what matters are the net effect of entrepreneurship on the economic system and the role of these actions in the development of the economic system (Aghion & Howitt, 1992; Birch, 1979/1987; Kirzner, 1979; Metcalfe, 1998; Santarelli, 2006). Investigations into the individual motives and traits of entrepreneurs, the perspective adopted by researchers grouped in the second category, tend to employ theories from psychology or sociology (Brockhaus, 1980; Collins & Moore, 1964; McClelland, 1961; Pennings 1982; Kuratko, Hornsby & Naffziger, 1997). The view of entrepreneurship as organizational phenomenon, the third category, is rooted in management science (Burgelman,

1983a/b; Drucker, 1985; Quinn, 1979; Rule & Irwin, 1988; Schollhammer, 1982; Stopford & Baden-Fuller, 1994). The characteristics of entrepreneurial management and, essentially, the recipes to enhance entrepreneurial activities and succeed with it are at the centre of this stream of research. Or, put differently, researchers attempt to identify the organizational processes and behaviours that enable firms to actually achieve their entrepreneurial aims (Stevenson & Jarillo, 1990).

Perspective / Key facts	(I) What are the effects of corporate entrepreneurship ?	(II) Why does it happen?	(III) How does it happen?
Research focus	Results in economic context	Motivations and traits of individuals to act entrepreneurial	Processes and behaviors that imply entrepreneurial activity
Unit of analysis	General economic system	Individuals/Societies	Organization-level
Disciplinary background	Economics	Psychology/Sociology	Management

Figure 12: Central research perspectives to study corporate entrepreneurship
Source: Own table based on Stevenson & Jarillo (1990)

Based on this classification, the present research project is in line with the third category – the study of entrepreneurship as organizational phenomenon with a focus on the preconditions to entrepreneurial behaviours and success.

Among the potential drivers of entrepreneurship, previous research addressed factors such as the role of industry life cycle, environmental dynamism, hostility and technological sophistication (Covin & Slevin, 1991; Miller & Friesen, 1982; Zahra & Garvis, 2000), as well as internal factors such as top management characteristics, governance, organizational resources and firm culture (Simsek, Veiga & Lubatkin, 2007; Srivastava & Lee, 2005; Yiu, Lau & Bruton, 2007; Zahra, Neubaum, Huse, 2000). With regard to firm outcomes, there is a substantial body of literature which investigates the relationship between entrepreneurial behaviours and financial performance (Rauch et al., 2009).

Moreover, as in most areas, a trend towards increasing sophistication in the domain of corporate entrepreneurship can be observed (Phan et al., 2008). For instance, scholars begin to address specific contexts of corporate entrepreneurship such as university-spin offs (Wright, Clarysse, Mustar & Lockett, 2008), or specific aspects such as knowledge management in corporate entrepreneurship (Agarwal, Echambadi, Franco & Sarkar, 2004).

In the next section, attention will be directed to the construct of entrepreneurial orientation, a multidimensional concept to capture actual entrepreneurial behaviours.

2.2.4 Construct of entrepreneurial orientation

Following the discussion about the definition of entrepreneurship and the presentation of corporate entrepreneurship and the research stream relevant for this dissertation, this section carries on with the entrepreneurial orientation construct, a framework to measure entrepreneurial behaviours which will be relevant in the subsequent empirical study.

The construct of entrepreneurial orientation (EO) is in line with the assumptions of corporate entrepreneurship. More specifically, it builds on the view that entrepreneurship is an organizational-level phenomenon, an element of a firm's strategic posture that can be analyzed in the actual processes, attitudes and behaviours of the organization (Covin & Slevin, 1991).

The EO construct as developed by Lumpkin & Dess (1996) is not a stand-alone effort. Rather, it directly builds on several prior efforts in the field and in particular Miller (1983), who depicts entrepreneurship as a multidimensional phenomenon in his three dimensional concept of corporate entrepreneurship (CE). There, each dimension represents a distinct behaviour that is characteristic for entrepreneurial firms. These dimensions are: (1) *innovativeness* – the

predisposition to engage in novel combinations; (2) *risk taking* – a propensity for bold actions such as venturing into new markets, borrowing heavily, or committing significant resources amid substantial uncertainty; and (3) *proactiveness* – an opportunity-chasing, pioneering attitude distinguished by market moves ahead of the competition and in anticipation of future demand.

The elements of the former CE concept are identical to the first three dimensions of the subsequent EO construct by Lumpkin & Dess (1996), who basically extend Miller's framework with two additional dimensions, namely (4) *competitive aggressiveness* – the intensity of a firm's desire to outperform rivals and its offensive attitude towards competitive threats and (5) *autonomy* – the discretion to pursue opportunities unobstructed by organizational constraints.

In the following, the exact meaning of each of the five dimensions of the EO construct will be explained in greater detail.

Dimension 1: Innovativeness

Innovativeness in entrepreneurship relates to a firm's propensity to develop new ideas, to promote and experiment with novel combinations that eventually turn into new products, processes or entire business models (Lumpkin & Dess, 1996). Lumpkin & Dess specifically distinguish between two forms of innovation, product market and technological. While they describe product market innovation to occur in the fields of product design, marketing and sales (Miller & Friesen 1978), technological innovation is used to capture advances in product development, engineering and research, always with an emphasis on specialist knowledge (Maidique & Patch 1982). While the degree of innovativeness may vary, it is supposed to constitute in any case a departure from established organizational practices and to reflect a firm's ambition to identify new and unique solutions (Ettlie, Bridges & O'Keefe, 1984; Damanpour, 1991).

In line with this, the innovativeness scale in the EO construct is designed to asses the top management's emphasis on technological leadership and new product development, the number of new products or services, and the extent of change, if any, in the business over a five year horizon.

Dimension 2: Risk Taking

Risk taking describes a firm's tendency to take bold actions in the allocation of organizational resources. Miller & Friesen define risk taking as "the degree to which firm leadership is willing to make large and risky resource commitments – i.e., those which have a reasonably chance of costly failure and where the outcomes are uncertain" (1978:923). Lumpkin & Dess (2001) further characterize their notion of risk taking by stating that it may take the form of venturing into new markets, the dedication of significant resources to new business concepts with uncertain outcomes or substantial financial leverage to reach organizational goals. Moreover, risk taking has been associated with the pursuit of very high returns, as opposed to a preference for lower, but more predictable, rates of return (Slevin & Covin, 1990). Again, the propensity of firms to take risks is a matter of degree – although in the business context, "no risk" is not a meaningful concept, as all business undertakings involve some basic level of risk.

Accordingly, the measures of risk taking in the EO construct are designed to assess firm-level risk taking by capturing management's preference for projects with potentially higher but less certain returns as well as the willingness to pursue possible opportunities in a fearless, bold manner.

Dimension 3: Proactiveness

In entrepreneurship research, proactiveness refers to how a firm reacts to market opportunities. A proactive firm is expected to adopt a forward-looking perspective and to anticipate future developments in today's actions (Lumpkin & Dess, 1996; Venkatraman, 1989). Proactive firms take an active stance in shaping the industry and outperform other market participants in bringing new products to the market, in controlling valuable resources or occupying attractive niches (Miller, 1983; Miller & Friesen, 1982). In contrast to Miller's version, the EO construct of Lumkin & Dess explicitly differentiates between proactiveness and competitive aggressiveness. While the former targets how a firm relates to new market opportunities, the latter aims at how firms relate to competitive threats and defend their position in the marketplace.

In order to capture this dimension of the construct, the EO scale proposes to inquire the firm's propensity to initiate changes in the market place and to be the first to introduce new products and services to the market.

Dimension 4: Competitive aggressiveness

Competitive aggressiveness addresses the attitude of a firm towards its competitive environment. Competitive aggressiveness describes "a firm's predisposition to directly and intensely challenge its competitors to achieve entry or improve position, that is, to outperform industry rivals in the market place" (Lumpkin & Dess, 1996:148). Competitive aggressive behaviour does not have to be proactive; it may also be reactive to the behaviours set in the competitive environment (Cruz Serrano et al., 2006). Characteristic for a competitive posture are tactics such as aggressive price cutting below profitability to increase one's market share (Venkatraman, 1989), the concentrated outspending of competing firms in key product features or the blocking of competitors from strategic resources (MacMillan & Day, 1987).

Consequently, the EO construct measures competitive aggressiveness in a firm's eagerness to gain market share from competition, and in doing so, the offensiveness of its posture and responses towards competing firms.

Dimension 5: Autonomy

Autonomy is the final dimension and together with competitive aggressiveness, not included in the original CE concept but has been added later in the refinement suggested by Lumpkin & Dess (1996). Lumpkin & Dess describe autonomy as "the independent action of an individual or a team in bringing forth an idea or a vision and carrying it through to completion" (1996:445). Autonomy may start with the ability and willingness of individuals to depart from the tried and true and pursue new prospects in an independent and self-directed way. Yet in the organizational context, autonomy also caters to the absence of organizational constraints such as malevolent superiors and bureaucratic processes that could inhibit the realization of new opportunities (Lumpkin & Dess, 1996). In the organizations, autonomy may occur in different forms. 'Autocratic autonomy' refers the freedom typically enjoyed by the owner-managers of small firms (Miller, 1983; Mintzberg & Waters, 1985; Shrivastava & Grant, 1985). In contrast, larger organizations may grant certain levels of autonomy to mid-level managers and employees in order to encourage their entrepreneurial behaviour (Hart, 1992; Bourgeois & Brodwin, 1984; Bower, 1970; Quinn, 1979). Moreover and specifically for the family firm context, Nordqvist, Habbershon & Melin (2008) propose an extension of the autonomy concept to embrace "external autonomy" in the sense that individuals are independent from external stakeholders such as banks, customers and suppliers.

Following these suggestions, the present study assesses the level of autonomy in the possibility for situational, informal decision making and the independence of decision making from external stakeholders such as banks.

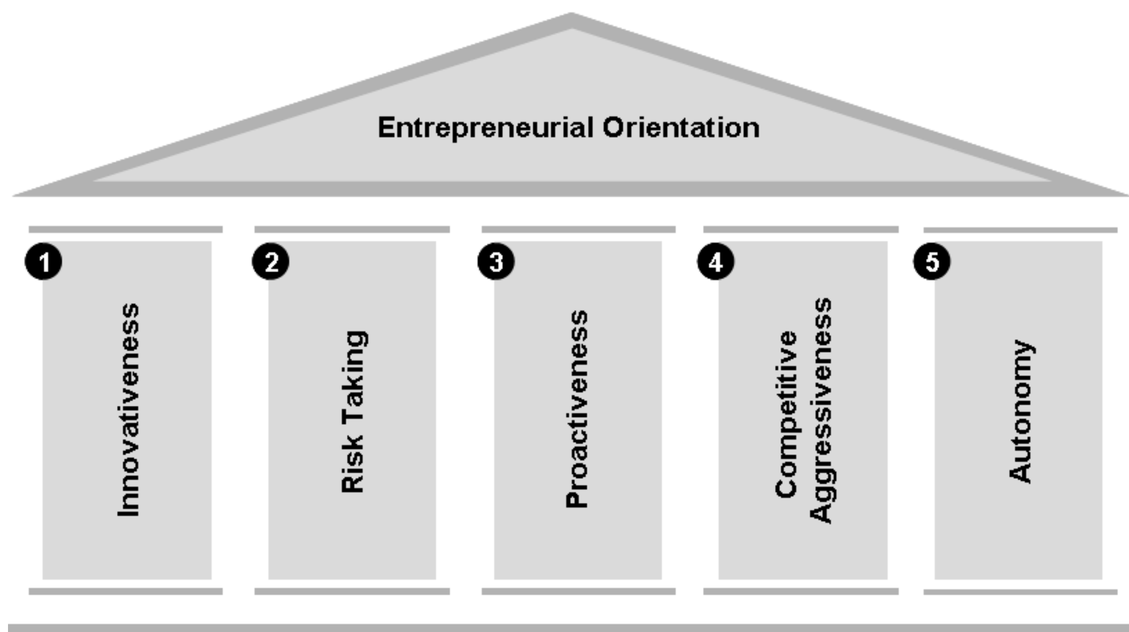

Figure 13: Visualization of five dimensional EO construct
Source: Own illustration based on Lumpkin & Dess (1996)

Summing up the scores for all items in each dimension provides a measure of the degree to which firm's engage in each of the five salient entrepreneurially oriented behaviours. The higher the score, the greater the degree of entrepreneurial orientation (Covin & Slevin, 1989).

The reliability and validity of the multi-dimensional EO construct has been dealt with in several studies (Chadwick, Barnett & Dwyer, 2008; Kreiser, Marino & Weaver, 2002; Rauch et al., 2009).

Since the five dimensions of the construct are reckoned to be highly intercorrelated (Bhuian, Menguc, & Bell, 2005; Richard, Barnett, Dwyer, & Chadwick, 2004; Stetz, Howell, Stewart, Blair, & Fottler, 2000), the combination of the dimensions into a single index of entrepreneurship is feasible and also common practice among researchers (Covin, Slevin, & Schultz, 2004; Lee, Lee, & Pennings, 2001; Naman & Slevin, 1993; Walter, Auer, & Ritter, 2006; Wiklund & Shepherd, 2003).

However, one must note that the aggregation into a single index is not unproblematic. Since each dimension is modelled to represent a distinct and independent aspect of entrepreneurial behaviour, the dimensions may occur in varying combinations (Covin, Green & Slevin, 2006; George, 2006; Lumpkin & Dess, 2001). Recent research also suggests that the individual dimensions may relate differently to firm outcomes such as performance (Stetz et al., 2000). As a consequence, one needs to be aware that the indexing into a single measure of entrepreneurship may disguise the exact relationships and forming of the individual dimensions with the respective variables under study. The relevance of this issue depends, admittedly, on the research question. For this study, which investigates antecedents of entrepreneurial behaviours, it was decided that the broad, multifaceted operationalization of entrepreneurship is preferable to the concentration on a single dimension such as, for instance risk taking *or* innovativeness.

2.2.5 Entrepreneurship as variable in strategic management

As is evident from the previous section, the language of the entrepreneurial orientation literature borrows substantially from the field of strategic management research. Yet this is not a one-way relationship. Entrepreneurship occurs also with increasing frequency in the domains of strategic management[25].

There is even a new term to describe the intersection of strategic management and entrepreneurship research – ‘strategic entrepreneurship’ (Kuratko & Audretsch, 2009). As is argued by its proponents, strategic entrepreneurship builds on the complimentary nature of strategy and entrepreneurship and may

[25] As evidence, one may consider terminology such as “entrepreneurial posture” (Covin & Slevin, 1986/1991), the “pioneering-innovative management” (Khandwalla, 1987), the “prospector strategy” (Miles & Snow, 1978), “innovative strategy making” (Miller & Friesen, 1983), “entrepreneurial mode of strategy making” (Mintzberg, 1973), and “entrepreneurial management” (Stevenson, 1983).

benefit both fields (Ireland et al., 2003). Firms whose strategies concentrate on the management of current competitive advantages but fail to address new opportunities risk that market changes reduce their wealth creation prospects (Hitt, Ireland, Camp, & Sexton, 2001). Morris et al., 2008 highlight therefore that more emphasis shall be placed on entrepreneurial thinking in the strategy-making processes. In a similar way, the pursuit of entrepreneurial opportunities may be conducive to the forming of sustainable competitive advantages and wealth creation of firms. Yet without appropriate incentives and steering, firms may not be able realize these gains but rather dissipate their energies (Day & Wendler, 1998). Businesses may benefit from the development of a strategy that guides entrepreneurial behaviours, by defining, for instance, the desired level of entrepreneurship in an organization and how this may be achieved (Morris et al., 2008).

Indeed, the facile integration of entrepreneurship in strategic management frameworks has even been referred to as 'take over' by some scholars (Baker & Pollok, 2007; Meyer, 2009). The nature of strategic management, which has been described as an open and interdisciplinary subject, certainly plays an important role in this process (Prahalad & Hamel, 1994). With a strong direction towards application and practice, the means and emphases of strategic management may shift with the focus of practitioners (Nag, Hambrick, & Chen, 2007). Essentially, the purpose of a strategy is to define where the firm wants to go and how it intends to get there (Kuratko & Audretsch, 2009). In a business atmosphere that is characterized by increasing risk, complexity, and change (Bettis & Hitt, 1995; Hitt & Reed, 2000; McGrath & MacMillan, 2000), entrepreneurial qualities play an increasing role for business managers. The rise of entrepreneurship in the strategic management literature is therefore far from accidental.

Yet beyond all territorial debate, firms require elements of both, entrepreneurship and strategic management in order to prosper in the long run (Amit, Brigham & Markham, 2001; Hitt &Ireland, 2000; McGrath & MacMillan, 2000).

2.3 Theories about family influence on entrepreneurship

Following the review of theoretical foundations in both family business and entrepreneurship research, attention will now turn to the literature at the overlap of both fields: theories and concepts that address entrepreneurship in a family-influenced environment. To this end, the chapter begins with a short appraisal of the development of research at intersection between family business and entrepreneurship in 2.3.1. Subsequently, three key contributions on family influenced entrepreneurship will be presented and discussed in greater detail. The notion of family orientation in chapter 2.3.2, the idea of enterprising families domain in 2.3.3, and last but not least, the proposition of family entrepreneurial orientation in chapter 2.3.4.

2.3.1 Development of research topic

The research topic of entrepreneurship in family firms is exactly at the overlap of two distinct research domains: family business and entrepreneurship research.

The pioneer in this field, Hoy & Verser's study "Emerging business, emerging field: entrepreneurship and the family firm" (1994), provided the first overview of the common themes between the two distinct fields. Essentially, this is achieved by depicting entrepreneurship and family business domains as a continuum along eight grand themes in entrepreneurship research formerly suggested by Gartner (1990).

In subsequent research, the notion of the overlap evolves from the consideration of mere commonalities to actual interrelationships between family influence and entrepreneurial activities in businesses.

Among these contributions is the suggestion to adopt a "family-embeddedness perspective" for entrepreneurship research (Aldrich & Cliff, 2003). In their analysis, Aldrich & Cliff show how changes in the roles and composition of the

family as institution in modern societies alter the modes of new venture creation. The paper argues that families are to businesses what oxygen is to fire and should thus be reflected in entrepreneurship studies.

With a similar focus on the topic of new business creation is Steier (2003), who researches the family-provided financial backing for new ventures. He finds that families are immensely important to the financing of new businesses and in fact the largest source of start-up capital. Moreover, he reports that the motives to provide funding differ substantially, ranging on a continuum from altruistic "donations" to the ventures of dear family member, to professional, market-like considerations and that nothing of this was so far considered in literature.

Craig & Lindsay (2002) are the first to investigate the family variable in its impact on the entrepreneurial process in established family firms. According to them, the family constitutes a rather an obstacle to processes of strategic renewal, change and firm development. They highlight the importance of an outside board of directors for family influenced firms in order to mitigate detrimental family effects and enhance entrepreneurial activities.

Martin & Lumpkin (2003) focus explicitly on the effects of family dynamics on entrepreneurial behaviours in established family businesses as opposed to start-up situations. In their paper, they propose that the entrepreneurial orientation is in high founding generations, but that with successive generations of ownership, this trait is replaced with an increasing family orientation, where stability and legacy interests become the principal concerns of business families. Their contribution is remarkable in the context of this study since it is the first to establish a direct link between the family mindset and the entrepreneurial behaviours of firms.

In the following years, contributions with an explicit family business focus increase. However, like in other areas of family business research, scholars tend to overemphasise the business system relative to the family system (Dyer &

Sanchez, 1999; Heck et al., 2000; Rogoff & Heck, 2003; Sharma et al., 1996). Examples include Salvato (2004), who examines the antecedents of entrepreneurship (Salvato, 2004) such as CEO leadership experience, managerial body size, delegation, and non-family ownership. Brunninge & Nordqvist (2004) concentrate on the role of independent directors for entrepreneurship in family firms. Craig & Moores (2006) inquire the impact of business practices and environmental conditions on innovation.

To date, there is little conceptual work that deals with corporate entrepreneurship in family firms (Fletcher, 2004; Kellermanns & Eddleston, 2006; Nordqvist, 2008). The following part discusses three pioneering conceptual contributions.

2.3.2 Family orientation

Martin & Lumpkin (2003) assume that in family firms, the mindset of the business family – that is, the intentions, attitudes and values – are the key to understand the character, processes and outcomes of the family-influenced organization. Consequently, they involve family orientations in the study of entrepreneurial behaviours in family firms. Their central proposition is that of a systematic change of business family orientations across generations of family ownership. Specifically, they argue that entrepreneurial orientations are likely to be high in first generation business families, but to decline in successive generations. At the same time, orientations that reflect the concern for family and family issues – *family orientations (FO)* – are supposed to increase. By family orientations, Martin & Lumpkin understand the family priorities to favour business or family matters, concerns for the family legacy, the existence of conflict, the desire for harmony, furthermore, the perception as family business and pride in the family's achievements, concern for the family name and a sense of responsibility for the community. The FO items are not yet described in a great level of detail in 2003. A precise description of the FO construct and its

theoretical foundation is only afforded in a paper published by Lumpkin et al. (2008) five years later. Therein, the key dimensions of the family mindset are summarized with (1) *tradition*, (2) *stability*, (3) *loyalty*, (4) *trust* and (5) *interdependency*.[26]

In order to substantiate their propositions, Martin & Lumpkin (2003) also conduct an empirical study, which will, also empirical evidence is really addressed in the consecutive chapter, briefly be reviewed in this context.

Their study confirms indeed increasing levels of family orientations. Later generations are more likely to perceive themselves as a family business, to exhibit pride in being part of a family business and the desire to pass on the family business to future generations of family members. Moreover, across generations, a tendency for the family to develop from owner-managers to shareholders in later generations is observed. Last but not least, the study demonstrates that successive generations of family businesses exhibit increasing levels of conflict both over pure business issues (strategic direction, capital, control) as well as the involvement of family in the firm (roles, qualification and compensation). Related to this, Martin & Lumpkin find an increasing importance of consensus over patriarchal decision making.

However, the evidence to support a decline in EO with successive generations is moderate. Out of the five salient dimensions of the EO scale, only four are investigated, while innovativeness, a central dimension of EO, is missing. Among the investigated remaining four dimensions, supporting evidence for the hypothesized decline of entrepreneurship can really only be found for two dimensions, competitive aggressiveness and autonomy. Moreover, the evidence for one of these two dimensions, declining autonomy, is debatable in so far as it

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[26] This later version is also distinct from the 2003 draft in that it aims to be a general means to capture family mindsets and to understand how individuals "perceive, relate and value family" (Lumpkin et al., 2008:134) – irrespective of the family business context.

is likely that the measures reflect size effects rather than generational effects[27]. Overall, the proposition of Martin & Lumpkin (2003) concerning declining EO is only weakly supported in the empirical findings– generously considered, only two of the five EO dimensions show declining levels.

The direction of thought suggested by Martin & Lumpkin (2003) is on the spot with its focus on what may be behind the entrepreneurial behaviours in family-influenced firms: the mindset of the controlling family coalition.

However, the FO scale has not been popular with other researchers investigating entrepreneurial behaviours in family firms.

A possible reason for this may be the lack of clarity and detailed explanation for the design of the FO scale in the 2003 draft. Apparently, the operationalization of the FO scale did not take place under ideal circumstances either. The items were drawn from an existing database, which evidently restricts the choice of

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[27] Evidence for declining autonomy is based on an increasing number of people involved in key decisions of the organizations, the existence of board of directors and the larger size of such a board with successive generations of family ownership; one may argue though, that older firms have a tendency to be larger, which by definition implies a larger managerial body size and more sophisticated controlling mechanisms such as a board of directors. Thus, without controlling for size effects, the conclusion of declining autonomy is problematic. Proactiveness, measured in the perceived importance to expand the business and increase the value of the firm's operations, shows an inverse U-shaped trend with lower levels in first and third then in second generation family firms – thence, as the authors agree, the hypothesis is not supported. Risk taking is measured using three items, first, the importance to reduce financial obligations of the business, second, personal loans with the company and third, the importance attributed to increasing business profitability. In the report, risk taking is reported to partially support the hypothesis. However, the only measure that consistently declines across generations is the frequency of personal loans to the company. Indeed, the view of Martin & Lumpkin (2003) to interpret this as a sign of declining organizational risk taking is debatable since this item only reflects the personal debts of the family to the company, not the overall risk profile of the organization – even if measured in financial obligations. Findings for competitive aggressiveness support the hypothesis of the authors as families in successive ownership generations attribute more importance to value and profitability increasing measures and show declining willingness to engage in aggressive behaviours towards competition.

measures[28]. For instance, it is questionable whether family involvement should only be measured through the number of family members present on the board of directors. Family members, in particular those of the next generations, might also be present in other operative functions. Moreover, one may argue that certain effects are more related to size of the business operations and size of the owning family then the generation of ownership.

Furthermore, it might have been detrimental to the FO construct that it positions family orientation against the entrepreneurial orientation in a sort of trade-off. In Martin & Lumpkin‘s concept, family influenced firms are either entrepreneurial *or* family-oriented. In a way, this is a variant of dual systems thinking where the business system is strictly characterized as good and functional, while the family system is considered as bad and non-functional – a pitfall criticized by Whiteside & Herz-Brown (1991) more than a decade earlier. In fact, it seems fair to assume that some very entrepreneurial, large and old family businesses are at the same time entrepreneurial in business matters *and* very focused on handling challenges in the family sphere. As was mentioned in the outline of this manuscript with the anecdote of Steinberg, Inc., the disregard of family dynamics and the failure to cope with these challenges can have the most destructive consequences.

2.3.3 Enterprising families domain

Habbershon & Pistrui (2002) assert that the conventional theoretical frame of family business researchers is too narrow to capture certain aspects of family influenced entrepreneurship. Specifically, they criticize that most concepts and definitions are tied to a particular business asset. As a consequence,

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[28] The FO measures in Martin & Lumpkin’s study (2003) include the family involvement in the business measured as number of family members on board of directors, the intention to involve children in the business, family conflict over roles of family members, family member qualifications and compensation; and furthermore, the perception of the business as family business, and finally, the intention to transfer the business to a relative.

entrepreneurship in family firms is only examined in relation to that particular business asset and the family firm ceases to exist with the termination of that very asset. Habbershon & Pistrui (2002) see a lack of theory for entrepreneurial families that have diversified interests beyond a particular business asset or family groups that decide to dispose of a particular business asset and then jointly redeploy their wealth in other, more promising activities. They suggest that transgenerational family influenced entrepreneurship would be more accurately assessed with the family rather than a particular business as unit of analysis. Their *enterprising family* is defined by the joint transgenerational wealth creation motive and ownership of business operations, which however, may change over time. In line with this, the role of the family members is primarily envisaged as that of shareholders, rather than that of operative business managers.

With their direction of thinking, Habbershon & Pistrui (2002) address a blind spot in family business research and provide valuable input for the discussion. The shift in paradigm that brings the family ownership group rather then an operative business to the centre of analysis offers a new dimension to the study of family influenced entrepreneurship. Arguably, the enterprising families concept is build on a special case rather then the norm among family firms. Serial and portfolio entrepreneurship do not occur in many family businesses. Similarly, the family-as-investor mindset is unlikely to fit all business families. For instance, businesses with small scale activities typically won't be able to afford professional management and limit their involvement to that of a shareholder. In contrast, the thinking of Habbershon & Pistrui (2002) is very suitable to the study of large, multigenerational family groups who frequently pursue horizontal business activities or redirect their strategic focus from one investment to another[29]. Moreover, even if their ideas are not immediately applicable to the majority of family firms, introducing the notion of

[29] As example, consider the development of business activities of Haniel Group and Whil. Werhahn KG in Germany.

diversification and redeployment of assets to family business research helps to broaden the spectrum of strategic options for family businesses and their advisers and thereby ultimately contributes to the wealth generation of all families in business.

2.3.4 Family entrepreneurial orientation

Nordqvist (2008) proposes a synthesis of the original EO construct proposed by Lumpkin & Dess (1996), the FO dimensions developed in Martin & Lumpkin (2003) and the enterprising families concept proposed by Habbershon & Pistrui (2002) under the name of *family entrepreneurial orientation (FEO)* scale. The suggested scale consists of thirteen dimensions. These dimensions include the five well-known EO dimensions proposed by (Lumpkin & Dess, 1996): (1) *innovativeness*, (2) *risk taking*, (3) *proactiveness*, (4) *competitive aggressiveness* and (5) *autonomy*. Furthermore, the scale contains eight items for family orientation: (6) *interdependency*, (7) *loyalty*, (8) *security*; (9) *stability*, (10) *tradition*, (11) *persistence*, (12) *efficiency* and (13) *reputation*. Out of these, the first five are credited to Martin & Lumpkin (2003), while the later three are added by Nordqvist. The reference to Habbershon & Pistrui (2008), which demand to place greater emphasis on family mindset rather than processes at the business-level, is embedded in the construction of the scale: Eight of the thirteen dimensions address aspects of the family mindset which need to be measured at the family, rather than the firm level.

Unfortunately, Nordquvist's proposition has not yet been formulated with a high level of detail and for the moment, some questions remain. Firstly, the relationship of the conventional EO with the FO scales. In Martin & Lumpkin's (2003) FO scale, several dimensions are not independent, but positioned as trade-offs with EO dimensions. For instance, innovativeness opposes stability/tradition, risk taking contrasts security while autonomy is at the opposite of

interdependency. Moreover, some of his additions to the FO scale, persistence and efficiency, appear to be rather antecedent traits to entrepreneurial behaviour. A further clarification concerning the use of the EO dimensions may also be advisable. Conventionally, EO dimensions address organizational behaviours in a particular business asset. In the FEO scale, one would expect a reflection of Habbershon & Pistrui's (2002) concern to capture not only one particular business asset, but also horizontal and serial business activities of diversified business families. So far, Nordqvist's suggestion does not elucidate how this is to be achieved. Overall, Nordqvist's FEO scale constitutes a constructive recapitulation of former contributions. Unfortunately, it is not yet a ready-to-use construct.

2.4 Conclusion and outlook

This chapter provided the theoretical foundations for this dissertation.

The section about family business theory showed that family firms are the most important type of organization around the world. However, the nature and extent of family influence on business operations is not homogenous. As a result of this, researchers struggle to find a single definition that captures the essentials of this organizational species. Among the dominant approaches to define family firms in the literature, a components-of-involvement approach that concentrates on control of ownership seems most suitable for the purpose of this dissertation. Key argument in favour of such a basic definition is the concern to keep a broad spectrum of family influenced firms in the sample. The definition of family firm has therefore been stated as:

A family firm is a company where members of a kinship group hold at least 50 percent of the equity and voting rights in a company and 30 percent in publicly listed firms.

The distinctiveness of family firms typically grounded in systems theory, which describes the family firm as result of the interplay of two distinct social systems. Among the existing conceptualizations, especially the life-cycle model of family firms captures systematic differences of family firms depending on the situation of family, business and ownership and thereby prepares the ground for a more differentiated treatment of family firms as is intended in the empirical part of the dissertation.

Furthermore, this chapter demonstrated that the language and contentions of family business research are specific to the family business research domain. In general organization research, the influence of the family variable for organizational behaviour is still largely ignored.

The section on entrepreneurship theory reviewed key theoretical developments and introduced the research stream of corporate entrepreneurship, which studies the predisposition of established organizations to engage in entrepreneurial activities. Specifically, corporate entrepreneurship was defined as:

Corporate entrepreneurship is the process whereby an individual or a group of individuals, in association with an existing organization, create a new organization or instigate renewal or innovation within that organization.

Particular attention has been given to the entrepreneurial orientation (EO) construct, which captures entrepreneurial behaviour in the five salient dimensions of innovativeness, risk taking, proactiveness, competitive aggressiveness and autonomy and which will also be used to measure entrepreneurship in the empirical part of this study.

This chapter also examined the relationship between entrepreneurship and strategic management research. It was demonstrated that both fields borrow

substantially from each other and that they are actually complementary in the context of both corporate entrepreneurship and strategy making.

In the third section of this chapter, contributions to study entrepreneurship in family firms were discussed. There is no comprehensive and ready-to-use concept yet. From the contributions reviewed, two propositions emerge as central. Firstly, the important role of the family mindset in shaping the entrepreneurial behaviour of family firms (Martin & Lumpkin, 2003; Lumpkin et al., 2008; Nordqvist, 2008). Secondly, the recommendation to shift the focus of attention from the business level and particular business assets to the family level in order to better capture the family driven nature of firms as well as the horizontal and serial entrepreneurial activities of family groups (Habbershon & Pistrui, 2002).

3 Analysis of Past Empirical Evidence on Family Firm Entrepreneurship

The aim of this chapter is to provide an overview and analysis of the existing empirical studies on entrepreneurship in family firms. Toward this aim, chapter 3.1 begins with an outline of the procedure and scope of the analysis. Next, chapter 3.2 elaborates the theoretical foundations and methodological aspects of the studies under review and thereby prepares the ground for the detailed presentation of the findings that takes place in chapter 3.3. Last but not least, chapter 3.4 summarizes and critically evaluates the results of the review.

3.1 Procedure and scope

To begin with, it is necessary to specify the scope and procedures for this review. With regard to the definition of entrepreneurship, the adoption of an overly inclusive approach clearly risks reducing the comparability of results across studies. The application of very strict conditions, for instance, to consider only studies that explicitly refer to the full five dimensional EO construct presented in the previous chapter, would result in a very small subset of the studies that deal with entrepreneurship in the family firms. Therefore, a somewhat more inclusive approach seems advisable. As a rule, any study that provides insights on at least one of the five salient dimensions of the EO construct (Lumpkin & Dess, 1996) – that is, on innovativeness, risk taking, proactiveness, competitive aggressiveness or autonomy – will be considered in this review even if the study does not make an explicit reference to the framework.

As one may suspect, past studies are not unanimous in their definition of the term family firm either. In fact, not all studies even bother to provide a definition or

feature under the label family business research. Consequently, the inclusion of studies had to be arbitrary in some cases and is guided by the intention to include all efforts that appear relevant for the focus of this study.

The literature review concentrates on quantitative empirical evidence. Hence, case studies, anecdotal, experience-based reports and samples with less than 10 firms are generally not included in this section. Such a strict cut-off point is debatable, since case studies are also factual evidence and constitute a valuable source of information to family researchers. However, the focus of this study is less about the rich detail – the core quality of case studies – but about the identification of central tendencies in family firm behaviour that can be confirmed across a large number of cases. For this reason, qualitative evidence will generally not be part of this review, although exceptions maybe made for case studies with exceptionally relevant findings.

Moreover, in order to ensure the quality of findings, the primary focus of this analysis is on studies published in international scholarly journals such as the Academy of Management Journal, Entrepreneurship Theory & Practice, Family Business Review, Journal of Business Venturing, Journal of Small Business Management, International Journal of Entrepreneurial Behaviour and Research, Journal of Private Equity Firms, Journal of Developmental Entrepreneurship. Additionally and where accessible, working papers from high profile institutions and researchers as well as accepted papers from reputable conferences (e.g. IFERA) are considered.

Sometimes, a specific sample has been published in several articles. As a rule, where more than one publication was found with the same underlying sample and mostly identical messages, only the most recent publication is included in the review.

3.2 Analysis of methodology

This section reviews first the theoretical foundations of prior empirical efforts in chapter 3.2.1. Consecutively, the definitions and concepts employed are analyzed in chapter 3.2.2. Next, a review of the nature and quality of underlying samples is prepared in chapter 3.2.3. Overall, a primary concern of this section is to bring to attention the heterogeneity of the existing empirical work, which essentially means that any conclusions across studies should be made with utmost caution.

3.2.1 Theoretical foundations

The majority of studies address entrepreneurial behaviour in family firms from the point of view of the family business research domain. Next is entrepreneurship (Brockhaus, 1980; Masters & Meier, 1988; Pistrui et al., 2000; Stewart, Watson, Carland & Carland, 1998). Moreover, there is one contribution that originates from the area of small business studies (Gudmundson, Hartman & Tower, 2003) and another one from economics (Caliendo et al., 2008).

In search of the explanatory models applied in former efforts, nine different theories have been identified. Moreover, a considerable lack of theory was noted for a number of studies.

Among the studies written by family business scholars, agency theory is to be the most popular explanatory framework. The propensity for entrepreneurial behaviour of firms is related to the ownership and governance models in place. In particular the combination of ownership and management roles frequently encountered in family firms is linked with both lower levels of entrepreneurship (e.g., Naldi et al., 2007; McConnaugy et al., 2001) but also higher levels of entrepreneurship (e.g., Daily & Dollinger, 1992; Zahra, 2005).

Research domain	Explanatory model	#	Authors
Family business	**Agency theory**	7	Daily & Dollinger (1992); Eddleston et al. (2009); Gils et al. (2008); McConaughy et al. (2001); Naldi et al. (2007); Salvato (2004); Zahra (2005)
	Stewardship perspective	4	Eddleston et al. (2009/2008); Zahra (2005/2003)
	Resource-based view	3	Eddleston et al.(2008); Gils et al.(2008); Zahra et al. (2004)
	Upper-Echelon	1	Gils et al. (2008)
	Trait theory	1	Gils et al. (2008)
	Contingency theory	1	Craig & Moores (2006)
	No identifiable reference to specific theory	9	Brunninge & Nordqvist (2004); Donckels & Fröhlich (1991); Gallo (1995); Gallo & Vilaseca (1996); Kellermanns et al. (2008); Kellermanns & Eddleston (2006); Martin & Lumpkin (2003); McCann et al. (2001); Westhead & Cowling (1997); Zellweger & Sieger (forthcoming)
Entrepreneurship	**Risk attitudes**	3	Brockhaus (1980); Masters & Meier (1988); Stewart et al. (1998)
	Achievement motivation	3	Brockhaus (1980); Masters & Meier (1988); Stewart et al. (1998)
	Socio-economic forces	1	Pistrui et al. (2000)
Economics	**Risk attitudes**	1	Caliendo et al. (2008)
Small business	**No identifiable reference to specific theory**	1	Gudmundson et al. (2003)

Figure 14: Theoretical foundations of past empirical studies
Source: Own analysis

The stewardship perspective is present in four research efforts. With reference to Davis et al. (1997) and Corbetta & Salavto (2004), the prevalence of stewardship orientations, that is, collectivistic and empowering behaviours, is linked with greater engagement in entrepreneurial behaviours of family firms (e.g. Eddleston et al., 2009).

The resource-based view of the family firm was put to practice in three former studies. Therein, particular resource constellations stemming from the familyness

of the firm (Habbershon & Williams, 1999; Habbershon et al., 2003) are tested in their effects for the entrepreneurial behaviour of firms (e.g., Zahra et al., 2004).

Moreover, a tendency for the combinatory use of theories can be observed. For instance, stewardship theory has been combined with agency theory in Eddleston et al. (2009). In Eddleston et al. (2008) stewardship theory is teamed up with the resource-based view of the family firm. Gils, Voordeckers & Hagedoorn (2008) even employ four different theories. Among them are the familiar agency theory and resource-based view. Moreover, they refer to upper-echelon theory, which highlights the influence of executives' experience for the strategic choices of the firm (Finkelstein & Hambrick, 1996). Finally, the study also employs trait theory and links entrepreneurial behaviours to the psychological predisposition of managers (Mueller & Thomas, 2000; Rotter, 1966).

Studies written by entrepreneurship scholars and also the study with an economic background were found to frequently emphasise individual personality aspects. They recur to the intellectual traditions of achievement motivation theory (McClelland, 1961), and/or theories on risk taking preferences such as expectance theory (Atkinson, 1957), entrepreneurial risk preferences (Mancuso, 1975) and risk taking propensity (Chell, Haworth & Brearley, 1991; Sexton & Bowman, 1985). In contrast, Pistrui et al. (2002) adopt a sociological stance. They integrate external effects such as culture, social, economic, and political infrastructure (Davidsson, 1995; Van de Ven, 1993) as determining factors that shape the personality and actions of entrepreneurs (Shapero & Sokol, 1982) and business families (Benedict, 1968).

Studies without an identifiable reference to an established theoretical framework are by and large written by family business scholars. Given the traditional proximity between research and practical advice in this domain, a possible reason for this theoretical agnosticism might be that researchers were more interested in understanding real-life phenomena than in theories. Another explanation might

be that researchers felt that the established paradigms would not contribute to their specific research problem. As was mentioned before, family businesses were long ignored as an organizational phenomenon and thus not considered in mainstream theoretical frameworks.

3.2.2 Definitions and concepts

As outlined above, the definitional boundaries of this review are purposefully very broad. Therefore, a detailed discussion of the individual definitions employed is important. In the following paragraphs, the definitional variety of the term family business and the different conceptualizations of entrepreneurship in previous empirical studies will be examined.

Family business

The term family business has been interpreted with significant variation. While *family ownership (O)* is a central defining condition to all but one study, this condition has been operationalized in almost as many variations as there were studies under review. Several studies simply demand 'family ownership' (Daily & Dollinger, 1992; Stewart et al., 1998; Zahra, 2005), which may be stated as "ownership resides within the family" (Kellermanns & Eddleston, 2006:816). Yet in the absence of further specification, it remains unclear whether such studies require 100 percent or only a controlling stake of the equity to be held by the family. A number of studies demand the family to be the "major owner" (Brockhaus, 1980:510; Masters & Meier, 1988:32), ask for "considerable financial control" (Pistrui et al., 2000:252) or „some identifiable" share of family ownership in the firm (Zahra, 2003:501). Without further clarification, such statements leave substantial room for interpretation. More precise are the studies that request "majority family ownership" (Salvato, 2004:71), "majority of voting rights" (Brunninge & Nordquist, 2004:88) or even indicate a minimum equity

threshold. For instance 50 percent for private firms (Gallo, 1995; Gallo & Vilaseca, 1996; Martin & Lumpkin, 2003; Naldi et al., 2007). For public firms, the equity threshold was generally lower. Martin & Lumpkin set the cut-off point at 10 percent; In McCann et al. (2001) the median family ownership is around 10 percent, suggesting that their equity threshold was likely to be as low as three or five percent of family ownership.

Many studies require additional defining conditions for family firms. Next to family ownership which has been outlined above, a *family that is actively involved in the management of the firm (FM)* is the second most frequently mentioned condition. Again, the use of this criterion varies significantly. Examples include "having at least two family members employed by the organization" (Kellermanns & Eddleston, 2006:8) or "family members in leadership roles" (Gudmundson et al., 2003:6). Others specify a family affiliation for the CEO (McCann et al., 2001), demand that only family members shall be in the management of the business (Daily & Dollinger, 1992) or simply state that the firm needs to be family managed (Brockhaus, 1980; Gils et al., 2008; Masters & Meier, 1988).

Some studies make the family firm status conditional upon the *self-perception (P)* of the respondents to be a family business (Brunninge & Nordquist, 2004; Gils et al., 2008; Gudmundson et al., 2003; Martin & Lumpkin, 2003; Naldi et al., 2007; Salvato, 2004; Westhead & Cowling, 1997; Zahra, 2005).

Intergenerational involvement (IGI) refers to the involvement of multiple generations of the family in the management of the business. This condition was identified in two studies (Zahra, 2003; Zahra et al., 2004).

Furthermore, some studies require firms to either have the *intention to pass on the business in the family (TI)* (Kellermanns et al., 2008; Martin & Lumpkin, 2003), or to have even already completed one *generational transfer in the past (GT)* (Gallo, 1995).

Kellermanns et al. (2008) follow the essence approach and require a *consistency of firm vision with family strategy (V)* as a mandatory criterion.

A noteworthy case is also the first generation family firm. Several of the observed studies refer to “entrepreneurs”. According to Carland, Hoy, Boulton, & Carland, (1984), entrepreneurs are individuals who independently own and actively manage a small business. As this is congruent to a family business where an individual controls both ownership and management, these studies were generally included in the review. However, not all researchers would agree to this decision. For instance, a specific condition to exclude founding generations is employed in Gallo (1995), who considers only businesses that are at least in the second generation of family ownership as family firms. The attempt to confine family businesses from start-ups can also be found in Craig & Moores (2006), Salvato (2004) and Zahra (2003), who require firms to have a minimum of five, respectively three years of age to be included in the sample.

A summary of all definitional conditions encountered, their frequency and sources is given below.

Defining conditions	#	Authors
Family ownership (O)	26	Brockhaus (1980); Brunninge & Nordqvist (2004); Caliendo et al. (2008); Craig & Moores (2006); Daily & Dollinger (1992); Donckels & Fröhlich (1991); Eddleston et al. (2009/2008); Gallo (1995); Gallo & Vilaseca (1996); Gudmundson et al. (2003); Kellermanns & Eddleston (2006); Martin & Lumpkin (2003)*; McConaughy et al. (2001); Masters & Meier (1988); McCann et al. (2001); Naldi et al.(2007); Pistrui et al. (2000); Salvato (2004); Stewart et al. (1998); Gils et al. (2008); Westhead & Cowling (1997); Zahra et al. (2004); Zahra (2003); Zahra (2005); Zellweger & Sieger (forthcoming)
Family in management (FM)	17	Brockhaus (1980); Brunninge & Nordqvist (2004); Caliendo et al. (2008); Daily & Dollinger (1992); Eddleston et al. (2009, 2008); Gallo (1995); Gallo & Vilaseca (1996); Gils et al. (2008)*** ; Gudmundson et al. (2003); Kellermanns & Eddleston (2006); Kellermanns et al. (2008); Martin & Lumpkin (2003)*; McConaughy et al. (2001); Naldi et al. (2007); Pistrui et al. (2000); Zellweger & Sieger (forthcoming)
Self-perception as family business (P)	8	Brunninge & Nordqvist (2004); Gils et al. (2008)***; Gudmundson et al. (2003); Martin & Lumpkin (2003)*; Naldi et al. (2007); Salvato (2004)**; Westhead & Cowling (1997); Zahra (2005)
Transfer intention (TI)	2	Kellermanns et al. (2008); Martin & Lumpkin (2003)*
Intergenerational involvement (IGI)	2	Zahra et al. (2004); Zahra (2003)
Past generational transfer (GT)	1	Gallo (1995)
Vision for firm consistent with family strategy (V)	1	Kellermanns et al. (2008)

Notes
* Martin & Lumpkin (2003) use ownership plus one out of three additional conditions
** Salvato (2004) requires controlling ownership or perception
*** Gils et al.(2008) require involvement in management, ownership and self-perception

Figure 15: Defining conditions of family firm in past empirical studies
Source: Own analysis

Entrepreneurship

Multidimensional, behaviour-oriented conceptualizations of entrepreneurship are common in past empirical studies. However, the five dimensional EO construct

of Lumpkin & Dess (1996) is rarely employed in its entirety (Martin & Lumpkin, 2003; Zellweger & Sieger, forthcoming). Instead, many studies (Eddleston, Kellermanns & Zellweger, 2009; Kellermanns & Eddleston, 2006; Salvato, 2004; Zahra et al., 2004) draw on its direct precursor, the CE construct suggested by Miller (1983). In some instances, scholars refer to CE and EO constructs[30] but use only some of their dimensions. For instance, Naldi et al. (2007) advert to the five dimensional EO construct of Lumpkin & Dess (1996) but employ only its first three dimensions – thus operating basically with the CE construct. Zahra (2005) in turn quotes Miller's (1983) CE concept, but uses only the dimension of risk taking.

A reference to the concept of strategic renewal and change (Covin & Slevin, 1989; Stopford & Baden-Fuller, 1990) was made in Brunninge & Nordqvist (2004). Yet a closer look reveals that the dimensions of this construct, innovativeness, risk taking and proactiveness, are identical with the first three dimensions of the CE (Miller, 1983) and EO constructs (Lumpkin & Dess, 1996).

Daily & Dollinger (1992) and McCann et al. (2001) allude to the typology of business strategy proposed by Miles & Snow (1978). Therein, firms are classified according to their strategy making behaviour in innovators/prospectors, analyzers, reactors and defenders. Firms with prospector strategies are characterized to be risk taking, emphasize innovative practices and seek proactively grow-oriented strategies, which is again very much in line with Miller (1983). Analyzers are characterized as growth-oriented, but with a tendency to follow rather than to lead trends in their industries. Reactors are described to have no strong strategic profile and deficiencies in general management. The defender profile describes conservative firms that adhere to what they know best (Miles & Snow, 1978).

[30] See chapter two for detailed discussion of the CE and EO constructs.

Stewart et al. (1998) investigate the 'entrepreneurial proclivity' and bear on the theoretical work of McClelland (1961), Sexton & Bowman (1985) and Schumpeter (1934). In their operationalization, the well-know dimensions of risk taking and innovativeness emerge.

Donckels & Fröhlich (1991) propose their own entrepreneurial attitudes typology, which resemble likewise three dimensions of Miller's CE framework (1983).

Moreover, a number of studies rely on one-dimensional concepts of entrepreneurship.

A firm's innovative capacity (McGrath, 2001), defined as its commitment to find new approaches in technology, business models and products, is employed in Eddleston, Kellermanns & Sarathy (2008). Its operationalization is achieved with the familiar items from Miller (1983) and Zahra (1996). Innovation and innovation processes are focalized in Craig & Moores (2006), Gils et al. (2008) and Gudmundson et al. (2003), all with reference to Schumpeter (1934) and Damanpour (1991).

Risk taking is frequently employed as stand-alone concept. However, with different connotations. Following the psychological traditions in entrepreneurship research, some studies focus on the personality characteristics that may be linked with a predisposition for risk taking (Brockhaus, 1980; Masters & Meier, 1988; Stewart et al., 1998). In a similar vein, Caliendo et al. (2008) make reference to the psychological aspects of risk taking developed in Chell et al. (1991). Zahra (2003) in contrast measures risk taking in the level of firm internationalization. Furthermore, some studies conceptualize risk taking as financial risk and firm leverage (Gallo, 1995; Gallo & Vilaseca, 1996). Although one might argue that some of these conceptualizations are very narrow, each is a core element of the risk taking behaviour outlined in the EO construct (Lumpkin & Dess, 1996/2001) and is therefore included in this review.

Concept of entrepreneurship	EO-Dimensions	Authors
Entrepreneurial orientation (Lumpkin & Dess, 1996)	Innovativeness Risk taking Proactiveness Comp. aggress. Autonomy	Martin & Lumpkin (2003) Zellweger & Sieger (forthcoming)
	Innovativeness Risk taking Proactiveness	Naldi et al. (2007)
Corporate entrepreneurship (Miller, 1983)	Innovativeness Risk taking Proactiveness	Eddleston et al.(2009); Kellermanns et al. (2008); Kellermanns & Eddleston (2006); Salvato (2004); Zahra et al.(2004)
	Risk taking	Zahra (2005)
Strategic renewal and change (Stopford & Baden-Fuller,1994; Covin & Slevin, 1991)	Innovativeness Risk taking Proactiveness	Brunninge & Nordqvist (2004)
Typology of business strategy (Miles & Snow, 1978)	Innovativeness Risk taking Proactiveness	McCann et al.(2001); Daily & Dollinger (1992)
Entrepreneurial attitudes typology (Donckels & Fröhlich, 1991)	Innovativeness Risk taking Proactiveness	Donckels & Fröhlich (1991)
Entrepreneurial proclivity (McClleland, 1961; Jackson, 1976; Sexton & Bowman, 1985; Schumpeter, 1934)	Risk taking Innovativeness	Stewart et al. (1998)
Innovative capacity (McGrath, 2001; Miller, 1983; Zahra, 1996)	Innovativeness	Eddleston et al. (2008)
Innovation processes (Damanpour, 1991; Schumpeter, 1934)	Innovativeness	Craig & Moores (2006); Gils et al. (2008); Gudmundson et al.(2003)
Psychological risk taking propensity (Atkinson, 1957; Chell et al., 1991; McClleland, 1961, Mancuso (1975)	Risk taking	Brockhaus (1980); Caliendo et al. (2008); Masters & Meier (1988)
Entrepreneurial orientation (Davidsson, 1995; Dunkelberg & Cooper, 1982)	Risk taking	Pistrui et al. (2000)

Concept of entrepreneurship (cont.)	EO-Dimensions	Authors
Internationalization	Risk taking	Westhead & Cowling (1997); Zahra (2003)
Financial leverage	Risk taking	Gallo (1995); Gallo & Vilaseca (1996); McConaughy et al. (2001)

Figure 16: Conceptualization of entrepreneurship in past empirical studies
Source: Own analysis

The conceptual variety is also reflected in the survey items employed in former empirical studies. Even among authors who refer to the very same concept, variations in the operationalization can be observed in the studies of Eddleston, Kellermanns & Zellweger (2009), Kellermanns & Eddleston (2006), Kellermanns et al. (2008), Salvato (2004) and Zahra et al. (2004).

3.2.3 Sampling issues

This chapter examines the sampling characteristics of past empirical studies. Therein, the provenience of samples, the size of samples and average size of firms in the sample as well as the nature of information obtained will be discussed.

3.2.3.1 Provenience

Provenience refers to the geographical origin of the sample. It does not necessarily reflect the background of the authors or journals in which the study is published. Among the studies reviewed, the U.S. emerges as dominant country of origin. It accounts for more than half of the studies. Sweden is the runner-up, contributing 3 samples. The remaining 10 studies originate from various, primarily European countries.

Provenience	#	Authors
US	14	Brockhaus (1980); Daily & Dollinger (1992); Gudmundson et al. (2003); Kellermanns & Eddleston (2006); Eddleston et al. (2008); Kellermanns et al.(2008); Martin & Lumpkin (2003); Masters & Meier (1988); McCann et al. (2001); McConaughy et al. (2001); Stewart et al. (1998); Zahra et al. (2004); Zahra (2003); Zahra (2005)
SE	3	Brunninge & Nordqvist (2004); Naldi et al. (2007); Salvato (2004)
Other countries *	10	Caliendo et al.(2008); Craig & Moores (2006); Donckels & Fröhlich (1991); Eddleston et al.(2009); Gallo (1995); Gallo & Vilaseca (1996); Gils et al. (2008); Pistrui et al. (2000); Westhead & Cowling (1997); Zellweger & Sieger (forthcoming)

Note
* Other countries comprises one study each from Australia and U.K., a combined Dutch/Belgian sample, two each from Germany, Switzerland and Spain as well as one multi-country European study

Figure 17: Geographical provenience of past empirical studies
Source: Own analysis

3.2.3.2 Sample size

The sample size refers to the number of firms contained in the sample. As is evident from the figure, sample size varies significantly in the examined studies. The smallest samples among the quantitative studies reviewed are made up of 50 firms (Kellermanns & Eddleston, 2008; Masters & Meier, 1988), while the largest sample represents 7,325 cases (Caliendo et al., 2008). However, the later is rather an outlier in a group where the median sample size is at 170 firms per sample. Although larger samples are generally better, it must be noted that differences in the nature, amount and quality of information required for a particular research question also affects sample size. Moreover it is important to mention the multi case study on three family firms, which, as an exception, is considered in this review. Yet in order not to distort the analysis on sample size, this qualitative study – Zellweger & Sieger (forthcoming) has not been listed in the illustration below.

Sample size (in firms)		Authors
	High: 7,325	Caliendo et al.(2008)
Upper 50%		Brunninge & Nordqvist (2004); Donckels & Fröhlich (1991); Eddleston et al. (2009); Martin & Lumpkin (2003); McCann et al. (2001); McConaughy et al.(2001); Naldi et al. (2007); Salvato (2004); Stewart et al.(1998); Zahra (2003); Zahra et al.(2004); Zahra (2005)
	Median: 170	
Lower 50%		Brockhaus (1980); Craig & Moores (2006); Daily & Dollinger (1992); Eddleston et al. (2008); Gallo (1995);Gallo & Vilaseca (1996); Gils et al. (2008); Gudmundson et al. (2003); Kellermanns & Eddleston (2006); Pistrui et al. (2000);Westhead & Cowling (1997)
	Low: 50	Masters & Meier (1988); Kellermanns et al. (2008)

Note: Sample size compares the number of firms investigated, not the total number of responses . That is, if more than one interview per company was held, this would not be reflected in this review

Figure 18: Sample sizes of past empirical studies

Source: Own analysis

3.2.3.3 Family firm sizes

Family firm size addresses the size of the business operations underlying the samples. Information on average firm revenues – not to speak of results – is rarely mentioned in past studies. However, most studies provide a sample average of the number of employees per firm. As can be seen from the figure below, most samples are build on firms with less than 100 employees, while only a minority addresses large family firms with an average staff of 100 or more. Thus, using the number of employees as a proxy for firm size, almost 80 percent of extant empirical evidence is based on small to medium sized family firms. This distribution is unbalanced and suggests that most of our knowledge is indeed based on the situation of smaller family firms. As research has shown the

fundamental differences between family firms of different sizes (Smith, 2007), knowledge directly applicable for large family firms is indeed scarce.

Average firm size	#	Authors
Less than 100 employees	18	Brockhaus (1980); Brunninge & Nordqvist (2004); Craig & Moores (2006); Caliendo et al. (2008); Daily & Dollinger (1992); Donckels & Fröhlich (1991); Eddleston et al. (2008); Gudmundson et al. (2003); Kellermanns & Eddleston (2006); Martin & Lumpkin (2003); Masters & Meier (1988); Naldi et al. (2007); Salvato (2004); Stewart et al. (1998); Pistrui et al. (2000); Westhead & Cowling (1997); Zahra et al.(2004); Zahra (2003)
More than 100 employees	6	Gallo (1995); Gallo &Vilaseca (1996); McCann et al. (2001); McConaughy et al. (2001); Zahra (2005); Zellweger & Sieger (forthcoming)
Information not available	3	Eddleston et al. (2009)* ; Gils et al. (2008)***; Kellermanns et al. (2008)**

Notes
* Study classifies firms as ‘private firms’
** Firms are described to be ‘larger than average’
*** Firms are characterized as ‘small to medium sized’

Figure 19: Average firm size in past empirical studies

Source: Own analysis

3.2.3.4 Nature of information

The nature of information obtained in the samples may differ in the following aspects. Firstly, whether the information employed for the survey is public and available from secondary sources or whether it is private and sourced directly from the family firms. Secondly, whether the information is gathered from a particular source in the organization such as the CEO or a member of the business family or just anybody in the organization such as the summer intern. Thirdly, whether the authors aim for a verification of statements through multiple respondents. And fourth, whether the study adopts a cross-sectional or longitudinal survey design.

Among the studies reviewed, all but one (McConaughy et al., 2001) are based on private information which is obtained in direct interviews or mail surveys.

Moreover, with the exception of three studies which do not specify the background of respondents (Craig & Moores, 2006; Eddleston et al., 2008; Gallo, 1995), all researchers concentrate on the top management team and target responses from the CEO, CFO and owner-manager of the family firm.

Furthermore, especially in more recent studies, a trend to obtain multiple responses per firm can be observed (e.g. Eddleston et al., 2009/2008; Kellermanns & Eddleston, 2006; Kellermanns et al., 2008; Zahra et al., 2004; Zahra, 2005; Zellweger & Sieger, forthcoming). Evidently, such a proceeding allows for a more appropriate and complete picture of family firms and is thus highly desirable.

The dominant survey design is a cross-sectional format, which is applied by almost all studies under review. A noteworthy exception is the longitudinal study of Craig & Moores (2006), who study the patterns of innovation of 67 family firms over a ten year horizon.

In conclusion of this section, it shall be repeated that the extant empirical studies are quite heterogeneous in their theoretical and methodological approaches. It must be quite clear at this point that a scientifically solid comparison of "likes with likes" cannot be achieved from this set of studies and that any implications from a comparative analysis need to be treated with caution. This must be kept in mind in the next section, where the results of the studies will be analyzed and indeed be placed in a comparative fashion next to each other.

3.3 Presentation of empirical evidence

This chapter presents the empirical evidence extracted from the selected literature. Generally, findings can be distinguished in contributions to the characteristics of entrepreneurship in family firms which will be focalized in chapter 3.3.1 and efforts that focus on the determinants of entrepreneurial behaviour, which is the dealt with in chapter 3.3.2.

3.3.1 Characteristics of entrepreneurial behaviour

In this section findings pertaining to the characteristics of entrepreneurial behaviour are presented. In fact, most researchers opt for the comparison of family and non-family firms in order to carve out the characteristic traits of family firms. The subsequent discussion mirrors the structure of the EO construct and presents findings along the dimensions of (1) innovativeness, (2) risk taking, (3) proactiveness, (4) competitive aggressiveness, and (5) autonomy. An alphabetical overview of all findings considered in this section is provided at the end of the chapter.

3.3.1.1 Innovativeness

What regards innovativeness, there is substantial evidence but findings are not always consistent. On the basis of 89 small firms in the U.S., Gudmundson, Tower & Hartmann (2003) report that family firms have a tendency to score higher in terms of both initiation and implementation of innovative ideas compared to non-family firms. In contrast, Donckels & Fröhlich (1991) conclude from an investigation into the strategic orientation of 1,132 small and medium sized firms in eight European countries that the family firms in their sample are less innovative than non-family firms. Specifically, family firms are reported to perceive innovation as too risky and not a top priority among the firm’s goals.

Moreover, some of the findings support the assumption that family firm attitudes develop across time. McCann et al. (2001) report that the 231 U.S. family firms in their sample were as likely to pursue innovative or defensive strategies. However, accounting for differences in size and age, younger and smaller family firms were significantly more likely to show innovative behaviours than their older and larger counterparts. Similarly, Craig & Moores (2006) report that firms in earlier stages of their life cycle[31] – that is, younger and smaller firms – demonstrate higher levels of innovativeness than firms at later stages in their life-cycle. In contrast to this, Gils et al. (2008) find no statistical difference in the innovativeness of first, second and third generation family firms in a sample of 153 small and medium sized Dutch and Belgian family firms. An altogether different dynamic is proposed in Zellweger & Sieger (forthcoming). From an in-depth analysis of three long-lived family firms, they suggest that the level of innovativeness – both what regards product-market as well as structural and process innovation – fluctuates over time. According to their analysis, family firms tend to be more innovative in the aftermath of generational changes.

All findings pertaining to the characteristics of innovativeness in family firms are presented in the figure below. The structure of the presentation is identical throughout this section. In the illustration, the first row always indicates the dimension of entrepreneurship considered. The second row contains the columns for (1) the *authors* of the study; (2) the *year* of publication; (3) the *source* of the study in terms of its country of origin; (4) *sample* characteristics, that is, the reference group, the number of firms in the survey and their approximate size; (5) the *concept of entrepreneurship* employed and (6) *EO*, which lists the dimensions of the EO construct captured in each study – while only the results for each individual dimension (e.g., innovativeness) are relevant in the respective analyses and therefore highlighted in bold. Furthermore, in order to save space, each dimension will be used with an abbreviation. That is, innovativeness will be

[31] Craig & Moores employ the life-cycle concept of Adizes (1979).

“I”, risk taking “RT”, proactiveness “P”, competitive aggressiveness “CA” and autonomy will be shortened as “A”. The last three columns to the right contain information on the *characteristics of entrepreneurship*, that is, whether (7) *lower levels*, (8) *no difference*, or (9) *higher levels* were observed in each context, indicated with an “X” in the respective row. Since studies differ substantially in their study design and the respective reference group, column (4) sample provides key information to interpret the findings. Therein, several abbreviations describe the types of firms and the definitions employed. “NFF” signifies non-family firms, “FF” stands for family firms. The letters in brackets abbreviate the defining conditions of family firm applied. Consistent with the terminology used in the methodological section, “O” represents family ownership; “FM” equals family in management; “P” is short for self-perception as family business; “GT” stands for completed generational transfer and “TI” for transfer intention; “IGI” represents intergenerational family involvement in the business; “V” stands for the consistency between family and firm vision. Studies may compare different types of family firms, or, much more common, choose to analyze the behaviour of family firms by contrasting it with non-family firms. Information on the respective reference group is also presented in column (4), sample. If the study examines different types of family firms, the sample information states “FF only” and clarifies the types of family firms under comparison in brackets in columns (7), (8), (9) indicating the characteristic behaviour of entrepreneurship. If there is a non-family reference group, the sample information states “FF vs. NFF” and the values in columns (7), (8), (9) always apply to family firms and their performance relative to non-family firms.

Characteristic behaviour regarding Innovativeness								
Authors	Year	Source	Sample	Concept of entrepreneurship	EO	Characteristic family firm behavior		
						Lower levels	No difference	Higher levels
Craig & Moores	2006	AU	67 small firms; FF (O) only	Innovation (Schumpeter, 1934; Damanpour, 1992)	I	X (FF in later stages of life cycle)		X (FF in earlier life-stages)
Donckels & Fröhlich	1991	EU	1132 SME; FF (O) vs. NFF	Entrepreneurial attitudes (own)	I RT P A	X		
Gils et al.	2008	NL/BL	153 SME; FF (O-FM) only	Innovation (Schumpeter, 1934)	I		X (Between different generations of FF)	
Gudmund-son et al.	2003	US	89 Small firms; FF (O-FM-P) vs. NFF	Innovation	I			X
McCann et al.	2001	US	231 mid-sized firms; FF (O) only	Strategy typology (Miles& Snow, 1978)	I RT P	X (Older, larger FF)		X (Young, small FF)
Zellweger & Sieger	Fo	CH	3 mid/large firms; FF (O-FM) only	Entrepreneurial orientation	I RT P CA A	X (FF with long leadership tenure)		X (FF with recent leadership change)

Figure 20: Findings concerning innovativeness of family firms
Source: Own analysis

3.3.1.2 Risk taking

Concerning family firm risk taking behaviour, evidence from past empirical studies shows that family firms are in many aspects less risk taking than non-family firms. Donckels & Fröhlich (1991) report from the afore mentioned study that the family firms are significantly more risk averse, less profit and growth

oriented, and more likely to follow conservative strategies than non-family firms. In line with this, Naldi et al. (2007) report lower levels of risk taking in the strategies of family firms in a study of 696 Swedish SMEs. Martin & Lumpkin (2003) inquire potential differences in the risk taking behaviour of first, second and third generation family businesses. They report a decline in the personal loans of family members to the company but find no indication of declining risk taking in firm financial leverage or the desire to increase business profitability. Zellweger & Sieger (forthcoming) deconstruct risk taking into different aspects: Performance hazard risk is defined as the risk of organizational failure induced by business decisions; control risk in their definition is firm financial leverage; ownership risk measures the extent to which most of one's personal wealth is invested in only one or a few assets with no or only limited diversification. They report that their selection of long-lived family firms show a tendency to have lower levels of performance hazard and control risk. The long-lived family firms in their study aim to engage only in "calculated risks" emphasising that risky projects may not endanger the company as a whole and are very cautious with dept capital. At the same time, these firms all displayed high levels of ownership risk, where most family members relied on constant income from the family business dividends as their primary source of income.

Some studies compare the psychological predisposition for risk taking of owner-managers and hired managers. Typically, the risk taking propensity of individuals is measured in their willingness to take chances in a decision making scenario. Brockhaus (1980) finds no difference in the risk taking propensity of small business owner-mangers and employed managers, based on an investigation of 93 small U.S. firms. Masters & Meier (1988) replicate Brockhaus's study in a survey of 50 small firms in the U.S. In line with Brockhaus (1980), they find no different in the risk taking of owner-managers and hired managers. Stewart, Watson, Carland & Carland (1998) provide contradicting evidence. Based on a large sample of 767 U.S. small firms, they

find higher risk taking propensity with owner-mangers than with corporate managers.

Characteristic behaviour regarding risk taking								
Authors	**Year**	**Source**	**Sample**	**Concept of entrepreneurship**	**EO**	**Characteristic family firm behavior**		
						Lower levels	**No difference**	**Higher levels**
Donckels & Fröhlich	1991	EU	1,132 SME; FF (O) vs. NFF	Entrepreneurial attitudes (own)	I **RT** P A	X		
Martin & Lumpkin	2003	US	318 SME; FF (O + FM/TI/P) only	EO (Lumpkin & Dess, 1996)	**RT** P CA A		X (Between different generations of FF)	
Naldi et al.	2007	SE	696 SME; FF (O-FM-P) vs. NFF	EO (Lumpkin & Dess, 1996)	**RT**	X		
Zellweger & Sieger	Fo	CH	3 mid/large firms; FF (O-FM) only	EO (Lumpkin & Dess, 1996)	I **RT** P CA A	X (Per-formance hazard and control risk in long-lived FF)		X (Ownership risk in long-lived FF)
Brock-haus	1980	US	93 small firms; FF (O-FM) vs. NFF (M)	Risk taking propensity – CDQ of Kogan & Wallach, 1964	**RT**		X	
Masters & Meier	1988	US	50 small firms; FF (O) vs. NFF	Risk taking propensity – CDQ of Kogan & Wallach, 1964	**RT**		X	
Stewart et al.	1998	US	767 small firms; FF (O) vs. NFF	Risk taking propensity (Jackson personality inventory)	**RT**			X
Westhead & Cowling	1997	UK	146 small firms; FF (O-P) vs. NFF	Inter-nationalization (export sales)	**RT**		X	

Characteristic behaviour regarding risk taking (continued)								
Authors	**Year**	**Source**	**Sample**	**Concept of entrepreneurship**	**EO**	**Characteristic family firm behavior**		
						Lower levels	**No difference**	**Higher levels**
Zahra	2003	US	409 SME; FF (O-IGI) vs. NFF	Inter-nationalization (export sales + presence)	**RT**	X		
Gallo	1995	ES	81 mid-sized firms; FF (O-FM-GT) vs. NFF	Financial risk taking (firm leverage)	**RT**	X		
Gallo & Vilaseca	1996	ES	104 mid-sized firms; FF (O-FM) vs. NFF	Financial risk taking (firm leverage)	**RT**	X		
Mc Conaughy et al.	2001	US	214 large firms; FF (O-FM) vs. NFF	Financial risk taking (firm leverage)	**RT**	X		

Note: Firms ranked first according to risk taking dimension, then alphabetical order

Figure 21: Findings concerning risk taking in family firms
Source: Own analysis

Risk taking characteristics of family firms are also studied in the sense of financial risk taking and firm leverage. In this respect, findings are unanimous and affirm lower debt levels in family firms in contrast with non-family firms (Gallo, 1995; Gallo & Vilaseca, 1996; McConaughy, Matthews & Fialko, 2001[32]).

Another aspect of risk taking behaviour is pursued in research that concentrates on internationalization. Zahra (2003) finds that family firms lag behind non-family firms both in terms of export sales and foreign countries entered. In line with this are Donckels & Fröhlich (1991), who report lower export levels in family firms as opposed to non-family firms. In contrast to these findings,

[32] See also earlier version of study in Mishra & McConaughy (1999).

Westhead & Cowling (1997) cannot identify any significant difference in the relevance of export sales of the 146 British family and non-family firms examined in their study.

3.3.1.3 Proactiveness

In comparison with risk taking and innovativeness, substantially less evidence exists on the proactiveness of family firms.

Characteristic behaviour regarding proactiveness								
Authors	**Year**	**Source**	**Sample**	**Concept of entrepreneurship**	**EO**	**Characteristic family firm behavior**		
						Lower levels	**No difference**	**Higher levels**
Daily & Dollinger	1992	US	104 SME; FF (O-FM) vs. NFF	Strategy typology (Miles& Snow, 1978)	I RT **P**	X		
Martin & Lumpkin	2003	US	318 SME; FF (O + FM/TI/P) only	EO (Lumpkin & Dess, 1996)	RT **P** CA A	X (First/third generation)		X (Second generation)
Zellweger & Sieger	Fo	CH	3 mid/large firms FF (O-FM) only	EO Lumpkin & Dess, 1996)	I RT **P** CA A	X (Low/ moderate overall levels in long-lived firms)		

Figure 22: Findings concerning proactiveness in family firms
Source: Own analysis

Daily & Dollinger (1992) report a higher frequency of proactive strategic postures with the non-family firms than with the family firms in their sample. Martin & Lumpkin (2003) find no general support for a decline in proactiveness with family firms in successive generations of ownership but indicate an inverse u-shaped trend. Founding and third generation firms attribute less importance to proactive behaviours than family firms held in the second generation. Martin & Lumpkin interpret their findings with the different operational challenges and

priorities over the life-cycle of the family firm: While the primary concern of founders might be to establish a viable business as such, third generation firms might already be struggling with survival and restructuring. Second generation family firms might be more likely to consider growth opportunities for the business success achieved by their parents. Zellweger & Sieger (forthcoming) report from their case studies that long-lived family firms are only moderately proactive and that there is no clear trend in the forming of this behaviour. Rather, levels of proactiveness fluctuated over time where low levels are interspersed by carefully selected – "play it safe" – proactive moves.

3.3.1.4 Competitive aggressiveness

Comparable to the scarcity encountered for proactiveness, empirical knowledge on competitive aggressiveness in family firms is limited. Martin & Lumpkin (2003) find successive generations to display less competitive aggressiveness than founding generation family firms. Over time, they argue, family firms may concentrate more on profitability rather than gaining market share from competition trough aggressive behaviours. Zellweger & Sieger (forthcoming) find that competitive aggressiveness of long-lived family firms decreases over time. Successive generations aim to prosper in niches and avoid open conflict with competition – mainly, according to the authors, due to reputation concerns of the controlling family.

Characteristic behaviour regarding competitive aggressiveness								
Authors	**Year**	**Source**	**Sample**	**Concept of entrepreneurship**	**EO**	**Characteristic family firm behavior**		
						Lower levels	**No difference**	**Higher levels**
Martin & Lumpkin	2003	US	318 SME; FF (O + FM/TI/P) only	EO (Lumpkin & Dess, 1996)	RT P CA A	X (Successive FF gene-rations)		X (First FF gene-rations)
Zellweger & Sieger	Fo	CH	3 mid/large firms; FF (O-FM) only	EO (Lumpkin & Dess, 1996)	I RT P CA A	X (Successive FF gene-rations)		

Figure 23: Findings concerning competitive aggressiveness in family firms
Source: Own analysis

3.3.1.5 Autonomy

The final dimension of entrepreneurship is autonomy on which, similar to the former two dimensions, little evidence exists.

The first piece of evidence originates from Donckels & Fröhlich (1991), who find that small firm owner-managers frequently display higher levels of external autonomy than non-family firms. They observe a strong desire for independence among family firms, and as a consequence of this, fewer engagements in socioeconomic network activity such as strategic partnerships for subcontracting, R&D or new market entry.

Martin & Lumpkin (2003) find that the number of people involved in the decision making processes of family firms increases with successive generations – which they interpret as declining levels of autonomy. A further indication of declining autonomy is to them the increasing importance of the board of directors as decision making body with successive generations of family ownership. Boards feature more family representatives and have greater decision making

powers. However, one may argue against their conclusions that older firms have a tendency to be larger, which by definition implies a larger managerial body size and more sophisticated controlling mechanisms. Martin & Lumpkin's conclusion is accepted, but might be considered with caution.

Last but not least, Zellweger & Sieger (forthcoming) report from their case studies that long-lived family firms display constantly high levels of external autonomy across time, that is, a high level of independence from external stakeholders such as banks. In contrast, internal autonomy, which concerns the modes of decision making with in the organization, was found to increase as later family generations join the firm and apparently place greater emphasis on participative leadership style.

Characteristic behaviour regarding autonomy								
Authors	**Year**	**Source**	**Sample**	**Concept of entrepreneur-ship**	**EO**	**Characteristic family firm behavior**		
						Lower levels	**No difference**	**Higher levels**
Donckels & Fröhlich	1991	EU	1,132 SME; FF (O) vs. NFF	Entrepreneurial attitudes	I RT P **A**	X		
Martin & Lumpkin	2003	US	318 SME; FF (O + FM/TI/P) only	EO (Lumkin & Dess, 1996)	RT P CA **A**	X (Successive FF generations)		X (First FF gene-ration)
Zellweger & Sieger	Fo	CH	3 mid/large firms; FF (O-FM) only	EO (Lumpkin & Dess, 1996)	I RT P CA **A**	X (Internal autonomy in successive FF generations	X (Constantly high leves of external autonomy in long-lived FF)	

Figure 24: Findings concerning autonomy in family firms
Source: Own analysis

Following the summary of main findings concerning the characteristics of entrepreneurship below, the discussion will turn to the determinants of entrepreneurial behaviour in family firms.

Authors	Year	Source	Sample	EO	Main findings
Brockhaus	1980	US	93 small firms	RT	Risk taking not a distinguishing characteristic of owner-managers in comparison to employed managers
Craig & Moores	2006	AU	67 small firms	I	Innovation is related to firm life-cycle stage. Family firms in early stages of life with higher levels of innovativeness
Daily & Dollinger	1992	US	104 SME	P	Family firms less often with proactive, growth-oriented strategy than non-family firms
Donckels & Fröhlich	1991	EU	1,132 SME	I RT P A	Family firms less innovative and with more conservative strategies than non-family firms. Family firms with stronger desire for independence, as manifest in lower levels of networking (e.g., strategic alliances)
Gallo	1995	ES	81 mid-sized firms	RT	Family firms with lower debt levels than non-family firms
Gallo & Vilaseca	1996	ES	104 mid-sized firms	RT	Family firms with lower debt levels than non family firms
Gils et al.	2008	NL/BL	153 SME	I	No significant difference in innovation in 1st, 2nd and 3rd generation family firms
Gudmundson et al.	2003	US	89 small firms	I	Family firms more innovative than non-family firms
Martin & Lumpkin	2003	US	318 SME	RT P CA A	Decreasing levels of competitive aggressiveness and autonomy with successive generations of family ownership. Proactive behavior with inverse U-shaped trend across generations. That is, lower levels in first and third generations of family ownership, higher levels in second generation
Masters & Meier	1988	US	50 small firms	RT	Risk taking not a distinguishing characteristic of owner-manager in comparison to employed managers
McCann et al.	2001	US	231 mid-sized firms	I	Family firms as likely to be innovative as conservative. Innovative family firms likely to be younger and smaller

Authors	Year	Source	Sample	EO	Main findings (continued)
McConaughy et al.	2001	US	214 large firms	RT	Family firms with lower debt levels than non-family firms
Naldi et al.	2007	SE	696 SME	RT	Family firms with less risk taking than non-family firms
Stewart et al.	1998	US	767 small firms	RT	Owner-managers with higher risk taking propensity than employed managers
Westhead & Cowling	1997	UK.	146 small firms	RT	No significant difference between family and non-family firms if measured in internationalization
Zahra	2003	US	409 SME	RT	Family firms with lower levels of internationalization than non-family firms
Zellweger & Sieger	Fo	CH	3 mid/ large firms	I RT P CA A	In family firms, the level of EO in each dimension is dynamically adapted over time

Figure 25: Summary characteristics family firm entrepreneurship

Source: Own analysis

3.3.2 Determinants of entrepreneurial behaviour

This section presents findings concerning the determinants of entrepreneurial behaviour in family firms. The discussion is organized along the following focus themes: (1) CEO characteristics; (2) corporate governance and culture; (3) ownership structure; (4), family issues; (5) financial performance; and (6) firm environment. An alphabetical overview of all findings pertaining to the determinants of family firm entrepreneurship is provided towards the end of this section. The graphical illustration of all findings presented in the following is in line with the structure presented in the previous section. One additional column

named **focus variable** is included. Therein, the specific variables investigated in each study are listed.

3.3.2.1 CEO characteristics

Past evidence concerning CEO characteristics address: (1) The affiliation of the CEO with the owning family; (2) CEO tenure as well as (3) CEO personality and experience. In the following, the findings for each of these aspects will be presented

(1) CEO affiliation with owning family

Evidence on the impact of the CEO's affiliation with the owning family is mixed. Martin & Lumpkin (2003) report that successive generations of family firms are more likely to employ external management and that the level of competitive aggressiveness and autonomy decline in parallel.

Zahra (2003) find that family firms where the CEOs are recruited from the family show higher levels of risk taking in terms of firm internationalization. Gils et al. (2008) find that family firms with family CEOs engage to a lesser extent in organizational innovation than family firms with external hires. Other studies report that the background of family firm CEOs, that is, whether they are family member or external hires, does not affect firm entrepreneurial behaviour. This position is supported by Daily & Dollinger (1992), who study the propensity to adopt an entrepreneurial strategy in a sample of 104 small and mid-sized U.S. family firms. The same conclusion is reached in Zahra (2005), who reports no difference in the risk taking behaviour of 209 U.S. family firms.

Focus: CEO affiliation with owning family									
Authors	**Year**	**Source**	**Sample**	**Concept of entrepren-eurship**	**EO**	**Focus variable**	**Reported relationship with entrepreneurship**		
							Positive	**None**	**Negative**
Gils et al.	2008	NL/BL	153 SME; FF (O-FM)	Innovation (Schumpeter, 1934)	I	Family CEO			X (3)
Daily & Dollinger	1992	US	104 SME; FF (O-FM) vs. NFF	Strategy typology (Miles& Snow, 1978)	I RT P	Family CEO or professional hire		X	
Martin & Lumpkin	2003	US	318 SME; FF (O + FM/TI/P)	EO (Lumpkin & Dess, 1996)	RT P CA A	Professional hire			X (Sub-sequent FF gene-rations and *only* CA/A)2
Zahra	2003	US	174 SME(1); FF (O+ MGL)	Internatio-nalization (Sales + presence abroad)	RT	Family CEO	X		
Zahra	2005	US	209 small and large firms; FF (O-P)	Corporate entrepren-eurship (Miller, 1983)	RT	Family CEO or professional hire		X	

Notes
(1) Zahra's total sample included 409 firms but only 174 family firms were relevant for this analysis
(2) Negative relationship could not be confirmed for other dimensions of EO construct
(3) Negative relationship only established for organizational innovation, but not for process or product innovation

Figure 26: Influence of CEO affiliation with owning family
Source: Own analysis

(2) CEO tenure

Common knowledge among family business scholars and practitioners is the fact that family CEOs, especially founders, have substantially longer tenures than professional hires.

In Daily & Dollinger's (1992) study, professional hires achieve an average tenure of 9 years, while family CEOs remain in power for more than 20 years. The impact of such lengthy CEO tenures on firm entrepreneurship has been addressed in four past empirical studies. Yet again, results differ.

Focus: CEO tenure									
Authors	**Year**	**Source**	**Sample**	**Concept of entrepren-eurship**	**EO**	**Focus variable**	**Reported relationship with entrepreneurship**		
							Positive	**None**	**Negative**
Keller-manns & Eddle-ston	2006	US	74 SME; FF (O-FM)	CE (Miller, 1983)	I RT P	Lengthy CEO tenure		X	
Keller-manns et al.	2008	US	50 'larger than average' firms; FF(FM–V-TI)	CE (Miller, 1983)	I RT P	CEO tenure; CEO age		X	
Gils et al.	2008	NL/BL	153 SME; FF (O-FM)	Innovation (Schumpeter, 1934)	I	Lengthy CEO tenure	X (1)		
Zahra	2005	US	209 small and large firms; FF (O-P)	CE (Miller, 1983)	RT	Lengthy CEO tenure			X

Note
(1) Positive association only identified for process innovation

Figure 27: Influence of CEO tenure
Source: Own analysis

Zahra (2005) finds a negative association between lengthy CEO tenures and entrepreneurial risk taking in family firms, irrespective of whether the CEO is a family member or a professional hire. In contrast, Kellermanns & Eddleston (2006) see no evidence supporting a decline in the entrepreneurial orientation with lengthy CEO tenures. In line with this are Kellermanns, Eddleston, Barnett & Pearson (2008), who confirm that age and tenure of the CEO and the

entrepreneurial behaviour of the family firm are uncorrelated. Gils et al. (2008) even find a mild positive association between lengthy CEO tenures and process innovation, but find no statistically significant support for associations with product or organizational innovation.

(3) CEO personality and experience

Few studies inquire the impact of the personality, skill-set and experience of the CEO. Salvato (2004) finds that the ability of the CEO to spot opportunities in the firm environment matters for all family firms. His findings are confirmed in Kellermanns & Eddleston (2006), who demonstrate that the ability to recognize technological opportunities in the firm environment promotes entrepreneurship

Furthermore, Salvato (2004) finds that in large, open family and professionally managed firms where the CEO is supported by mid-level management, the CEO's orientation towards growth is likely to be more important to EO than his individual skills to recognize opportunities in the firm environment.

Gils et al. (2008) test how the locus of control of leaders, that is, whether individuals believe that events in their lives are within their control, or determined by factors outside their control such as luck and destiny (Mueller & Thomas, 2000; Rotter, 1966), is associated with product, process and organizational innovation. They report a positive relationship between an internal locus of control and organizational innovativeness, but find no significant association with product or process innovation in family firms.

Salvato's (2004) study demonstrates that different types of CEO experience matter in different types of family firm contexts. For instance, he finds previous work experience in other industries to be positively related to entrepreneurship in the founder-based firm, while same industry experience is without effect. For the sibling/cousin consortium family firms, Salvato finds that same industry

experience is even negatively related to entrepreneurship, while previous management and leadership experience exercise a positive influence.

Focus: CEO personality and experience									
Authors	**Year**	**Source**	**Sample**	**Concept of entrepren-eurship**	**EO**	**Focus variable**	**Reported relationship with entrepreneurship**		
							Positive	**None**	**Negative**
Gils et al.	2008	NL/BL	153 SME; FF (O and FM)	Innovation (Schumpeter, 1934)	I	Internal locus of control	X [(1)]		
Keller-manns & Eddle-ston	2006	US	74 SME; FF (O-FM)	CE (Miller, 1983)	I RT P	Ability to spot opportu-nities	X		
Salvato	2004	SE	535 SME; FF (O *or* P)	CE (Miller, 1983)	I RT P	Ability to spot opportu-nities	X		
						Growth orien-tation	X (Open FF		
						Other industry experience	X (Founder FF)	X (Sibling/ cousin and open FF)	
						Same industry experience		X (Founder/ open FF)	X (Sibling/ cousin FF)
						Experience in leadership and manage-ment	X (Sibling/ cousin FF)	X (Founder/ open FF)	

Note
(1) Positive association only identified for organizational innovation, not for product or process innovation

Figure 28: Influence of CEO personality and experience
Source: Own analysis

In open family firms, CEO experience is found to be altogether unrelated to entrepreneurship. Salvato suggests that due to the professionalized structures of

the typically larger nature of open family firms, individual characteristics may have less impact on firm entrepreneurship than other systemic conditions.

3.3.2.2 Corporate governance and culture

This section presents findings concerning the impact of firm governance and culture for entrepreneurship in family firms. For the subsequent discussion, findings are arranged along the following themes: (1) board of directors, (2) decision making, (3) human capital management, (4) strategic planning and (5), organizational culture.

(1) Board of directors

This section summarizes studies that investigate the relationship between the board of directors and entrepreneurship. Often, business families are reluctant to employ a board of directors and, according to Höppner (2006), far from all family firms would be likely to benefit from a full-fledged control board. Yet in the context of family firm entrepreneurship, researchers have no second thoughts but universally agree on the general desirability of strong and independent boards. Brunninge & Nordquist (2004) investigate the impact of independent board members on family firm entrepreneurship on a sample of 1,026 small Swedish firms. They report that family firms are less likely to involve independent board members than non-family firms, and that the frequency of independent directors in family firm increases with the presence of private equity investors. The existence of independent board members correlates also with a higher general board activity. However, they find no support for the association of independent board members and entrepreneurship. Eddleston et al. (2009) investigate the level of interaction in strategic matters between the boards of directors and the owning family in 179 Swiss family firms. They report a positive association for close interaction and involvement of the board of directors in

shaping the strategic agenda of the family business and entrepreneurship – provided that family firm unity is included as moderating variable. McCann et al. (2001) indicate that entrepreneurial family firms attribute higher priority to having regular board meetings than less entrepreneurial family firms.

Focus: Board of directors									
Authors	**Year**	**Source**	**Sample**	**Concept of entrepren-eurship**	**EO**	**Focus variable**	**Reported relationship with entrepreneurship**		
							Positive	**None**	**Negative**
Brunninge & Nordqvist	2004	SE	1,026 SME; FF (O-FM-P)	Strategic renewal and change (Stopford & Baden-Fuller, 1994)	I RT P	Indepen-dent directors		X	
Eddleston et al.	2009	CH	179 private firms; FF (O+FM)	CE (Miller, 1983)	I RT P	Partici-pative gover-nance between board and family	X (1)		
McCann et al.	2001	US	231 mid-sized firms; FF (O)	Strategy typology (Miles& Snow, 1978)	I RT P	Regular meetings	X		
Salvato	2004	SE	535 SME; FF (O *or* P)	CE (Miller, 1983)	I RT P	Indepen-dent directors and level of board involve-ment	X (Founder FF)	X (Sibling/ cousin and open family FF)	
Zahra	2003	US	174 SME2; FF (O+ MGL)	Internatio-nalization (int. sales + presence)	RT	Board chairman is also CEO	X		
						Family presence on board of directors	X (Int. sales	X (Int. pre-sence)	

Note
1) Only when family harmony is included as moderating variable, participation of board is positively associated
2) Total study included 409 firms but only 174 family firms were included for this analysis

Figure 29: Influence of the board of directors on family firm entrepreneurship
Source: Own analysis

Salvato (2004) gives account of a positive relationship between the presence of independent board members, the level of board activity and entrepreneurship in the founder-based family firm, but finds no evidence of comparable correlation for the sibling/cousin consortium and the open family firm.

Zahra (2003) finds a positive influence on entrepreneurship from a duality in roles as chairman of the board and CEO of the firm. Moreover, the presence of family members on the board is positively associated with entrepreneurial risk taking when measured as the level of international sales. However, there is no impact when internationalization is measured in the number of foreign countries entered. Regarding this surprising finding, Zahra suggests that the increase of foreign sales without actually building a presence abroad might be a characteristic example for 'conservative risk taking' in family firms.

(2) Decision making

Family firms are often criticized for very centralistic, autocratic decision making structures geared towards the patriarch of the family (Feltham, Feltham & Barnett, 2005). Consequently, scholars are especially interested in the effects of decentralization as opposed to centralization and formality versus informality in decision making.

The extant studies all report a positive association between the decentralization of decision making and entrepreneurial behaviours (Craig & Moores, 2006; Salvato, 2004; Zahra et al., 2004). Results are also consistent in demonstrating that less formalization correlates with higher levels of entrepreneurship (Craig & Moores, 2006; Salvato, 2004). Martin & Lumpkin (2003) report that with successive generations of family ownership, decision making styles tend to evolve from autocratic towards consensus orientation. In parallel to this development, they find declining levels of competitive aggressiveness and autonomy.

Focus: Decision making									
Authors	Year	Source	Sample	Concept of entrepren-eurship	EO	Focus variable	Reported relationship with entrepreneurship		
							Positive	None	Negative
Salvato	2004	SE	535 SME; FF (O *or* P)	CE (Miller, 1983)	I RT P	Delegation of decision making	X (In sibling/ cousin FF)		
						Informality of decision making	X (In sibling/ cousin FF)		
Zahra et al.	2004	US	218 SME; FF (O+IGI)	CE (Miller, 1983)	I RT P	Delegation of decision making	X		
Craig & Moores	2006	AU	67 small firms; FF (O)	Innovation	I	Decentral-ization of decision making	X		
						Informality of decision making	X		
Martin & Lumpkin	2003	US	318 SME; FF (O + FM/TI/P)	EO (Lumpkin & Dess, 1996)	RT P CA A	Consensus decision making			X (Sub-sequent FF gene-rations and *only* CA/A)[1]

Note
1) But no decline in RT and PA observed while I was not investigated in this study

Figure 30: Influence of decision making practices
Source: Own analysis

(3) Human resources

Several aspects of human resource practices have been addressed in prior empirical research. Salvato (2004) finds a large managerial body to be conducive to entrepreneurship in open family firms. Using upper-echelon theory, Gils et al. (2008) show that heterogeneity in the top management in terms of functional

backgrounds, industrial experience, educational background, ages and personality correlates with family firm innovation. However, their hypotheses are only confirmed for innovation in organizational practices, not for product and process innovation.

Focus: Human resources									
Authors	Year	Source	Sample	Concept of entrepren-eurship	EO	Focus variable	Reported relationship with entrepreneurship		
							Positive	None	Negative
Eddleston et al.	2009	CH	179 private firms; FF (O+FM)	CE (Miller, 1983)	I RT P	Employee education, skills and experience		X	
Gudmund-son et al.	2003	US	89 Small firms; FF (O-FM-P) and NFF	Innovation process	I	Empower-ment of employees	X		
McCann et al.	2001	US	231 mid-sized firms; FF (O)	Strategy typology (Miles& Snow, 1978)	I RT P	Building an effective non-family human resources	X		
Gils et al.	2008	NL/BL	153 SME; FF (O-FM)	Innovation (Schumpeter, 1934)	I	Hetero-geneity of manage-ment	X (1)		
Salvato	2004	SE	535 SME, FF (O *or* P)	CE (Miller, 1983)	I RT P	Large managerial body size	X (Open FF)		
						Value-based compen-sation	X (Founder/ open family FF)	X (Sibling/ cousin FF)	

Note
(1) Positive association only confirmed for innovation in organizational practices, not for product or process innovation

Figure 31: Influence of human resource practices
Source: Own analysis

McCann et al. (2001) also demonstrate that fast growing entrepreneurial firms put significantly more emphasis on building an effective non-family management team and are in general more concerned with employee development than less

entrepreneurial firms. In a similar vein, Gudmundson et al. (2003) report that the empowerment of employees is positively associated with the initiation of new ideas and implementation of new products. In contrast, Eddleston et al. (2009) find no association between employee education, skills and experience with corporate entrepreneurship. Salvato (2004) is the first to test the role of "value-based compensation", which addresses the relevance of variable components in the compensation. Typically, such variable components are linked to the financial value-added of the company during a specific period of time. Salvato (2004) finds that such practices play a critical role in the founder-based and open family firms, but have no impact on entrepreneurship in the sibling/cousin consortium firms. Salvato suggests that the typical sibling/cousin consortium may have several highly motivated family members in leading positions of the firm and that non-family employees therefore might be less present in the leadership and less relied on as source of entrepreneurial ideas. As a consequence, value-based compensation might have less impact than in the founder-based or open family firm, where value-based compensation allays strategic simplicity and agency problems.

(4) Strategic planning

The positive role of strategic planning on entrepreneurship is consistently supported across studies. Kellermanns & Eddleston (2006) report strategic planning as a moderator that enhances the positive effect of perceived technological opportunities on entrepreneurial firm behaviour. Additionally, they show that the positive impact of strategic planning on entrepreneurship is stronger in firms where only one family generation is active, and that it is less accentuated in family firms where several generations are involved in the family operations. McCann et al. (2001) report that family firms who pursue an entrepreneurial strategy have a tendency to put more emphasis on strategic planning than less entrepreneurial family firms. Eddleston et al. (2009) also

subscribe to the positive role of strategic planning. They investigate the role of 'comprehensive strategic decision making', which measures the extent to which a family business dedicates time and effort to the detailed evaluation of multiple strategic options and find the extensive discussion of alternative strategic options to be positively related to entrepreneurship in family firms.

Focus: Strategic planning									
Authors	**Year**	**Source**	**Sample**	**Concept of entrepreneur-ship**	**EO**	**Focus variable**	**Reported relationship with entrepreneurship**		
							Positive	**None**	**Negative**
Eddle-ston et al.	2009	CH	179 private firms; FF (O+FM)	CE (Miller, 1983)	I RT P	Compre-hensive strategic decision making	X		
Keller-manns & Eddle-ston	2006	US	74 SME; FF (O-FM)	CE (Miller, 1983)	I RT P	Strategic planning	X (FF with single active gene-ration)	X (FF with several active gene-rations)	
McCann et al.	2001	US	231 mid-sized firms; FF (O)	Strategy typology (Miles& Snow, 1978)	I RT P	Strategic planning	X		

Figure 32: Influence of strategic planning on family firm entrepreneurship
Source: Own analysis

(5) Organizational culture

Past studies address different aspects of culture. Information politics, defined as the scope and timeliness of information throughout the company, has been positively linked to innovation in family firms in a study by Craig & Moores (2006). A firm's willingness to change, defined as having an interest in new challenges and trying out new things, was also shown to have a positive association with entrepreneurial behaviours in family firms (Kellermann &

Eddleston, 2006). Zahra et al. (2004) report a positive relationship between long-term orientation and entrepreneurship in family firms. Likewise, Eddleston et al. (2009), support that a long-term orientation in investment policies is positively associated with entrepreneurship in family firms.

Focus: Organizational culture									
Authors	**Year**	**Source**	**Sample**	**Concept of entrepren-eurship**	**EO**	**Focus variable**	**Reported relationship with entrepreneurship**		
							Positive	**None**	**Negative**
Craig & Moores	2006	AU	67 small firms; FF (O)	Innovation	I	Scope and timeliness of information	X (esp. later stage FF)		
Keller-manns & Eddleston	2006	US	74 SME; FF (O-FM)	CE (Miller, 1983)	I RT P	Willingness to change	X		
Eddle-ston et al.	2009	CH	179 private firms; FF (O+FM)	CE (Miller, 1983)	I RT P	Long-term orientation	X		
Zahra et al.	2004	US	218 SME; FF (O+IGI)	CE (Miller, 1983)	I RT P	Long-term orientation	X		
						External orientation	X		
						Balance individualism and group orientation	X		

Figure 33: Influence of organizational culture on family firm entrepreneurship
Source: Own analysis

Zahra et al. (2004) indicate a positive correlation for entrepreneurship and external orientation. They suggest that a firm's external orientation may provide access to diverse sources of knowledge and thereby promotes entrepreneurial opportunities. Furthermore, Zahra and colleagues find a non-linear, U-shaped association between individualism and entrepreneurship and conclude that both

individualism and group orientation might be conducive to entrepreneurship in family firms[33]. As interpretation, the authors suggest that individualism may promote autonomous risk-taking, while group orientation facilitates implementation of new ideas, learning and knowledge sharing in firms. Zahra et al. (2004) also point out that all variables of organizational culture tested in their study were significantly more influential on entrepreneurship in family firms than in non-family firms.

3.3.2.3 Ownership structure

Generally, past research indicates that families have a strong tendency to hold controlling ownership in the firms they are invested in (Thomsen & Pedersen, 2000; Gallo, 1995). This contrasts with most other owner profiles such as banks and institutional investors, who typically hold much smaller shares in individual companies in reflection of portfolio strategies and diversification. This section reviews the findings concerning the impact of (1) the level of family ownership and (2) the presence and influence of non-family investors.

(1) Family ownership

Little evidence exists on the impact of family ownership.

Zahra (2005) finds a positive relationship between high levels of family ownership and entrepreneurial risk taking. This result is in accordance with one of his earlier investigations (Zahra, 2003), where he reports a positive association of family ownership and internationalization. An antipode to Zahra's findings is the observation of Gallo (1995). He finds lower levels of financial risk taking in

[33] Based on Morris, Lewis & Sexton (1994), the study defines individualism as self-orientation, self-sufficiency and the pursuit of individual goals irrespective of group goals. Group orientation is described concern for group welfare, cooperation and the subordination of personal interests to the goals of a larger group.

family firms with high levels of family ownership and interprets this with a reluctance to share control with outsiders, which, he concludes, restricts the financing of entrepreneurial growth.

Focus: Family ownership									
Authors	Year	Source	Sample	Concept of entrepren-eurship	EO	Focus variable	Reported relationship with entrepreneurship		
							Positive	None	Negative
Gallo	1995	ES	81 mid-sized firms; FF (O-FM-GT) vs. NFF	Financial risk taking (firm leverage)	RT	Family ownership			X
Zahra	2003	US	174 SME[1] ; FF (O+IGI)	Risk taking – internatio-nalization (internat. sales + presence)	RT	Family ownership	X		
Zahra	2005	US	209 small and large firms; FF (O-P)	CE (Miller, 1983)	RT	Family ownership	X		

Note
(1) Total study included 409 firms but only 174 family firms were included for this analysis

Figure 34: Influence of family ownership on family firm entrepreneurship
Source: Own analysis

(2) Non-family ownership

Evidence on non-family ownership is really only available from one study.

For the founder-based firm, Salvato (2004) reports a positive relationship between entrepreneurship and the presence of investment companies as minority investors. In the sibling/cousin consortium, only venture capital firms are positively associated with entrepreneurship. The presence of other professional and non-professional investors relates negatively to entrepreneurship. For open

family firms, the presence of non-family investors shows no association with entrepreneurial behaviour of the firm.

Focus: Non-family ownership									
Authors	Year	Source	Sample	Concept of entrepreneur-ship	EO	Focus variable	Reported relationship with entrepreneurship		
							Positive	None	Negative
Salvato	2004	SE	535 SME; FF (O *or* P)	CE (Miller, 1983)	I RT P	% owned by investment company	X (Founder FF)	X (Open family FF)	
						% owned by venture capital	X (Sibling/ cousin FF)	X (Open family FF)	
						% owned by others (1)		X (Open family FF)	X (Sibling/ cousin FF)

Note
(1) The study described "Other investors" as other professional and non-professional investors

Figure 35: Influence of non-family ownership on family firm entrepreneurship
Source: Own analysis

3.3.2.4 Family issues

This section is dedicated to investigations that relate to family issues. Findings are distinguished in those that address (1) family presence in business and (2) family orientations.

(1) Family presence in business

The impact of family presence is frequently examined in the extant literature.

Focus: Family presence in business									
Authors	**Year**	**Source**	**Sample**	**Concept of entrepren-eurship**	**EO**	**Focus variable**	**Reported relationship with entrepreneurship**		
							Positive	**None**	**Negative**
Martin & Lumpkin	2003	US	318 SME; FF (O+ FM/TI/P)	EO (Lumpkin & Dess, 1996)	RT P CA A	Family presence on board of directors			X [2]
Keller-manns & Eddle-ston	2006	US	74 SME; FF (O-FM)	CE (Miller, 1983)	I RT P	Inter-generational involvement		X	
Keller-manns et al.	2008	US	50 "larger than average "firms; FF(FM–V-TI)	CE (Miller, 1983) – select items	I RT P	Inter-generational involvement	X		
McCann et al.	2001	US	231 mid-sized firms; FF (O)	Strategy typology (Miles& Snow, 1978)	I RT P	Inter-generational involvement		X	
Salvato	2004	SE	535 SME; FF (O *or* P)	CE (Miller, 1983)	I RT P	Inter-generational involvement	X (Founder based FF)		
Zahra	2005	US	209 small and large firms; FF (O-P)	CE (Miller, 1983)	RT	Inter-generational involvement	X		
Zahra	2003	US	174[1] SME; FF (O+IGI)	Internatio-nalization (int. sales + presence)	RT	Inter-generational involvement	X (int. sales)	X (int. pre-sence)	
						Overall family involvement in strategy making	X (int. sales)		X (int. pre-sence)

Note
(1) Total sample contains 409 firms. Only 174 family firms were included in this analysis
(2) Negative relationship only with competitive aggressiveness and autonomy in successive generations of family ownership

Figure 36: Influence of family presence on family firm entrepreneurship

Source: Own analysis

Martin & Lumpkin (2003) find that the family's presence on the board of directors increases with successive generations of family ownership while two dimensions of entrepreneurship, competitive aggressiveness and autonomy, decrease.

Moreover, the active presence of family in the family business has been investigated in terms of intergenerational involvement – that is, the concurrent engagement of several family generations in the firm. Zahra (2005) reports that the higher the number of generations active in the company operations, the higher the firm's focus on innovation. Zahra suggests that the different viewpoints and experiences of different generations may increase the insights for innovation. Kellermanns et al. (2008) confirm the positive association of intergenerational involvement and family firm entrepreneurship. In contrast, Kellermanns & Eddleston (2006) find no evidence for an association of intergenerational involvement and entrepreneurship.

McCann et al. (2001) also reject the hypothesized positive relationship between the number of generations involved and the pursuit of an innovative strategy. Zahra (2003) results are mixed. While family involvement is positively associated with level of international sales, it is not correlated to the number of foreign countries entered. Zahra assumes that family members may adopt a cautious, rather than a very aggressive approach in pursuing internationalization. Moreover, Zahra (2003) finds family involvement in the strategy making of the firm is positively related to international sales, but negatively to the foreign countries entered. Salvato (2004) finally reports a positive association for intergenerational involvement and entrepreneurship in the founder-based family firm, but not for the sibling/cousin consortium or open family firm types.

(2) Family orientations

There is not a lot of evidence that addresses the dynamics and attitudes of the business family. Eddleston et al. (2009) introduce the notion of 'family-to-firm unity', a term which comprehends both family harmony and a strong identification of the family with the business. They report that family-to-firm-unity plays a significant role in moderating the relationships between entrepreneurial behaviours and firm-level antecedents such as a participative board of directors and well-qualified staff.

McCann et al. (2001) find that above average aged family firms[34] with very entrepreneurial strategies tend to give priority to business matters over family issues but at the same time, aim to find opportunities for personal growth and development for the family offspring.

Martin & Lumpkin (2003) propose that the mindset of business families changes over time. They demonstrate that the pride in the family business and the self-perception as a family business strongly increase with successive generations of family ownership. In line with this, transfer intentions and the desire to maintain the business in the family grow. Furthermore, their results show that the tendency to encourage family offspring to pursue a career in the family business – albeit still at a high level – becomes lower in the second and third generation of family ownership. In parallel, the frequency of non-family presidents and their important role as closest adviser to the family increase with later ownership generations.

[34] According to Dyer (1986), the average life-span of a family firm is 24 years. The firms in this sample averaged a life time of 49 years.

Focus: Family orientations									
Authors	Year	Source	Sample	Concept of entrepren-eurship	EO	Focus variable	Reported relationship with entrepreneurship		
							Positive	None	Negative
Eddle-ston et al.	2009	CH	179 private firms; FF (O+FM)	CE (Miller, 1983)	I RT P	Family-to-firm unity	X		
Martin & Lumpkin	2003	US	318 SME; FF (O+ FM/TI/P)	EO (Lumpkin & Dess, 1996)	RT P CA A	Conflict			X (1)
						Self-perception as family business			X (1)
						Pride			X (1)
						Transfer intentions			X (1)
						Greater freedom in career choice for offspring			X (1)
						Community concerns			X (1)
McCann et al.	2001	US	231 mid-sized firms; FF (O)	Strategy typology (Miles & Snow, 1978)	I RT P	Priority of business over family matters	X		
						Provide family members with opportunity to grow	X		

Note
(1) Negative relationship only with competitive aggressiveness and autonomy in successive generations of family ownership

Figure 37: Influence of family mindset on family firm entrepreneurship
Source: Own analysis

Martin & Lumpkin (2003) also report a global increase in conflicts with successive generations of family ownership. In their study, increasing conflict was observed in business matters such as, for instance, the strategic direction of

the firm, investments, ownership issues and control of the firm. Similarly, conflict in family issues was found to increase over issues such as roles, employment and compensation of family members. Furthermore, Martin & Lumpkin (2003) observe that subsequent generations aim for group consensus rather than a patriarchal dominance, which is, most likely, an effect of decreasing individual stockholdings with the increase of family size in many old family firms. In parallel to the development of these above outlined family orientations in successive generations of family ownership, Martin & Lumpkin report a decrease in entrepreneurial orientation – or, more precisely, a decrease in competitive aggressiveness and autonomy.

3.3.2.5 Financial performance

Financial performance is a particular determinant of EO in the sense that it can be both antecedent and outcome of entrepreneurial activities (Rauch et al., 2004/2009).

Independently of the family firm context, there is still some debate about the precise relationship of entrepreneurial orientation and firm performance (Rauch et al., 2004/2009). In general, entrepreneurial orientation is assumed to be positively related with future firm performance. However, the inverse causality has also been suggested in the literature. For instance, Stopford & Baden-Fuller (1994) point out that financially troubled firms have less difficulty to depart from past beliefs and behaviours and to adopt policies that foster entrepreneurship.

Within the family firm context, only few studies directly address family firm performance.

Kellermanns et al. (2008) report a positive association between entrepreneurial behaviour and firm performance, measured in employment growth over the last three years.

McCann et al. (2001) observe that family firms with an entrepreneurial “prospector-type” strategy are significantly more likely to have superior market share positions than family firms with conservative strategies. However, due to the cross-sectional nature of the study, the direction of the relationship is not clear, but can only be seen as an association.

Eddleston et al. (2008) test the relationship of firm innovative capacity and firm performance. They find a significant positive association between the innovative capacities and performance of family firms. Furthermore, they find that this relationship is negatively moderated by strategic planning. That is, firms with low levels of strategic planning show a strong positive association of innovative capacity and performance, while firms with higher levels of strategic planning show weaker levels of association.

Naldi et al. (2007) examine the relationship of risk taking and performance for 265 Swedish small and medium sized family firms in a longitudinal analysis over three years. Their results indicate that risk taking is even negatively related to future performance in family firms. The authors tentatively point to the governance structures of the firms in their sample, which are predominantly owner-managed firms. In this setting, they argue, formal control systems are more likely to be weak and decision-making styles more intuitive. Therefore, they suggest some opportunities may be pursued that would not withstand systematic evaluation and consequently result in negative performance.

Caliendo et al. (2008) evaluate the impact of risk attitudes on entrepreneurial survival rates based on a sample of 7,325 self-employed individuals from a large panel study on the socioeconomic conditions in Germany. They report an inverse U-shaped relationship between the willingness to take risk and entrepreneurial survival rates –measured in the pursuit or exit from self-employment over a five year observation period. Individuals with particularly low or high risk taking attitudes were found to be more likely to fail than individuals with intermediate

risk taking levels. Moreover, the study points to a number of moderating socioeconomic variables. Female entrepreneurs were more likely to exit self-employment than their male counterparts. Moreover, being young, single with a self-employed father, a university degree and previous working experience all increase the chances for entrepreneurial survival.

Focus: Financial performance									
Authors	Year	Source	Sample	Concept of entrepren-eurship	EO	Focus variable	Reported relationship with entrepreneurship		
							Positive	None	Negative
Keller-manns et al.	2008	US	50 "larger than average" firms; FF(FM–V-TI)	CE (Miller, 1983)	I RT P	Financial perfor-mance	X		
McCann et al.	2001	US	231 mid-sized firms; FF (O)	Strategy typology (Miles& Snow, 1978)	I RT P	Financial perfor-mance	X		
Eddleston et al.	2008	US	74 SME; FF (O-FM)	Innovative capacity (McGrath, 2001, Miller, 1983, Zahra, 1996)	I	Financial perfor-mance	X		
Naldi et al.	2007	US	265 SME; FF (O-FM-P)	EO (Lumpkin & Dess, 1996)	RT	Future financial perfor-mance			X
Caliendo et al.	2008	GER	7325 small firms; FF (O+FM)	Risk taking attitude	RT	Survival rate	X (medium risk taking)		X (high/low risk taking)

Figure 38: Influence of financial performance on family firm entrepreneurship
Source: Own analysis

3.3.2.6 Firm environment

Firm environment refers to the competitive, social and economic forces that influence firm behaviour. In a non-family context, a number of studies have examined how the conditions of environmental dynamism, heterogeneity and hostility (Miller & Friesen, 1982) relate to firm entrepreneurship.

In the family firm context, comparable investigations are rare.

Craig & Moores (2006) find no association between competitive pressures and firm innovativeness. However, they report that technological uncertainty in the firm environment correlates positively with firm innovation.

Pistrui et al. (2000) compare the socio-cultural forces, personality characteristics, and environmental perceptions of 160 first generation family firms in the former East and West Germany. They find significant differences between the East and West German entrepreneurs in almost every aspect. To begin with, the basic demographics of family firms differ in terms of firm size, firm age, and the gender of the entrepreneurs. In general, West German enterprises were older, larger and more likely to be founded by male entrepreneurs. Moreover, the authors indicate that family traditions are more important to West German family firms and that East German entrepreneurs are more willing to sell their business rather than to establish a legacy for their offspring. At the same time, East German entrepreneurs are more committed to do whatever it takes to make their business a success. Family investments, personal commitment and employment of family members were all higher among East German respondents. In contrast to Western firms, East German entrepreneurs prioritize family concerns over business concerns. Moreover, achievement motives for entrepreneurs in the former East are more centred on freedom, personal expression and independence, while Western entrepreneurs are motivated by the desire for achievement per se as well as financial welfare ambitions for themselves and their relatives. Last but not least, the perception of environmental conditions differed. East German

entrepreneurs reported greater difficulty in obtaining financing for their ventures, felt more threatened by competition and were more positive about government support than entrepreneurs in the West.

Focus: Firm environment									
Authors	**Year**	**Source**	**Sample**	**Concept of entrepren-eurship**	**EO**	**Focus variable**	**Reported relationship with entrepreneurship**		
							Positive	**None**	**Negative**
Craig & Moores	2006	AU	67 small firms; FF (O)	Innovation	I	Technolo-gical un-certainty	X		
						Competi-tive forces		X	
Pistrui et al.	2000	GER	160 SME; FF (O-FM)	Entrepreneurial attitudes – Entrepreneurial Profile Questionnaire (EPQ)	RT	National culture	Affects family involvement, personal commitment, priorities in life, transfer intentions, achievement motives, perception of environment		

Figure 39: Influence of firm environment on family firm entrepreneurship
Source: Own analysis

To conclude this section, an overview of main findings in the studies contributing to the determinants of family firm entrepreneurship is provided on the next page.

Authors	Year	Source	Sample	Focus	Main findings
Brunninge & Nordquvist	2004	SE	1,026 SME	Governance	Presence of independent directors without impact on corporate entrepreneurship in family firms
Caliendo et al.	2008	GER	7,325 small firms	Performance	Inverse U-shaped relationship for risk taking and entrepreneurial success. Low/high levels with higher failure rate than medium levels of risk taking
Craig & Moores	2006	AU	67 small firms	Governance; Firm environment	Scope and timeliness of information, decentralization and informality as well as environmental technological uncertainty are positively associated with innovation. Correlations vary over the life-cycle of the business.
Daily & Dollinger	1992	US	104 SME	CEO	CEO affiliation with family without effect on propensity to adopt prospector-type strategy
Eddleston et al.	2008	US	74 firms	Performance	Significant positive association of innovative capacity and performance, negatively moderated by strategic planning.
Eddleston et al.	2009	CH	179 firms	Governance; Family issues	Comprehensive decision making and long-term orientation positive for corporate entrepreneurship. Family firm unity moderates relationship
Gallo	1995	ES	81 mid - sized firms	Ownership	Ownership control preference of families is limiting factor for entrepreneurship in family firms
Gudmund-son et al.	2003	US	89 small firms	Governance and culture	Empowerment of employees and management support enhance family firm I
Gils et al.	2008	NL/BL	153 SME	CEO; Governance; Family issues	Family CEO negative associated with, TMT heterogeneity and CEO internal locus of control positive associated with organizational innovation. CEO tenure moderately positive associated with process innovation.
Kellermanns & Eddleston	2006	US	74 SME	CEO; Governance and culture	Long CEO tenures without impact on corporate entrepreneurship (CE). Willingness to change and opportunity spotting increase CE. Strategic planning enhances positive effect of perceived opportunities and facilitates CE in family firms with only one active generation
Kellermanns et al.	2008	US	50 firms	CEO; Family issues	No significant correlation for CE and CEO characteristics. Positive CE association for intergenerational involvement

Authors	Year	Source	Sample	Focus	Main findings (continued)
Martin & Lumpkin	2003	US	318 SME	Family issues	Decreasing competitive aggressiveness and increasing family orientation (FO) with successive generations of family ownership
McCann et al.	2001	US	231 mid-sized firms	CEO; Governance and culture	No relationship between number of generations involved and propensity to pursue innovative strategy. Prospector firms more likely to have formalized strategic planning; prioritize business over family agenda
Naldi et al.	2007	SE	696 SME	Performance	Risk taking in family firms is negatively related to performance
Pistrui et al.	2000	GER	160 SME	Firm environment	Strong differences in entrepreneurial orientation and environment perception between former East and Western German entrepreneurs
Salvato	2004	SE	535 SME	CEO; Ownership; Family issues; Governance and culture	Positive association for corporate entrepreneurship (CE): Founder–based: CEO experience, opportunity spotting, intergenerational involvement, value-based compensation, equity with invest. companies Sibling/Cousin: CEO opportunity spotting, strategy, delegation and informality, intergenerational involvement, equity with venture capital Open family firm: CEO opportunity spotting, large managerial body, growth orientation, value-based compensation
Zahra et al.	2004	US	536 SME	Governance and culture	Positive CE association observed for decentralization of decision-making, external orientation, long-term orientation, moderate levels of individualism
Zahra	2003	US	409 SME	Family issues	Family involvement with mixed results concerning risk taking
Zahra	2005	US	209 firms	CEO; Family issues	Family ownership promotes new market venturing. CEO affiliation with family without impact on risk taking. Lengthy CEO tenure inhibits radical innovation and venturing. Multiple family Involvement promotes innovation

Figure 40: Summary determinants family firm entrepreneurship

Source: Own analysis

3.4 Appraisal of past empirical studies and their findings

The first evident observation made in this chapter was the methodological heterogeneity of previous empirical research. Although most studies have been conducted by family business researchers, considerable variation in the use of theories and conceptualizations exists. As a consequence, the comparability of studies is limited and any comparison should be taken with utmost caution. However, a tendency for definitional convergence towards the concept of corporate entrepreneurship (CE) (Miller, 1983) and its later variant, the EO construct (Lumpkin & Dess, 1996) can be observed. Furthermore, as the large majority of evidence originates from the behaviour of small firms in the U.S. while evidence from larger firms and other regions is sparse, very little is known about the entrepreneurial characteristics of these firms. Direct application of existing evidence on other firms is problematic, as both firm size (McCann et al., 2001) and culture (Pistrui et al., 2000) are likely to substantially impact their entrepreneurial behaviour.

Heterogeneity prevails also in the results of past empirical studies.

Concerning the empirical evidence about the characteristic form of entrepreneurship in family firms, the depth of evidence is not balanced across the five salient dimensions of the EO construct.

The best researched dimension is family firm risk taking behaviour, which also brings about the most consistent findings. Family firms have a tendency for lower risk taking levels than non-family firms. Therein, the notion of 'conservative risk taking' appears particularly interesting and may be worth some future research. For the other four dimensions, findings are very limited and often mixed so that it seems premature to draw general conclusions. Martin & Lumpkin's proposition of a declining entrepreneurial orientation with successive generations is indeed supported in three dimensions. Evidence exists for competitive aggressiveness and autonomy from Martin & Lumpkin's (2003) own

study. Moreover, two independent studies report declining levels of innovativeness in older and larger firms – which appears to be in line with Martin & Lumpkin's thinking.

Concerning the determinants of entrepreneurial behaviour, a number of conclusions may be drawn.

As for CEO characteristics, findings consistently support the personality of the CEO as relevant determinant of family firm entrepreneurship. Especially his ability to identify entrepreneurial opportunities in the firm's environment, a general orientation towards growth and change, as well as the fundamental belief in the self-determination of one's life seem to benefit family firm entrepreneurial behaviour. In contrast, findings pertaining to the CEO affiliation with the owning family and the CEO tenure are mixed. It seems fair to assume that these factors are indeed no general determinants of family firm entrepreneurship. Little evidence exists on the role of the CEO's professional experience. Salvato's study suggests that it is a relevant variable and that the impact of CEO experience is dependant on both the type of experience and the type of family firm.

The findings concerning governance and culture of family firms offer several insights. Prior studies show that a strong and actively involved board of directors can be conducive to entrepreneurship and thus an asset for business families (Eddleston et al., 2009; McCann et al., 2001; Salvato, 2004). While many authors argue for independent board members in order to provide new perspectives and advice, strengthen relationships with important stakeholders and increase professional behaviour (e.g. Fiegener, Brown & Derux, 2000; Gersick et al., 1997; Huse, 2000; Neubauer & Lank, 1998), the benefits of independent directors for entrepreneurship in family firms seem limited on the basis of the empirical evidence: Brunninge & Nordqvist (2004) find no association between the presence of independent board members and the level of family firm entrepreneurship. They conclude that the role of independent board members for

strategy-making processes may indeed be overestimated. Salvato (2004) finds an association between independent board members and entrepreneurship, but only in founder-based companies. In contrast, there is evidence on the positive role of insider dominated boards for entrepreneurship in family firms. Both the presence of family members on the board of directors (Zahra, 2003) and the duality of CEO and chairman correlate positively with risk taking in family firms (Salvato, 2004). Evidently, since the studies do not report on long-term consequences of this increased risk taking, it is difficult to assess whether these risks have been carefully evaluated or whether they were frivolously accepted - an argument, which is typically brought forward against the commingling of operational, ownership and control functions (Carney, 2005; Gedajlovic, Lubatkin & Schulze, 2004; Schulze et al., 2003).

With regard to the modes of decision making, evidence across studies suggests that family firms can increase their level of entrepreneurial activities through decentralization of decision making and low levels of formalization (Craig & Moores, 2006; Salvato, 2004; Zahra et al., 2004).

Moreover, it appears that family firms that invest in talent development and the building of effective (non-family) management teams will be able to achieve higher levels of entrepreneurship (Eddleston et al., 2009; Gils et al., 2008, Gudmundson et al., 2003; McCann et al., 2001; Salvato, 2004).

In addition to that, the findings strongly support the positive effects of strategic planning for the entrepreneurship in the family firm (Eddleston et al., 2009; Kellermanns & Eddleston, 2006; McCann et al., 2001).

An organizational culture that is characterized by long-term orientation (Eddleston et al. 2009; Zahra et al., 2004), openness (Zahra et al., 2004), willingness to change (Kellermanns & Eddleston, 2006) and moderate individualism (Zahra et al., 2004) seems also conducive to family firm entrepreneurship.

Despite the fact that ownership is widely regarded as critical influencing factor of firm behaviour, only a small number of authors have actually addressed the issue in previous studies on family firm entrepreneurship. In fact, not a single study was identified to address the influence of ownership concentration or dispersion within the family group. Evidence on family and non-family ownership is scarce and not always conclusive. Perhaps, there is a non-linear relationship between family ownership and entrepreneurship in family firms. Family ownership could be conducive to entrepreneurship up to a certain point, but not necessarily beyond. Furthermore, it appears that ownership effects are moderated by structural factors such as the family firm life-cycle (Salvato, 2004).

The influence of family issues on entrepreneurship is clearly an under-researched area. Substantial coverage is only available for the involvement of several generations in the business operations – albeit with inconclusive findings. The direction of research pursued by Eddleston et al. (2009), Martin & Lumpkin (2003) and McCann et al. (2001) is distinct from most research in focusing on family level phenomena rather than firm-level attributes. The relevance of family mindseet for entrepreneurial activities is clearly supported by their findings.

Moreover, entrepreneurship was found to have a complex relationship with past and future financial performance in family firms and very little evidence exists. For the time being, it appears that innovation has a positive association with (future) firm performance in family firms. The association of risk taking with future financial performance was found to be nonlinear. While medium levels of risk are conducive to firm performance, particularly high and low levels of risk taking were found to have a negative impact on future firm performance.

Former studies highlight also the important role of environmental influences for the entrepreneurial behaviours of family firms. Especially Pistrui et al. (2000), who demonstrate the relevance of national culture for the characteristics of

entrepreneurial behaviour, point to the need for more empirical evidence from family businesses outside the U.S.

A very promising avenue to reconcile the large number of inconclusive findings is the distinction of different types of family firms. Martin & Lumpkin (2003) show that competitive aggressiveness and autonomy decline with successive generations of family ownership. Craig & Moores (2006) and McCann et al. (2001) report that family firms at an early stage in their life cycle (young and small firms) show higher levels of innovativeness than family firms at a later stage (older and larger firms). Salvato (2004) demonstrates that different types of firms – in his case, the founder-centred firm, the sibling/cousin consortium and the open family firm – are influenced by different determinants of entrepreneurial behaviour. Although only few studies in the literature distinguish between different types of family firms, the findings clearly show that family firms should not be treated as homogenous species on which general statements can be made and that more research on the distinct characteristics of different types of family firms is desirable.

Moreover, in terms of theory, it seems that stewardship theory (Corbetta & Salvato, 2004; Davis, Schoorman & Donaldson, 1997) is consistently supported. The decentralization of decision making, the long-term orientation of family firms and the empowerment of employees are typical attributes of a stewardship philosophy and show strong positive associations with entrepreneurial behaviour across studies.

The analysis also demonstrates that former efforts generally centre on the business system with topics such as leadership, governance and culture, firm environment, firm ownership, financial performance, while the family mindset, actions and intentions are still a little researched. The family influence, it seems, is typically only considered if it is manifest in the business system. For instance, in the numbers of involved family members, the number of generations involved

and the roles of family members in the operative business. Yet with this narrow focus, critical factors to understand the family firm phenomenon may be omitted. Family functioning for example may seriously affect family firm activities (Pieper, 2007). Moreover, the business family mindset determines the family's general approach to doing business, its risk profile, investment horizon and entrepreneurial orientation. Except for the initial work of Martin & Lumpkin (2003) and McCann et al. (2001) empirical investigations into this aspect have not been conducted.

Evidently, the current practice to focus on one particular business asset also risks that researchers don't get to see the full spectrum of activities pursued by business families, as was criticized by Habbershon & Pistrui (2002). The most likely reason why researchers are so firmly focused on the business system and a particular operative asset is a very practical one: data collection. While there are all kinds of directories that collect company data, a directory of enterprising families that neatly lists their operations is unlikely to exist.

Before moving on to the next chapter, it is worth repeating that the motivation for this study's research agenda is largely driven by these very gaps of existing research as outlined above. The subsequent empirical study aims to broaden the empirical evidence with a sample from the German speaking region and to include mid and large sized firms. The search for the determinants of entrepreneurial behaviour in family firms will not be limited to the business, but will also address phenomena at the family-level. Lastly, the subsequent study will also differentiate between different types of firms, a procedure that appears most promising to further the understanding of entrepreneurship in family firms.

4 Theoretical Framework and Development of Hypotheses

The following chapter provides a theoretical framework to explain the forming of particular traits and constellations in family firms and how and why these traits relate to entrepreneurial activities. Chapter 4.1 positions family mindset as a central determinant of family firm behaviour. Chapter 4.2 reaches out to introduce agency and stewardship theory as two fundamentally different, literally opposite philosophical approaches to model the behaviour of individuals. In chapter 4.3, the possibilities of the combinatory use of both theories is elaborated. Chapter 4.4 establishes the link between business family mindsets that resemble the stewardship or agency philosophy and the level of entrepreneurial orientation. Subsequently, a set of hypotheses will be developed in chapter 4.5 and potential limitations to the validity of relationships due to family firm specifics will be discussed. Chapter 4.6 summarizes the theoretical framework and the hypotheses derived from it.

4.1 Importance of family mindset for family firm behaviour

The first and most fundamental assumption in this chapter is that entrepreneurial behaviour is not a matter of chance, but a strategic position that is actively and persistently adopted by organizations (Ireland, Covin & Kuratko, 2009; Kuratko & Audretsch, 2009). Essentially, this view builds on Child's (1972) strategic choice perspective, according to which organizations and their leaders can actively shape and determine the relationship of the organization with its environment. If this theoretical stance is accepted, then the question is really to find out what drives organizations in their decisions to adopt a more or less entrepreneurial posture.

As was demonstrated in chapter 3, a broad array of theories, concepts and facets is employed in the literature to identify the drivers of entrepreneurship in family firms. Overall, most of the extant family business efforts may be classified into either of two major approaches developed in general entrepreneurship research. Firstly, those who concentrate on the traits and personalities of the family business leader. This approach stands in the tradition of Schumpeter's thinking (1934) of the entrepreneurial actor, which was later refined by authors such as Cole (1946), Redlich (1949), Hartman (1959), Collins & Moore (1970), Shapero (1975) and Kets de Vries (1977). Secondly, there are those scholars who argue that entrepreneurship does not, especially in larger family firms, depend on a single central actor. Instead, entrepreneurship should be studied as an organizational process that might be performed at various places in the organization, including for example the departments for research, corporate development or marketing. Consequently, such efforts focus on the identification of particular constellations in the governance and culture of firms as potential drivers of entrepreneurship. Family business researchers adopting this perspective typically refer to authors such as Burgelman (1983a/b), Burns & Stalker (1961), Guth & Ginsberg (1990), Drucker (1985), Miller (1983), Normann (1961), Stevenson & Jarillo (1990) and Stopford & Baden-Fuller (1994).

Yet the presumably central theme of family business research – the family influence on organizations in all its forms and complexities and in particular the factors that originate from the family level, such as the family orientations, intentions and attitudes as well as the dynamics stemming from the family as a group are prominently missing in most theories concerning entrepreneurial behaviours of firms. Still in 2003, Aldrich & Cliff diagnosed that "very little attention is paid to how family dynamics affect fundamental entrepreneurial processes" (2003:574).

The present study suggests that certain family orientations, values and attitudes promote entrepreneurship, whereas other family mindsets hinder entrepreneurial behaviours. Therein, this study follows authors such as Habbershon & Pistrui (2002), who highlight the need to consider the family level as focal point to analyze the behaviour of family firms. The study also builds on Martin & Lumpkin (2003), who first link the family mindset with the level of entrepreneurship in family firms. There is not much theoretical work available to explain why certain families promote entrepreneurial behaviours more than others.

However, a recent contribution that employs stewardship and agency theory and links the prevalence of either model of man in business families with firm behaviours and especially the entrepreneurial profile of the family firm (Corbetta & Salvato, 2004; Eddleston et al., 2008; Eddleston et al. 2009; Miller et al., 2007; Zahra et al., 2008) appears to offer a suitable paradigm to the study. In the following sections, this approach shall be developed in greater detail.

4.2 Foundations of agency and stewardship theory

Agency and stewardship theory are both well established theoretical frameworks in management research. However, they differ substantially in their philosophical and disciplinary background, their underlying assumptions and their arguments to explain individual behaviours. Correspondingly, their propositions to structure organizational relationships and their vision of optimal organizational results are very different.

Agency theory is grounded in economics and the concept of economic rationality (Simon, 1997). The agency theoretic model of man is that of a self-serving, opportunistic individual who aims to maximize his individual utility (Jensen & Meckling, 1976). Specifically, agents are assumed to be primarily motivated by

extrinsic tangible rewards and to show little commitment to anything beyond their personal financial interests (Davis et al., 1997). Generally, agency theory (Eisenhardt, 1989; Jensen & Meckling, 1976) is used to explain the effects of individual behaviours on firm efficiency and to assess the efficacy of organizational structures set up to minimize the costs of dysfunctional behaviours (Greenwood, 2003). The classic application of agency theory is the agency problem originating from the separation of ownership and control. Managers (the agents) are largely unaffected by the wealth effects of their decisions and have different values, goals and risk preferences for their behaviour than do the risk bearing owners of the firm (the principals). Since both agent and principal are assumed to maximize their individual utility (Jensen & Meckling, 1976), chances are substantial that the utility functions of agent and principal do not coincide and that the agent will not always choose to act in the best interest of the principal. As typical opportunistic managerial behaviours, agency theory lists shirking and self-service, for instance, by granting themselves excessive monetary and non-monetary vantages at the expense of shareholder interests (Williamson, 1985). The principal cannot ensure the desired behaviour of the agent at all times due to asymmetric information and incomplete contracts (Alchian & Woodward, 1988)[35]. Agency theory therefore suggests curbing deviant behaviour and losses to the principal by installing appropriate financial incentive schemes and controlling mechanisms such as the instalment of efficient board of directors. However, such interest-alignment mechanisms are not achieved at zero costs. The sum of the resulting burden to the principal is termed agency costs (Jensen & Meckling, 1976)[36].

[35] Such behaviours include adverse selection, that is when an agent who is unsuitable for the task is hired, or moral hazard, which refers to the shirking, free-riding and the consumption of perks by the agent (Alchian & Woodward, 1988).

[36] According to Jensen & Meckling (1976), the agency costs are the sum of 1) the monitoring expenditures of the principal, 2) the bonding expenditures of the agent and 3) the residual loss.

The stewardship theory on the other hand is a more recent theoretical framework. It is rooted in the disciplines of psychology and sociology and defines situations were individuals have interests that extend beyond purely individual or economic goals and rather identify with a greater, organizational objective (Donaldson & Davis, 1991). The model of man in stewardship theory describes individuals whose behaviour is structured such that pro-organizational, collectivistic objectives are attributed with higher utility than personal, self-serving aims (Davis et al., 1997; Frank, 1994; Jensen & Meckling, 1994). Stewards believe their interests are aligned with those of the organization and that by working towards the organizational goals, their personal needs will be satisfied (Argyris, 1973; Davis et al., 1997; Donaldson & Davis, 1991). The accomplishment of collectivistic goals triggers substantial intrinsic and personal utility for stewards (Zahra, Hayton, Neubaum, Dibrell & Craig, 2008). It is also important to note that stewardship behaviour is not irrational – the motivation for the 'self-actualizing behaviours' (Argyris, 1973; Davis et al., 1997) originates from the strong identification with the organization's objectives. Accordingly, the propositions for governance models brought forward by stewardship theorists emphasize the important role of trust, the delegation of decision making as well as the empowerment of employees to achieve optimal results (Davis et al., 1997).

What concerns the application of each theory for the family firm context, they demonstrate likewise disparate views on the role of the family for family firm outcomes.

Originally, agency theorists considered family firms to be an ideal organizational form. The typical combination of ownership and management control was believed to ensure perfect alignment of interests and thus make agency problems redundant (Amihud & Lev, 1999; Fama & Jensen, 1983; Jensen & Meckling, 1976). Yet this initial view was more or less abandoned with the writings of Schulze and colleagues who proposed that some typical phenomena in family firms such as a lack of formal control mechanisms, non-reciprocal altruism and

nepotism may even aggravate agency problems. To them, the family is really more a problem than a benefit for the organizational success of family firms (Schulze, Lubatkin, Dino & Buchholtz, 2001; Schulze, Lubatkin & Dino, 2002; Schulze, Lubatkin & Dino, 2003). Typical examples of negative family dynamics involve conflict among family members over the use of financial surplus or strategic direction (Gersick et al., 1997; Schulze et al., 2001/ 2003). Parental, non-reciprocal altruism, a trait whereby parents behave generous towards their kin even to the point of spoiling them (Stark 1995; Lunati, 1997; Becker, 1981), may induce parents to grant children financial means, employment and other benefits, regardless of their actual achievements, competence or the organizational implications (Lubatkin et al., 2007; Schulze et al., 2003). Consequently, Schulze and colleagues suggest the use of an adapted agency theory in family firms that focuses on the dysfunctional behaviours related to family involvement, their determinants, costs and potential remedies (Schulze et al., 2001/ 2003).

In contrast, stewardship theory depicts the family and the family culture as a source of competitive advantage for family firms (Corbetta & Salvato, 2004; Eddleston & Kellermanns, 2007). Family members are characterized as stewards of the business who believe that their interests are aligned with the firm. They are described with the stewardship attributes of being collectivist, pro-organizational and trustworthy, willing to put aside their personal interests for the sake of the business (Davis et al., 1997). Correspondingly, it is assumed that they are motivated to maximize performance of the family business (Corbetta & Salvato, 2004; Eddleston & Kellermanns, 2007; Eddleston et al., 2008).

4.3 Combinatory use of agency and stewardship theory

Each theory as outlined above has great merits, but also limitations.

Agency theory is one of the most powerful theoretical frameworks in governance research. Yet its focus is limited to very specific constellations (Davis et al., 1997; Donaldson, 1990). In particular, critique has been raised concerning its depiction of human behaviour as being overly simplistic (Jensen & Meckling, 1994). Individuals can only be modelled as self-serving and opportunistic, leaving no room for non-economic motivations and collectivistic orientations (Doucouliagos, 1994), which restricts its applicability to the complexities of social interaction in organizations (Frank, 1994; Hirsch, Michaels & Friedmann, 1987).

Stewardship theory contrasts directly with agency theory. By taking a broader view of human behaviour, proposing that individuals are not only driven by egoistic motives, but also by service to others and generosity (Davis et al. 1997), stewardship theory excels exactly in the deficiencies of agency theory, especially the lack of non-economic assumptions and collectivistic orientations (Dougouliagos, 1994; Hirsch, Michaels & Friedman, 1987; Perrow, 1986). In contrast, it fails to account for economic and self-centred motives of human actors.

Researchers who decide for either theory are consequently forced to adopt a very narrow and undifferentiated view on the phenomena under study. To demonstrate this with the case of family business – researchers who adopt the agency framework will have to portrait families as self-serving and detrimental in their effects for business. Consequently, they will search only for evidence of detrimental effects and focus only on those tools that are suitable to curb such detrimental effects (Bertrand & Schoar, 2006; Faccio, Lang, &Young, 2001). In contrast, researchers who adopt the stewardship perspective will have no choice but to model the family as self-less, committed and benevolent (Arrègle et al.,

2007; Miller & LeBreton-Miller, 2005). They will have to ignore any evidence of negative family influence and concentrate on instruments that promote collective orientations and empowerment. Evidently, this is not very realistic. As no one would really doubt, families have the ambivalent quality of being both – they may be the greatest asset or the greatest liability of the family business. And worse of all – they may be both at the same time. Yet to find out what the exact dynamics in the family and its corresponding influence on the business are research models need to allow for this ambivalent character. A quality, with neither agency nor stewardship theory affords on its own. Instead, with the choice of either of these two theoretical frameworks alone, researchers need to decide ex-ante which of the very opposing views of family influence they want to pursue.

Previous research has dealt with this problem in different ways. Certain researchers have chosen to pursue a single theory approach and accept to describe and explain only certain aspects of reality and their phenomenon under study (e.g, Naldi et al., 2007). Moreover, a substantial number of empirical research in family business examined in chapter 3 turns to theoretical agnosticism – that is, rather than working with theories, they pursue problem-driven work (e.g. Brunninge & Nordqvist, 2004; Salvato, 2004). Yet this risks, as Davis & Marquis (2005) put it, to be simple “business journalism with regressions” (p. 335). Furthermore, there is the possibility to combine different theories in a single research project in order to capture different phenomena and enhance explanatory power. A choice which became rather popular in recent times (e.g. Eddleston et al., 2009; Eddleston et al., 2008). Evidently, such a procedure is not necessarily easy. The aim to address different aspects of reality may only be met by using separate theories in a consecutive way (e.g. Gils et al., 2008) rather than in a true combinatory fashion because there is no proper connectivity between them. The result of the simultaneous use of disjoint

theories may then be more a series of smaller independent research projects rather than one large integrated research model.

However, agency and stewardship theory display in the specific context of family business and business family mindsets a connectivity that is remarkably good so that both theories can indeed be used together to form a single combinatory and integrated research framework.

As was first proposed by Davis et al. (1997) the literally opposing models of man embedded in agency and stewardship theory lend themselves very well to depict two idealized, opposing mindsets. On the one hand, a mindset that is guided by self-serving and economic principles. On the other hand, a mindset that is characterized by collective orientations and self-actualizing aims. Thereby, researchers have not only a sort of dual track to choose between two sets of beliefs and theories of human behaviour that they can alternately use. Researchers can even identify traces of both "realities" in the same mindset and setting. Overall, one can access a much greater repertoire from the logic and contentions of economics, psychology and sociology to describe, explain and predict human behaviour. The result of this is a device that allows to produce a much more nuanced and realistic depiction of the phenomenon under study.

Evidently, due to the novelty of this approach there are still many untapped spots in its application. For instance, there are little predictions that explain *why* a mindset may be prevalent in a certain setting or *how* mindsets may change over time from resembling more one and later more the other theoretical construct. As one of the first to address this matter, LeBretonMiller & Miller (2009) point to the sociological embeddedness literature to answer these questions. In particular, they argue that human actors are embedded in multiple social systems that determine their orientations and behaviours. The structural, political, cultural, normal and cognitive patterns that prevail in the respective social systems are supposed to form the mindset of individuals and members of a social system.

Last but not least and before putting the theory to work, it must also be kept in mind that the combinatory use of these two theories is still far from being a universal master theory that integrates all possible patterns and constellations of reality. To name a few, it ignores resource constellations central to the resource-based view of the firm (Barney, 1996) as much as individual skills and talent highlighted in Schumpeter's work (1934). Thus, despite its enlarged repertoire, it will still only convey parts of reality and ignore others.

In the next section, the combinatory use of agency and stewardship theory will be used to model particular family mindsets and describe their impact on the entrepreneurial behaviours of the family firm.

4.4 Linking agency and stewardship mindsets with entrepreneurship

Extending Davis et al.'s (1997) idea to employ stewardship and agency theory in a complementary way, especially Corbetta & Salvato (2004) propose their combinatory use to depict contrasting models of business family mindsets and their implications for firm behaviour and outcomes. Essentially, the idea is that the dominant model of man, the beliefs and assumptions of a business family are not restricted to the family members. Instead, they are assumed to be conferred in a social spill over effect from the family to the employees of the family business to shape their behaviour and attitudes (Schein, 1995; Barsade, 2002). This way, the business family is believed to determine the model of man prevailing in its family business and thus the organizational behaviour.

An outcome of the research that links the respective models of man in stewardship and agency theory with family firm behaviour is an explanatory model that locates the causes of entrepreneurial behaviour in the mindset of the

business family (Corbetta & Salvato, 2004; Eddleston et al., 2009; Miller et al., 2007; Naldi et al., 2007).

Specifically, it is suggested that when a family culture resembles more the self-serving, economically rational model of man, agency relationships will also predominate in the family business and entrepreneurial orientations will be weak (Corbetta & Salvato, 2004; Eddleston et al., 2009). Individuals are expected to use all their discretionary powers to their own benefit and to the disadvantage of the family firm. Correspondingly, controlling mechanisms will be in place to hold these self-serving tendencies in check (Jensen & Meckling, 1976). Consequently, such family firms are assumed to concentrate on the minimization of agency costs and to emphasize efficiency as measure of effectiveness (Eisenhardt, 1989). In such conditions, researchers assume entrepreneurship and entrepreneurial activities to be low (Corbetta & Salvato, 2004; Eddleston et al., 2009).

Business families with a self-actualizing model of man on the other hand are believed to promote stewardship behaviour in the family business and to foster entrepreneurial behaviours (Corbetta & Salvato, 2004). Specifically, individuals are expected to perceive their interests aligned with the organizational goals and to be committed to the fulfilment of the organizational objectives. In line with this, the organization is geared towards involvement and empowerment of employees. As a result, employees are assumed to adopt innovative and proactive behaviours more readily, to engage in calculated risk taking and to thereby contribute to the long term performance and survival of the firm. Such behaviour would also be reinforced with the principals of the business who would more readily appreciate the entrepreneurial initiatives brought forward by their employees and thus facilitate their realization (Davis et al., 1997). According to the literature such constellations should result in significantly higher levels of entrepreneurship than in agency-imprinted settings (Corbetta & Salvato, 2004; Davis et al., 1997).

The existing explanatory model that links a business family's model of man with its entrepreneurial activities is very straightforward in its proposed mode of action: a family with an agency model of man generates agency relationships in its business activities and has little focus on entrepreneurship. In contrast, a family that is characterized by the stewardship model of man is expected to produce stewardship behaviour in its organization, and to thereby promote entrepreneurial behaviours in the family business.

Indeed, there is plenty of empirical evidence that supports the positive relationship of stewardship orientations and entrepreneurship in family firms. Stewardship oriented human resource practices such as the empowerment of employees (Gudmundson et al., 2003), the building of effective human resources (McCann et al., 2001) and a large and diverse managerial body (Gils et al., 2008, Salvato, 2004) have all been linked with higher levels of entrepreneurship in family firms. Likewise, concerning the governance philosophies, firms that adopt the stewardship model and promote a culture of involvement and delegation of decision making were reported to have higher levels of entrepreneurship (Craig & Moores, 2006; Eddleston et al., 2009; Salvato, 2004; Zahra et al., 2004).

Still, it might be premature to adopt a simple logic that classifies all stewardship behaviour as good and all agency behaviour as bad for family firm entrepreneurship.

To begin with, there is empirical evidence that suggests a more cautious, differentiated approach.

For instance, in a recent study on Swiss family firms, Eddleston et al. (2009) employ family-to-firm unity, a factor which describes supportive behaviours and involvement of the family in the family business originating from intact family relationships to represent stewardship philosophy of business families. Yet in contrast to their own expectation, they find family-to-firm-unity to hamper the positive effect of another important variable, namely a skilled and experienced

hired workforce, for the entrepreneurial behaviours of the firm. In fact, they find that firms with little human capital are most entrepreneurial when they have high family-to-firm-unity. As it seems, a strong and involved family may compensate for a lack of human capital. As interpretation, Eddleston et al. (2009) offer that family members in these firms might be aware that they cannot rely solely on the hired workforce and that they need to actively engage in the business operations for the realization of entrepreneurial opportunities. Alternatively, too much family involvement may handicap the level of education, skill and experience of the hired workforce. Very strong levels of family harmony may also open doors for nepotism and deter non-family talent from pursuing a career in the business. Thus, there seem to be certain constellations where family stewardship might be detrimental to factors that would otherwise seem important and positively associated with entrepreneurship.

In an analogy to this, a finding of Zahra (2005) may be interpreted in a way that governance philosophies inspired by agency theory are not all bad for entrepreneurship. Zahra (2005) reports from an empirical study that lengthy CEO tenures in family firms are detrimental for the innovativeness of the firm. The explanation at hand is that long tenures give CEOs the time to accrue significant powers and that they may drive competent but critical voices away from the organization (Hambrick & Finkelstein, 1987). As a consequence, strategic simplicity and inertia may propagate in the organization and lead subsequently to lower levels of entrepreneurship. From an agency point of view, such a scenario should have been prevented by a system of checks and balances, which would have limited the monopolization of decision making powers in the first place. Thus, the instalment of certain agency governance mechanisms that better control and monitor the firm leadership might reduce the dangers of strategic simplicity and thereby facilitate entrepreneurial behaviours.

Another indicator that pure-play stewardship settings are not optimal but that certain elements of agency thinking benefit firm behaviour and outcomes may be

drawn from the study of Naldi et al. (2007). Therein, they demonstrate that risk taking in family firms is negatively associated with firm performance. Past empirical evidence shows that family firms rely to a lesser extent on formal control and governance mechanisms than non-family firms (Aronoff & Ward 1996; Höppner, 2006; Mustakallio, Autio & Zahra 2002). Perhaps, this lack of powerful control systems is responsible for the negative relationship between risk taking and performance. In fact, objective control systems might also have prevented some of the excessive risk taking observed in several German family businesses in the recent past[37].

In conclusion from these observations, it seems fair to assume that stewardship behaviour is often, but not always positive and that factors associated with agency philosophy may not be all negative for successful family firm entrepreneurship. It is therefore proposed that in order to achieve optimal results, families and their businesses need both – stewardship and agency characteristics.

Consequently, this study assumes that both agency and stewardship mindsets can have positive and negative implications for entrepreneurial behaviours and that optimal results are achieved with the right combination of both traits.

Among the conditions previously used to identify the prevalence of an agency or stewardship perspective in family firms, researchers concentrated especially on decision-making styles (Corbetta & Salvato, 2004; Eddleston et al., 2009) and human resources practices (Eddleston et al., 2009; Miller et al., 2008; Zahra et al., 2008). Moreover and beyond the firm-level, the level of family commitment to the enterprise (Eddleston & Kellermanns, 2007; Eddleston et al., 2009; Zahra et al., 2008), the degree of shared and aligned values between family and business (Corbetta & Salvato, 2004; Eddleston et al., 2009; Zahra et al., 2008)

[37] Prominent recent examples were excessive financial risk taking brought the family businesses at the edge of collapse include Schaeffler, Porsche, the operations of Merckle family and Sal. Oppenheim.

family harmony (Eddleston & Kellermanns, 2007) and the orientation toward the long-term, transgenerational success (Corbetta & Salvato, 2004; Eddleston et al., 2009; Miller et al., 2008; Zahra et al, 2008) have been proposed in the literature.

This study suggests a research model to predict entrepreneurship in family firms with a particular emphasis on family mindsets and corresponding behaviours. The proposed predictor variables are (1) family commitment, which addresses the priorities of family members and their willingness to subordinate their personal goals to the agenda of the family firm. (2) Family focus on growth and change, which assesses whether the family is more held back in a concern for stability and the conservation of traditions or open for new strategic directions and entrepreneurial opportunities. Concerning the family governance approach, it examines (3) the decentralization of decision making authority in the family firm and (4) the existence of formal strategic planning processes in the family business. Last but not least, it includes (5) family functioning which captures the family relationships and the status of family cohesion.

4.5 Development of hypotheses

In this chapter, each of the five elements of the above proposed research model is discussed in greater detail with corresponding hypotheses. An overview of the complete research framework is provided at the end of this section.

4.5.1 Family commitment

Family commitment describes a family state of mind where the family is highly dedicated to the family business – even to the extent that it places the priorities of the business ahead of the needs and wants of the family and its individual

members. Highly committed families behave as if the family exists to serve the family business.

In the literature, this attitude has been given different names. ‘Business first’ as opposed to ‘family first’ is a frequently encountered example to describe strong family commitment (Schlippe & Groth, 2006; Mühlebach, 2004; Simon, Wimmer & Groth 2005). Moreover, in reference to the concept of altruism, defined as a trait that links the welfare of an individual to the welfare of others (Bergstrom, 1995), stewardship proponents have used the term “family altruism” to describe a family attitude of unselfish concern and devotion to the family business where family members place the firm's objectives ahead of their individual aims (Corbetta & Salvato, 2004; Zahra, 2003). In doing so, the stewardship concept of family altruism deviates from the notion of individual altruism and the problems of asymmetric altruism previously identified in family firms (Schulze et al., 2001/2003). An example of asymmetric altruism may be parent–child relationships where the parents are overly generous toward their offspring and thereby encourage them to free ride (Schulze et al., 2003). The stewardship perspective assumes symmetric altruism in families. It is described as a family trait where all family members subordinate their personal goals to goals of the family business (Corbetta & Salvato, 2004; Davis et al., 1997; Zahra, 2003).

A high level of family commitment to the family business is in line with a stewardship mindset (Davis et al., 1997). In the stewardship theory of the family firm, families are depicted with collectivistic orientations and a strong belief in the common family responsibility to strive for the prosperity of the family business (Cabrera-Suarez, de Saá-Pérez & Garcia-Almeida, 2001). Moreover, they are assumed to encourage self-restraint of family members and to be considerate of the effects of their actions for family firm (Becker, 1981; Bernheim & Stark, 1988; Kellermanns & Eddleston, 2004; Schulze et al., 2003).

Business families that can be characterized as very committed to the business may be more entrepreneurial since the family members' interests are more aligned with the success of the family firm (Corbetta & Salvato, 2004; Eddleston & Kellermanns, 2007; Zahra et al. 2008). This may affect the firm's entrepreneurial activities in the several ways.

Firstly, high commitment families are likely to be more modest in their claims for dividends and pay-offs. As a result, the family business can accumulate the financial resources necessary to engage in entrepreneurial ventures (Kang, 2000). In fact, family commitment may be a quality that is particularly beneficial to the funding of entrepreneurial projects in family firms where ownership is fractionalized and where many family owners are not employed by the company (Schulze et al., 2003). In such settings, outside family shareholders directly benefit from the payout of dividends but (especially when the business is privately held[38]) not from growth in valuation of the business and from new investments which can be difficult to evaluate for outsiders. However, when the family group collectively agrees in being committed to the family business, such tendencies might easier be held in check.

Secondly, the human resource politics in committed families may be less susceptible to nepotism and political allocation of positions based on clan-affiliation (Schulze et al., 2003). As everyone agrees on the priority of business needs over family needs, candidates for key positions in the family business will be selected based on their talents and irrespective of family considerations. Some business families, such as the German Haniel group, may even go as far as to establish a rule whereby family members are categorically banned from

[38] Typically, and in particular for family firms that are private – as is the case for most family businesses – there is no liquid market for the family firm shares (Schulze et al., 2003). But even in family firms that are listed on the stock exchange, the family block-holding often has restrictions on the vendibility of shares. In the case of Henkel Corporation for example, 49 percent of the shares are publicly listed, while the family controls 51 percent of the shares, which are pooled in a voting contract for several years.

operational leadership positions in the family business. Such a policy appears hard on talented family offspring. However, it is the result of a family philosophy which clearly prioritizes the needs of the business over the family where leadership shall not be affected by family considerations, but structured in a way that the welfare of the business is maximized.

Thirdly, strong family commitment may create a similar affective response among employees. Research suggests that affect and motivation are contagious in social networks (Barsade, 2002) and that the organization's leaders are the strongest influencers of employee affection. In family firms, this influence is exercised by the business family (Rhoades & Eisenberger, 2002). Affection and commitment increases the discretionary contributions of employees (Riketta, 2002), which, in turn, may create conditions in which organizations increase autonomy of employees (Davis et al., 1997) and thereby enhances the entrepreneurial profile of the family firm.

Little empirical evidence exists on the relationship between family commitment and entrepreneurship. Although not perfectly aligned with the concept of entrepreneurship, Zahra et al. (2008) report that a family firms' culture of commitment to the business is positively associated with the strategic flexibility of the firm. In an earlier paper, Zahra (2003) finds that family ownership and family involvement increase the commitment of the family to the business and consider this 'family altruism' as a facilitator to the engagement in risky international expansion.

For the reasons explained above, family commitment appears to promote entrepreneurship in the family business. It is therefore suggested that:

> *Hypothesis 1: Family commitment is expected to be positively associated with entrepreneurship in the family business*

4.5.2 Family focus on growth and change

Family focus on growth and change describes a family attitude where the family concentrates on growth and development of the family business. In doing so, family leaders dedicate more time to the development of new business than to the management of the established business. This perspective also includes a forward looking attitude and willingness to embrace change in the products and services, technologies and business models pursued by the family business. Moreover, families with such an orientation would also accept to give up the stability of the present situation and instead cope with temporary volatility on the way to long-term prosperity.

A family attitude that embraces change and growth is in line with stewardship theory. Stewards have been described as being motivated by opportunities for growth, achievement, affiliation and self-actualization (Davis et al., 1997). In a more recent application of stewardship theory, Zahra et al. (2008) specifically derive the ability to change and respond to strategic challenges from the prevalence of a stewardship-oriented mindset. Furthermore, it has been argued that a focus on growth and change is only possible when families overcome individual welfare concerns for the benefit of the collective family business – thus indeed requiring a stewardship mindset in the business family.

Family focus on growth and change appears to be a particularly important prerequisite of entrepreneurship in family firms.

There are many reports that find business families conservative and reluctant to consider new strategic directions (Beckhard & Dyer, 1983; Gersick et al., 1997; Kepner, 1991; Vago, 2004; Ward, 1987). This conservatism has been explained with increasing emotional attachment to the organization's existing strategic positions over time (Miller et al., 2003). For example, a particular product may embody the legacy of earlier generations, the rise of the family business to wealth and glory and is therefore considered sacrosanct. Similarly, glorious

leadership figures of the family may be idealized to such an extent that their successors find it difficult to deviate from their strategic footprint (Beckhard & Dyer, 1983; Handler, 1989; Miller et al., 2003; Stavrou, 1999). Furthermore, it was argued that the pursuit of new and inevitably risky strategies may conflict with increasing concerns for wealth preservation of business families (Carney, 2005).

However, the strong reliance on tradition and formerly successful businesses models, strategies and products can render the family firm inflexible and vulnerable (Sirmon, Arregle, Hitt & Webb, 2008). Businesses that consider change as a threat rather than an opportunity will have difficulties adapting to environmental shifts which, inevitably occur in most industries (Miller & Friesen, 1982; Duncan, 1972). The resistance to change has been linked with stagnation and loss of market share in family firms (Miller et al., 2003) while the ability to change is regarded as key success factor of family businesses (Vago, 2004; Kellermanns & Eddleston, 2006).

In empirical research, change orientation has long been associated with entrepreneurial behaviour (Miller, 1983) and innovation in particular (Karagozoglu & Brown, 1988). In proximity to the concept under study, Kellermanns & Eddleston (2006) report a positive association between a firm's willingness to change and corporate entrepreneurship in family businesses. Similarly, Upton, Teal & Felan (2001) highlight the importance of flexibility for family firms, stating that the fastest growing family firms have been found to pursue first-to-market and early-follower market-timing strategies.

It is assumed that business families that exhibit greater orientation towards growth and change have higher rates of entrepreneurship in their firms. Therefore, it is suggested that

Hypothesis 2: The family focus on growth and change will be positively associated with entrepreneurship in the family firm.

4.5.3 Decentralization of decision making

Organizations differ in their locus and modes of decision making. Practices range from complete centralization to complete delegation. In centralistic cultures, power is generally concentrated in the hands of a small number of individuals at the top and little decision making authority is left with other parts of the organization. In contrast, decentralization describes organizations with a more participative philosophy were decision making is delegated to the operational level (Richardson, Vandenberg, Blum & Roman, 2002). Among the various definitions that have been made on the subject, this study will follow the definition of Simon et al., who state that "an administrative organization is centralized to the extent that decisions are made at relatively high levels in the organization, decentralized to the extent that discretion and authority to make important decisions are delegated by top management to lower levels of executive authority" (Simon et al., 1954:1).

Decentralization is also in line with a stewardship philosophy. It is proposed that individuals who are involved in the decision making processes of an organization are more likely to engage in behaviours that benefit firm prosperity (Davis et al., 1997). Specifically, the delegation of decision making powers is assumed to promote a sense of belonging, responsibility for the business and self-satisfaction among employees (Eisenhardt, 1989; Miller & Monge, 1986; Zahra et al., 2008). As a consequence, employees are assumed to have a higher motivation to act in the interests of the business (Davis et al., 1997). In contrast, individuals who are treated as subordinates and not deemed trustworthy to be responsible for some decision-making in the organization are considered more likely to get involved in anti-organizational, egoistic behaviours (Argyris, 1973; Davis et al., 1997).

Decentralization may also enhance a firm's entrepreneurial behaviour.

Decentralization puts employees in a position to take initiative and actively respond to entrepreneurial challenges (Miller, 1983; Pinchot, 1985). As a result, a

firm’s responsiveness to opportunities in its environment may be multiplied (Zahra, 2003, Davis et al., 1997). In contrast, centralization could diminish entrepreneurial behaviours by reducing all strategic reflection and action to the few individuals at the top (Davis et al., 1997). Centralization may also create a one-way communication of orders and obedience that limit a vivid exchange of ideas that could otherwise transport visions of entrepreneurial opportunities across the organization and generate the support needed for their implementation (Eddleston et al., 2009). Decentralization may allow companies to access their full entrepreneurial potential by taking advantage of the motivation and capabilities of lower-level employees whose contributions are often neglected in more autocratic, centralized organizations (Aiken & Hage, 1966; Locke & Schweiger, 1979).

In particular founders of family firms are characterized as charismatic but often autocratic leaders who prefer secrecy and straightforward action to shared decision making powers and in-depth discussions over strategic direction (Mintzberg, 1994). However, such firms are likely to make insufficient use of the firm’s human capital and thereby restrict the firms’ entrepreneurial potential (Lansberg, 1988) – not to mention the long-term implications of being overly dependent on a single individual (Feltenham et al., 2005). Business families with a stewardship philosophy are assumed to overcome such autocratic tendencies and to promote decentralization and empowerment in their organizations. As a result, these firms are assumed to have a stronger entrepreneurial profile and higher strategic flexibility (Corbetta & Salvato, 2004; Davis et al., 1997; Kellermanns & Eddleston, 2004; Zahra et al., 2004).

The positive association of decentralization and entrepreneurship in family firms has also been supported in previous empirical studies. Craig & Moores (2006) find that more innovative firms have a tendency for decentralization and less formal structures. Zahra et al. (2004) report a positive association of decentralization of decision making and entrepreneurship. Last but not least,

Salvato (2004) finds the delegation and informality of decision making to be conducive to entrepreneurship, in the sibling/cousin consortium family firm.

Therefore, it is suggested that

Hypothesis 3: The decentralization of decision making is positively related to family firm entrepreneurship.

4.5.4 Formal strategic planning

Strategic planning is a managerial tool that comprehends the formulation of regular, long-term plans for the effective development of a company in the light of both its external opportunities and threats and as well as the internal strengths and weaknesses of the firm (Kuratko & Audretsch, 2009; Rigby, 2001). The process entails the definition of a mission statement, the specification of objectives, the formulation of strategies and the setting of actionable policies (Hitt, Ireland & Hoskisson, 2009). It requires the collection of data, in-depth analysis, the conceptualization and modelling of alternative future scenarios and their evaluation against crucial questions concerning the actual and desired positioning of the business (Mazzola, Marchisio & Astrachan, 2008; Boyd, 1991). Strategic planning is more than regular strategic reflection. In order to reach its full capacity, the planning process should be formal, that is, written and institutionalized, since this prepares the necessary groundwork for active strategic thinking and also ensures the healthy open dialogue so often needed in family firms (Ward, 1988). Many authors, including Ackoff (1970), Miller & Friesen (1978, 1984), and Mintzberg (1973) have stressed the importance of strategic planning in promoting entrepreneurship and long-term survival of organizations.

Strategic planning may benefit entrepreneurship in family firms since it helps to mitigate some of the typical pitfalls of family businesses. As was discussed

before, successful entrepreneurs often become overly reliant on their particular formula of success (Ward, 1988/1997) and concerns of reputation and wealth preservation may gain weight in business leaders' considerations over time (Backley, 1994). Moreover, family business leaders are ascribed a tendency to make themselves indispensable and attribute little importance to grooming capable talent that could contribute to the development of the family firm (Lansberg, 1988; Zahra, 2005). However, as times and the premises for success change, the combination of increased risk aversion, centralization and fixation on strategies of past success may turn a once dynamic family business inflexible. It might be stuck with strategic simplicity, a condition, wherein habits of the past are repeated again and again regardless of strategic challenges and entrepreneurial opportunities (Miller, 1983; Ward, 1997). A proper strategic planning process may help to disclose and mitigate such problems early on. Strategic planning may give purpose to middle managers and next generation family members alike and channel their efforts toward a greater participation in the strategic management of the organization. Their input may help companies to concentrate on the constant development of the business, to find new avenues for profitable growth, to adjust to changes in the market place and to ultimately ensure their long-term survival (Kellermanns & Eddleston, 2006; Mazzola et al., 2008; Ward, 1988).

Strategic planning may also enhance the quality of entrepreneurial projects. Family business leaders often have the authority to go after what they personally think is the best option (Gedajlovic et al., 2004) without having to defend their views in front of a board or investment committee. Decision-making may be made on the basis of "gut feel" (Carney, 2005:23) rather than demure business plan calculations and the consideration of all available information, including a detailed consideration of alternatives, risk, and consequences (Schulze et al., 2003). This, however, makes family businesses susceptible to self-control problems which can affect the nature of opportunities pursued and the likelihood

of their success (Jensen, 1994). The set-up of a formal and regular strategic planning process may reduce the dangers of self-control and enhance the quality of entrepreneurship in family firms.

Besides, strategic planning may promote the feeling of unity and as a consequence, consistency of action throughout an organization (Kuratko & Audratsch, 2009). In order to work toward the company's goals, employees must be aware what these goals are. Without a clear understanding of the central objectives of the firm – innovation, for instance – employees will not concentrate on these issues in their day-to-day actions. A well formulated and communicated business strategy can provide direction to the behaviour of individuals and the choices they make (Kuratko & Audratsch, 2009). Thus, strategic planning may also serve as "integrative device" that facilitates the mobilization of an organization towards a common goal and thus benefit the implementation and pursuit of entrepreneurial strategies (Ketokivi & Castaner, 2004).

Similarly, strategic planning may contribute to the unity of direction in the ownership group. In particular in subsequent generations of family ownership and amid growing numbers of family owners, the potential for misunderstandings intensifies (Jaffe & Lane, 2004). Strategic planning may facilitate the communication with outside family shareholders (Schulze et al., 2003) and helps to increase the common understanding of the family business goals and to ensure the buy-in of all family members to the entrepreneurial projects of the family business (Kellermanns & Eddleston, 2006; Ward, 1988). Furthermore, strategic planning in family businesses can be used to incorporate and clarify family issues such as succession, professional and personal goals of family which may also handicap family firm development if not addressed properly (Ward, 1988).

In contrast to the former three variables suggested, formal strategic planning is derived from agency theory and is in line with an agency family mindset. Agency theorists consider planning and the tracking of actual performance against plans

as a vital element to control organizations and reduce agency costs (Donaldson & Davis, 1991). In particular the formal nature of a full-fledged strategic planning process makes it a governance instrument that curbs individual freedom and facilitates control. In practice, firm leadership – irrespective of whether family affiliated or hired – needs to present its strategic agenda to the stakeholders of the firm, face their critical evaluation, win their support, stick to the then agreed agenda and eventually have its own performance measured against these plans.

The positive role of strategic planning on entrepreneurship in family firms has also been supported in empirical studies. McCann et al. (2001) observe that family firms who pursue an entrepreneurial strategy have a tendency to put more emphasis on strategic planning than less entrepreneurial family firms. Eddleston et al. (2009) also subscribe to the positive role of strategic planning. They find the extensive discussion of alternative strategic options to be positively related to entrepreneurship in family firms and therefore support the positive role of strategic planning on firm entrepreneurship. Kellermanns & Eddleston (2006) expose strategic planning as a moderator that enhances the positive effect of perceived technological opportunities on entrepreneurial firm behaviour.

Therefore, it will be proposed that:

Hypothesis 4: The institutionalization of formal strategic planning is positively associated with family firm entrepreneurship.

4.5.5 Moderating effect of family functioning

Following the McMaster approach (Miller, Ryan, Keitner, Bishop & Epstein, 2000), family functioning is defined as a multi-dimensional construct with six dimensions to discern healthy from unhealthy families. The first dimension, *problem solving*, captures ability to resolve conflicts that threaten the integrity and functioning of the family. *Communication*, the second dimension, focuses on

the skills related to information exchange in the family such as listening and self-disclosure. The third dimension addresses the existence of *family roles*, that is, the extent to which family members perform family behaviours such as nurturance and support. Fourth, families are evaluated in their *affective responsiveness*, which captures their ability to respond with appropriate quality and quantity of feelings to various stimuli. *Affective involvement,* the fifth dimension, is concerned with the level of interest, attachment and involvement that family members have in each other. The last dimension, *behaviour control* focuses on the way in which families set the standards of behaviour for its members.

According to the stewardship theory, healthy, functioning families are likely to exhibit altruistic, collectivist and trust-based behaviours. In turn, the egoistic and self-serving behaviours of agency theory appear more likely in families that are laden with conflict and with little cohesion and affection towards each another (Beckhard & Dyer, 1983; Dyer, 1986; Gersick et al., 1997; Levinson, 1971; Kellermanns & Eddleston, 2004).

The present study proposes that family functioning moderates the relationship between the four thus far presented predictors and entrepreneurial orientation. In reference to Baron & Kenny (1986), a moderator variable is conceptualized as "a variable that affects the direction or strength of the relation between an independent variable […] and a dependent variable […]" (p. 1174)[39]. That is, the extent to which a family system is healthy or unhealthy is assumed to affect the forming of the business family mindset and the entrepreneurial activities of the family business.

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[39] Baron & Kenny also elaborate the distinction of moderating and mediating effects. According to them, a variable may be considered as a mediator to the extent that it facilitates the relation between two variables. That is, after controlling for the mediator, the relation between predictor and dependent variable should be diminished (to zero in the case of total mediation). In general, mediators may be thought of to explain *how* and *why* certain relationships take significance. In contrast, moderator variables specify *when* certain effects occur.

Specifically, it is argued that through family cohesion, mutual trust and effective interactions (Gomez-Meija et al., 2001), family functioning may heighten the proposed positive effects of family commitment, family focus on growth and change, decentralization of decision making and formal strategic planning on family firm entrepreneurship.

In tainted family cultures and relationships, family members are unlikely to exhibit the high levels of trust and commitment toward the family (Schulze et al., 2001). Correspondingly, the willingness to behave altruistic and to assign priority to a joint family business ahead of personal interests will be low (Davis et al., 1997). Instead, individuals will seek to maximize their own utility at the detriment of the collective (Schulze et al., 2001). In fact, previous research has shown that relationship conflicts decrease goodwill and understanding among family members (Jehn, 1997). Instead, feelings of stress and the perception that others have antagonistic motives were found to increase (Simons & Peterson, 2000). Conflicts within the family group may absorb attention that would be required for the governance of the family business. Eventually, for the sake of family harmony, families may compromise on business affairs (Kets de Vries, 1993). Thus, distorted family relationships can destroy the pro-organizational behaviours associated with a stewardship mindset. Therefore, in accordance with stewardship theory, family functioning may promote collective orientations among family members and commitment to the family firm goals (Corbetta & Salvato, 2004).

Likewise, the willingness to break with family traditions and focus instead in growth and change require certain qualities in the owning family. Change typically entails ample discussions about strategic decisions, distorts equilibrium, requires the resolution of many and often unforeseen problems, and necessitates learning of new skills and behaviours (Kepner, 1991). Moreover, change always involves the risk of failure. Family change agents therefore require the support and trust of the family. A family that is stressed may not have the willingness to

expose itself to such a process, even if the alternative – doing nothing – implies lower profits and eventually jeopardizes the entire existence of the firm (Vago, 2004). In particular the lack of trust in each other, deficiencies in the family's communication and problem solving abilities, as well as fear of political manoeuvres in the family may lead to an attitude where the least threatening common denominator is to continue with the tried and true strategies set up long ago by a glorious and universally venerated family leader of the past. Such fear of change by family firms has been linked with stagnation and loss of market share (Miller et al., 2003). Family functioning may increase the confidence of families to manage change in a fair, efficient and successful manner and thereby may promote the pro-organizational, trusting behaviours stipulated by stewardship theory. As a consequence, healthy families may be more inclined to consider change as an opportunity for the family business, to take an active stance in the development of the company and thereby enhance entrepreneurial activities in the family business.

Furthermore, a governance philosophy which is in line with stewardship theory attributes high importance to the decentralization of decision making power and empowerment of employees (Davis et al., 1997). Stewardship theorists propose that psychological, situational and cultural factors may influence the choice of governance models installed by the principals (Davis et al. 1997).The condition of the owning family may be such a factor. In particular, the stewardship model of man (trusting, collective and altruistic) is more likely an attribute of a healthy family. Instead, the prevalence of an egoistic, opportunistic model of man may be more indicative of unhealthy family relationships and lack of family cohesion. Therefore, in line with stewardship theory, families that are characterized by trust, affection and cohesion may be more likely to consider delegation and involvement-oriented governance styles as a suitable option and thereby may stimulate entrepreneurship in their firms.

Last but not least, family functioning may also affect the forming and effects of formal strategic planning. In general, strategic planning requires intensive and at times controversial communication among the involved parties and especially the family members. When the owning family exhibits low cohesion and trust, the decision makers in the family are likely to be more inclined to secrecy and to avoid an open strategic planning process. Additionally, as strategic planning addresses the long-term future of the family business, it requires that the family group actually has a perspective for the common family business. In a family that is characterized by conflict and resentments, family members may have little interest to engage in the long-term planning of family business because they prefer to terminate the joint engagement and sell off the business in the near future. Likewise, when the family is more concerned with itself, which could be the case in times of crisis and conflict, family members may simply not be focused on the business affairs. Therefore, family functioning may facilitate the relationship between strategic planning and entrepreneurship.

The arguments presented above lead to the following hypotheses:

Hypothesis 5a: Family functioning enhances the positive relationship between family commitment and family firm entrepreneurship.

Hypothesis 5b: Family functioning enhances the positive relationship between family focus on change and growth and family firm entrepreneurship.

Hypothesis 5c: Family functioning enhances the positive relationship between decentralization of decision making and family firm entrepreneurship.

Hypothesis 5d: Family functioning enhances the positive relationship between formal strategic planning and family firm entrepreneurship.

4.5.6 Potential dependency of relationships on type of family firm

Up to this point, no particular attention has been given to the structural differences of family firms and they were treated as a homogenous species. This section discusses how specific characteristics of family firms may affect the prevalence of the investigated traits and their relationship with entrepreneurial behaviour.

Both in family businesses and entrepreneurship literature, there is evidence in favour of a differentiated treatment of family firms.

First, one may consider the situation of family business research in general. Up to present, researchers struggle to agree on a precise definition of what constitutes a family business. As a result, substantial differences exist in the forming of family influence of organizations that are currently researched under the common label ‘family business’. The efficacy and validity of empirical research may be particularly harmed by this inconsistency. For example, findings based on a sample of listed multinational enterprises with a family controlling 10 percent of firm equity will most likely not be transferable on small firms that are fully owned and managed by their founders and vice-versa. However, such definitional details are easily forgotten once the main findings of a study make their way in the scholarly discourse. Even more problematic are samples that are collected without consideration of structural factors in the first place. The phenomena and relationships at stake might be blurred by the heterogeneity of cases. Researchers may draw inaccurate conclusions and subsequently report findings that are, in reality, not applicable or valid to anybody. Consequently, many prominent researchers are concerned about the credibility of family business research and demand more accuracy and differentiation in empirical studies (Habbershon & Williams, 1999; Nordqvist, 2008; Smyrnios, Tanewsky & Romano, 1998).

Second, one may revert to the conceptual foundations of this study. Miller (1983), one of the most frequently referred sources in corporate entrepreneurship, highlights the importance to differentiate between different organizational types in the study of entrepreneurial behaviour. In fact, Miller (1983) elaborates on the issue of differentiation in the very same article that contains his – much better remembered – corporate entrepreneurship (CE) construct. Specifically, he states that "the correlates of entrepreneurship vary in a systematic and logical way from one type of firm to another" (1983:771).

Furthermore, support for a differentiated treatment of family firms may also be derived from agency and stewardship theory. Davis et al. (1997) who propose the complementary use of stewardship and agency theory point out that the forming of an agency or stewardship mindset is not accidental, but determined by psychological, situational and cultural factors. Thus, one may argue that structural characteristics of families and their businesses may be factors that influence the likelihood that either stewardship or agency perspective are adopted and thus create systematic differences among certain types of family firms.

Last but not least, one may draw on the evidence from past studies on family firm entrepreneurship. As was elaborated in chapter 3, only 4 out of a total of 26 studies reviewed for this dissertation actually make a distinction between different types of family firms. However, their findings strongly support the importance of a differentiated analysis in order to understand the drivers of family firm entrepreneurship and demonstrate its potential to reconcile previous contradicting findings. Concerning the generation of ownership, Martin & Lumpkin (2003) show that competitive aggressiveness and autonomy decline with successive generations of family ownership and that in parallel, particular family orientations emerge. Regarding size and age of the business, Craig & Moores (2006) and McCann et al. (2001) report that family firms at an early stage in their life cycle show higher levels of innovativeness than family firms at

a later stage. Salvato (2004) demonstrates that firms with different levels of ownership concentration have distinct predictors of entrepreneurial behaviour.

In sum, considering general family business research, the theoretical concepts applied in this study, as well as past empirical findings, all arguments point towards a differentiated analysis for the predictors of family firm entrepreneurship.

Three classifications emerge as authoritative from the literature. Firstly, the concentration of family ownership (Gersick et al., 1997; Salvato, 2004), secondly, the generation of family ownership (Martin & Lumpkin, 2003; Sonfield & Lussier, 2004) and thirdly, firm size (Sonfield & Lussier, 2008; Smith, 2007)[40]. In the following, a brief explanation of each classification as well as the rationale as to how specific constellations may affect the investigated variables and their relationship with family firm entrepreneurship will be given.

Ownership concentration

Ownership concentration, the first classification, distinguishes family businesses according to the concentration of ownership. Gersick et al.'s (1997) familiar scheme of ownership concentration which categorizes family firms as being either controlling owner, sibling partnership or cousin consortium will be employed for this purpose[41].

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[40] A classification which was evaluated but ultimately abandoned was the measuring of family influence with a more sophisticated instrument such as the F-PEC index. However, the aggregated nature of the scale proofed to be adverse for interpretations since it was difficult to determine the specific drivers of differences.

[41] A note on terminology: Although ownership concentration is often linked with control concentration, the two terms are not identical. Whereas ownership concentration deals with the distribution of equity in an organization, control concentration refers to the level of concentration in the decision making powers in an organization. In the Gersick typology, ownership concentration may typically be low in a cousin consortium, but control concentration may be not necessarily be as low – for instance, because the owning family decides to form

Ownership concentration may affect the motivation of family members to act as either stewards of the family business or self-serving agents (Corbetta & Salvato, 2004). Stewardship theory proposes that organizational members are more likely to engage in the goal achievement and development of their company in environments of low control concentration (Eddleston & Kellermanns, 2007; Ruekert & Walker, 1987; Schwarz, 1990). That is, when control is shared; no single individual is in a position to dominate the decision making process (Davis & Harveston, 2001) which is assumed to facilitate the empowerment and involvement-orientated governance models promoted in stewardship theory (Davis et al., 1997). The sharing of control has also been associated with greater family involvement (Kellermanns & Eddleston, 2004). Therefore, the propensity for stewardship behaviour may generally be higher in family firms with low ownership concentration such as sibling partnerships and cousin consortiums as opposed to controlling owner firms.

However, some arguments may point in the opposite direction and suggest higher levels of stewardship behaviour in family firms with strong ownership concentration. For instance, the identification of a family member with the family business may ultimately be a function of his personal ownership stake and his means to exercise control in the business. In family firms with several hundred family shareholders, the powers of an individual are limited. As a consequence, low-power family members often have a preference for dividend payouts over reinvestments in the company – simply because they feel they cannot control the direction of the business. In fact, such behaviour can also be aligned with stewardship theory, which suggests that individuals working in environments that they cannot influence often demonstrate withdrawal behaviours (Davis et al.,

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coalitions, establish a strong family representative and/or to install binding shareholder voting agreements on family members (Simon, Wimmer & Growth, 2005). Nonetheless, as a tendency, one may argue that control concentration may be somewhat aligned with ownership concentration – i.e., controlling owners have higher control concentrations than sibling partnerships; sibling partnerships are likely more concentrated than cousin consortiums.

1997). In contrast, controlling owners and in particular founders often give absolute priority to the prosperity of their organization above everything else. For instance, they may work long hours, pay themselves low salaries and refrain from any personal luxury. Controlling owners have also exceptional knowledge of their businesses and are thus more capable to recognize and appreciate strategic opportunities for their firms. In large ownership groups, many family members are outsiders that may have little understanding of the strategic matters of the business. As a consequence, they may either deny all change or may be too quick to agree to overly risky moves proposed by their advisers – simply because they do not fully acknowledge the dangers associated with certain strategies. Therefore, family firms with high ownership concentration may show higher levels of family altruism and (healthy) willingness to change. The relevance of ownership concentration was also affirmed in previous empirical research, suggesting ownership concentration as an important factor in shaping the effects of family relationships on the family firm (Salvato, 2004).

Consequently, the forming of the variables in this study might be affected by the concentration of ownership. The literature is ambivalent in the exact working and provides evidence for both directions, that is, higher and lower levels with each type of ownership concentration.

Ownership generation

Ownership generation, the second classification of family businesses, distinguishes firms by the generation of family ownership. In order to create meaningful categories, cases are divided into first generation family firms, second generation family firms and those firms that are held in the third generation of family ownership or beyond (Martin & Lumpkin, 2003; Sonfield & Lussier, 2004).

In fact, a substantial body of family business literature addresses the changing attitudes of the owning family across generations. Founding generations are characterized as having a strong need for achievement and high entrepreneurial spirits (Mintzberg, 1973). A trait assumed to fade with subsequent generations (Martin & Lumpkin, 2003). Instead, consecutive generations are generally believed to become increasingly conservative, concerned with wealth preservation and maintenance of the family legacy (Shanker & Astrachan, 1996). Furthermore, founders are supposed to be centralistic and authoritarian (Dyer & Handler, 1994), while successive generations were found to shift towards more participative leadership models (Aronoff, 1998; Spinelli & Hunt, 2000). Research also proposes that subsequent generations have more formal, objective and "professional" governance structures (Aronoff, 1998; Coleman & Carsky, 1999; Dyer, 1988; McConaughy & Philipps, 1999; Schein, 1995; Sonfield & Lussier, 2008). Besides, certain qualities are thought to develop with successive generations – in particular the perception as a family business, pride in the family name but as well a desire for family harmony and agreement in family affairs (Harris, Martinez & Ward, 1994; Shanker & Astrachan, 1996; Sharma et al., 2001)

Consequently, the forming of the variables singled out in this study might be affected by the respective generation of family ownership. Following the findings presented above, family commitment might be a trait that increases with successive generations of family ownership, while family focus on growth and change may occur in earlier generations. In the same vein, formal strategic planning and decentralization – being both elements of a participative leadership style – might increase with successive generations of ownership. Last but not least, empirical evidence suggests that the concern for family harmony is higher on the agenda in subsequent generations of family ownership than in early generations (Martin & Lumpkin (2003).

Firm size

Finally, family firms may be classified according to the size of family business operations. Following the thresholds recommended by the European commission (European Commission, 2003) companies with less than 49 employees are considered as small firms, firms with 50 to 249 employees as medium firms, while companies with 250 or more employees are regarded as large firms[42].

Dedicated investigations into the effects of firm size are rare in the family business literature. Smith (2007) demonstrates that effects of size exercise a substantial influence on family firm behaviours. Firm size also features as a key structural variable in Miller's (1983) typology of organizations. Moreover, Sonfield & Lussier (2008) report that large family firms spend more time in strategic management activity, are more likely to use non-family members in the top management and to turn more often to outsiders for advice than small firms. Thus, large family firms are clearly more affected by non-family influences than small firms. Consequently, the relationship between the variables of family mindset in this study (family commitment, family focus on growth and change) and entrepreneurship could become less relevant in parallel with decreasing levels of family influence in larger firms. At the same time, certain management practices such as formal strategic planning might be common standard for larger firms, so that such variables may lose their relevance. Sonfield & Lussier (2008) also report that small firms are more likely to have conflict among family members than large firms, giving further weight to a differentiated analysis in order not to confound family dynamics in various types of firms.

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[42] Note that the draft of the European Commission also distinguishes also between micro firms (less than 10 employees) and small firms (10 to 40 employees). This distinction has been ignored in the present study for simplicity reasons – only four cases would fall under the label micro firms. Moreover, the EU originally recommended the combination of FTE with either annual turnover or total balance sheet thresholds. However, the exact replication of these other two criteria and their respective thresholds is not feasible with the data collected in this study. Moreover, in recent publications (e.g Small Business Act, 2008), the European Commission itself refers increasingly to FTE thresholds only.

Consequently and following the reasoning presented above, it appears advisable to test the research framework and its hypotheses for specific types of family firms in the subsequent empirical analysis.

4.6 Summary of chapter

This chapter provided the theoretical framework and argumentation of the hypotheses for the subsequent empirical study.

The study follows a line of thinking that considers family dynamics and mindset as key drivers of entrepreneurship in family firms (Eddleston et al., 2008; Eddleston et al., 2009; Zahra et al., 2004; Zahra et al., 2008).

To this end, stewardship and agency theory are employed as framework to characterize different family mindsets. As a tendency, scholars have ascribed business families with a prevalence of stewardship orientations a higher potential for entrepreneurial behaviour and business families whose model of man resembles more the perspectives adopted in principal-agent theory a focus on efficiency at the expense of entrepreneurship (Corbetta & Salavto, 2004; Kellermanns et al., 2009).

In contrast to the dominant view in previous research that agency characteristics are generally detrimental and stewardship attributes conducive to entrepreneurial behaviours in family firms, this study seeks to draw a more differentiated picture. Specifically, it is proposed that despite their by and large positive effects, certain stewardship constellations might harm entrepreneurship, while certain agency mechanisms are suitable to benefit the entrepreneurial activities in family firms.

In line with this proposition, five predictor variables are suggested to explain entrepreneurship in family firms.

The first variable proposed to benefit entrepreneurship in family firms is family commitment, a trait whereby families subordinate their personal aims to the goals of the business. Highly committed families may be less prone to certain family business pitfalls such as nepotism, conflict and excessive consumption and thereby facilitate prosperity and entrepreneurship in the family business.

The second variable concerns the family attitude towards growth and change. For various reasons such as family traditions, wealth concerns or family politics, family businesses may be reluctant to alter the status quo and actively embrace change. However, the willingness to engage in new ways of doing business is a precondition to most entrepreneurial activities and also to the long-term survival in most industries. Therefore, family focus on growth and change is assumed to promote entrepreneurship in family firms.

The third variable assumed to benefit family firm entrepreneurship is a governance model that stresses the decentralization of decision making. Stewardship theory suggests that empowerment of employees promotes the identification of organizational members with the business and their engagement for the prosperity of the business. The increasing participation of employees may enhance the firm’s responsiveness to environmental changes and entrepreneurial opportunities (Davis et al., 1997).

The prevalence of a formal strategic planning process is the fourth variable of the research model. In contrast to the other variables, formal strategic planning represents an agency mindset with a focus on formality, planning and control. However, in the context of family firm entrepreneurship, formal strategic planning may help to reduce the dangers of strategic simplicity and to increase the quality of entrepreneurial projects. Furthermore, strategic planning may stimulate a sense of unity and consistency of action throughout the family business which benefits its overall entrepreneurial orientation and facilitates the accomplishment of entrepreneurial projects.

The fifth variable in the research model is family functioning. It is assumed that the extent to which a family system is healthy or unhealthy will affect the attitudes and orientations of the family with regard to the family business and thereby ultimately affect organizational behaviour. Specifically, family functioning is expected to enhance the relationship between the predictor variables and entrepreneurial behaviour of the family firm.

Last but not least, the final section of the chapter discussed the relevance of a differentiated analysis and proposed three characteristics of family firms that might affect the forming of the selected variables and their hypothesized relationship with entrepreneurship. In the empirical part, the research model will therefore also be examined depending on the level of ownership concentration, the generation of family ownership and the size of business operations.

The full research model is summarized in the illustration below.

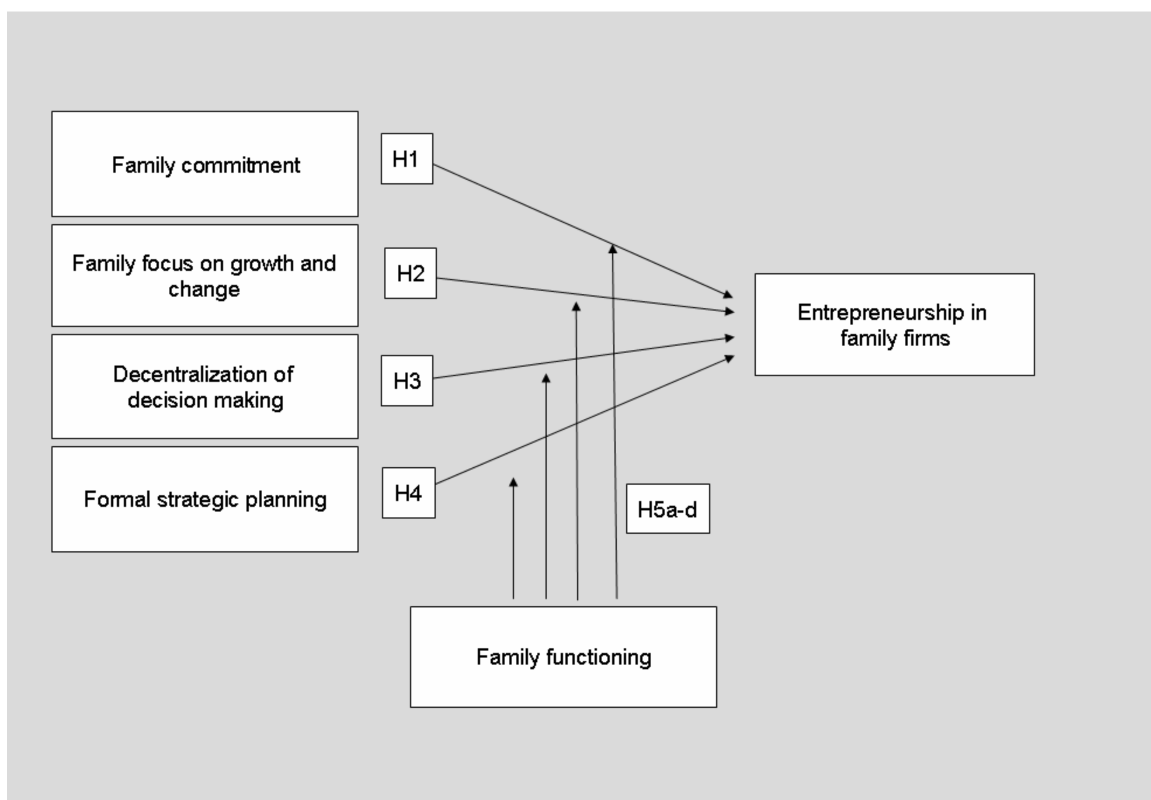

Figure 41: Summary of hypotheses and research model

Source: Own graph

5 Design and Description of Empirical Study

This chapter deals with the design and description of the empirical study. The chapter begins with the transformation of the variables from the research framework into operational measures. Consecutively, the design of the empirical survey is explained. Thereafter, key descriptive statistics of the sample are presented. The chapter terminates with several tests to ensure the validity of data and constructs for the subsequent analysis.

5.1 Operationalization of variables

This section outlines the translation of the research model into operational measures for the survey. Unless stated otherwise, all items are measured using a 7-point Likert scale anchored by strongly disagree (1) and strongly agree (7).

5.1.1 Dependent variables

Entrepreneurial behaviour is implemented with the EO construct as per Lumpkin & Dess (1996). All measures are adopted from the literature. The items for innovativeness, risk taking and proactiveness originate from Naldi et al. (2007), who in turn refer to the strategic posture scale of Covin & Slevin (1989). Suitable measures for competitive aggressiveness and autonomy were found in Lumpkin & Dess (2001) and Lyon, Lumpkin & Dess (2000). From these items, both the full five dimensional (EO5) as well as the smaller three dimensional construct (EO3) may be composed as construct of entrepreneurial behaviour.

5.1.2 Independent variables

Family commitment

Family commitment to the business is assessed with the priorities of the business family and their inclination to attribute greater importance to the business over family agendas. The measure originates from the (so far unpublished) FO/FEO scales suggested by Nordqvist (2008), Martin & Lumpkin (2003), and Lumpkin et al. (2008) and was kindly made available by Thomas Zellweger.

Family focus on growth and change

Family focus on growth and change is measured with several items. First, in the family orientation towards growth or preservation. Second, whether family leaders spend more time managing the established business or developing new business opportunities. Third, with regard to its growth focus, whether the family concentrates more on the expansion of the established business activities or seeks growth in unrelated, new business fields. Fourth, with the relevance of legacy concerns to the family which are assessed with the importance attributed to preserving existing products or services in the future. Fifth, in the openness to fundamentally change the shape of the family business, measured in the fixation on the current business model or disposition to revisit and alter the business model. Sixth, in the family risk and return expectations in its preference for stable, but lower or higher, but more volatile returns. All items are adopted from the (so far unpublished) FO/FEO scales suggested by Nordqvist (2008), Martin & Lumpkin (2003) and Lumpkin et al. (2008) and were provided by Thomas Zellweger.

Decentralization of decision making

Following Zahra et al. (2004) and Miller (1983), the extent of centralization or decentralization in decision making is evaluated by asking respondents to position themselves between the extremes of centralization and decentralization in their decision making structures.

Formal strategic planning

The nature and prevalence of strategic planning in the family firms is evaluated with a measure from Kellermanns & Eddleston (2006). The original scale includes several items: "We have a strategy for achieving our business' goals"; "We have a plan for our business"; "We know what we need to do to reach our business' goals"; "Our business objectives are not clear"; "There is no formal strategic planning – There is formal and regular strategic planning". Yet in line with several authors, only a single item question was used to cover this aspect (Gould, 1979; Ketokivi & Castaner, 2004; Schulze, Lubatkin Dino, Buchholtz, 2001; Zahra 1991). Thus, although deplorable with hindsight due to the critical role of strategic planning that emerges in the empirical study, respondents were only asked to position themselves on a continuum between "There is no formal strategic planning in the company" to "A formal strategic planning process is regularly held".

Family functioning

Family functioning is measured with items from the General Family Functioning Scale of the McMaster Family Assessment Device (Epstein, et al., 1983) [43].

[43] Family functioning is a complex phenomenon which can be assessed in a variety of ways. The three most prominent measurement instruments are Beavers Systems Model (Beavers & Hampson 2000), The Circumplex Model of Marital Family Systems (Olson, Sprenkle &

Originally, the scale was designed to be a screening instrument to discern healthy from unhealthy families in family therapy. The entire McMaster Family Assessment Device is a 60-item self-report instrument to assess six dimensions of family functioning: *problem solving, communication, roles, affective responsiveness, affective involvement,* and *behaviour control.* The 12-item General Functioning scale is a concentrated version of the device to assess the overall health of the family. The validity of the scale was confirmed in several previous studies (Byles, Byrne, Boyle & Offord, 1988; Kabacoff, Miller, Bishop, Epstein, Keitner, 1990).

Family functioning is hypothesized as moderator variable in the research model (Baron & Keny, 1986). Regression analysis with moderators requires including cross-product terms in the regression equation consisting of the predictors and the moderating variable respectively. To reduce potential problems associated with multicollinearity, all interaction terms are mean centred (Aiken & West, 1991; Cronbach, 1987).

5.1.3 Control variables

This section outlines the control variables that were collected for the purpose of this study. However, it is important to note that only a selection of these were included in the final research model.

Company environment

The impact of company environment on the entrepreneurial behaviour of organizations has been demonstrated in many studies (Becherer & Maurer, 1997; Bruno & Tyebee, 1982). In the subsequent study, environmental effects are

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Russell, 1979) and the McMaster Model of Family Functioning (Epstein, Baldwin & Bishop, 1983).

controlled for with two items each to capture dynamism, hostility and heterogeneity of the environment. The respective items originate from Miller & Friesen (1982). Moreover, in line with Naldi et al. (2007), the format of some questions is amended to facilitate handling in the present survey[44]. Furthermore, the overall market growth relative to respective industry growth is assessed (Zellweger).

Information on size, age and activities of family business

Structural variables to control for the type of firm include firm age (Wiklund & Sheperd, 2005; Zahra, 2005), industry focus (Naldi et al., 2007; Smith, 2007), activity range (Zahra, 2003) and firm size. With regard to firm size, the three most common variables employed to model organizational size are (1) firm revenues, (2) the number of full time employees and (3) net assets (Scott, 1981). Singh (1986) finds all three measures to be correlated at .85 or higher and argues that each of these measures alone is sufficient to capture organizational size. In line with Kellermanns & Eddleston (2006, 2007), Naldi et al. (2007) and Zahra (2005), firm size is captured by the number of full-time employees. Additionally, last year business revenue is assessed by asking respondents to classify themselves to belong to either of six brackets [0-20 Mio. EUR], [20-50 Mio. EUR], [50-250 Mio. EUR], [250-500 Mio. EUR], [500-1,000 Mio. EUR] or [1,000 Mio. EUR and above].

Ownership structure

The ownership constellation is investigated both in terms of ownership concentration within the family and the potential presence and nature of non-family owners. Family ownership is measured as the percentage of firm equity

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[44] For instance, instead of asking for a positioning between two statements, to use a rating

held by the founding family (Sharma, Chrisman & Chua, 1996; Zahra, 2003; Zahra 2005). The additional questions regarding ownership dispersion within the family as well as the existence, nature and relevance of non-family shareholders were designed by the author.

CEO characteristics

CEO characteristics address the size of the top management team (own), the duality of being a founding family member and CEO (Zahra, 2005), CEO tenure (Zahra, 2005), CEO experience (Salvato, 2004), CEO education (own), and leadership continuity and family involvement in leadership over the past 50 years (own).

Family presence in business

The family presence in the operative business is measured in the number of involved individuals and their respective roles. Additionally, respondents are asked to indicate the number of generations active (Kellermanns & Eddleston, 2006; Zahra, 2005) and the number of family members under the age of 40 (own). Moreover, the existence of suitable succession candidates in the family (own) as well as the extent to which individual family members pursue entrepreneurial activities outside the main family business (own) is assessed.

Governance

Several items inquire the nature and composition of controlling mechanisms of the firm (Brunninge & Nordqvist, 2004). Firstly, respondents are asked to indicate the existence of shareholder boards, advisory boards (German "Beirat")

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corresponding to strong agreement or disagreement with a statement on a scale from 1 to 7.

and supervisory boards (German “Aufsichtsrat”). Secondly, if existing, they are asked to rate the presence of non-family members on the advisory and supervisory boards. Thirdly, if existing, the survey demands to rate the contribution of the boards to the strategic renewal and change process of the family business. All three items pertaining to this issue were drafted by the author. Furthermore, in order to evaluate the influence of incentive systems, the study inquires the existence and extent of value-based compensation schemes in the family business (Salvato, 2004).

Past performance

In line with the literature, performance is treated as a multi-dimensional construct (Cruz Serrano et al., 2006; Dess et al., 2003; Hofer & Schendel, 1978; Lumpkin & Dess, 1996; Zahra & Covin, 1995). Due to the private nature of most family firms and their well-known reluctance to comment on objective measures of performance, the survey employs subjective measures. The validity of subjective measures has been demonstrated in many studies including Dess & Robinson (1984), Love et al. (2002), Venkatraman & Ramanujam (1987). The specific items originate from Kellermanns & Eddleston (2006) and address growth of sales, average market share, growth of profitability and average profitability measured in the profit margin on sales. Respondents were asked to rate their performance in each of these four aspects against their competitors over a three-year horizon. In deviation from Kellermanns & Eddleston (2006) which only use 3-item scale, this study employs a 7-item scale. The individual scores are summed up to form an overall performance construct, with higher values connoting better performance. Conceptually, this approach is also comparable to Wiklung & Sheperd (2003). In addition to the described subjective performance construct, one additional objective long term performance item the development of turnover over past ten years was included (own).

Access to financial resources

The company's access to financial resources is measured in two ways. First, by asking for the equity ratio of the firm, calculated as total equity/total assets of the firm. Moreover, with a subjective measure concerning the satisfaction with access to financial capital adopted from Wiklund & Sheperd (2005).

Information on the respondent

Finally, in order to calibrate the respondents answers, each participant was asked to indicate his/her role and affiliation with the family business, the generation of ownership and year of birth (own).

The full questionnaire is enclosed in the appendix. Additionally, as the questionnaire is in German language and includes several control items that were not drawn on, a shorter version in English that lists only the items included in the research model is presented next to it.

5.2 Survey design

The questionnaire for the empirical survey was designed in March and April 2008. A preliminary version was tested in a pilot study with five family businesses. The participants were asked to complete the questionnaire and to comment on its feasibility and potential problems. In doing so, it should be assured that the variables and measures chosen were clear, unambiguous and acceptable and that the estimated time to complete the survey was appropriate. Preliminary tests were recommended by especially Corbin & Strauss (1990) formerly applied in e.g. Campion, Cheraskin & Stevens (1994) and Eddleston & Kellermans (2006). Comments that emerged in the test phase were gathered and

the questionnaire subsequently amended. A copy of the final version of the questionnaire is included in the appendix.

On April 24th, the distribution of the final questionnaire commenced. For several reasons, the survey was not sent out to a random sample of family firms. Family business owners receive lots of inquiries from various research institutions to participate in family business related studies. As the author was told by a family business owner, the daily rate of inquires for a medium sized family business is at two requests per day. It is quite comprehensible, that even benevolent family businesses don't have the capacity to address all these inquiries. In fact, many family business leaders ignore such inquires altogether. The nature of the survey did not exactly facilitate high response rates either. Several questions, such as those regarding family functioning, are very personal and easily at conflict with the strong norms of privacy held by many business families. In addition to that, the mix of family and business related questions could only be answered by individuals who are very familiar with intimate business and family matters. The target profile of respondent was therefore a family member that also holds leadership function in the business such as CEO or chairman of the board. Thus, the aim to address such a specific profile of individual as opposed to just anybody in the organization and gain his consent to dedicate his or her precious time to an extensive questionnaire was certainly not making the case easier.

For these reasons, a combination of random and convenience sampling was employed[45]. The target companies were identified and approached through several channels including the associations of Die Familienunternehmer ASU and F.B.N. Family Business Network. Moreover, the corporate banking departments of two major banks in Germany, Hypovereinsbank and Deutsche Bank, kindly agreed to distribute the survey to select medium to large sized

[45] Convenience sampling allows the researcher to reach respondents or units that are most readily and conveniently available (Cochran, 1977).)

family businesses among their clients. Finally, a number of individuals kindly provided access to their personal and professional networks of business families.

The questionnaire was distributed in two different formats. The standard format was a hard copy version. The package consisted of a cover letter providing information on the research project and, where applicable, a letter of recommendation from the institution or individual that facilitated the contact, the questionnaire, as well as postage-paid reply envelopes to ensure anonymity. Furthermore, the study was also distributed as e-mail version, including only the cover letter and the questionnaire. The benefit of a hard copy version is its formal appearance and its reach to less computer-afin individuals. This version was primarily employed for the distribution with Die Familienunternehmer_ASU, Deutsche Bank and Hypovereinsbank. An email inquiry is obviously much cheaper and very easy to handle. This format was primarily relied on to address family businesses with which there was a personal relationship. It was also very useful to post reminder e-mails.

The response time indicated in the survey was set at 2 months. Distribution and collection of surveys through all channels mentioned continued until the 31st of October, which was the last date for return set in the questionnaires handed out in late August/early September 2008.

Respondents were also guaranteed confidentiality. In line with this, the returned questionnaires do not contain any information on the identity of the participating family business. Responses can only be associated with certain family business profiles and analyzed as part of the sample. They can not be used to trace back the situation in a particular family business. In addition to meeting the general preference for privacy, such a procedure constitutes an important element of safety in the odd event that a completed questionnaire would erroneously be delivered to the wrong recipient. A downside of this approach is that the primary information obtained from the family businesses can not – with the exception of

the few cases where the identity is known due to personal relationships with the respondents – be validated in a systematic way through secondary information available through press and research. However, since the key items in the survey inquire about family and firm orientations rather than hard facts such as financial information, it is rather unlikely that the answers to these specific issues would be easily available through secondary material anyway.

5.3 Descriptive statistics

For the entire survey, descriptive statistics on the individual items are presented in the appendix. The descriptive statistics concerning response rates, background of respondents, year of foundation, family ownership generation, family ownership concentration, primary economic activity, revenue and number of employees are considered central to understanding the characteristics of the sample and will be highlighted in this section.

Response rates

Approximately 250 questionnaires were distributed between April and September 2008. Overall, a total of 144 responses were received until October 31st. Out of these, eight families indicated that they did not wish to or could not participate in the survey. In particular, a lack of time to complete the survey, the prior termination or sale of the operating business, the perception not to be a suitable candidate, and firm policies against completing mail surveys were indicated as reasons to decline participation. The remaining 136 respondents provided completed surveys. However, two more had to be eliminated from the sample, since they were not family businesses as defined in this study. This equals a response rate of 54 percent, which compares favourably to the 25-35

percent rates one normally finds in family business survey research (Miller, LeBreton-Miller & Scholnick, 2007).

	Quantity	Percent
Requests distributed	250	100%
Responses received	144	58%
Refusals	8	3%
Completed questionnaires	136	54%
Insufficient questionnaires	2	1%
Final sample	134	54%

Figure 42: Response rate in empirical survey
Source: Own analysis

Background of respondents

The dominant profile of respondent is that of a family member who is also active in the leadership of the family business. Out of the 134 respondents, 98 percent declared to be a member of the owning family. Moreover, 78 percent of the participants indicated to be in the top management of the family business (such as CEO/CFO roles), further 7 percent reported to have a seat in the shareholder committee ("Gesellschafterrat"), and another 7 percent to be in either the supervisory or advisory boards ("Aufsichtsrat/Beirat"). For the remainder, 6 percent quoted to perform some other operative role in the company, while only 2 percent indicated to have no formal active involvement in the operations.

		Frequency	Percent	Valid percent	Cumulated percent
Valid	Top management	105	78.4	78.4	78.4
	Shareholder committee	9	6.7	6.7	85.1
	Advisory board	5	3.7	3.7	88.8
	Supervisory board	4	3.0	3.0	91.8
	Other operative function	8	6.0	6.0	97.8
	No operative function	3	2.2	2.2	100.0
	Total	134	100.0	100.0	

Figure 43: Respondent role in surveyed family firms
Source: Own analysis

Year of foundation

On average, the family firms in the sample were founded in 1914 and have 94 years of age. The somewhat higher median year of foundation is 1926, which reflects that the sample contains some very old family businesses whose formation dates back to the late 17th and early 18th century which distorts the mean value. Nonetheless, in view of the fact that the average family business has been estimated to have a life-span of only 24 years (Dyer, 1986) the family firms in this sample show an exceptional longevity. An analysis of company formation by decade shows that the density of foundations was highest during the in-between-wars years of 1920 to1930, followed by the 1940/1950s, which mark the beginning of the post-war-boom in Germany. The third strongest company formation in the sample occurred during the years of the industrialization between 1890 and 1899. The histogram below illustrates this point.

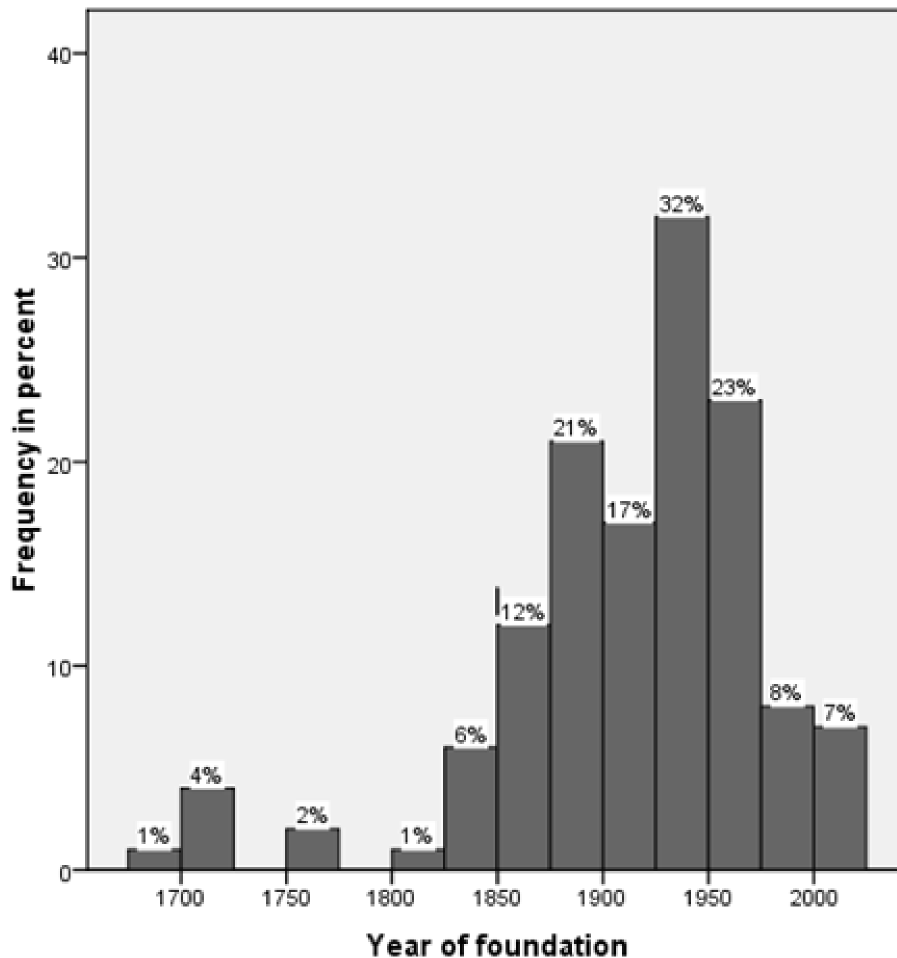

Figure 44: Foundation of surveyed family firms
Source: Own analysis

Family ownership generation

In line with the longevity observed above, the average family firm in this sample is in the fourth generation of family ownership. About 80 percent of the firms in the sample are held in between the 2nd and the 5th generation. While the 2nd, 4th and 5th generation are equally balanced, most businesses are being held in the third generation, which is also the median of the sample. The remaining 20 percent are almost equally distributed among first generation firms and businesses that are held in the 6th generation and beyond. The family firm that

had been longest in the hands of a single family records more than twenty generations of family ownership.

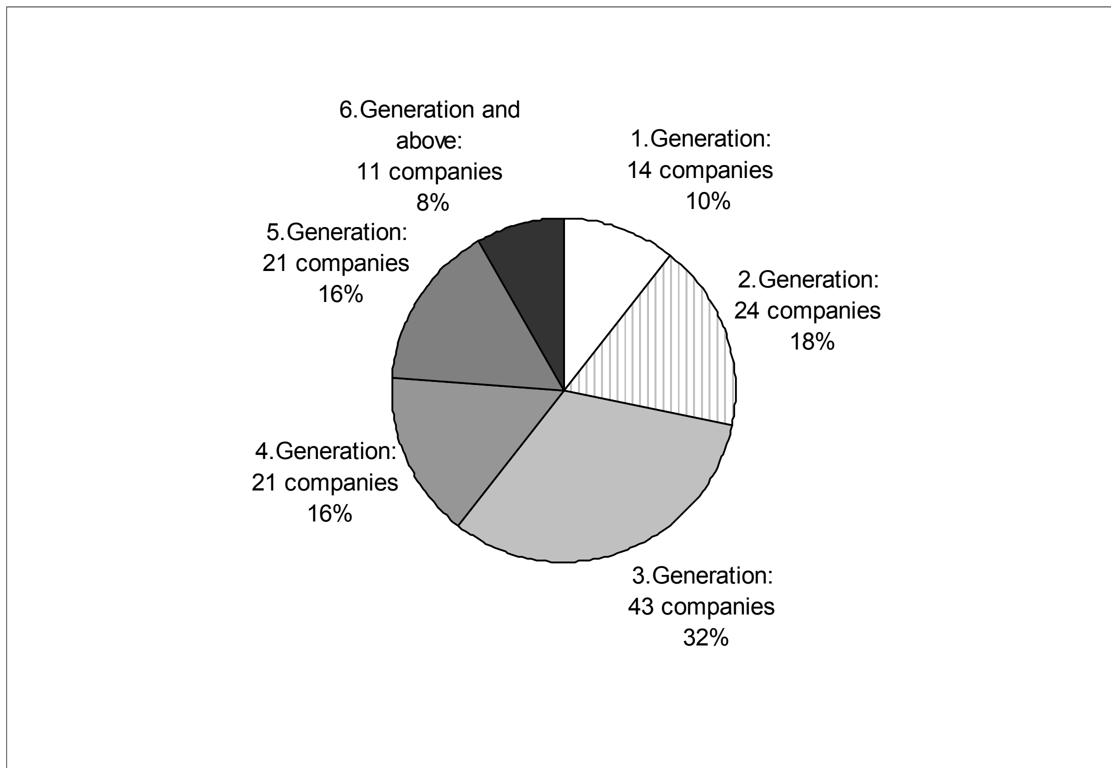

Figure 45: Family ownership generation of surveyed family firms
Source: Own analysis

Family ownership concentration

The family businesses in the sample range from very tightly held firms with a single owner to families with several hundred family shareholders. According to Gersick et al.'s (1997) categorization, the sibling partnership with 2 to 9 shareholders is the dominant type in this sample, representing 64 percent of cases. 22 percent of the participants state that ownership is concentrated with a single person in the family and are thus controlling owner firms. Cousin consortiums, firms with 10 or more members in the owning family, were identified in 19 responses, representing 14 percent of the sample.

		Frequency	Percent	Valid percent	Cumulative percent
Owners (#)	1 (Controlling Owner)	29	21.6	21.6	21.6
	2 - 9 (Sibling Partnership)	86	64.2	64.2	85.8
	10 + (Cousin Consortium)	19	14.2	14.2	100.0
	Gesamt	134	100.0	100.0	

Figure 46: Ownership concentration in surveyed family firms
Source: Own analysis

N	Valid	134
	Missing	0
	Mean	14
	Median	3
	St.Deviation	54
	Minimum	1
	Maximum	500

Figure 47: Number of family shareholders in surveyed family firms
Source: Own analysis

Primary economic activity of family businesses

In a very basic differentiation into manufacturing, trading and service activities, the dominant part of the sample (71 percent) may be classified to have manufacturing activities as primary business. Services are the main business of 16 percent, while companies with a focus on wholesale and retail trade account for another 14 percent of the sample. It is important to note that several companies pursue diverse activities and do not exactly fit into any of the proposed categories with their entire spectrum of operations. For this statistic, an attempt was made to identify the dominant activity of the group and then classify the family business in one of the three categories accordingly.

Revenue

The breakdown by revenue reveals that many firms in the sample are above average in size. The average firm in the sample achieves revenue in between 50 to 249 Mio. EUR. More specifically, about half of the companies generate up to 49 Mio. EUR in revenues and are thus, at least in terms of their revenue, small to medium sized firms (SME) as defined by the European Commission. The other half of the sample generates revenues of 50 Mio. EUR and above. More precisely, 41 firms (31 percent) achieve revenues of up to 19 Mio EUR per year. 23 firms (17 percent) show revenues of 20 to 49 Mio. EUR. Among the large family businesses, 32 firms (24 percent) have indicated their last full year revenue to be between 50 and 249 Mio. EUR, 13 companies (10 percent) put themselves in the range between 250 and 499 Mio. EUR, another 7 (5 percent) indicated an amount of 500 to 999 Mio. EUR. Further 18 participants (13 percent) reported revenues of 1,000 Mio. EUR and above.

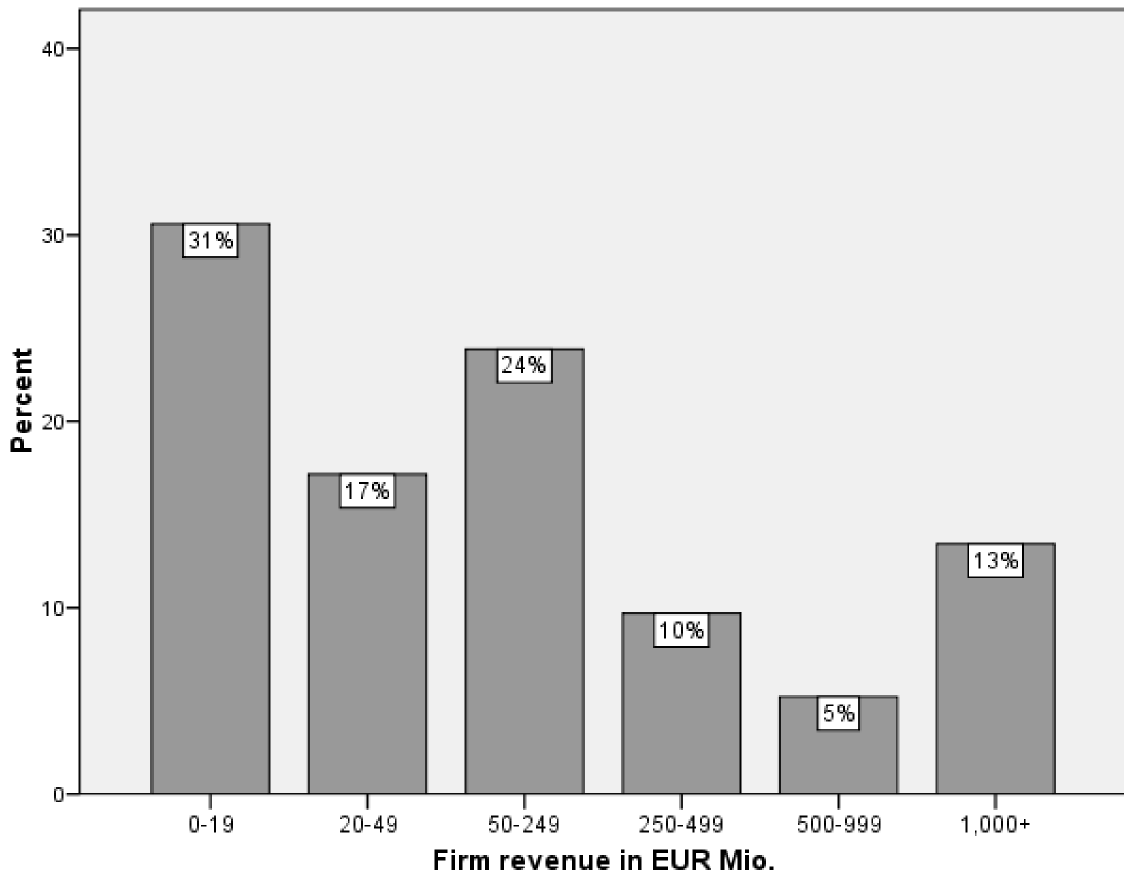

Figure 48: Revenue of surveyed family firms
Source: Own graph

Number of Employees

The median number of employees for the sample is 248. The mean number is much higher, at 3,693 full-time employees per company. Again, the difference between the median and the average reflects the broad spectrum of family businesses ranging from a minimum of two employees to a maximum of 100,000 employees.

N		
	Valid	134
	Missing	0
	Mean	3,693
	Median	248
	St.Deviation	11,782
	Minimum	2
	Maximum	100,000

Figure 49: Full time employees of surveyed family firms
Source: Own analysis

5.4 Tests of validity

This section aims to ensure quality of study by testing for the validity of answers, constructs and suitability of the sample for regression analysis. Furthermore, it also examines the external validity of data.

Test for non-response bias

A common concern in empirical research is that the characteristics of respondents may differ from those of non-respondents, which, evidently, would drastically reduce the generalisability of findings. Armstrong & Overton (1977) demonstrate that late respondents are similar to non-respondents. Consequently, potential non-response bias in the sample was explored by comparing early respondents to late respondents. For this purpose, responses within a month's time were included in the early respondent group, whereas those responding after a month of notice were considered late respondents. To examine the differences between the two groups, an ANOVA was conducted across the studies' key variables (see appendix). From this analysis, no significant differences between the groups emerged for any of the variables tested except firm size. Indeed, late respondents tended to be larger firms with on average revenue of 50 to 249 Mio. EUR revenue as opposed to the 20 to 49 Mio. EUR measured for early

respondents. However, since size is a variable that is controlled for in the study, the test provides some assurance that non-response bias is not a major problem in this survey.

Test for common method bias

Since the data were collected with a cross-sectional survey design, common method bias might be an issue of concern. The existence of a common source or method bias is revealed when a single common factor emerges that accounts for the majority of the variance in the variables. In order to mitigate this potential problem, a factor analysis is conducted as suggested by Podsakoff & Organ, 1986 (see appendix). In this procedure, all items pertaining to the controlling, independent, moderator and dependent variables are entered in a factor analysis. 10 factors with eigenvalues greater than 1 emerge that explain 68 percent of the variance. The first factor explains 12 percent of the variance, while the remaining 9 factors explain 56 percent. Hence, since no common method factor emerged and no single factor accounted for the majority of variance explained, common method bias does not appear to be a problem in the current study.

Validity of constructs

The internal consistency and reliability of constructs is examined with Cronbach's alpha (α), which is a common test theory for this purpose (Cronbach, 1951; 1987). In general, α can take values between negative infinity and 1 and will increase when correlations between items increase. In the literature, a reliability of 0.60 or higher (Nunnally & Bernstein, 1994) is recommended as minimum threshold to build a construct of multiple items.

Construct	Items	alpha
Past performance	Development of revenue	.82
	Average market share	
	Development of profitability	
	Average profitability	
Family focus on growth and change	**Regarding the family priorities/beliefs** (anchored by)	.70
	The family tends to think about preserving The family tends to think about growth	
	The family tries to grow within the existing business The family seeks growth in new businesses	
	Family leaders pay a disproportionate amount of time nurturing the existing businesses Family leaders pay a disproportionate amount of attention to new businesses	
	The family is committed to sustaining current products and/or services The family assumes that a significant percentage of products and/or services will be replaced in the future	
	The family has a very clear business model that we believe will take us into the future The family frequently revisits and is willing to change the business model to take us into the future	
	Above all at any moment in time the family is looking for stable financial returns The family accepts more volatile, but therefore above average rates of return in the long run	
Family functioning	Planning family activities is difficult because we misunderstand each other	.84
	In times of crisis we can turn to each other for support	
	We can express feelings to each other	
	Individuals are accepted for what they are	
	We are able to make decisions about how to solve problems	
	We confide in each other	
	There are lots of bad feelings in the family	

Construct (cont)	Items	alpha
Entrepreneurial orientation	5-dimensional entrepreneurial orientation index (EO5)	.72
	3-dimensinal entrepreneurial orientation index (EO3)	.78
	Risk taking - In general, the management prefers (anchored by)	.66
	Projects with low risk and normal returns Projects with higher risk and potentially very high return	
	Cautious “wait-and-see” position to minimize the hazard of costly erroneous decisions Fearless, aggressive position, in order to maximize the chance of possible opportunities	
	Innovativeness – New product introduction past 5 years (anchored by)	.82
	There were no new products or services in this period There were many new products or services	
	Changes were minor in nature Changes were fundamental to our business	
	The focus was on the management of existing products and markets The focus was on technological leadership and radical innovation	
	Proactiveness - Concerning the behavior in the market (anchored by)	.72
	The company tends to react changes in the market The company tends to iniate measures that spur changes in the market	
	Rarely is the company first to market new products, services or technologies Often, the company is first market new products, services or technologies	
	Competitive aggressiveness - Attitude towards competitors (anchored by)	.62
	The company is moderate in its efforts to gain market share from its competitors The company aggressively seeks to gain market share from the competition	
	Company aims to avoid the escalation of competitive conflicts, pursues a "live and let live strategy" Company has an aggressive "eat or be eaten" attitude towards the competition	
	Autonomy - Concerning decision making in the company (anchored by)	-.15
	Decision making usually follows pre-determined procedures Decision making is usually free of formal rules and suited to the situational needs	
	Decision making is heavily influenced by external stakeholders (e.g. banks) Decison making is realtively independent of external stakeholders	

Figure 50: Scale items and reliabilities

Source: Own analysis

On the basis of this test, in particular the constructs for *past financial performance* (α = .82), *family focus on growth and change* (α = .70), and *family functioning* (α = .84) achieve highly satisfactory results. Both scales of entrepreneurial orientation prove satisfactory as overall constructs – the respective values of Cronbach's alpha are 0.72 for the five dimensional construct and 0.78 for the three dimensional construct. However, the individual assessment of the five dimensions is less satisfactory. While the alpha for *innovativeness* (α = 0.82) and *proactiveness* (α = 0.72) are satisfactory, the alpha for *risk taking* and *competitive aggressiveness* are somewhat lower at 0.66 and 0.62 respectively. Especially *competitive aggressiveness* is relatively close to the minimum threshold of 0.6, which is not particularly good but still in line with the values reported in previous studies (Naldi et al., 2007). A serious point of concern is *autonomy* with an alpha of (–0.15) – an unacceptable result. Since very few studies actually employ all five dimensions of the EO construct, a calibration is difficult to obtain. A review of the literature indicates that the general validation process of the autonomy scale is still far from being completed (Lumpkin, Cogliser, Schneider, 2009). To further understand the relationship of the five dimensions of the EO construct, all items pertaining to the construct are entered into a factor analysis. Following the example of Lumpkin & Dess (2001), the factor analysis uses the principal components method with a Promax rotation which allows factors to be correlated (Kim & Müller 1978). Four components with eigenvalues greater than 1 emerge and all items entered show significant factor loadings (>0.40). The items for innovativeness, risk taking and competitive aggressiveness load cleanly on separate factors – thus supporting their independence. Yet the items of proactiveness and autonomy load both on the fourth component – thus hinting that respondents did not perceive the distinctiveness of these two dimensions. Thus, the factor analysis confirms the problematic character of the five dimensional construct experienced with Cronbach's alpha test.The rotated principal components solution can be found on the next page.

	All questions posed in anchored by format...	Factor 1: Innovative-ness	Factor 2: Comp. Aggressi-veness	Factor 3: Risk taking	Factor 4: Autonomy/ Pro-activeness
I1.	There were no new products or services in this period... ...There were many new products or services	**0.992**	0.022	-0.159	-0.243
I2.	Changes were minor in nature... ...Changes were fundamental to our business	**0.958**	-0.107	0.028	-0.064
I3.	The focus was on the management of existing products and markets... ...The focus was on technology leadership and radical innovation	**0.704**	-0.028	0.148	0.203
C1.	The company is moderate in its efforts to gain market share from its competitors... ...The company aggressively seeks to gain market share from the competition	-0.079	**0.917**	-0.096	-0.238
C2.	Company avoids escalation of competitive conflicts, pursues "live and let live strategy" ... ...The company adopts an aggressive "eat or be eaten" atttitude towards the competition	-0.029	**0.848**	-0.041	0.002
R1.	Cautious “wait-and-see” position to minimize the hazard of costly erroneous decisions... ...Fearless, aggressive position to maximize the chance of possible opportunities.	-0.005	0.056	**0.866**	-0.170
R2.	Projects with low risk and normal returns... ...Projects with higher risk and potentially very high return	-0.032	-0.176	**0.858**	0.017
A1.	Decision making usually follows pre-determined procedures... ...Decision making is usually free of formal rules and suited to the situational needs	0.020	0.161	0.360	**-0.701**
A2.	Decision making is heavily influenced by external stakeholders (e.g. banks)... ...Decison making is realtively independent of external stakeholders	-0.172	-0.141	0.048	**0.681**
P1.	The company tends to react changes in the market ... ...The company tends to initiate measures that spur changes in the market	0.167	0.297	0.023	**0.524**
P2.	Rarely is the company fist to market new products, services or technologies ... ...Often, the company is first to market new products, services or technologies	0.102	0.351	0.187	**0.416**

Extraction method: Main component analysis. Rotation method: Promax with Kaiser-Normalization to allow for correlation between factors.
a) The rotation is converged in 6 iterations.
Note: Factors with loadings greater than or equal to +/- 0,40 are print in boldface to indicate significanc

Figure 51: Factor analysis testing validity of entrepreneurial orientation scale

Source: Own analysis

Due to quality concerns, the intended implementation of entrepreneurship with the five dimensional EO construct will be abandoned. Instead, entrepreneurship will be measured with the three dimensional construct of entrepreneurship consisting of innovativeness, risk taking and proactiveness. Evidently, a four dimensional construct eliminating only the dimension of autonomy would also be feasible and supported by both the results from Cronbach's alpha and the factor analysis. However, this option is rejected in order to increase the quality of the construct and its comparability with other studies which have largely employed the three dimensional construct. An overview of the means and standard deviations for the individual dimensions of the entrepreneurship construct is enclosed in the appendix.

Conditions of multiple regression analysis

Multiple regression procedures require particular data characteristics.

The first condition, to target a ration of 15-20 cases per independent variable is met with a total of 134 cases and five independent variables equalling 26.8 cases per variable (Grimm & Yarnold, 2008).

Furthermore, substantial multicollinearity is to be avoided. Multicollinearity indicates the degree to which the predictor variables are intercorrelated with each other. In general, the greater the intercorrelation among predictors, the greater the problems for conducting a multiple regression (Grimm & Yarnold, 2008). In the extreme case that a predictor is perfectly related and thus replaceable by another predictor, there is no mathematical solution to the regression. Moreover, the greater the multicollinearity, the more unstable are the partial regression coefficients. Consequently, standard errors and confidence intervals are larger while the likelihood of statistical significance becomes lower (Grimm & Yarnold, 2008). In SPSS, problematic levels of multicollinearity can be detected from the tolerance values of collinearity and variance inflation factor (VIF). As a

general rule, tolerance values of less than 0,1 and VIF values of 5 and above suggest multicollinearity (Backhaus, Erichson, Plinke & Weiber, 2003). Tolerance values of less than 0,01 and VIF of 100 and above are certain evidence of multicollinearity (Fahrmeier, Künstler, Pigeot, Tutz, 1999). In the current study, tolerance values range between 0.6 and 0.9 while VIF shows values of 1.1 to 1.7. Thus, multicollinearity is not a problem in the present study.

Furthermore, multiple regression analysis requires independence of the cases in the sample. Since the sample is cross-sectional and not a time-series, this concern is likely to be unproblematic from the outset. The Durbin-Watson test confirms this with a value of 1.887 which is, as desired, in a range close to 2. Hence, auto-correlation is not a problem in this study.

Multiple regression analysis also stipulates certain qualities for the residual scores. A residual is the difference between a subject's actual observed score on the criterion and the score predicted for that subject using the regression equation. For multiple regressions, residuals should be normally distributed and homoscedastic, that is, with equal variances at all values of the predictors (Pedhazur, 1982). A satisfactory level of normal distribution is confirmed with the Kolmogorov-Smirnov test presented below, which demonstrates that standardized residuals do not significantly deviate from normality (Sig. = 0.86).

		Standardized Residual
N		11
Parameter of normal distribution (a,b)	Mean	0.00000
	Standard Deviation	0.934281
Extreme Differences	Absolute	0.05
	Positive	0.04
	Negative	-0.05
Kolmogorov-Smirnov-Z		0.59
Asymptotic signficance (2-tailed)		0.86

a. The tested distribution is normally distributed.
b. Calculated from data.

Figure 52: Kolmogorov-Smirnov test on distribution of residuals
Source: Own analysis

Potential problems related to heteroscedasticity are graphically examined. From the graphical display of the standardized residuals of the regression (y-axis) and predicted values (x-axis), no clear pattern emerges. Except for a few extreme outlier cases, values are spread out relatively evenly in a horizontal band. Hence, it seems fair to assume that the condition of homoscedasticity may not be fulfilled to perfection, but to a satisfactory level.

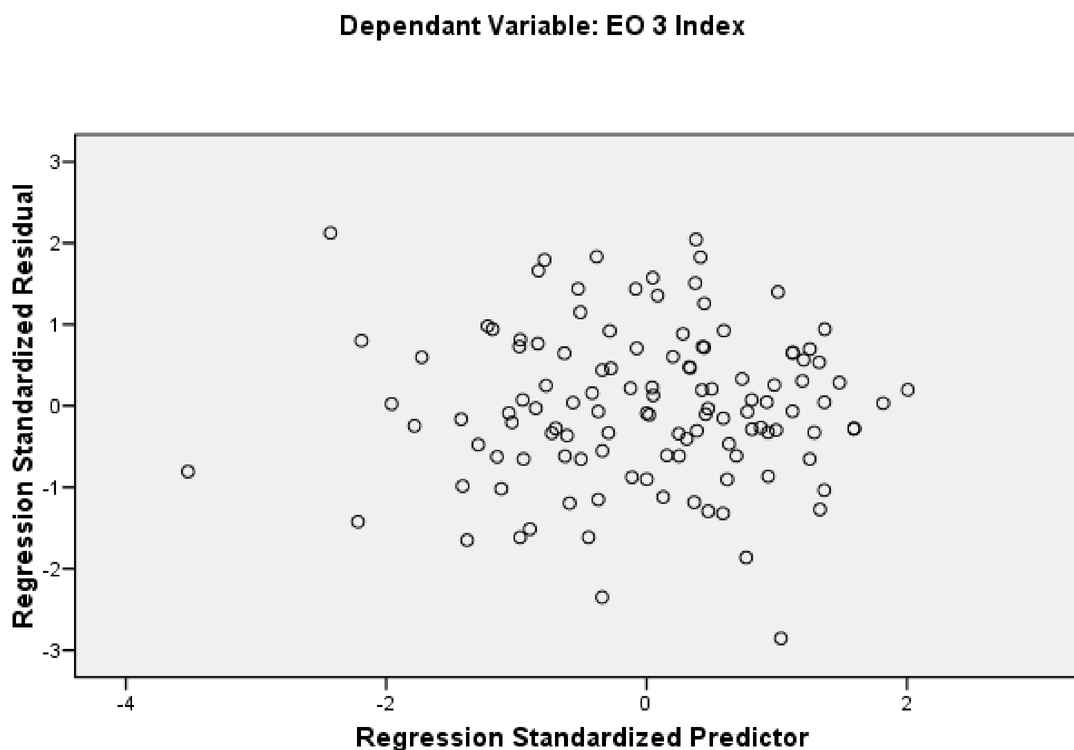

Figure 53: Graphical test to assess homoscedasticity
Source: Own analysis

External validity of data

As was already discussed in chapter 2, the availability of statistical information on family firms in Germany is rare. As a consequence, benchmarking the current sample against the population of family businesses is difficult and will be limited to two key parameters: size and age of the operation. With regard to firm size, the surveys of Institut für Mittelstandsforschung (2007) and Klein (2000) reveal that 99 percent of all German family businesses have revenues of less than 20 Mio. EUR. In comparison, 70 percent of the present sample report revenues of 20 Mio. EUR and above. What concerns firm age, no statistic specific to the German-speaking region is known to the author. As best available proxy, international studies are drawn on. Dyer (1996) and Ward (2008) estimate that the average life-span of family businesses is only 24 years. With an average of 96 years, the

family firms in this sample are thus already exactly four times as old as the average life expectation for comparable organizations. In sum, this sample is therefore distorted towards larger and older family firms in comparison to national averages.

Overall, with the empirical material described above, the empirical examination of the research model as outlined in chapter 4 will be feasible. Before proceeding to the presentation and discussion of results in the next chapter, the graphic below summarizes once more the research model. More specific and a perfect copy of the subsequent regression analysis, it includes also control variables for environment and firm characteristics next to the independent and the moderator variables. The dependent variable, entrepreneurship in family firms, is depicted only with the three dimensional construct rather then the five dimensional construct originally envisaged as discussed above.

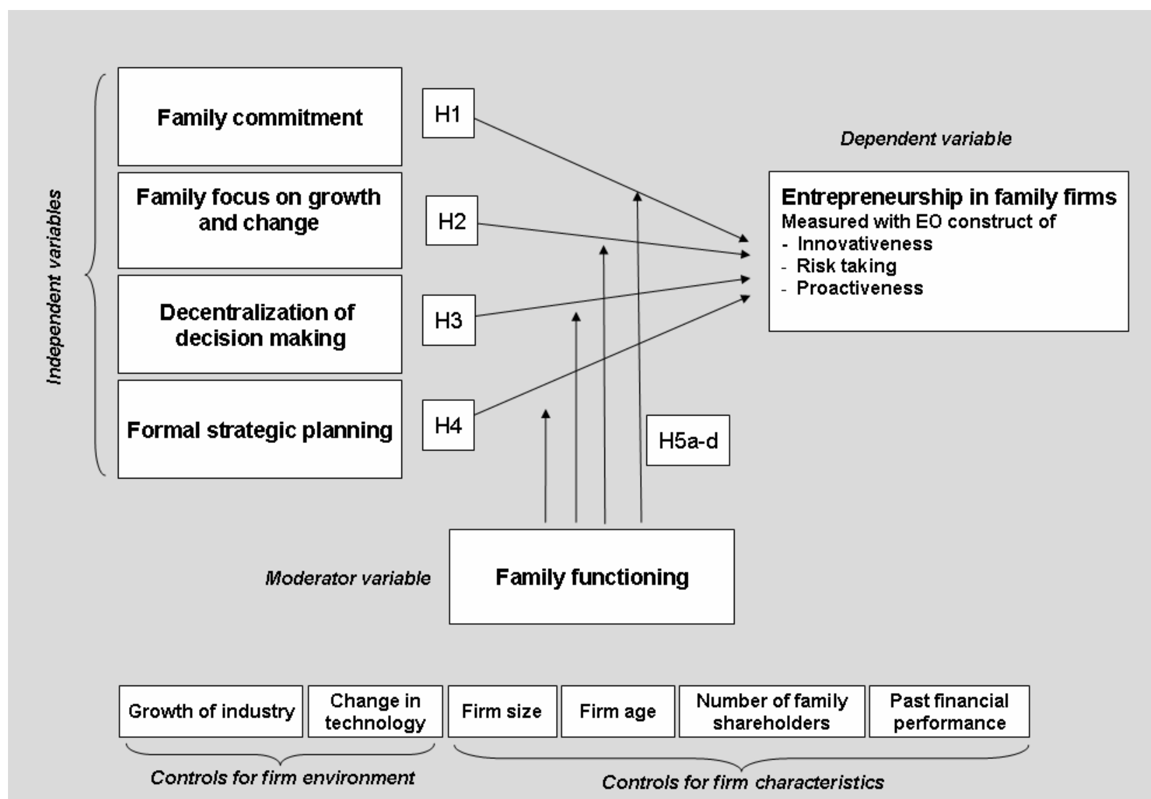

Figure 54: Complete research model

Source: Own illustration

6 Presentation and Discussion of Empirical Results

Following the literature review in chapter 2 and 3, the presentation of the theoretical framework and development of hypotheses in chapter 4, as well as the operationalization of the empirical study in chapter 5, this chapter employs multivariate regression and correlation analysis to test the hypothesized relationships. All findings will be presented in chapter 6.1. In a first step, the results for the full sample will be presented. In order to investigate potential differences between different types of family firms, separate analyses based on the concentration of ownership, the generation of family ownership and the firm size will be run consecutively. The detailed discussion and interpretation of findings is accomplished in chapter 6.2.

6.1 Presentation of results

In this chapter, results for the total sample will be presented in 6.1.1. Next, results for more homogenous sub-samples will be presented. Firstly, the sample will be divided according to ownership concentration in 6.1.2. In the following, the sample will be classified according to ownership generation in 6.1.3. Finally, in chapter 6.1.4, results for a classification according to firm size will be presented.

6.1.1 Results for total sample

This section examines the results for the total sample. The first exhibit contains the means, standard deviations and zero-order correlations for all variables of the research model and is presented below.

Variables	Mean	SD	1	2	3	4	5	6	7	8	9
1. Growth of industry	4.01	1.50	*	*	*	*	*	*	*	*	*
2. Change in production technology	3.81	1.60	0.443(**)	*	*	*	*	*	*	*	*
3. Firm size	2.82	1.70	0.259(**)	0.126	*	*	*	*	*	*	*
4. Firm age	94.31	62.85	-0.094	-0.025	0.338(**)	*	*	*	*	*	*
5. Number of family shareholders	14.47	53.73	0.095	-0.118	0.336(**)	0.307(**)	*	*	*	*	*
6. Past financial performance	4.98	1.07	0.445(**)	0.168	0.172(*)	-0.096	0.100	*	*	*	*
7. Family commitment	5.28	1.45	0.047	0.143	0.270(**)	0.156	0.100	0.221(*)	*	*	*
8. Family focus on growth and change	3.42	0.96	0.182(*)	0.192(*)	0.062	0.032	0.156	0.205(*)	0.122	*	*
9. Decentralization of decision making	3.85	1.93	0.249(**)	0.205(*)	0.259(**)	0.068	0.101	0.176(*)	0.146	0.312(**)	*
10. Formal strategic planning	4.98	1.73	0.232(**)	0.215(*)	0.303(**)	0.097	0.045	0.114	0.251(**)	0.027	0.244(**)
11. Family functioning	5.13	1.17	-0.021	0.082	-0.114	-0.074	-0.022	-0.092	-0.094	0.031	0.044
12. Entrepreneurship (EO3)	4.55	0.89	0.385(**)	0.399(**)	0.191(*)	-0.048	-0.038	0.448(**)	0.309(**)	0.339(**)	0.269(**)

† = p < 0.10; * = p < 0.05; ** = p < 0.01; *** = p < 0.001
N=134
Note: Entrepreneurship is operationalized with 3-dimensional scale of risk taking, innovativeness and proactiveness. Means and standard deviations for dimensions can be found in the appendix.

Figure 55: Results from mean, standard deviation and correlation analysis

Source: Own analysis

The hypotheses pertaining to the effects of family mindset on family firm entrepreneurial behaviour are tested with multiple regression analysis, a statistical procedure, which attempts to quantify the relationship between several independent variables and a dependent variable by fitting a least squares function (i.e., a linear regression function) to the observed data.

Family firm entrepreneurship is employed as dependent variable, measured with the 3 dimensional entrepreneurship construct of risk taking, innovativeness and proactiveness (EO3).

Family commitment, family focus on growth and change, decentralization of decision making and formal strategic planning are entered as independent variables. Family functioning is proposed as moderating variable and its role is evaluated using multiplicative interaction terms between the standardized variables of family functioning and the other four independent variables (Baron & Kenny, 1986).

Additionally, variables to control for effects related to industry, firm size, firm age, family ownership concentration and past financial performance are included in the model.

The full regression equation for the research model under study is thus:

$Y = b_0$ + b_1Growth of industry + b_2Change in production technology + b_3Firm size + b_4Firm age + b_5Number of family shareholders + b_6Past financial performance + b_7Family commitment + b_8Family focus on growth and change + b_9Decentralization of decision making + b_{10}Formal strategic planning + b_{11}Family functioning + b_{12}Family functioning * Family commitment + b_{13}Family functioning * Family focus on growth and change + b_{14}Family functioning * Decentralization of decision making + b_{15}Family functioning * Formal strategic planning

The results of the hierarchical multiple regression procedure are exhibited in the figure below and will now be presented in turn.

Variables	Model 1	Model 2	Model 3	Model 4
Controls				
Growth of industry	0.066	0.038	0.041	0.087
Change in production technology	0.273**	0.167*	0.163*	0.139†
Firm size	0.164	0.031	0.037	0.052
Firm age	-0.018	-0.050	-0.048	-0.016
Number of family shareholders	-0.087	-0.104	-0.107	-0.118
Past financial performance	0.313***	0.212**	0.214**	0.219**
Independent Variables				
Family commitment		0.158*	0.161*	0.181*
Family focus on growth and change		0.172*	0.170*	0.147†
Decentralization of decision making		0.045	0.044	0.068
Formal strategic planning		0.382**	0.376***	0.402***
Moderator				
Family functioning			0.0305	0.092
Interaction Effect				
Family functioning * Family commitment				-0.225**
Family functioning * Family focus on growth and change				0.102
Family functioning * Decentralization of decision making				-0.055
Family functioning * Formal strategic planning				0.112
ΔR^2	0.296***	0.209***	0.001	0.039*
R^2	0.296	0.505	0.506	0.545
Adjusted R^2	0.258	0.459	0.455	0.479
F	7.847***	11.031***	9.969***	8.236***

† = p < 0.10; * = p < 0.05; ** = p < 0.01; *** = p < 0.001
N=134
Note: Entrepreneurship is operationalized with 3-dimensional scale of risk taking, innovativeness and proactiveness.

Figure 56: Multiple regression predicting entrepreneurship in full sample
Source: Own analysis

In Model 1, only the control variables are entered. That is, two controls for industry, one each for firm size, firm age, family ownership concentration and past financial performance. The change in R^2 for this model is significant at $\Delta R^2 = 0.296$, $p < .001$. As can be seen from the results, a high rate of technological change in the firm environment ($\beta = 0.273$, $p < 0.01$) and a superior past financial performance of the business ($\beta = 0.313$, $p < 0.001$) have strong and positive associations with family firm entrepreneurial behaviour.

In Model 2, all independent variables except family functioning are entered in order to test the first four hypotheses. The change in R^2 is significant ($\Delta R^2 = 0.209$, $p < 0.001$), which indicates the relevance of the independent variables to the overall explanatory power of the regression. Family commitment ($\beta = 0.158$, $p < 0.05$), family focus on growth and change ($\beta = 0.172$, $p < 0.05$) and formal strategic planning ($\beta = 0.382$, $p < 0.01$) are significant and positively associated with entrepreneurship, thus supporting hypotheses 1, 2, and 4. However, decentralization of decision making shows no relevant association with entrepreneurship. Thus, hypothesis 3 is rejected.

In Model 3, the fifth independent variable, family functioning is entered independently. The regression shows no significant change in R^2 and the entered variable, family functioning, has no significant association with entrepreneurship. Hence, family functioning appears to have no direct effects as predictor of family firm entrepreneurship.

In Model 4, family functioning is tested as moderator. To this end, four interaction terms between family functioning and family commitment, family focus on growth and change, decentralization of decision making and formal strategic planning are calculated and added to the regression.

As can be seen from the results, the change in R^2 is minor but significant at $\Delta R^2 = 0.039$, $p < 0.05$. Out of the four tested interaction terms, only the coefficient representing the interaction between family commitment and family functioning is significant ($\beta = -0.225$, $p < 0.01$). Consequently, only one term supports the moderating role of family functioning. Therein, the negative coefficient indicates a negative impact of family functioning on the relationship between family commitment and entrepreneurship. To facilitate the interpretation of this moderation effect, the interaction between family commitment and family functioning is graphically depicted. The illustration is obtained by plotting the results of four different versions of the regression equation with regard to family

commitment and family functioning. These correspond to four basic combinations of both variables in high-high, low-low, high-low and low-high levels of family commitment and family functioning. Technically, high and low levels are obtained using +1/-1 standard deviations from the mean values respectively. All other variables are entered with the multiplication of their respective regression coefficient and mean values – thus assuming ceteris paribus condition.

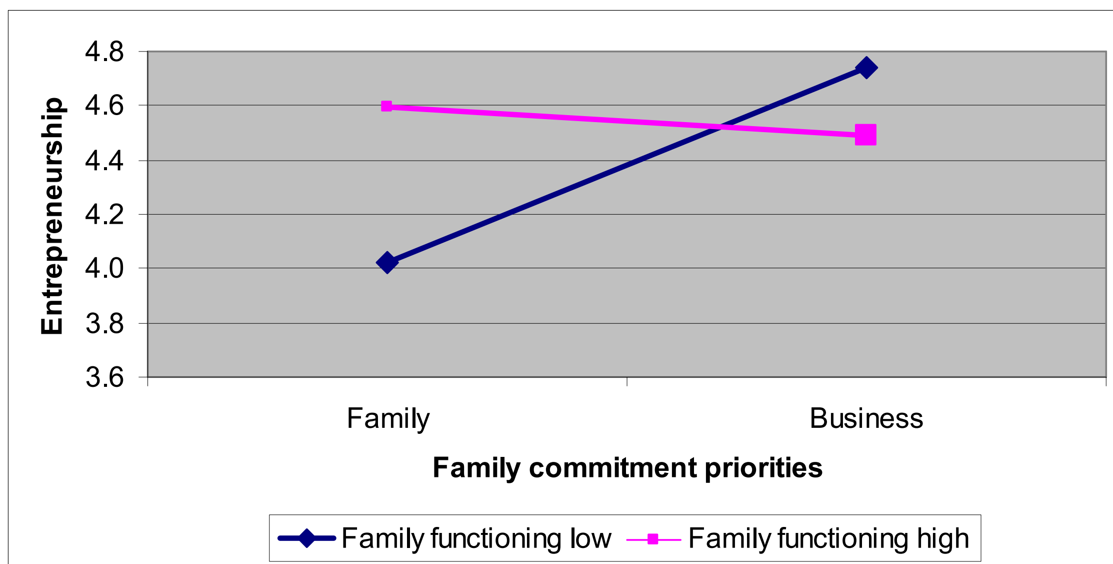

Figure 57: Interaction between family commitment priorities and family functioning and its impact on entrepreneurship
Source: Own analysis

Concerning the hypotheses on moderation effects, hypothesis 5a which argues that family functioning increases the positive relationship between family commitment and family firm entrepreneurship is not supported. On the contrary, family functioning is found to negatively influence the relationship between the two variables (β = - 0.225, $p < 0.01$). The relationship between entrepreneurship and family focus on growth and change (β = 0.102, n.s.), the decentralization of decision making (β = - 0.055, n.s.) and formal strategic planning (β = 0.112, n.s.) are not significantly moderated by family functioning. Therefore, hypotheses 5b, 5c, and 5d are rejected on the basis of these findings. A very detailed

interpretation of above identified moderation effect will take place in the discussion part of this chapter in section 6.2.5.

Following Kellermanns & Eddleston (2006), a variant of the research model outlined above where formal strategic planning is employed as moderator has also been tested. However, there were no relevant interactions between the independent variables and strategic planning to impact entrepreneurship in this sample. The findings for this alternative regression model are displayed in the appendix.

In the next three sections, results for more homogenous sub-sets of the full sample will be presented in order to detect potential particularities for distinct types of family firms.

6.1.2 Classification according to ownership concentration

Evidently, the overall sample size of 134 cases restricts the statistical methods available for analyzing sub-groups. Especially multiple regression procedures are limited to groups with more than 75 cases – the rationale being that with a minimum of 15 cases per variable and 5 independent variables in the study, a minimum sample size of 75 cases constitutes the minimum threshold to conduct meaningful multiple regression analyses. Generally, simple correlation analysis is drawn on as alternative to multiple regressions in order to examine relationships between variables in smaller samples. The disadvantage of this method is that even though it provides information on the direction of association, its strength and statistical significance, all measured relationships are only bi-variate and do not reflect the interplay of multiple variables. Hence, correlation analysis is clearly a less powerful and less realistic instrument than multiple regression analysis which performs exactly this kind of task. The findings from correlation analysis may therefore not be overstated and are clearly of inferior quality from a scientific point of view.

To facilitate comparability, the course of examination will follow the same structure for all three classifications discussed throughout the rest of this section. As a first step of analysis, the characteristic forming of variables in each type of family firm will be examined. To this end, descriptive statistics and multinomial logistic regressions will be applied. In the next step, the relationship between entrepreneurship and the control, independent and moderation variables will be examined. Therein, correlation analysis will be employed for all sub-groups. For those with sufficient size, the relationships will additionally be tested with multiple regression analysis.

In the first classification, the sample is divided according to the concentration of family ownership in controlling owner, sibling partnership or cousin consortium type of family firms (Gersick et al., 1997). Based on this classification, the sample contains 29 controlling owner firms, 86 sibling partnerships and 19 cousin consortiums.

According to the analysis of means, firms classified as "controlling owners" have 63 years of age, achieve between 20 and 49 Mio. EUR revenues and are strong performers in rapidly growing markets with substantial technological change. The sibling partnerships have on average 4 family shareholders, almost a century of lifetime, and control larger operations with on average 50-249 Mio. EUR revenues. Moreover, they operate in more stable markets with less technological change and tend to be less successful performers than the other two types of family firms. The cousin consortiums in the sample have on average 84 family shareholders. They are the oldest organizations with on average 131 years of age, the largest with approximately 500 Mio. EUR revenues and also the most successful companies with regard to their past financial performance. Furthermore, they tend to operate in industries with little technological change but comfortable growth rates, which perhaps, are achieved through geographical

expansion.

	Controlling Owner	Sibling Partnership	Cousin Consortium	All
Number of Cases	29	86	19	134
Controls				
Growth of industry	4.6	3.7	4.6	4.0
Change in production technology	4.1	3.8	3.4	3.8
Firm size (revenue)	2.0	2.7	4.5	2.8
Firm age	62.7	96.8	131.1	94.3
Number of family shareholders	1.0	3.7	83.6	14.5
Past performance	5.3	4.8	5.4	5.0
Independent Variables				
Family commitment	5.1	5.3	5.7	5.3
Family focus on growth and change	3.7	3.3	3.7	3.4
Decentralization of decision making	4.0	3.8	3.9	3.9
Formal strategic planning	5.2	5.0	4.7	5.0
Family functioning	5.6	5.1	4.6	5.1
Dependent Variable				
Entrepreneurship (EO3)	4.8	4.4	4.7	4.5

N=134

Figure 58: Means analysis by ownership concentration

Source: Own analysis

In fact, cousin consortiums were found to operate in significantly more countries and have international sales account for a higher share of total sales than controlling owners and sibling partnerships (see appendix). As for the independent and dependant variables, several patterns emerge. Family commitment is a quality that steadily increases with the size of the ownership group. On the other hand, formal strategic planning and family functioning show steadily decreasing values across the ownership life-cycle. The development of family focus on growth and change, decentralization of decision making and entrepreneurship is u-shaped – taking their lowest values in sibling partnerships.

Additionally, as Gersick's ownership concentration typology contains three categories, a multinomial regression is conducted to test whether the occurrence and forming of certain variables is related to a specific type of family firm. The

three types of ownership concentration will thus form the dependent variable. Controlling owner, the first type, is chosen as comparison base line. All other variables – including entrepreneurship – are potential predictors. However, multinomial logistic regression is most suitable for categorical variables but not ideal for metric scales[46]. Hence, metric variables are either converted into categorical scale or, if there is no meaningful conversion, excluded from this analysis. For this reason firm age is removed from the analysis. Moreover, number of family shareholders is eliminated since it is redundant in the classification based on ownership concentration. To facilitate the interpretation of the output, the possible forming of all remaining categorical variables is dichotomized so that '0' corresponds to high levels and '1' signifies low levels of a particular characteristic. Specifically, as all variables are measured in 7-item Likert scale format, meaningful categories for transformation could be obtained by grouping values 1-4 to signify low levels (coded '1') and values 5–7 as high levels (coded '0') of a particular characteristic. Firm size (in revenue) was divided in large firms with revenues in excess of 50 Mio. EUR and coded as '0' whereas small and medium sized firms with revenues up to 49 Mio. EUR are coded as '1'. Classifying high values with 0 and low values with 1 may seem counterintuitive, but is deliberately chosen to best match the output format of multinomial logistic regression in SPSS.

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[46] Multinomial logistic regression shows the odd ratio of the event taking place if the independent variable changes by a unit of one. However, if this unit is very small compared to the total number of possible values – e.g. firm age in years changed by one – the odd ratio would not be very meaningful.

Variables	Model 1a: Sibling partnership	Model 1b: Cousin consortium	Model 2a: Sibling partnership	Model 2b: Cousin consortium
Control				
Growth of industry	0.445	2.146	0.251*	2.003
Change in production technology	1.135	0.196*	2.577	0.477
Firm size (in revenue)	2.970*	6.383**	3.040†	10.907*
Past financial performance	0.323†	0.821	0.376	0.714
Independent				
Family commitment			0.656	1.951
Family focus on growth and change			0.366	0.594
Decentralization			0.986	1.192
Formal strategic planning			0.347	0.112*
Family functioning			7.80E-009***	3.60E-009
Entrepreneurship (EO3)			1.216	4.049
Log-likelihood	61.612***		134.394***	
Likelihood-ratio chi-square	29.498***		47.827***	
Nagelkerke R-Square	0.243		0.403	

† = p <0.10; * = p < 0.05; ** = p < 0.01; *** = p < 0.001
N=134
Note: The comparison baseline is "Controlling owner"

Figure 59: Multinomial logistic regression analysis predicting ownership concentration
Source: Own graph

The figure above shows the results of the multinomial logistic regression procedure for ownership concentration. Models 1a and 1b include only the control variables. The independent variables are added in Models 2a and 2b. All models are statistically significant. The percent of variance in the dependent variable explained by the independents in Model 1a and 1b reaches a Nagelkerke R^2 of 0.243, Models 2a and 2b including all variables achieve a Nagelkerke R^2 of 0.403.

Before presenting the individual results for each variable, a note on methodology appears important. The procedure of multinomial logistic regression applies a maximum likelihood estimation after transforming the dependent into a logit variable so that the output shows – quite in contrast to linear regression – the odds of a certain event occurring if the independent variable is changed by one

unit. Therein, values larger than 1 demonstrate a positive relationship between the increase in the independent variable by one unit and the likelihood of the forming of the respective dependent variable over the comparison base line. If the value is between 1 and 0, the relationship is negative – that is, the higher the value of the independent variable, the lower the likelihood that the respective forming of the dependent variable occurs over the comparison base case. If the value is close to 1, there would be no relationship between the forming of the dependent variable and the independent variable.

In the control models, the odd ratios for firm size appear as a steady and significant predictor of ownership concentration – the more diluted the ownership, the more likely is the business to be large. With regard to the independent variables, the most significant and strongest effect occurs from family functioning. Firms with low levels of family functioning are more likely to be sibling partnerships than controlling owner firms ($ß = 7.80E\text{-}009$; $p < 0.001$). Furthermore, the presence of formal strategic planning mechanisms appears to decrease with cousin consortiums in comparison with controlling owner firms ($ß = 0.112$; $p < 0.05$). Lastly and most importantly, entrepreneurship cannot be identified as relevant predictor of ownership concentration as there are no significant relationships.

As next step, the analysis will turn to analyzing the relationship between entrepreneurship as dependent variable and its suggested predictor variables for each type of family firm. To this end, a bi-variate correlation analysis is conducted for each type of ownership concentration.

	Controlling Owner	Sibling Partnership	Cousin Consortium	All
Number of Cases	29	86	19	134
Controls				
Growth of industry	0.066	0.424(**)	0.347	0.359(**)
Change in production technology	0.408(*)	0.450(**)	0.287	0.421(**)
Firm size (revenue)	0.287	0.238(*)	-0.104	0.178(*)
Firm age	-0.114	0.028	0.050	-0.018
Past performance	0.411(*)	0.445(**)	-0.245	0.387(**)
Independent Variables				
Family commitment	0.284	0.360(**)	-0.033	0.294(**)
Family focus on growth and change	0.390(*)	0.255(*)	0.296	0.292(**)
Decentralization of decision making	0.448(*)	0.178	0.317	0.232(**)
Formal strategic planning	0.282	0.416(**)	0.517(*)	0.415(**)
Family functioning	-0.011	0.010	0.387	0.086

† = p < 0.10; * = p < 0.05; ** = p < 0.01; *** = p < 0.001; N=134
Note: Entrepreneurship measured with EO3 scale. Control "Number of family shareholders" redundant in this classification and therefore omitted.

Figure 60: Correlations with entrepreneurship by ownership concentration
Source: Own analysis

It is evident at first sight that strong and significant associations often apply only to a single type of family firm, and generally not more than two. Concerning the central variables of the research model, family commitment correlates with entrepreneurship in family firms with less than ten family owners. However, the correlation is only significant and also strongest for sibling partnerships (0.360, p < 0.01). In cousin consortiums instead, family commitment shows no relevant association with entrepreneurship. Family focus on growth and change correlates positively with entrepreneurship across the board in this analysis. However, the strength of the relationship varies and statistical significance can only be claimed for controlling owner firms (0.390, p < 0.05) and sibling partnerships (0.255, p < 0.05). Decentralization of decision making shows strong and significant correlations with entrepreneurship in controlling owner firms (0.448, p < 0.05). Formal strategic planning demonstrates strong correlations with entrepreneurship. Especially for entrepreneurship in sibling partnerships (0.377, p < 0.05) and cousin consortiums (0. 358, p < 0.01), formal strategic planning

appears to play a critical role. The correlations between family functioning and entrepreneurship are insignificant for all three types of ownership concentration. However, whereas the strength of correlation is close to zero for controlling owners (-0.011, p = n.s.) and sibling partnerships (0.100, p = n.s.), cousin consortiums show a considerable positive but statistically insignificant correlation (0.387, p = n.s.). A finding, which contrasts with the irrelevance of family functioning as direct predictor of entrepreneurship concluded from the analysis of the total sample.

As a final step, a multiple regression identical to the one held for the total sample is performed for the sub-sample of sibling partnerships, since the number of cases in this group (86) is sufficiently large to allow for this type of statistical analysis.

The regression for sibling partnerships exhibits high similarity with the regression analysis for the total sample. Roughly the same level of total variance explained is achieved. The adjusted R^2 is 0.470 for the sibling partnership as opposed to 0.479 for the full sample.

Model 1 concerning the control variables returns more or less the same results as the total sample. Change in production technology ($ß = 0.293$, $p < 0.01$) and past financial performance ($ß = 0.291$, $p < 0.01$) emerge as strong and significant predictors of entrepreneurship.

The independent variables added in Model 2 account for a change in R^2 of 0.197 ($p < 0.001$). Family commitment is significantly and somewhat stronger associated with entrepreneurship in the regression for sibling partnerships than in the full sample ($ß = 0.218$, $p < 0.05$ vs. $ß = 0.158$, $p < 0.05$). Likewise, family focus on growth and change is stronger associated with entrepreneurship in the regression on sibling partnerships than for the full sample ($ß = 0.196$, $p < 0.05$ vs. $ß = 0.172$, $p < 0.05$). Family focus on growth and change is without relevance for entrepreneurship. Formal strategic planning is slightly less but still very relevant

in sibling partnerships in contrast to the full sample (ß = 0.346, $p < 0.001$ vs. ß = 0.382, $p < 0.001$). Moreover, just like in the total sample, decentralization of decision making is without significance for sibling partnerships.

Variables	Model 1	Model 2	Model 3	Model 4
Controls				
Growth of industry	0.026	0.019	0.019	0.056
Change in production technology	0.321**	0.214*	0.214*	0.218*
Firm age	0.061	-0.008	-0.008	0.019
Number of family shareholders	-0.083	-0.125	-0.125	-0.149
Past financial performance	0.358***	0.235*	0.235*	0.250*
Independent Variables				
Family commitment		0.231*	0.231*	0.203*
Family focus on growth and change		0.082	0.081	0.058
Decentralization of decision making		0.107	0.107	0.106
Formal strategic planning		0.370***	0.369***	0.400***
Moderator				
Family functioning			0.004	0.042
Interaction Effect				
Family commitment * Family functioning				-0.096
Family focus on growth and change *Family functioning				0.090
Decentralization of decision making* Family functioning				-0.018
Formal strategic planning*Family functioning				0.137
ΔR^2	0.249***	0.223***	0.000	0.024
R^2	0.249	0.472	0.472	0.496
Adjusted R^2	0.201	0.409	0.401	0.395
F	5.235***	7.460***	6.625***	4.921***

† = p < 0.10; * = p < 0.05; ** = p < 0.01; *** = p < 0.001
N=95
Note: Entrepreneurship operationalized with EO3 scale. Control "Firm size" redundant in this classification and therefore omitted.

Figure 61: Multiple regression predicting entrepreneurship in sibling partnerships
Source: Own analysis

In Model 3 the change in R^2 is 0.001 and not statistically significant. Thus, in line with expectations, family functioning appears to be without direct effect for entrepreneurship in the sibling partnerships.

In contrast to the total sample and perhaps due to the smaller sample size, the change in R^2 ($\Delta R^2 = 0.027$) in Model 4 of the sibling partnerships regression is

not statistically significant and none of the interaction terms shows noteworthy or significant associations with entrepreneurship.

In sum, the specific regression analysis for sibling partnerships supports hypotheses 1, 2, and 4 but reject hypotheses 3 and 5

For controlling owners and cousin consortiums, the same level analysis cannot be achieved due to the relatively small size of the respective samples. Based on correlation analysis, one may conclude that family focus on growth and change and decentralization of decision making stand out as predictors of entrepreneurship in controlling owner firms thus indicating support of hypotheses 2 and 3. In cousin consortiums, strategic planning appears to be the overarching but only relevant predictor variable so that all hypotheses except hypothesis 4 would be rejected.

6.1.3 Classification according to ownership generation

The next classification of family businesses distinguishes firms by the generation of family ownership. For this purpose, the sample is divided into first generation, second generation, and those firms that are held at least in the third generation of family ownership (Martin & Lumpkin, 2003).

The sample is grouped into 14 firms that are held in the first generation, 24 firms in the second generation of family ownership and 96 firms that are held in the third generation or above.

According to the analysis of means, the first generation firms may be characterized as being 20 years old, having 1 to 2 family shareholders, and to achieve 20 Mio. EUR in revenues. In contrast, second generation firms are almost double in age, size (20 to 49 Mio. EUR), and held by on average 3 family shareholders. Family firms in the third generation or beyond report a mean age of 117 years – which corresponds approximately to the fifth generation of

ownership. These firms have the largest ownership groups with 19 family shareholders on average and control also the biggest operations, with revenues in the range of 50 to 249 Mio. EUR.

	First generation	Second generation	Third generation+	All
Number of Cases	14	24	96	134
Controls				
Growth of industry	4.6	3.9	4.0	4.0
Change in production technology	3.6	3.8	3.8	3.8
Firm size (revenue)	1.8	2.2	3.1	2.8
Firm age	18.4	46.5	117.3	94.3
Number of family shareholders	1.6	3.0	19.2	14.5
Past performance	4.9	4.9	5.0	5.0
Independent Variables				
Family commitment	4.5	5.2	5.4	5.3
Family focus on growth and change	3.5	3.4	3.4	3.4
Decentralization of decision making	3.9	3.8	3.9	3.9
Formal strategic planning	4.9	4.5	5.1	5.0
Family functioning	5.5	5.0	5.1	5.1
Dependent Variable				
Entrepreneurship (EO3)	4.6	4.5	4.5	4.5

N=134

Figure 62: Means analysis by ownership generation
Source: Own analysis

As for the key variables of the research model, differences in the forming between the three generational types are a lot less pronounced than in the previous analysis by ownership concentration. The most remarkable differences are the developments of the family commitment attitude, which increases significantly with consecutive generations of family ownership and the level of family functioning, which declines substantially across time. In contrast, especially the family focus on growth and change, the decentralization of decision making as well as entrepreneurship appear to be almost stable when analyzed across generations.

Analogue to the procedure held for the analysis by ownership concentration, a multinomial logistic regression to test the relationship between the occurrence of certain characteristics and family firm ownership generation will be held. This time, ownership generation will be the dependent variable with the three possible forms being first, second, and third generation family firms. The first type, first generation firms, is chosen as comparison base category. As before, firm age and number of family shareholders are eliminated while all remaining predictor variables are converted into dichotomous form.

Variables	Model 1a: Second generation	Model 1b: Third generation and more	Model 2a: Second generation	Model 2b: Third generation and more
Control				
Growth of industry	0.281	0.272†	0.357	0.265†
Change in production technology	1.563	1.327	1.352	1.415
Firm size (in revenue)	2.790	6.039*	1.665	4.008†
Past financial performance	1.609	2.619	1.212	2.489
Independent				
Family commitment			1.898	1.403
Family focus on growth and change			1.735	1.012
Decentralization			2.443	2.040
Formal strategic planning			1.058	1.553
Family functioning			0.298	1.003
Entrepreneurship (EO3)			0.528	0.662
Log-likelihood	55.678		142.799	
Likelihood-ratio chi-square	12.750		18.764	
Nagelkerke R-Square	0.118		0.183	

† = p <0.10; * = p < 0.05; ** = p < 0.01; *** = p < 0.001
N=134
Note: The comparison baseline is "First generation".

Figure 63: Multinomial regression predicting family ownership generation
Source: Own graph

The table above reports the results of the multinomial regression analysis. Models 1a and 1b include only the control variables, the independent variables are added in Models 2a and 2b. In contrast to the previous analysis, the

multinomial logistic regression predicting ownership generation is not statistically significant and the explained variance is Nagelkerke R^2 is much lower at 0.118 for Models 1a and 1b and 0.183 for Models 2a and 2b.

Very few significant associations emerge from the variables. At best, one may find relevant predictors in the control section and conclude that the likelihood that family businesses with strong industry growth are in the third generation rather than in the first generation decreases (ß = 0.272; $p < 0.1$). Put the other way round, family firms in the third generation are more likely to operate in mature markets with less growth. Furthermore, it appears that larger firms are more likely to be third generation family firms rather than first generation family firms (ß = 6.039; $p < 0.05$). None of the independent variables shows a relevant relationship with the forming of the dependent variable. In particular, entrepreneurship seems to be no relevant predictor of family ownership generation.

Next, the course of investigation will return to the relationship between entrepreneurship as dependent variable and its suggested predictor variables for each type of family firm. In line with the procedures held above, bi-variate correlation analyses will be performed for each type of ownership generation.

From the results, it occurs that family commitment has strong and positive associations with entrepreneurship in family firms held in the second (0.429, $p < 0.05$), third and further generations of family ownership (0. 340, $p < 0.01$). For family firms in the first generation, there is a negative, albeit statistically insignificant association between family commitment and entrepreneurship. In contrast, family focus on growth and change and decentralization of decision making are highly correlated in first generation family businesses (0.762, $p < 0.01$ and 0.567, $p < 0.05$) but not in subsequent generations of family ownership. Formal strategic planning in turn exhibits stronger associations with subsequent generations of family ownership than in first generation family firms (0.590, p <

0.01 for second and 0.409, $p < 0.01$ for subsequent generations). Family functioning shows no statistically significant association for any of the three generational types. Nonetheless, the development of the direction of association from being negative in first and second generations to being positive in subsequent generations contrasts again with the assumed neutrality of family functioning in its direct relationship with family firm entrepreneurship.

	First generation	Second generation	Third generation+	All
Number of Cases	14	24	96	134
Controls				
Growth of industry	0.487	0.350	0.362(**)	0.359(**)
Change in production technology	0.584(*)	0.389	0.406(**)	0.421(**)
Firm size (revenue)	0.167	0.204	0.213(*)	0.178(*)
Firm age	-0.615(*)	0.006	-0.011	-0.018
Number of family shareholders	-0.170	-0.034	0.018	-0.012
Past performance	0.475	0.588(**)	0.295(**)	0.387(**)
Independent Variables				
Family commitment	-0.255	0.429(*)	0.340(**)	0.294(**)
Family focus on growth and change	0.762(**)	0.156	0.253(*)	0.292(**)
Decentralization of decision making	0.567(*)	0.169	0.222(*)	0.232(**)
Formal strategic planning	0.219	0.590(**)	0.409(**)	0.415(**)
Family functioning	-0.213	-0.106	0.167	0.086

† = p < 0.10; * = p < 0.05; ** = p < 0.01; *** = p < 0.001; N=134
Note: Entrepreneurship measured with EO3 scale.

Figure 64: Correlations with entrepreneurship by family ownership generation
Source: Own analysis

For the sub-sample of family firms held in the third generation and above which features 96 cases, a multiple regression analysis is additionally performed.

Variables	Model 1	Model 2	Model 3	Model 4
Controls				
Growth of industry	0.099	0.096	0.111	0.128
Change in production technology	0.274*	0.144	0.118	0.100
Firm size	0.227*	0.096	0.116	0.111
Firm age	0.013	-0.013	0.002	0.029
Number of family shareholders	-0.127	-0.163	-0.178†	-0.164
Past financial performance	0.215*	0.167	0.178†	0.167
Independent Variables				
Family commitment		0.186†	0.188†	0.219*
Family focus on growth and change		0.171†	0.164†	0.150
Decentralization of decision making		0.048	0.037	0.070
Formal strategic planning		0.312***	0.298**	0.292**
Moderator				
Family functioning			0.097	0.139
Interaction Effect				
Family commitment * Family functioning				-0.220*
Family focus on growth and change * Family functioning				0.036
Decentralization of decision making * Family functioning				-0.026
Formal strategic planning * Family functioning				0.071
ΔR^2	0.258***	0.192***	0.008	0.035
R^2	0.258	0.450	0.458	0.493
Adjusted R^2	0.200	0.375	0.375	0.381
F	4.468**	5.979***	5.532***	4.401***

† = p < 0.10; * = p < 0.05; ** = p < 0.01; *** = p < 0.001
N=96
Note: Entrepreneurship operationalized with EO3 scale.

Figure 65: Multiple regression predicting entrepreneurship in third generation and above
Source: Own graph

Being the dominant group in the sample for all firms (96 out of 134 cases), it comes as no surprise that the multiple regression analysis shows again high similarity to the results from the total sample.

Model 1 pertaining to the control variables is statistically significant at $\Delta R^2 = 0.258$, $p < 0.001$ and shows change in production technology (ß = 0.274; $p < 0.05$), firm size (ß = 0.227; $p<0.05$) and past financial performance (ß = 0.215; $p < 0.05$) as key predictor variables among the variables related to family firm characteristics and firm environment.

The additions made in Model 2 are statistically significant and explain another $\Delta R^2 = 0.192$, $p < 0.001$ of variance. Family commitment (ß = 0.186, $p < 0.1$). Family focus on growth and change (ß = 0.171, $p < 0.1$) and especially formal strategic planning (ß = 0.312, $p < 0.01$) show significant and positive associations with entrepreneurship so that hypotheses 1, 2, and 4 are supported. Comparing the strengths of association with the total sample, it occurs that formal strategic planning is somewhat stronger associated with entrepreneurship in the full sample (ß = 0.382, $p < 0.01$). The decentralization of decision making shows no relevant association with entrepreneurship in family firms in the third generation of ownership and above so that hypothesis 3 is rejected.

The change of R^2 in Model 3 ($\Delta R^2 = 0.008$, p = n.s) is not significant and family functioning without relevant direct association with entrepreneurship.

In Model 4, the change in R^2 is not statistically significant ($\Delta R^2 = 0.035$, p = n.s.). Yet like in the full sample, the interaction term between family functioning and family commitment shows a significant negative association with entrepreneurship (ß = - 0.220, $p < 0.05$). This finding supports the assumption concerning the ambivalent effect of family ownership.

In sum, the specific regression analysis for family firms held at least in the third generation of ownership supports hypotheses 1, 2, and 4 but rejects hypotheses 3 and 5.

Overall, one may conclude from the analysis by generation that family commitment appears to be more important for family firm entrepreneurship in successive generations of family ownership. In contrast, family focus on growth and change seems to be a critical factor in first generations. In line with the findings for controlling owners analyzed in the previous section, decentralization appears to be beneficial in first generation family businesses. Formal strategic planning, in contrast, becomes markedly positive associated with entrepreneurship in successive generations of family ownership. The role of

family functioning as direct predictor of entrepreneurship seems to be more complex than initially assumed. Evidence from correlation analysis indicates that rather than being neutral across the board, the association of family functioning with entrepreneurship may depend on the type of family firm. What concerns the moderation qualities of family functioning, the negative association of entrepreneurship and the interaction term between family functioning and family commitment is also confirmed for third generation family firms.

6.1.4 Classification according to firm size

As final step, the sample is divided according to firm size which is measured in the number of employees. Firms with less than 49 employees are classified as small firms, firms with 50 to 249 employees as medium firms, while companies with 250 or more employees are treated as large enterprises[47].

Commensurate to this classification, the sample is split in 24 small firms, 43 medium sized firms and 67 large companies.

According to the means analysis, small firms with less than 50 employees report on average less than 20 Mio. EUR in revenues. They are controlled by 2 family shareholders and have 64 years of age. The second type, medium firms, tends to achieve between 20 and 49 Mio. EUR revenues and reach almost 90 years of age. On average, four family members are involved in the ownership of the family business. The third type, large firms with more than 250 employees, is controlled by 25 individuals and report on average an annual turnover of 250 to 499 Mio. EUR. Moreover, medium and larger firms tend to operate in industries with

[47] Note that the draft of the European Commission also distinguishes also between micro firms (less than 10 employees) and small firms (10 to 40 employees). This distinction has been ignored in the present study for simplicity reasons – only four cases would fall under the label micro firms. Moreover, the European Commission originally recommended the combination of FTE with either annual turnover or total balance sheet thresholds but in recent publications (e.g., Small Business Act of 2008) refers increasingly to FTE thresholds only.

higher growth, faster rates of technological change. They also tend to outperform their competition more often than small firms. Concerning the variables of the research model, family commitment, decentralization of decision making, formal strategic planning and entrepreneurship increase significantly in their absolute levels with firm size. In contrast, family focus on growth and change remains almost identical across sizes while family functioning shows a mild decline with increase in size.

	Small firms	Medium firms	Large firms	All
Number of Cases	24	43	67	134
Controls				
Growth of industry	3.3	3.9	4.3	4.0
Change in production technology	3.1	4.0	4.0	3.8
Firm size (revenue)	1.0	1.8	4.1	2.8
Firm age	63.9	87.9	109.3	94.3
Number of family shareholders	2.3	4.7	25.1	14.5
Past performance	4.6	5.0	5.1	5.0
Independent Variables				
Family commitment	4.2	5.2	5.7	5.3
Family focus on growth and change	3.3	3.5	3.4	3.4
Decentralization of decision making	3.4	3.7	4.1	3.9
Formal strategic planning	3.9	5.0	5.4	5.0
Family functioning	5.3	5.2	5.1	5.1
Dependent Variable				
Entrepreneurship (EO3)	4.2	4.5	4.7	4.5

N=134

Figure 66: Means analysis by firm size

Source: Own analysis

Analogue to the two previous procedures, a multinomial logistic regression is held in order to test the relationship between the forming of the variables in the research model and the size of the family business. This time, the three categories of family firm size – small, medium and large, will form the dependent variable and "small firm" will be applied as base category. Again, firm age and number of family shareholders are removed since they are metric variables. Moreover, firm

size (in revenue) is removed for redundancy reasons in this classification which measures firm size already in the number of employees. All remaining variables are, like in the two previous procedures, transformed in dichotomous scales.

Variables	Model 1a: Medium firms	Model 1b: Large firms	Model 2a: Medium firms	Model 2b: Large firms
Control				
Growth of industry	1.269	2.113	1.699	2.147
Change in production technology	2.003	2.270	2.585	3.239
Past financial performance	3.108†	1.980	3.666†	1.052
Independent				
Family commitment			2.827	4.989*
Family focus on growth and change			0.937	0.504
Decentralization			1.482	2.138
Formal strategic planning			2.771	3.021
Family functioning			0.250	0.144
Entrepreneurship (EO3)			1.197	2.500
Log-likelihood	49.339†		159.673**	
Likelihood-ratio chi-square	10.778†		38.261**	
Nagelkerke R-Square	0.092		0.317	

† = p < 0.10; * = p < 0.05; ** = p < 0.01; *** = p < 0.001
N=134
Note: The comparison baseline is "Small firms".

Figure 67: Multinomial logistic regression predicting firm size
Source: Own analysis

The figure above reports the results of the multinomial regression analysis. Models1a and 1b include only control variables. The independent variables are added in Models 2a and 2b. All models are statistically significant. Model 1a and 1b reach a Nagelkerke R^2 of 0.092. Models 2a and 2b add substantially to the explanatory power of the analysis and achieve a Nagelkerke R^2 of 0.317.

Among the control variables, past financial performance appears to be the most relevant distinguishing characteristic. That is, medium sized family firms are significantly more likely to report superior past performance than small firms. As for the independent variables, family commitment emerges as a characteristic

that is significantly stronger and more likely to occur in large firms than in small family firms (ß = 4.989; $p < 0.05$). Again, entrepreneurship is not identified as relevant predictor of either type of family firm size thus suggesting that the two variables are independent of each other.

The analysis returns now to the relationship between entrepreneurship and the hypothesized predictor and control variables. To this end, each category of ownership concentration is now examined in correlation analysis.

	Small firms	Medium firms	Large firms	All
Number of Cases	24	43	67	134
Controls				
Growth of industry	0.337	0.323(*)	0.290(*)	0.359(**)
Change in production technology	0.332	0.433(**)	0.342(**)	0.421(**)
Firm age	-0.243	-0.069	-0.112	-0.018
Number of family shareholders	-0.181	-0.113	-0.117	-0.012
Past performance	0.468(*)	0.26	0.371(**)	0.387(**)
Independent Variables				
Family commitment	0.154	0.275	0.276(*)	0.294(**)
Family focus on growth and change	0.550(**)	0.316(*)	0.117	0.292(**)
Decentralization of decision making	0.418(*)	0.072	0.174	0.232(**)
Formal strategic planning	0.392	0.377(*)	0.358(**)	0.415(**)
Family functioning	0.118	-0.379(*)	0.405(**)	0.086

† = p < 0.10; * = p < 0.05; ** = p < 0.01; *** = p < 0.001; N=134
Note: Entrepreneurship measured with EO3 scale. Control variable "Firm size" redundant in this classification and therefore omitted.

Figure 68: Correlations with entrepreneurship by firm size
Source: Own analysis

Again, marked differences exist in the strength and significance of relationships among the different sizes of family firms. The association between family commitment and entrepreneurship increases steadily with firm size but is only significant for large firms (0.276, $p < 0.05$). In contrast, family focus on growth and change shows higher and significant values for small (0.550, $p < 0.01$) and medium sized firms (0.316, $p < 0.05$) but lower and insignificant values for large firms. The relationship between decentralization of decision making and

entrepreneurship is insignificant and lower for medium and large firms, but significant and strong for small firms (0.418, $p < 0.05$). Formal strategic planning is most consistent in its positive association with entrepreneurship. However, only the associations for medium (0.377, $p < 0.05$) and large firms (0.358, $p < 0.01$) are statistically significant. The most striking finding in this differentiated analysis is the relationship of family functioning and entrepreneurship. On the basis of the analyses conducted so far, family functioning appeared to be rather insignificant in its direct effects on family firm entrepreneurship. Initial contradicting evidence was made in the previous sections, where family functioning was shown to have a positive association with entrepreneurship in cousin consortiums, while being neutral in sibling partnerships and controlling owners. Similarly, family functioning was negatively associated with entrepreneurship in first and second generation family firms but positive for subsequent generations. However, these findings lacked statistical significance. Stronger evidence emerges from the split by firm size. In the two largest sub samples, medium and large sized family firms, family functioning displays once a significant negative (-0.379, $p < 0.05$ in medium sized firms) and once a significant positive association (0.405, $p < 0.05$ in large firms) with entrepreneurship.

Unfortunately, none of the categories related to firm size is large enough on its own for multiple regression analysis. As an approximation, a new category of large firms containing firms with 100 employees and more is introduced at this point. The resulting class consists of 95 cases and is thus sufficiently large to conduct a multiple regression procedure.

Variables	Model 1	Model 2	Model 3	Model 4
Controls				
Growth of industry	0.026	0.019	0.019	0.056
Change in production technology	0.321**	0.214*	0.214*	0.218*
Firm age	0.061	-0.008	-0.008	0.019
Number of family shareholders	-0.083	-0.125	-0.125	-0.149
Past financial performance	0.358***	0.235*	0.235*	0.250*
Independent Variables				
Family commitment		0.231*	0.231*	0.203*
Family focus on growth and change		0.082	0.081	0.058
Decentralization of decision making		0.107	0.107	0.106
Formal strategic planning		0.370***	0.369***	0.400***
Moderator				
Family functioning			0.004	0.042
Interaction Effect				
Family commitment * Family functioning				-0.096
Family focus on growth and change *Family functioning				0.090
Decentralization of decision making* Family functioning				-0.018
Formal strategic planning*Family functioning				0.137
ΔR^2	0.249***	0.223***	0.000	0.024
R^2	0.249	0.472	0.472	0.496
Adjusted R^2	0.201	0.409	0.401	0.395
F	5.235***	7.460***	6.625***	4.921***

† = p < 0.10; * = p < 0.05; ** = p < 0.01; *** = p < 0.001
N=95
Note: Entrepreneurship operationalized with EO3 scale. Control "Firm size" redundant in this classification and therefore omitted.

Figure 69: Multiple regression predicting entrepreneurship in large firms
Source: Own analysis

Model 1 confirms change in production technology and past financial performance as predictor variables for large firms (ß = 0.321, $p < 0.01$; ß = 0.358, $p < 0.001$) amid a significant change in R^2 of 0.249 and $p < 0.001$.

The change in Model 2 is significant with $\Delta R^2 = 0.223$, $p < 0.001$, thus adding considerably to the explanation model. For family commitment (ß = 0.231, $p < 0.05$) and formal strategic planning (ß = 0.370, $p < 0.01$), strong and significant associations with entrepreneurship emerge. Consequently, hypotheses 1 and 4 can be confirmed for large family firms with 100 employees or more. In line with the full sample, decentralization of decision making is not associated with

entrepreneurship. In contrast, family focus on growth and change shows no relevant association with entrepreneurship. As a consequence, both hypothesis 2 and 3 are rejected.

Model 3 ($\Delta R^2 = 0.000$, p = n.s.) is not statistically significant and family functioning without strong or significant direct association with entrepreneurship.

In Model 4, the change in R^2 is again not statistically significant ($\Delta R^2 = 0.024$, p = n.s.) and the interaction terms without significant association with entrepreneurship. As a result, hypothesis 5 concerning the moderation role of family functioning is rejected for large family firms.

In sum, the specific regression analysis for large firms with 100 employees or more supports hypotheses 1 and 4 but reject hypotheses 2, 3 and 5.

Overall, the analysis by firm size confirms firm size as relevant measure of differentiation in family firms (Smith, 2007). For large family firms, family commitment and formal strategic planning are important predictors of entrepreneurship. Family focus on growth and change is rejected as predictor to entrepreneurship in large firms, a finding in direct contrast to the regression analysis on the overall sample. Based on correlation analysis, family focus on growth and change seem important to small and medium sized firms. Decentralization of decision making is irrelevant to large firms even tough these firms report the highest level of decentralization. Instead, it is strongly associated with entrepreneurship in small firms. Finally, family functioning is not supported as moderator in large firms. Instead, it was found to exercise a significant and ambivalent direct effect on entrepreneurship in medium and large family firms. All findings presented above are summarized in the figures below. The findings will be interpreted and discussed in the second part of this chapter.

Method: Means Analysis

Variables / Type	All	Ownership Concentration			Ownership Generation			Firm Size (FTE)		
		Controlling Owner	Sibling Partnership	Cousin Consortium	1.	2.	3.+	Small (<49)	Medium (50-249)	Large (250+)
Growth of industry	4.0	4.6	3.7	4.6	4.6	3.9	4.0	3.3	3.9	4.3
Change in production technology	3.8	4.1	3.8	3.4	3.6	3.8	3.8	3.1	4.0	4.0
Firm size (revenue)	2.8	2.0	2.7	4.5	1.8	2.2	3.1	1.0	1.8	4.1
Firm age	94.3	62.7	96.8	131.1	18.4	46.5	117.3	63.9	87.9	109.3
Number of family shareholders	14.5	1.0	3.7	83.6	1.6	3	19.2	2.3	4.7	25.1
Past performance	5.0	5.3	4.8	5.4	4.9	4.9	5.0	4.6	5.0	5.1
Family commitment	5.3	5.1	5.3	5.7	3.5	5.2	3.4	4.2	5.2	5.7
Family focus on growth and change	3.4	3.7	3.3	3.7	1.8	3.8	3.9	3.3	3.5	3.4
Decentralization of decision making	3.9	4.0	3.8	3.9	18.4	4.5	5.1	3.4	3.7	4.1
Formal strategic planning	5.0	5.2	5.0	4.7	5.5	5.0	5.1	3.9	5.0	5.4
Family functioning	5.1	5.6	5.1	4.6	5.3	5.2	5.1	5.3	5.2	5.1
Entrepreneurship (E03)	4.5	4.8	4.4	4.7	4.2	4.5	4.7	4.2	4.5	4.7
Cases	134	29	86	19	13	24	96	24	43	67

Note: Selection of firms with 100+ employees not depicted in this graph

Figure 70: Summary of means for investigated variables in different types of family firms

Source: Own analysis

Method: Correlation Analysis

Type / Variables	All	Ownership Concentration			Ownership Generation			Firm Size (FTE)		
		Controlling Owner	Sibling Partnership	Cousin Consortium	1.	2.	3.+	Small (<49)	Medium (50-249)	Large (250+)
Growth of industry	0.359*		0.424**				0.362**		0.323*	0.290*
Change in production technology	0.421*	0.408*	0.450*		0.584*		0.406**		0.433**	0.342*
Firm size (revenue)							0.213*			
Firm age					0.615*					
Number of family shareholders										
Past performance	0.387**	0.411*	0.445**			0.588**	0.295**	0.468*		0.371**
Family commitment	0.294**		0.360**			0.429*	0.340**			0.276*
Family focus on growth and change	0.292**	0.390*	0.255*		0.762**		0.253*	0.550**	0.316*	
Decentralization of decision making	0.232**	0.448*			0.567*		0.222*	0.418*		
Formal strategic planning	0.415**		0.416**	0.517*		0.590**	0.409**		0.377*	0.358**
Family functioning									-0.379*	0.405**
Cases	134	29	86	19	13	24	96	24	43	67

Note: Selection of firms with 100+ employees not depicted in this graph

Figure 71: Summary of identified relationships with entrepreneurship in correlation analyses

Source: Own analysis

Method: Multiple Regression Analysis

Type / Variables	All	Ownership Concentration			Ownership Generation			Firm Size (FTE)			
		Controlling Owner	**Sibling Partnership**	Cousin Consortium	1.	2.	**3.+**	Small (<49)	Medium (50-249)	Large (250+)	**Proxy-Large (100+)**
Growth of industry			**0.424****								
Change in production technology	**0.139†**		**0.450***								**0.218***
Firm size (revenue)											
Firm age											
Number of family shareholders											
Past performance	**0.219****		**0.445****								**0.250***
Family commitment	**0.181***		**0.360****				**0.219***				**0.203***
Family focus on growth and change	**0.147†**		**0.255***								
Decentralization of decision making											
Formal strategic planning	**0.402*****		**0.416****				**0.292****				**0.400****
Family functioning											
Interaction family functioning* family business serving	**-0.225****						**-0.220***				
Cases	**134**	29	**86**	19	13	24	**96**	24	43	67	**95**

Note: All values based on Model 4 respectively. For sample size reasons, the analysis was only possible for the full sample, sibling partnerships, family firms in the third generations and family firms with 100 employees and more

Figure 72: Summary of identified relationships with entrepreneurship in multiple regression analyses

Source: Own analysis

6.2 Discussion of findings

Overall, the findings confirm earlier suggestions in the literature that the mindset and dynamics of the business family affect the entrepreneurial behaviour of family firms (Aldrich & Cliff, 2003; Astrachan, 2003; Martin & Lumpkin, 2003). Moreover, multinomial logistic regression asserts that the level of entrepreneurial behaviour is independent of ownership concentration, generation of ownership and firm size. That is, in short – any firm can achieve high levels of entrepreneurial orientation. However, evidence from regression and correlation analysis suggests that the predictors of entrepreneurship vary depending on the forming of these variables. In the following, the findings for each variable will be discussed in detail.

6.2.1 Family commitment

In accordance with the stewardship theory of the family firm, the empirical study confirms that a family mindset where the priority of the owning family is serving the business rather than the family has a positive association with entrepreneurship in family firms.

This finding is consistent with two prior empirical results. 'Family altruism', defined as an attitude whereby the family prioritizes the business needs ahead of its own, was formerly found to have a positive association with family firm entrepreneurship (McCann et al., 2001) and internationalization (Zahra, 2003). In close conceptual proximity, a study of Zahra et al. (2008) points to the positive role of a family culture characterized by commitment to the joint family business for strategic flexibility.

However, according to the differentiated analysis, family commitment is not equally important for entrepreneurship in all family firms. In particular small, first generation controlling owner firms seem unaffected by the forming of this particular trait. Rather, family commitment appears to be a quality that matters for family businesses in subsequent generations of ownership and with ownership groups that resemble sibling partnerships and control substantial business operations. Moreover, while the relevance of family commitment seems to peak in the second generation of ownership, it declines mildly in the third generation and beyond. In a similar vein, family commitment loses its importance in the large ownership groups defined as cousin consortiums.

A possible explanation might be that the founders of family businesses derive just as much entrepreneurial motivation from the desire to increase the family's financial situation or to create a lasting legacy for their offspring as from devotion to the young business. In line with this, Upton & Heck (1997) report that family business founders frequently have family interests in mind when starting their business. Moreover, competitive and egoistic struggles in the ownership group that might harm the business are less likely to occur in firms that are controlled by a single individual. Yet already at the stage of sibling partnerships, family members tend to be more concerned about their own welfare and that of their immediate relatives than about the welfare of other family members and the business (Gersick et al., 1997). In the absence of a dominant owner and formal family governance structures – a typical phenomenon in cousin consortiums – sibling partnerships are especially prone to conflict about strategic direction and firm resources (Schulze et al., 2003). Conflict may arise when risk attitudes about new ventures are divergent, when rivalry about decision making occurs, when personal financial needs force the family to make delicate but unprecedented decisions about payouts or about the potential role of adult children in the firm's operations (Schulze et al., 2003). Political manoeuvres between the different parties might lead to a series of compromises, ill-will and

second-best decisions (Schulze et al., 2003). The result may be a state of paralysis, where the firm is unable to pursue entrepreneurial opportunities or react to changes in the market environment (Meyer & Zucker, 1989). Consequently, the family's attitude to prioritize the business may matter exactly in the bracket of the sibling partnership with more than one, but less than ten shareholders. With ten or more family shareholders, the motives and attitudes in the family group do not become more modest and altruistic automatically. Rather, it is likely that when 'family' includes a large group of distantly related individuals, living totally different lives and having very different views in general and the family business in particular, egoistic and self-serving tendencies increase (Gersick et al., 1997; Karra, Tracey & Philipps, 2006; Schulze et al., 2003). But what may tame this problem in cousin consortiums is the presence of formal family governance policies (Pieper, 2007). Such family treaties restrict the family's discretionary powers to prioritize their interests such as personal financial needs and professional ambitions ahead of business needs. As a consequence, detrimental effects of egoistic tendencies might be better held in check in cousin consortiums, which might explain why the priorities of the family matter less in those firms.

6.2.2 Family focus on growth and change

Also in line with stewardship thinking, a family mindset where the family feels committed to growing and developing the business as opposed to merely sustaining the legacy of their ancestors and maintaining the status quo was found to relate positively to family firm entrepreneurship.

The impact of the owning family's attitude towards growth and change has never been tested as a variable on the family level in prior family business research. However, Kellermanns & Eddleston (2006) assess the willingness to change at the organizational level in family firms and report a positive association with

entrepreneurship. Their result may be considered in accordance with the findings of this study.

Again, the differentiated analysis shows that the type of firm affects the relevance of a family's growth and change orientation for entrepreneurship. A significant association with family firm entrepreneurship can be found for a very distinct profile of family firms: First generation family businesses that are small to medium sized with up to nine individuals in the ownership group (i.e. controlling owners or sibling partnerships). In subsequent generations of family ownership, amid increasing firm size and complexity in the ownership, the association between family focus on growth and change and entrepreneurship disappears.

Perhaps, in smaller and younger firms with more concentrated ownership, the drive to engage in entrepreneurial ventures depends more on the family as the family is very present in the day-to-day operations. In larger firms with extensive family ownership groups, the role of the family may resemble more that of a shareholder, while the entrepreneurial initiative depends, for instance, on the professional, externally hired top management of the firm. In line with this, only about 10 percent of controlling owner firms and sibling partnerships in this study reported to have professionally hired CEOs, while 47 percent of cousin consortiums indicated to employ an external CEO. When analyzed by firm size, none of the small firms and only 5 percent of medium sized firms have external CEOs, while 27 percent of the companies with 250 employees or more have external top management (see appendix).

6.2.3 Decentralization of decision making

Against expectations, the third element attributed to stewardship – the decentralization of decision making – has no relevant association with

entrepreneurship for the full sample but only for specific sub-samples of family firms.

This finding is surprising insofar as previous research highlights the desirability of decentralization across the board. In the literature, decentralization is praised as enabling individuals at lower-levels of the organization to take initiative and propose new entrepreneurial ideas (e.g. Miller, 1983; Pinchot, 1985), to multiply independent contributions from various points of the organization (e.g., Kanter, 1982) and to thereby increase organizational flexibility and responsiveness to environmental change (Daft, 2003).

The link between decentralization and family firm entrepreneurship is even backed up in several empirical studies (Craig & Moores, 2006; Salvato, 2004; Zahra et al., 2004). However, at a closer look, it is evident that the evidence is based on firms that are small or medium sized: the U.S. sample of Zahra and colleagues mentions 76 employees per firm as average. Salvato‘s Swedish sample consists of firms with 55 employees on average. The family businesses in Craig & Moores Australian sample are described as small without further specification.

Indeed, the correlation analysis conducted in this study shows that decentralization is strongly associated with entrepreneurship in firms with a classic founding generation profile: first generation, small in size, controlled by a dominant owner. Moreover, a much more subtle correlation is found for firms that are held in the third generation of ownership and beyond. Yet neither for medium or large firms, nor for family businesses described as sibling partnerships or cousin consortiums was an association between decentralization and entrepreneurship detected in correlation or multiple regression procedures.

The insignificance of decentralization in sibling partnerships may be due to the fact that siblings have a tendency to spread powers among themselves and thereby avoid strategic simplicity and its detrimental consequences for

entrepreneurship (Salvato, 2004). In larger firms and cousin consortiums, organizations might resemble a certain structural profile – the professional, large organization – to such an extent that decentralization, being most common among the large firms of this sample, may not be differing and relevant characteristic of entrepreneurship in these firms.

In contrast, decentralization appears to be beneficial in controlling owner, small family firms. The type of firm, in which it is least common. Indeed, owner-centred family businesses often depend to a large extent on a single leadership figure (Feltham et al., 2005). The literature is generally quite critical about the leadership style of controlling owners, suspecting them of paternalistic habits (Kets de Vries, 1993) and reluctance to share decision making authority with others (Aronoff & Ward, 1996; Beckhard & Dyer, 1983; Hambrick & Crozier, 1985; Rubenson & Gupta, 1990). Yet as a point of defence, it is also worth considering that the obstacle to decentralization of decision making authority is not always the personality of the business leader. Among others, it is the sheer size of the operation that affects whether or not a firm is attractive to self-directed employees[48]. The findings of a Canadian study demonstrate that strict alignment of family businesses towards a single leader decreases with firm size (Feltham et al., 2005). Small firms may simply be small enough to be 'headed' by a single individual so that centralization does not necessarily has to have a negative effect on firm outcomes. Furthermore, centralization was found to promote unity of direction, flexibility and speed in decision making which may benefit entrepreneurship in these firms (Chang & Harrington, 2000; Kets de Vries, 1993; Richardson et al., 2002). Nonetheless and despite potential

[48] This line of thinking was also supported in the personal experience of the author, who was told in a conversation with an owner-manager of a small real-estate development business that despite his best interest to delegate decisions, he encountered enormous difficulty to find employees that were willing to accept greater responsibility and decision making powers without going overboard – that is, behaving so self-guided and entrepreneurial that they would not want accept the owner as boss anymore but demand partnership status, replicate the business idea and start their own business.

difficulties in its implementation, the empirical results clearly support that founding generation entrepreneurs should be encouraged to increase decentralization in their organizations. For instance, they may dedicate particular attention to creating job profiles in their organizations that attract self-directed employees. That way, they may not only free themselves from business routines and create capacity for entrepreneurial projects on their own desk, but would also create an entrepreneurial spirit among their employees. Furthermore, business leaders may be encouraged to involve additional family members and in particular family offspring to channel their fresh thinking and drive to the benefit of family business entrepreneurship (Litz & Kleysen, 2001).

6.2.4 Formal strategic planning

Formal strategic planning is the variable that achieves the strongest association with entrepreneurship and emerges as most relevant predictor of entrepreneurship in this study.

The result is in line with previous empirical studies, where different notions of strategic planning have already been linked with entrepreneurial behaviour. Eddleston et al. (2009) find that the detailed analysis and evaluation of alternative strategic options relates positively to entrepreneurship in family firms; Kellermanns & Eddleston (2006) find that the clear definition of company goals and the existence of a precise strategic roadmap to reach these goals moderate the relationship between perceived technological opportunities and family firm entrepreneurship. Without disclosing their actual measures, McCann et al. (2001) also report that more entrepreneurial firms put more emphasis on strategic planning.

The differentiated analysis advises against undue generalization and demonstrates that the role of strategic planning as predictor to entrepreneurship depends on the type of family firm. Apparently, formal strategic planning is a

quality that has little relevance to small, controlling owner and first generation firms. Yet it does matter to all other identified types of family firms. Firms with increasing complexity in the ownership group: sibling partnerships and cousin consortiums. Firms in successive generations of family ownership: second generation, third generation and beyond. And finally, firms with increasing firm size: medium and large firms. Looking at mean values, strategic planning is also the variable with the most variation between types. The clear development of the mean value from 3.9 for small firms to 5.0 for medium firms and 5.4 for large firms suggests that the prevalence of formal strategic planning may be a size issue.

Apparently, the increasing occurrence and relevance of strategic planning goes hand in hand with the growing complexity of the business and the development towards a professional organization with decreasing family influence. Measuring the family influence via ownership, top management and the board of directors using the power scale of the F-PEC index suggested by Astrachan et al., 2002, family influence is found to decrease significantly with firm size. Whereas almost 80 percent of small firms are strongly family influenced, only about 40 percent of large firms show the same level of family influence (see appendix). Small firms may be characterized as sufficiently simple in the business model to be organized around a strong family leader who may reduce strategic planning to his personal strategic reflection with him/her being the only person involved in the strategy-making process. With increasing firm size, complexity of the business operations, growing number of owners and individuals involved, the formalization of strategic planning becomes a key instrument to foster entrepreneurial activities through planning, concentration, coordination and communication and should thus be recommended to these particular types of family firms.

The strong evidence of formal strategic planning as predictor for entrepreneurship is also remarkable on a theoretical level. As was explained in

chapter 4, formal strategic planning represents an element of agency thinking. The results demonstrate that a strict black/white perception of stewardship as beneficial and agency orientations as detrimental is not advisable for the study of family firm entrepreneurship. Rather, it seems that a specific mix of agency and stewardship elements for each particular type of family firms yields best results in terms of entrepreneurship.

6.2.5 Family functioning

The hypothesized role of family functioning as a moderator of entrepreneurial behaviour is only mildly supported. In fact, such a moderating role can only be confirmed for a single interaction, namely the one with family commitment. Contrary to expectations, family functioning is not univocal in its moderation but plays an ambivalent role in its interaction with family commitment. In families where family functioning is high, superior levels of entrepreneurship are achieved when they prioritize the family over the business. When family functioning is low, the highest and lowest levels of entrepreneurship may be achieved, depending on the respective forming of the family serving priorities. A family that prioritizes the business will achieve the absolute highest levels entrepreneurial behaviour. A family that addresses the interests of the family and its members before the business needs will have the lowest levels of entrepreneurial behaviour amid low levels of family functioning.

The result is somewhat against the common thinking that more family functioning, thus more harmony, closeness, love and altruism, will automatically lead to more entrepreneurship and better results in the family business. This study shows that high levels of family functioning can even negatively affect the entrepreneurship in families that generally pursue a business-first strategy. Perhaps, strong family functioning increases complacency-effects and leads families to have greater difficulty with truly enforcing business-first rules. For

instance, to terminate employment with less talented family offspring, to engage in risky business ventures despite the reluctance of certain parts of the family or to reduce dividends for the benefit of entrepreneurial investments (Lansberg, 1983). Perhaps, high levels of family functioning render the enforcement of business-first thinking conditional on the clause that family harmony may not be affected by the business decisions – which, eventually limits the families ability to really place the business ahead of its own needs.

Despite the negative effects that were just attributed to strong family functioning, it should not be forgotten that families with strong family functioning still attain the second and third best results at not so much distance from the optimal results. Hence, the damage of family harmony happens at a very high level and is probably still moderate in comparison to the potential detriments – both for family and business spheres – resulting from a lack of family functioning in business families (Davis & Harvston, 2001; Eddleston & Kellermanns, 2007).

Nonetheless, and that is a noteworthy finding of this study, lower levels of family functioning are not always negative for family firm outcomes. Rather, low family functioning seems to have the ambivalent quality of bringing about the best and the worst results in family firm entrepreneurship. The best outcomes are achieved when families prioritize the business over the family. In such settings, low family functioning may facilitate the implementation of tough business-first strategies that will benefit the business but are at odds with the interests of individual family members and therefore detrimental to family harmony. In contrast, low family functioning may lead to the lowest levels of family firm entrepreneurship when it occurs in combination with a family philosophy that places the interest of the family ahead of the business. Obviously, a family whose relationships are characterized by conflict and tensions and who does not agree on the business as a common responsibility may have a hard time developing its business. Amid the lack of this common denominator, it is likely that family members act out on their negative feelings towards each other, irrespective of collateral damage.

Moreover, such conflict may spur egoistic tendencies among family members to cash out, pursue individual entrepreneurial projects rather than to invest in the future development of the family business.

In line with Eddleston et al. (2009), the identified interaction between family commitment and family functioning supports that there may be some caveats to the benefits of a stewardship philosophy for entrepreneurship. From this study, it appears that stewardship behaviour towards the family and stewardship behaviour towards the business compete with each other. Stewardship behaviour towards the family – such as the family functioning concerns discussed in this section – can even be detrimental to business success. Future research may benefit from a precise distinction between stewardship behaviours that address the family from those behaviours that address the business.

Further insights into the complex role of family functioning can be gained from the analysis by type of family business.

The results show that the overall level of family functioning declines drastically with dispersed ownership (5.6 for controlling owners, 5.1 for sibling partnerships, 4.6 for cousin consortiums) and still visibly with subsequent generations of family ownership (5.5 first generation, 5.0 second generation, 5.1 third generation and beyond) and firm size (5.3 small firms, 5.2 medium firms, 5.1 large firms).

Evidence supports family functioning as direct and ambivalent antecedent to family firm entrepreneurship. In the correlation analysis by firm size, strong family functioning shows a significant negative association with family firm entrepreneurship for medium sized firms but a significant positive association with large family firms. Similar trends, although without statistical significance, are observable in the classifications for ownership concentration and ownership generation. In firms with concentrated ownership and in early generations, family functioning is rather detrimental for family firm entrepreneurship. With

successive generations of ownership and increasingly large ownership groups, family functioning becomes considerably positive associated with family firm entrepreneurship. These results are in stark contrast to the assumed irrelevance of family functioning as direct predictor of family firm entrepreneurship concluded on the basis of the full sample.

Concentrating on the results with statistical relevance, the negative association of family functioning and entrepreneurship in medium sized family firms and the positive association in large family firms may be interpreted with the specific characteristics of these firms.

As a tendency, medium sized family firms draw on family talent for the management of the family business Moreover, formal family and business governance mechanisms are rare in these types of firms. In contrast, large family firms are much more likely to rely on professional management[49] and to have formal treaties regarding family rights and duties and family business governance (Pieper, 2007). As a consequence, many problems arising from too much family functioning such as the promotion of unsuitable family offspring in management positions might be prevented by the mechanisms and characteristics of large firms – which is why the detriments of too much family harmony become only visible in small and medium sized family firms.

Vice versa, low levels of family functioning do harm to large firms, but are without effect for entrepreneurship smaller firms. The importance of family cohesion seems to increase with firm size as more individuals have a say in the control of the business and family members are only distantly related. In subsequent generations and amid decreasing equity shares held by each individual, attachment with the family and the business may decline. In such settings, conflicts in the family group can lead to political manoeuvres and the

[49] In this sample, 95 percent of the firms classified as medium sized have family member CEOs but only 73 percent of the large firms (see appendix).

blocking important decisions for the family business. Furthermore, when equity stakes are smaller and overall attachment with the family legacy maybe less pronounced, equity holdings will increasingly be regarded like any other exchangeable financial investment that is disposed at convenience if it returns unsatisfactory results. Yet especially for private family businesses, the exit of family members and the return of shares signifies a substantial strain on liquidity which can seriously harm the overall financial situation of the business and reduce its potential to engage in entrepreneurial projects. Thus, for the management of such family businesses, the need to produce stable returns and dividends competitive with comparable market rates increases. With this need to produce satisfactory dividends at all times, the firm's flexibility to take risks and invest in projects with long-term pay-off decreases. In such constellations, high levels of family functioning may indeed provide the glue to keep the family ownership group together in times of hardship. Likewise, family cohesion may facilitate modesty in personal dividends to the benefit of entrepreneurial investments undertaken by the family business.

7 Concluding Chapter

The first aim of the concluding chapter is to provide a summary of the results obtained in this dissertation. Next, the implications for theory and practice of this dissertation will be discussed. The chapter concludes with the limitations of this study.

7.1 Summary of results

Both family business and entrepreneurship are well established topics that attract considerable attention in research and the business world alike. Yet the overlap of both topics – entrepreneurship in family firms – is still a relatively young and unexplored field. As was demonstrated in chapters 2 and 3 of this dissertation, most of the conceptual and empirical contributions appeared in the past decade. The growth in publications over the last five years may be interpreted as a substantial increase in the research topic.

The aim of this dissertation was to investigate how the mindset of the business family affects the entrepreneurial behaviour of family businesses.

The literature review revealed that little theory and few consistent empirical findings exist on this matter.

Agency and stewardship theory were employed to form a complementary framework and theoretical point of reference. Each theory was used to depict one of two idealized, opposing family mindsets which were then linked with entrepreneurial outcomes in the family business. In the literature, the stewardship mindset is typically linked with higher levels of entrepreneurial behaviour. An agency mindset and corresponding attitudes are unanimously regarded as

detrimental for entrepreneurship. In contrast to this prevailing opinion, this dissertation suggested that the right combination of stewardship and agency elements would be best for family firm entrepreneurship.

In accordance with these theoretical assumptions, a research model to predict entrepreneurship was subsequently developed. Family commitment, family focus on growth and change, as well as decentralization of decision making were included as predictor variables to represent elements of a stewardship mindset. One further predictor variable, formal strategic planning, which is more in line with an agency mindset was added. Moreover, it was proposed that the relationship between the predictor variables and entrepreneurship would be moderated by the level of family functioning in the business family.

The research model was then put to test on a sample of 134 family businesses from the German speaking region with was collected for the purpose of this study in 2008.

Using multiple regression and correlation analysis, the research model was tested first on the full sample and later on more homogenous sub-samples arranged according to the conditions of ownership concentration, ownership generation and size of the family business.

On the full sample, the hypothesized positive associations between family commitment, family focus on growth and change and formal strategic planning could be confirmed. In contrast, decentralization was not found to significantly interact with entrepreneurship. Furthermore, family functioning was found to moderate the relationship between family commitment and entrepreneurship. Yet, against expectations, family functioning was found to interact with family commitment in a negative way, indicating that high levels of family harmony actually lower the positive effects of family commitment on family firm entrepreneurship.

The empirical findings demonstrate the importance of family mindset for entrepreneurship in family firms. The study especially achieved to demonstrate that agency elements can have positive implications for entrepreneurship in family firms. In contrast to the general opinion, the findings also revealed that stewardship attitudes are not only positive for entrepreneurship, but negative in certain circumstances. Thus, the balanced approach suggested in this dissertation is clearly supported.

The differentiated analysis by type of firm asserts that the level of entrepreneurship is independent of ownership concentration, ownership generation and firm size. However, the findings show that the impact of a particular family attitude is not univocal in its effects for all family firms but conditional to the characteristics of the family business. Family commitment plays an important role in sibling partnerships and mid to large sized family firms. Family focus on growth and change matters for entrepreneurship in firms with less than 10 owners, firms held in the first generation and small to medium sized operations. Similarly, decentralization of decision making seems to contribute most to a very specific profile of family firms – the small, first generation owner controlled business. Formal strategic planning is relevant to the exact opposite types: Firms that are medium or large sized, held in subsequent generations of ownership and with an ownership group that includes siblings up to several hundred distantly related individuals. In contrast to the full sample, the differentiated analysis also suggests a direct but discontinuous effect of family functioning for family firm entrepreneurship. While there is a clear positive association between strong family functioning and entrepreneurship for large firms, it appears that smaller firms do better with a less than perfectly harmonious family atmosphere.

The key findings concerning the relationship between family mindset and entrepreneurship are once more summarized for each type of family firm in the illustration below.

Type / Variables	All	Ownership Concentration			Ownership Generation			Firm Size (FTE)			
		Controlling Owner	Sibling Partnership	Cousin Consortium	1.	2.	3.+	Small (<49)	Medium (50-249)	Large (250+)	Med/Large (100+)
Growth of industry	+/+		n.s./ +				n.s./ +		+	+	
Change in production technology	+/+	+	+/+		+		n.s./ +		+	+	+
Firm size (revenue)							n.s./ +				
Firm age					+						
# family shareholders											
Past performance	+/+	+	n.s./ +			+	n.s./ +	+		+	+
Family commitment	+/+		+/+			+	+/+			+	+
Family focus on growth and change	+/+	+	+/+		+		n.s./ +	+	+		
Decentralization of decision making	n.s./ +	+			+		n.s./ +	+			
Formal strategic planning	+/+		+/+	+		+	+/+		+	+	+
Family functioning									(-)	+	
Interact. family functioning* family business serving[2]	(-) / n.a.						(-)/ n.a.				
Cases	134	29	86	19	13	24	96	24	43	67	95
Methods [1]	MRA / CA	CA	MRA / CA	CA	CA	CA	MRA / CA	CA	CA	CA	MRA

Terminology: "+" = positive assocation."(-)" = negative assocation. n.a. = not applicable; n.s.= not significant

(1) MRA= Multiple regression analysis. CA= Correlation analysis (2) Only tested in MRA

Figure 73: Simplified summary of identified relationships with entrepreneurship in different types of family firms

7.2 Implications for theory and practice

7.2.1 Theoretical implications

Central aim of this study was to further the understanding of entrepreneurship in family firms. Since the research question is at the overlap of two research fields – family business research and entrepreneurship research – its theoretical implications may be of interest to scholars from both fields.

(1) Contribution to the understanding of family firm entrepreneurship and its predictors

Research on the predictors of family firm entrepreneurship covers a vast array of variables and aspects. Extant family business research tends to concentrate on the business system with topics such as leadership, business practices, firm culture, firm environment, firm ownership, and performance. Family influence has so far mainly been considered if it is materially manifest in the business system. For instance, in the headcount, generations and roles of family members actively involved in the operative business. Variables related to the business family mindset, its culture and attitudes are largely absent.

Following the line of thinking that considers the business family mindset as ultimate source of all business behaviour; this study intended to address this gap in research on family firm entrepreneurship.

This study argued theoretically and demonstrated empirically the links between family mindset and entrepreneurial behaviour of the family business. It affirmed, although the relevance may vary with the type of firm, the role of the business family's commitment, its growth and change orientation, a governance model

that emphasizes formal strategic planning and decentralized decision making as well as overall family functioning for entrepreneurial behaviours.

Future research may want to build on the quantitative evidence regarding the importance of family mindset obtained in this study with more qualitative, in–depth analysis. In particular, scholars could inquire on the exact forming and modes of operation of the variables investigated in this study. Besides, qualitative studies could investigate the effects of family governance policies, an instrument whose influence has been speculated about in this study. Future research could also examine the link between the business family mindset, its entrepreneurial activities and the future financial performance in a more longitudinal study. Especially against the background of an increasing number of prominent family businesses that are on the edge of collapse as a consequence of high risk strategies, it seems advisable to integrate the consequences of entrepreneurial activities, that is, financial performance or even survival rates, in research models.

(2) Contribution to the conceptualization of entrepreneurship

This study also adds to the discussion regarding the appropriate conceptualization of entrepreneurship. Reviewing the extant empirical studies on entrepreneurship in family firms, multidimensional, behaviour-oriented conceptualizations are frequently encountered. Although the terminology is not consistent across studies, there is tendency for conceptual convergence. The combination of risk taking, innovativeness and proactiveness was found to be at the core of most conceptualizations. The suitability and validity of these three dimensions to form a construct of entrepreneurship was also confirmed in the empirical part of this study and can thus be recommended for future application. In contrast, this study finds the five dimensional construct of entrepreneurship suggested by Lumpkin & Dess (1996) to be partly problematic. The measures of competitive

aggressiveness, the fourth dimension, form a valid construct and independent dimension of entrepreneurship and thus a true addition to the first three elements. Yet the measures tested for autonomy were found to be insufficiently correlated and a factor analysis confirmed that respondents did not perceive five, but rather four distinct theoretical dimensions. Of course, this study might be an outlier. However, the fact that hardly any study has ever used the full five dimensional construct of entrepreneurial orientation in empirical research suggests that there may be a structural problem to the construct. Hence, future research may be well advised to review especially the dimension of autonomy and consider a modification before further application.

(3) Contributions regarding the use of stewardship and agency theory as complementary frameworks

This study successfully employed stewardship and agency theory to conceptualize the mindsets of business families and to link their respective forming with the entrepreneurial behaviour of the family business. Both theories are very powerful and established frameworks in family business research. Their combined application allows for a much greater repertoire and more realistic representation of the potential views that shape the attitudes and behaviours of individuals in family businesses. Since this approach is still in its infancy and unexplored in many ways, future research may want to concentrate on refining this promising framework. To begin with, additional efforts may be dedicated to the precise definition of what exactly constitutes the boundaries of agency or stewardship mindset in business families. So far, research draws mostly on the writings of Davis et al. (1997) which were formulated in a non-family context. A note of Corbetta & Salvato (2004) and a study of Kellermanns et al. (2009) constitute the only sources that provide meaningful conceptual input for the family firm context. Some dubieties in the meaning of stewardship terms came up in the context of this study. The stewardship model of man described by Davis

and colleagues is that of an individual "whose behaviour is ordered such that pro-organizational, collectivistic behaviours have higher utility than individualistic, self-serving behaviours" (Davis et al., 1997, p. 24). In the family firm context, trust, altruism and collectivistic orientations among family members are considered as key qualities of a stewardship mindset where personal interests are subordinated to business goals (Corbetta & Salvato, 2004; Eddleston & Kellermanns, 2007; Eddleston et al., 2008). However, collectivistic behaviours of family members can be directed to the family group <u>or</u> to the business organization. As was demonstrated in this study, the goals of the family group and the business organization can at times be opposites: For instance, denying a less than perfectly talented family candidate access to leadership positions is good for the business; granting it would ensure family harmony. Thus, researchers may draw very different conclusions on the family and its orientations depending on their understanding of the term collectivistic, which easily leads to confusion in the research community. A clear and common understanding of how exactly stewardship and agency mindsets shall be defined in the family firm context seem therefore the first and foremost task to address.

Noteworthy is also the identified ambivalent quality of stewardship and agency mindsets for family firm outcomes. In contrast to the extant literature which predominantly considers agency mindsets as detrimental and stewardship philosophies as beneficial to firm outcomes, this study proposed and empirically demonstrated that a balanced mindset combining both agency and stewardship elements yields best results for entrepreneurship. Future research may want to use this initial finding as point of departure to further understand the exact qualities of both mindsets. For example, researchers could test further variables such as control and incentive-based pay for agency mindsets. Likewise, research may want to test agency and stewardship theory on business outcomes other than entrepreneurship such as, for instance, future financial performance.

(4) Providing evidence on larger than average multi-generation family businesses and confirming need to distinguish between specific types of family firms

The sample employed in this study contained a significant number of family businesses that were mid or large sized, held in the third generation of family ownership or beyond and had relatively large ownership groups. Such evidence constitutes a relevant novelty since most prior empirical efforts analyzed younger, small to medium sized family firms with less complex ownership structures.

The differentiated analysis sorting family businesses according to their ownership concentration, ownership generation and size of operations clearly revealed that the predictors of entrepreneurship linked to the business family mindset vary substantially from type to type. Although this study is still among the first to systematically compare different types of family firms, the few available earlier differentiated efforts including especially Salvato (2004) confirm this observation. With many mixed and inconclusive findings among the existing typically undifferentiated empirical studies, a more differentiated handling of family firms may indeed be the key to reconcile the otherwise contradicting prior evidence.

For future research, it is hence advisable to be as precise as possible in what type of family firm is being researched. Each classification applied in this study – ownership concentration, ownership generation, and size of operations proofed valuable and may be recommended for future research. Additionally, scholars may want to investigate the impact of differing levels of operational family involvement. Applying more complex family firm typologies such as, for instance, the F-PEC Scale (Astrachan et al., 2002) may also be interesting. However, one should be aware that constructs that are aggregated from various aspects of family influence may also disguise a lot of information and thereby

eventually inhibit the interpretation findings – a primary reason, why aggregated constructs were not applied as typology in this study.

With regard to specific family firm profiles, scholars may also be encouraged to consider the investigation of entrepreneurship in business families with portfolio holdings. This call is indeed not new (see especially Habbershon & Pistrui, 2002, Kenyon-Rouvinez, 2001). Nonetheless, up to present, concepts and consequently empirical studies are still firmly focused on a single business asset per business family. In times of rapid change and amid the rise of the capital markets perspective in the business world, an increasing number of business families diversify their activities and dispose of unprofitable operations in order to invest in other industries with better prospects. In fact, debonding from a particular business may be central to the long-term prosperity of entrepreneurial families. The negligence of this issue in the concepts and empirical efforts of family business scholars is therefore regrettable.

7.2.2 Implications for practice

Several practical recommendations for family businesses and their advisors emerge from this study.

First and foremost, the findings point to the danger of giving general advice on enhancing entrepreneurial behaviours without consideration of the specific type of family firm at stake. The constellations in family firms can differ substantially and so do the respective drivers of entrepreneurship. The differentiated analysis of the firms in this sample according to ownership concentration, ownership generation and size of the business operations demonstrates this clearly.

Rather than reproducing the findings for all nine types of the three classifications of family firms tested in this study, the substantial correlation and similarities in characteristics and results of specific types will be used to form

recommendations for three idealized profiles of family firms on the basis of the nine types investigated in chapter 6[50]. First, the small sized, controlling owner firm, held in first generation of family ownership. Second, the sibling partnership, held in the second generation of family firms with medium sized business operations. Third, cousin consortiums, held at least in the third generation of ownership with large operations.

For the first profile – small, first generation, owner controlled firms - the decentralization of decision making in the family business and the family's focus on growth and change appear to be key levers of entrepreneurship. As was mentioned in the discussion, decentralization may not always be easy to implement in this type of firm. Yet these firms stand to benefit most from it. In order to achieve higher levels of decentralization, decision makers may revisit job profiles in their organization and extend the tasks and responsibilities for business managers. Such an empowerment may attract more self-directed individuals to the company that are capable to contribute to the leadership tasks and entrepreneurial profile of the family business. For the controlling owner, this would facilitate the delegation of routine decision making and free capacity for new businesses development. Family business leaders may also consider the involvement of family offspring in the entrepreneurial activities of the firm. Research has shown that young generations often display fresh thinking and enormous drive which can be channelled to the benefit of family firm entrepreneurship (Litz & Kleysen, 2001). Probably, the family's focus on growth and change attitude will also be positively influenced when individuals feel less

[50] Evidently, this constitutes a simplification. However, since the overlap among the three classifications is substantial, it was decided that readers would benefit more from a relative clear and comprehensive outline of family business type regarding the attributes of size, generation and ownership constellation as opposed to nine different descriptions concentrating on a single characteristic each. In order to avoid undue generalizations, an explicit note is made when findings pertain to less than all three attributes employed to form an idealized type of family firm.

pressure from routine management and perceive more support in the strategic development of their firms.

The second category of family firms addresses medium sized firms that are held in the second generation by a group of siblings. According to the findings in this study, family modesty and commitment to the firm play a critical role for the entrepreneurial behaviour of family firms at this stage. In contrast to controlling owner firms that are dominated by a single individual, ownership in sibling partnerships is characterized by a condition where no single individual can enforce his will without the consent of others. At this point, egoistical tendencies, camp thinking and political manoeuvres begin to increase. Business families at this stage should therefore begin to actively manage the family. This could include, for instance, the establishment of a clear family governance treaty that describes the rights and duties of family members. It may cover issues such as voting procedures, employment of family members in the family business, dividend policies, fringe benefits and pay-out rules. Families that manage to establish a general culture of modesty among family members and ensure that the family business is protected from egoistic and excessive wants of the family may also be in a superior position when it comes to the realization of entrepreneurial projects[51]. Furthermore, findings support that business families should not shy way from uncomfortable decision making for the sake of family harmony. Rather, they should encourage rational but fair decision making and even risk eventual conflict or disappointment. For instance, next generations in family businesses that are confronted from early on with the pronounced expectation to take over the family business, may be handicapped in their individual development. They might get engaged in the business only to avoid disappointing their parents, even if they feel neither passion nor interest for it. Evidently, this would unlikely lead to the best results for individual or business. Of course, the

[51] Positive association of family commitment and entrepreneurship applies only to sibling partnerships and medium sized firms, not to second generation family businesses.

opposite case would be just as detrimental – families where the offspring is firmly fixed on pursuing a career in the leadership of the family business despite insufficient talents and where parents support this ambition out of altruistic motives. Thus, both parents and children might be better off with more egoism and less altruistic tendencies at this stage.

As for governance practices, the family is still likely to dominate leadership roles in firms at this stage. However, in order to prepare for the decrease in operational involvement of family members typically observed in the next stage, family businesses should begin to invest in organizational processes and structures to foster the entrepreneurial spirit of the business. This study finds that especially formal strategic planning processes enhance entrepreneurial activities in sibling partnerships, second generations and medium sized firms. Family businesses may want to ensure that the strategy-making processes are fully embraced and actively used by the organizational members and not just accomplished as obligatory act. Therein, the active involvement of various parts of the organization should be encouraged and the results of the planning process, that is, the strategic goals of the company and the chosen path to achieve them, should be clearly communicated throughout the organization.

The third category comprises large sized, cousin consortium held in the third generation of family ownership or beyond. Most often, the role of the business family changes from being owner and manager to being predominantly shareholder in these firms. With less operational family involvement, the processes and culture of the organization become more important antecedents of entrepreneurship in these firms.

This study finds especially formal strategic planning to be conducive to entrepreneurship in these firms and the instalment of respective processes is recommended to family businesses at this stage. Furthermore, businesses in the third generation of ownership were found to benefit from decentralization.

Perhaps, the creation of project teams which operate outside the boundaries of the established routine business and with a dedicated focus on entrepreneurship could also enhance entrepreneurship in these firms.

Furthermore, a family mindset that is characterized by family commitment to the family business and overall family cohesion was found to benefit entrepreneurship in these firms. In order to foster these qualities, business families may want to encourage regular family activities, nurture family member's interest in the family business and promote a sense of pride and belonging among family members. Family groups should take particular attention in ensuring unity of direction and cohesion in the shareholder group. The election of family representatives and creation of shareholder committees may enhance unity of action and flexibility in such firms and thereby facilitates entrepreneurial activities.

All recommendations are summarized in the illustration below.

LEVERS TO ENHANCE ENTREPRENEURSHIP
Specific advice for three idealized types of family firms...

1 Controlling owner
First generation
Small sized firms

Aim to increase decentralization of decision making in organization
- Create „real“ management jobs
- Hire staff willing to take on responsibility
- Delegate „routine“ decision making away from CEO

Exploit entrepreneurial spirit of business family
- Reserve time of family decision makers to new business development
- Involve additional family members in new ventures

2 Sibling partnerships
Second generation
Medium sized firms

Begin actively managing the family
- Establish family treaty with rights and duties
- Cultivate values of modesty and commitment
- Don't put harmony above everything else - encourage fair but rational decision making

Invest in organizational processes and capacities
- Establish formal strategic planning process
- Ensure strategic communication and involvement accross organization

3 Cousin consortiums
Third generation
Large sized firms

Strive for cohesion in family ownership group
- Family bonding activities
- Foster pride and sense of belonging
- Ensure strong decision making and control over business

Nurture growth and change spirit in family business
- Foster family commitment to business
- Effectively manage entrepreneurial ideas at all levels of organization, e.g. with strategic planning and independent venture project teams

Figure 74: Summary of recommendations for practice
Source: Own graph

7.3 Limitations of study

This study has several limitations which may reduce the significance of its results.

The first limitation regards the cross-sectional nature of the study design. Since all information pertaining to the analyzed sample were collected in 2008, it is not possible to infer causality in the identified relationships. Comforting may be the finding of Craig & Moore (2006), who report from their longitudinal study that variables related to family and business culture are relatively stable across time.

The second limitation concerns the method of data collection and the selection of family businesses for the survey. Since responses were obtained through

convenience and not perfectly random selection, the sample does not constitute a perfect replication of the total population of family firms in Germany. Instead, the sample is likely to have a geographical bias towards the Southern German region from the firms that were approached through personal contacts. Furthermore, due to the efforts of the respective departments in Hypovereinsbank and Deutsche Bank, the sample tends to have more medium and large firms in comparison with national averages. Families approached through networking associations may also differ from average family firms in being more successful and as a result of this more open to enter into a dialogue with peers and researchers.

Third, the validity of the study may suffer from the data gathering procedure which relied on primary information of self-assessment for all items in the survey. Although self-assessment is a very common practice in family business research (Lyon et al., 2000), this methodology may affect the reliability of answers in that they reflect at times more wishful thinking than a factual state. Although full anonymity was granted to participating family firms in order to guard against biased responses, this study is still subject to the potential weaknesses associated with the use of perceptual data. Due to the anonymous nature of returned questionnaires, it was also not possible to trace back the identity of the respondent and verify the statements with secondary information.

The fourth limitation is related to the single-response approach of the empirical study. As Finkelstein & Hambrick (1996) note, even when confronted with the same situation, different individuals tend to focus on very different parts of their firm's business environment and might have very different aspirations for the firm and its mission. Evidently, the perceptions and beliefs of each respondent are subjective, shaped by many influences including personality, experience, values, belief as well as the actual position in family and organization or the age and generation of family ownership. The use of multiple respondents per

business family would have allowed the assessment of inter-rater reliability and is clearly advisable for future research.

Another limitation of the study is that the sample focuses on respondents with a very homogenous viewpoint. The viewpoint of family members (98 percent of respondents are family members) who are also senior decision makers in the family business (more than 90 percent report to be either member of the top management team or on the board of directors). The exclusive focus on top management is not unusual in business research. Especially members of the top management, which is the role of 78 percent of respondents in this sample, are considered as reliable source of information (Glick, Huber, Miller, Doty, & Sutcliffe, 1990, Chaganti, Chaganti & Vijay, 1989). Arguably, information relating to confidential family issues or business strategies could, if answered by a single individual, only be obtained from family members with significant involvement in the family business operations. Nonetheless, a more complete picture would be desirable for future research. This could be achieved by focusing in particular on relatives without operational involvement in the family business or employees that are not related with the family.

Furthermore, the study may suffer from the limited number of variables and items examined. As in most quantitative empirical research, investigations are based on a small set of information relating to the behaviour and processes in the underlying family businesses. Hence, the identified relationships may only convey a small part of family business realities and omit a substantial part of it. In this study, a pitfall may be the fact that several variables that had been collected with the survey were not included in the final research model. Among these omitted variables are in particular items that address characteristics of the CEO, items pertaining to the family presence in business and items that inquire about the existence, composition and impact of the board of directors. Of course, the reason for the selective inclusion of variables is not deliberate but driven by the nature of the statistical procedures employed. In multiple regression analyses,

the number of predictor variables is determined by the number of cases in the sample. However, given the strong role of agency elements identified from the empirical study, with hindsight, the omission of further agency-related variables such as the information on the board of directors appears deplorable.

Moreover, as a general rule, an attempt was made to employ tested and established multi-item constructs from the literature in the operationalization of the study. However, in particular the variables measuring family business priorities, formal strategic planning and the decentralization of decision making are based on single items only. Evidently, the use of multi-item constructs would have accomplished more reliable results.

Last but not least, the study's results are based on findings from a sample of family businesses from the German speaking region. Therefore, any inference of results to other regions should be made with utmost caution since national culture, traditions, economic and political circumstances may influence the applicability of the findings.

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Appendix

Alle Angaben werden selbstverständlich **streng vertraulich** behandelt und nur **anonym** ausgewertet bzw. dargestellt.

Fragebogen zu Erfolgsfaktoren von unternehmerischem Handeln in Familienunternehmen

Hinweise zur Bearbeitung
Der Fragebogen ist von Personen auszufüllen, die zum Gesellschafterkreis eines Familienunternehmens gehören.
Sie werden für die Beantwortung der Fragen voraussichtlich **10 Minuten** benötigen. Beachten Sie dabei bitte folgende Hinweise.

- Bitte kreuzen Sie Zutreffendes in den grau hinterlegten Kästchen an oder kreisen Sie dort die entsprechende Zahl ein.
- Beachten Sie für Fragen bei denen wir Sie bitten, selbst eine Angabe zu machen, dass der Aussagewert oftmals nicht von der absoluten Präzision der Antworten abhängt. Scheuen Sie sich daher bitte nie vor der Angabe von Schätzwerten.
- Falls Sie zu einzelnen Punkten keine Auskunft geben können, lassen Sie den entsprechenden Punkt bitte unbeantwortet.
- Bei Rückfragen kontaktieren Sie gerne Julia Hofmann: julia.hofmann@student.unisg.ch oder Tel. +49 (0) 172 660 2445.

TEIL 1	DIE INDUSTRIE UND DAS UMFELD IHRES UNTERNEHMENS							
Bitte bewerten Sie das Umfeld Ihres Unternehmens bezogen auf Ihr wichtigstes Geschäftsfeld. Geben Sie bitte für jede Frage Ihre Situation durch die Wahl einer Zahl von 1 bis 7 an und positionieren Sie sich damit zwischen den jeweiligen Aussagen.								
1.	Verglichen mit der Gesamtwirtschaft, wie beurteilen Sie das Wachstum Ihrer Industrie?	Wesentlich langsamer			Ungefähr gleich			Wesentlich schneller
		1	2	3	4	5	6	7
2.	Wie sehr ist Ihre Produktionstechnologie Veränderungen unterworfen?	Kaum						Oft und wesentlich
		1	2	3	4	5	6	7
3.	Wie gut sind Nachfrage und Wünsche der Kunden vorhersehbar?	Relativ gut						Kaum
		1	2	3	4	5	6	7
4.	Wie intensiv ist der Preis-Wettbewerb unter den Anbietern?	Weniger intensiv						Sehr intensiv
		1	2	3	4	5	6	7
5.	Wie groß ist die Gefahr, dass das Kerngeschäft in Zukunft stark an Bedeutung verliert?	Gering						Hoch
		1	2	3	4	5	6	7
Bitte beurteilen Sie nun das Umfeld für Ihr Unternehmen insgesamt und über alle Geschäftsfelder								
6.	Bezogen auf alle Ihrer Aktivitäten – gibt es große Unterschiede in der Art des Wettbewerbs?	Nein, sehr ähnlich						Ja, sehr verschieden
		1	2	3	4	5	6	7
7.	Wie stark ist Ihr Unternehmen insgesamt diversifiziert?	Kaum						Sehr stark
		1	2	3	4	5	6	7

TEIL 2	DIE UNTERNEHMERISCHE AUSRICHTUNG IHRES UNTERNEHMENS								
Untenstehend finden Sie jeweils Paare von Aussagen. Geben Sie bitte für jeden Punkt Ihre Präferenz durch die Wahl einer Zahl von 1 bis 7 an und positionieren Sie sich dadurch zwischen den jeweiligen Aussagen.									
8.	**Im Allgemeinen bevorzugt die Geschäftsleitung…**								
a.	Projekte mit geringem Risiko und normalen Erträgen.	1	2	3	4	5	6	7	Projekte mit erhöhtem Risiko und potentiell sehr hohen Erträgen.
b.	eine vorsichtige, abwartende Haltung um kostspielige Fehler zu minimieren.	1	2	3	4	5	6	7	eine mutige, aggressive Haltung um das vorhandene Potential optimal zu nutzen.
9.	**Bezüglich der Einführung neuer Produkte und Leistungen innerhalb der letzten 5 Jahre…**								
a.	es gab keine neuen Produkte oder Leistungen in diesem Zeitraum.	1	2	3	4	5	6	7	Es wurden viele neue Produkte oder Leistungen eingeführt.
b.	waren die Veränderungen meistens unwesentlicher Natur.	1	2	3	4	5	6	7	waren die Veränderungen oft ziemlich tief greifend.
c.	war die Geschäftsleitung eher auf das Management von bewährten Produkten und Märkten fokussiert.	1	2	3	4	5	6	7	hatten Technologieführerschaft und radikale Neuerungen Priorität für die Geschäftsleitung.
10.	**Im Verhalten gegenüber Konkurrenten ….**								
a.	neigt mein Unternehmen dazu, auf Maßnahmen von Wettbewerbern zu reagieren.	1	2	3	4	5	6	7	neigt mein Unternehmen dazu, Maßnahmen zu initiieren, auf welche die Konkurrenz reagiert.
b.	führen wir selten als erstes neue Produkte/Leistungen/Technologien ein.	1	2	3	4	5	6	7	führen wir häufig als erstes neue Produkte/Leistungen/Technologien ein.
c.	gibt es kaum Bemühungen, sich Mitbewerber-Marktanteile anzueignen.	1	2	3	4	5	6	7	ist mein Unternehmen sehr aggressiv und stark konkurrenzbetont.

d.	versucht man, ein Zusammenstoßen zu verhindern und verfolgt eine „leben und leben lassen“ Haltung.	1 2 3 4 5 6 7	nimmt mein Unternehmen typischerweise eine konkurrenzbetonte “fressen oder gefressen werden” Haltung ein.
11.	**Entscheidungsfindungen im Unternehmen…**		
a.	folgen stets der festgelegten Vorgehensweise.	1 2 3 4 5 6 7	erfolgen ziemlich frei von Formvorgaben entsprechend der Situation.
b.	sind stark durch externe Anspruchs-gruppen (z.B. Banken) beeinflusst.	1 2 3 4 5 6 7	sind relativ unabhängig von externen Anspruchsgruppen.
12.	**Spektrum der Aktivitäten**		
a.	In wie vielen Geschäftsfeldern sind Sie aktiv?		(Anzahl)
b.	Wie viele davon würden Sie als Kernaktivitäten bezeichnen?		(Anzahl)
13.	**Grad der Internationalisierung**		
a.	In wie vielen Ländern ist Ihr Unternehmen tätig?		(Anzahl)
b.	Welchen Beitrag zum Gesamtumsatz liefert Deutschland?		(Prozent)

14.	**Wie würden Sie die Leistung Ihrer Firma im Vergleich zu Ihren Mitbewerbern bewerten?**	**In den letzten fünf Jahren** **schlechter**			**gleich**			**besser**
a.	Entwicklung des Umsatzwachstums	1	2	3	4	5	6	7
b.	Durchschnittlicher Marktanteil	1	2	3	4	5	6	7
c.	Entwicklung der Profitabilität (Gewinnmarge)	1	2	3	4	5	6	7
d.	Durchschnittliche Profitabilität (Gewinnmarge)	1	2	3	4	5	6	7

15.	**Absolute Finanzkennzahlen und Finanzpolitik**		
a.	Wie hat sich Ihr Umsatz in den letzten 10 Jahren entwickelt? *(z.B. von 50 Mio. auf 100 Mio. = + 100 %)*		(Prozent)
b.	Wie hoch ist die Eigenkapitalquote Ihres Unternehmens? *(Ermittelt als Eigenkapital/Gesamtkapital)*		(Prozent)
c.	Der Zugang zu Kapital stellt in keiner Weise einen Engpass für das Wachstum des Unternehmens dar.	1 2 3 4 5 6 7	Der Zugang zu Kapital ist ungenügend und stellt ein großes Hindernis für das Wachstum des Unternehmens dar.

TEIL 3 DIE UNTERNEHMENSFÜHRUNG UND DAS ENGAGEMENT DER FAMILIE

16.	**Die Geschäftsleitung**		
a.	Wie viele Personen sind in der Geschäftsleitung?		(Anzahl)
b.	Ist der/die Vorsitzende der Geschäftsleitung ein Familienmitglied?	Ja	Nein
c.	Welchen berufsqualifizierenden Abschluss hat der/die Vorsitzende erworben?	Universität	Anderer Abschluss
d.	Wie viel Berufserfahrung außerhalb des Familienunternehmens hat er/sie?		(Jahre)
e.	Wie lange ist der/die derzeitige Vorsitzende im Amt?		(Jahre)
f.	Wie viele Personen hatten dieses Amt in den vergangenen 50 Jahren inne?		(Anzahl)
g.	Wie viele davon waren Familienmitglieder?		(Anzahl)
17.	**Führungsstil und Organisationskultur**		
a.	Die Entscheidungskompetenz ist tendenziell bei der obersten Führungsebene angesiedelt.	1 2 3 4 5 6 7	Die Entscheidungskompetenz wird soweit möglich an die Unternehmensbereiche delegiert.
b.	Es gibt keine formale strategische Planung im Unternehmen.	1 2 3 4 5 6 7	Die strategische Planung wird regelmäßig festgelegt und im Haus kommuniziert.
c.	Erfolgsabhängige Vergütung gibt es nur für wenige Mitarbeiter.	1 2 3 4 5 6 7	Das Gehalt der meisten Mitarbeiter hat eine erfolgsabhängige Komponente.
d.	Die Unternehmenskultur ist eher konservativ.	1 2 3 4 5 6 7	Das Unternehmen ist offen für Veränderung.

18.	**Aufsichts-, und Kontrollgremien**								
a.	Wie sehr sind, falls vorhanden, diese Organe Impulsgeber für Erneuerung/Weiterentwicklung?	NA	Überhaupt nicht wichtig						Sehr wichtig
	Gesellschafterrat		1	2	3	4	5	6	7
	Beirat		1	2	3	4	5	6	7
	Aufsichtsrat		1	2	3	4	5	6	7
b.	Wie sehr sind ggf. Aufsichtsrat und Beirat mit Nicht-Familienmitgliedern besetzt?	NA	Überhaupt nicht						Vollständig
			1	2	3	4	5	6	7

19.	**Engagement der Familie im Unternehmen**			
a.	Anzahl der Familien-mitglieder mit Tätigkeit im Unternehmen insgesamt	(Anzahl)	Davon in Geschäftsleitung	(Anzahl)
			Davon im Gesellschafterrat	(Anzahl)
			Davon im Beirat	(Anzahl)
			Davon im Aufsichtsrat	(Anzahl)
			Davon in anderen operativen Aufgaben	(Anzahl)
b.	Sind im Unternehmen Familienmitglieder aus mehr als einer Generation tätig?		Nein	Ja, nämlich:
c.	Wie viele Familienmitglieder unter 40 Jahren sind im Familienunternehmen tätig?			(Anzahl)

TEIL 4	DIE EIGENTÜMERSTRUKTUR DES UNTERNEHMENS		
20.	**Der Anteil der Familie am Unternehmen**		
a.	Welchen Anteil hält Ihre Familie insgesamt am Unternehmen? *(Bitte beachten Sie, dass als Familie alle Personen gezählt werden, die in einem verwandtschaftlichen Verhältnis zueinander stehen)*		(Prozent)
b.	Falls das Unternehmen nicht zu 100 Prozent im Besitz Ihrer Familie ist, bitte benennen Sie die übrigen Eigner und deren Anteile.	Andere Familie(n)	(Prozent)
		Leitende Angestellte	(Prozent)
		Private Equity Investoren	(Prozent)
		Gelistet an der Börse	(Prozent)
		Sonstige:	(Prozent)
21.	**Die Konzentration des Eigentums in der Familie**		
a.	Bitte geben Sie die Anzahl der Familienmitglieder an, die Gesellschafter sind.		(Anzahl)
b.	Über wie viel Prozent verfügen die beiden Individuen mit den größten Anteilen in der Familie zusammen?		(Prozent)

TEIL 5	DIE UNTERNEHMERISCHE EINSTELLUNG IHRER FAMILIE		
22.	Das Unternehmen existiert zum Wohle der Familie.	1 2 3 4 5 6 7	Das Unternehmen hat Priorität vor den Bedürfnissen der Familie.
23.	Das Unternehmen wird als eine Art „erweiterte Familie“ empfunden.	1 2 3 4 5 6 7	Unternehmen und Familie werden als voneinander getrennt wahrgenommen.
24.	Das Unternehmen soll auch noch in zukünftigen Generationen im Familienbesitz sein.	1 2 3 4 5 6 7	Die Familie kann sich vorstellen, das Unternehmen gegebenenfalls zu verkaufen.
25.	Die unternehmerischen Aktivitäten der Familie sind gebündelt und werden gemeinsam verfolgt.	1 2 3 4 5 6 7	Einzelne Familienmitglieder treiben individuelle unternehmerische Projekte ohne Beteiligung der anderen voran.
26.	Die junge Generation (bis 40 Jahre) zeigt starkes Interesse und die Fähigkeit, das Unternehmen weiterzuführen.	1 2 3 4 5 6 7	Es gibt niemanden in der nächsten Generation, der für die Leitung des Familienunternehmens in Frage kommt.
27.	Die Familie denkt vor allem an das Bewahren von Vermögenswerten.	1 2 3 4 5 6 7	Die Familie denkt vor allem an Wachstum.
28.	Die Familie möchte in den bisherigen Hauptgeschäftsfeldern wachsen.	1 2 3 4 5 6 7	Die Familie sucht Wachstum außerhalb der Kernaktivitäten.
29.	Entscheidungsträger der Familie verbringen die meiste Zeit mit dem Management bestehender Aktivitäten.	1 2 3 4 5 6 7	Die Entscheidungsträger widmen ihre Aufmerksamkeit vorwiegend neuen Projekten.
30.	Die Familie identifiziert sich stark mit bestimmten Produkten und sieht sich verpflichtet, diese zu behalten.	1 2 3 4 5 6 7	Die Familie geht davon aus, dass die meisten Ihrer heute angebotenen Produkte in Zukunft ausgetauscht werden.
31.	Die Familie ist überzeugt von der Zukunftsfähigkeit des derzeitigen Geschäftsmodells.	1 2 3 4 5 6 7	Die Familie hinterfragt das derzeitige Geschäftsmodell oft und ist bereit, dieses gegebenenfalls zu verändern.
32.	Die Präsenz der Familie im Top Management ist entscheidend für den Erfolg.	1 2 3 4 5 6 7	Die Präsenz von Nicht-Familienmitgliedern im Top Management ist entscheidend für den Erfolg.
33.	Die Familie bevorzugt stabile Erträge.	1 2 3 4 5 6 7	Die Familie bevorzugt weniger stabile, dafür höhere Erträge.
34.	Die Familie ist vor allem am langfristigen Erfolg interessiert.	1 2 3 4 5 6 7	Der Familie sind der kurzfristige Erfolg und Ausschüttungen sehr wichtig.

TEIL 6	DAS FUNKTIONIEREN DER FAMILIE							
	Bitte nehmen Sie Stellung zu folgenden Aussagen.	Trifft gar nicht zu			Neutral			Trifft sehr zu
35.	Die Planung von gemeinsamen Aktivitäten ist schwierig, da wir sehr unterschiedliche Interessen haben.	1	2	3	4	5	6	7
36.	In Krisensituationen können wir uns aufeinander verlassen.	1	2	3	4	5	6	7
37.	Unsere Gefühle können wir offen zum Ausdruck bringen.	1	2	3	4	5	6	7
38.	Jedes Familienmitglied wird akzeptiert wie es ist und kann seinen Weg selbst bestimmen.	1	2	3	4	5	6	7
39.	Es gelingt uns gut, auch schwierige Entscheidungen zur Lösung von familiären Angelegenheiten zu treffen.	1	2	3	4	5	6	7
40.	Wir haben ein vertrauensvolles Verhältnis zueinander.	1	2	3	4	5	6	7
41.	Es gibt Spannungen und Ressentiments in der Familie.	1	2	3	4	5	6	7

TEIL 7	ABSCHLIESSENDE ANGABEN						
Abschließend möchten wir Sie bitten, uns folgende allgemeine Angaben zu Ihrem Unternehmen und zu Ihrer Person zu machen.							
42.	**Angaben zu Ihrem Unternehmen**						
a.	Umsatz im letzten Geschäftsjahr	1 - 20 Mio. EUR	20 - 50 Mio. EUR	50 – 250 Mio. EUR	250- 500 Mio. EUR	500-1.000 Mio. EUR	Über 1.000 Mio. EUR
b.	Anzahl der Mitarbeiter *(in Vollzeitbeschäftigten)*				(Personen)		
c.	Ihre Branchenschwerpunkt(e) *(mehr als eine Nennung möglich)*	(Industrie)					
d.	Gründungsjahr				(Jahr)		
e.	In der wievielten Generation befindet sich das Unternehmen im Familienbesitz?				(Generation)		
43.	**Angaben zu Ihrer Person**						
a.	Ihre Rolle im Unternehmen				Mitglied der Geschäftsführung		
					Mitglied des Gesellschafterrats		
					Mitglied des Beirats		
					Mitglied des Aufsichtsrats		
					Andere operative Funktion		
					Nicht im Familienunternehmen tätig		
b.	Welcher Eigentümergeneration Ihres Familienunternehmens gehören Sie an?				(Generation)		
c.	Geburtsjahr				(Jahr)		

Ihre Angaben leisten einen wertvollen Beitrag für die Untersuchung.

Vielen herzlichen Dank für Ihre Unterstützung!

Bitte senden Sie uns den ausgefüllten Fragebogen in beiliegendem Briefumschlag an:

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oder per Fax an: **+49 (0) 9348 8148**

Haben Sie Interesse an Feedback? Sehr gerne schicken wir Ihnen den Ergebnisbericht zu. Bitte geben Sie uns hier die Email Adresse an, unter der wir Sie kontaktieren können ______________________________

Appendix 1: Questionnaire

PART 1	Descriptive Statistics					
Nr.	Item	N	Minimum	Maximum	Mean	Standard deviation
1	Growth of industry	134	1	7	4.01	1.504
2	Change of production technology	134	1	7	3.81	1.603
3	Dynamic of customer tastes	134	1	6	3.63	1.336
4	Intensity of price competition	134	1	7	5.62	1.491
5	Risk of core-activity industry decline	132	1	7	3.02	1.459
6	Heterogeneity in competition	134	1	7	4.04	1.818
7	Overall diversification of family activities	134	1	7	3.84	1.651

Note: For all items in Part 1, the scale has a Likert format with 1 equaling low, 7 corresponding to high values

PART 2	Descriptive Statistics					
Nr.	Item	N	Minimum	Maximum	Mean	Standard deviation
8a	Targeted risk profile of projects(1)	134	1	6	3.80	1.221
8b	General risk taking attitude of top management(1)	134	1	7	4.37	1.317
9a	Rate of new products/services over past 5 yrs(1)	134	1	7	5.13	1.434
9b	Nature of innovation over past 5 yrs(1)	134	1	7	4.54	1.433
9c	Focus of top management on innovation(1)	134	1	7	4.32	1.520
10a	Firm's proactiveness in market moves	134	1	7	4.84	1.339
10b	Firm's proactiveness in new product introduction	134	1	7	4.93	1.478
10c	Firm's aggressiveness in gaining market share	134	1	7	4.77	1.207
10d	Firm's aggressiveness in attitude towards competition	134	1	7	4.00	1.304
11a	Flexibility and informatily of decision making	134	1	7	5.09	1.406
11b	Autonomy from external stakeholders(1)	134	1	7	5.68	1.510
12a	Range of activities: number of strategic business units	134	1	80	4.35	7.041
12b	Number of core activities	134	1	50	2.69	4.351
13a	Number of countries active	133	0	200	25.36	36.926
13b	Relevance of domestic market for overall revenue (in %)	132	0.0%	100.0%	64.640%	31.2649%
14a	Relative development revenue past 5 yrs(2)	134	2	7	5.17	1.361
14b	Relative average market share past 5 yrs(2)	133	2	7	4.88	1.371
14c	Relative development profitability past 5 yrs(2)	134	1	7	4.94	1.348
14d	Relative average profitability past 5 yrs(2)	133	1	7	4.84	1.325
15a	Development revenue past 10 yrs (in %)	123	-20.0%	1,000.0%	115.301%	155.4162%
15b	Firm equity (in %)	123	0.0%	100.0%	44.887%	24.7493%
15c	Accessibility of financial resources(1)	131	1	7	2.56	1.642

Note: For most items in Part 2, the scale has a 7 Point Likert format with 1 equaling low, 7 corresponding to high values unless stated otherwise

(1) Original survey format asked respondents to position between two statements that correspond to extreme low and high values. In this table, the item is stated neutral and the values of the Likert scale are identical to the answers given by respondents when positioning themselves between the extreme low/high statements

(2) Respondents were asked to rate their own performance relative to competition

PART 3	Descriptive Statistics					
Nr.	Item	N	Minimum	Maximum	Mean	Standard deviation
16a	Number of family members active in top mangement	134	1	8	2.85	1.410
16b	Affiliation CEO - family (1=fam;0=non-fam)	134	0	1	0.85	0.358
16c	CEO education (1=university;0=other)	133	0	20	0.92	1.763
16d	CEO professional experience outside family firm (in years)	130	0	40	8.28	9.420
16e	CEO tenure (in years)	130	0	54	17.75	13.702
16f	Number of CEOs over past 50 years (#)	131	0	10	2.56	1.527
16f	Share of family members in past 50 years CEOs (in percent)	131	0	10	2.06	1.276
17a	Decentralization of decision making	134	1	7	3.85	1.933
17b	Institutionalization of formal strategic planning	134	1	7	4.98	1.728
17c	Institutionalization of value based compensation	133	1	7	3.94	1.910
17d	Willingness to change in firm	133	0	7	4.52	1.659
18	Existence of a shareholder committee	134	0	3	0.40	0.535
18	Existence of an advisory board	134	0	1	0.37	0.485
18	Existence of a supervisory board	134	0	1	0.31	0.466
18a	Perceived relevance of shareholder committee for strategic renewal and change	133	0	7	1.36	2.112
18a	Perceived relevance of advisory board for strategic renewal and change	134	0	7	1.68	2.445
18a	Perceived relevance of supervisory board for strategic renewal and change	134	0	7	1.27	2.177
18b	Presence of non-family members in control boards (0=Not applicable; 1=none, 7= all are non-family members)	134	0	7	2.19	2.370
19a	Number family members in business	133	0	60	3.83	6.028
19a	Number of famiy members in top management	134	0	4	1.43	0.913
19a	Number of family members in shareholder committee	134	0	60	1.74	6.094
19a	Number of family members in advisory board	133	0	9	0.41	1.136
19a	Number of family members in supervisory board	134	0	8	0.47	1.243
19a	Number of family members in other operative functions	133	0	10	0.71	1.465
19b	Number of family generations active in business	133	0	4	1.62	0.559
19c	Number of active family members under the age of 40	130	0	7	0.96	1.21

Note: For all items in part 3 the Likert scale format with 1 corresponding to low values and 7 corresponding to high values unless stated otherwise

PART 4	Descriptive Statistics					
Nr.	Item	N	Minimum	Maximum	Mean	Standard deviation
20a	Ownership share of family in family business	134	30%	100%	91.61%	18.528%
20b	Ownership share held by other families	134	0%	75%	5.08%	15.360%
20b	Ownership share held by top management	134	0%	40%	0.97%	4.856%
20b	Ownership share held by private equity firms	134	0%	55%	0.75%	6.116%
20b	Ownership share trated on stock exchange	134	0%	55%	1.29%	7.517%
20b	Ownership share held by others	134	0%	40%	0.30%	3.455%
21a	Number of family members with ownership	134	1	500	14.47	53.734
21b	Combined share of the two family members with the largest stake	132	1%	100%	69.60%	29.865%

PART 5	Descriptive Statistics					
Nr.	Item	N	Minimum	Maximum	Mean	Standard deviation
22	Family serving priorities (1=family, 7=business)	134	1	7	5.28	1.454
23	Perception of unity between family and business spheres (1=connected; 7=separate entities)	133	1	7	4.05	1.642
24	Desire to maintain the business in the family in future generations (1=high, 7=low)	134	1	7	2.65	1.799
25	Unity of family members in pursuit of new entrepreneurial activity (1=together, 7=separate agendas and accounts)	133	1	7	2.65	1.887
26	Interest and talent of next generation for family business leadership (1=high; 7=low)	121	1	7	2.69	1.820
27	Tendency for conservation or growth orientation in family (1=conservation; 7=growth)	134	1	7	4.06	1.570
28	Primary target areas for growing the family enterprise (1=the existing business; 7= new areas)	134	1	7	3.06	1.612
29	Main focus of family decision makers (1= managing current businss; 7=growing new business)	134	1	7	3.66	1.378
30	The level of identification with core business (1=high, 7=low)	134	1	7	3.36	1.544
31	Belief in sustainabilty of present business model (1=high; 7=low)	134	1	7	3.59	1.765
32	Belief in relevance of family involvement in operational management (1=high; 7=low)	133	1	7	3.30	1.817
33	Preference for revenue stablity (1=high; 7=low)	134	1	6	2.64	1.216
34	Primaraly return horizon of family (1=long term return; 7=short term return)	133	1	6	1.62	0.927

Note: All items in part 5 are denoted in 7 point Likert scale format. The interpretation is stated for each item individually

PART 6	Descriptive Statistics					
Nr.	Item	N	Minimum	Maximum	Mean	Standard deviation
35	Difficulties in planning joint activities	133	1	7	4.97	1.776
36	Ability to rely on each other in times of crisis	133	1	7	5.68	1.590
37	Possibility to openly express feelings	133	0	7	4.96	1.718
38	Individual family members are accepted for what they are	133	0	7	4.88	1.533
39	Family is capable of making tough decisions in family matters	133	0	7	4.95	1.552
40	Family members have trust in each other	133	1	7	5.41	1.632
41	There are lots of tensions and ressentiments in the family	133	1	7	5.15	1.587

Note: For all items in part 5 the Likert scale format with 1 corresponding to low correspondance to factual state to 7 corresponding to high affirmation and very accurate description of factual state in respective family.

PART 7	Descriptive Statistics					
Nr.	Item	N	Minimum	Maximum	Mean	Standard deviation
42a	Firm revenue (size brackets 1-6)(1)	134	1	6	2.82	1.703
42b	Number of employees (in FTE)	134	2	100,000	3,693	11,781.700
42c	Main activity of family business (industries coded 1-4)(2)	134	1	4	1.48	0.782
42d	Year of inception (year)	134	1688	2008	1914	62.876
42e	Current generation of family ownership	134	1	25	3.56	2.496
43a	Respondent role in company(3)	134	1	6	1.58	1.294
43b	Respondent generation of ownership	132	1	25	3.34	2.486
43c	Respondent year of birth	132	1921	1984	1958	13.944

1) Revenue brackets were formed as follows: 1=1-20 Mio; 2=20-50Mio; 3=50-250 Mio.; 4=250-500Mio;5=500-1000Mio.; 6=1000Mio and above

2) Industries were coded as follows: 1=Manufacturing; 2=Retail and Wholesale Trade; 3=Services; 4=Others

3) Respondet roles were coded as follows: 1=Top Management; 2=Shareholder committee; 3=Advisory board; 4=Supervisory board; 5=Other operative functions; 6=No operative function

Appendix 2: Descriptive statistics for all items in original questionnaire

Focus	Family firm types	N		EO 3 construct as employed in this study: Risk taking (1=low, 7=high)	Innovativeness (1=low; 7=high)	Proactiveness (1=low; 7=high)	Comp. Aggress. (1=low, 7=high)	Autonomy (1=low; 7=high)
Ownership concentration	Controlling Owner	29	Mean	4.24	4.86	5.33	4.36	5.62
			Standard Deviation	*1.15*	*1.32*	*1.11*	*1.35*	*0.92*
	Sibling Partnership	86	Mean	4.02	4.60	4.67	4.37	5.27
			Standard Deviation	*1.10*	*1.29*	*1.33*	*1.02*	*0.99*
	Cousin Consortium	19	Mean	4.14	4.68	5.18	4.47	5.55
			Standard Deviation	*1.03*	*1.03*	*0.75*	*0.81*	*1.07*
Ownership generation	First generation	14	Mean	4.11	4.43	5.21	4.32	5.71
			Standard Deviation	*1.32*	*1.40*	*1.22*	*1.35*	*0.64*
	Second generation	24	Mean	4.08	4.54	4.96	4.52	5.33
			Standard Deviation	*1.26*	*1.56*	*1.59*	*1.26*	*0.88*
	Third and beyond	96	Mean	4.08	4.73	4.82	4.36	5.35
			Standard Deviation	*1.03*	*1.16*	*1.16*	*0.98*	*1.06*
Firm size (FTE)	Small (<49FTE)	24	Mean	3.81	4.13	4.58	3.69	5.42
			Standard Deviation	*1.35*	*1.45*	*1.34*	*1.21*	*1.05*
	Medium (50-249FTE)	43	Mean	4.05	4.64	4.88	4.40	5.36
			Standard Deviation	*1.03*	*1.11*	*1.24*	*1.00*	*0.98*
	Large (250+FTE)	67	Mean	4.21	4.88	4.99	4.63	5.39
			Standard Deviation	*1.03*	*1.23*	*1.22*	*0.95*	*1.00*
Total sample		134	Mean	4.09	4.67	4.88	4.38	5.38
			Standard Deviation	*1.10*	*1.26*	*1.25*	*1.07*	*0.99*

Appendix 3: Means and standard deviations for entrepreneurship dimensions depending on firm type

		Sum of Squares	df	Mean of Squares	F	Sig.
Entrepreneurial Orientation	Between groups	0.990	1	0.990	1.260	0.264
	Within groups	102.965	131	0.786		
	Total	103.955	132			
Size revenue	Between groups	28.629	1	28.629	10.583	0.001
	Within groups	357.073	132	2.705		
	Total	385.701	133			
Past financial performance	Between groups	0.642	1	0.642	0.554	0.458
	Within groups	150.436	130	1.157		
	Total	151.078	131			
Family focus on growth and change	Between groups	1.245	1	1.245	1.369	0.244
	Within groups	113.689	125	0.910		
	Total	114.935	126			
Family functioning	Between groups	0.697	1	0.697	0.503	0.480
	Within groups	174.518	126	1.385		
	Total	175.214	127			
Family commitment	Between groups	1.951	1	1.951	0.922	0.339
	Within groups	279.272	132	2.116		
	Total	281.224	133			
Decentralization of decision making	Between groups	0.978	1	0.978	0.260	0.611
	Within groups	496.037	132	3.758		
	Total	497.015	133			
Formal strategic planning	Between groups	0.541	1	0.541	0.180	0.672
	Within groups	396.391	132	3.003		
	Total	396.933	133			
Growth	Between groups	2.957	1	2.957	1.310	0.255
	Within groups	298.036	132	2.258		
	Total	300.993	133			
Change in production technology	Between groups	2.945	1	2.945	1.147	0.286
	Within groups	331.284	129	2.568		
	Total	334.229	130			
Generation of ownership	Between groups	1.433	1	1.433	0.229	0.633
	Within groups	826.897	132	6.264		
	Total	828.330	133			
Ownership concentration	Between groups	238.678	1	238.678	0.082	0.775
	Within groups	383,778.702	132	2,907.414		
	Total	384,017.381	133			
Year of inception	Between groups	703.077	1	703.077	0.177	0.675
	Within groups	525,100.572	132	3,978.035		
	Total	525,803.649	133			

Appendix 4: Oneway ANOVA testing for non-response bias

Explained total variance

Component	Initial Eigenvalues			Sums of squared factor loadings for extraction			Rotated sums of squared factor loadings		
	Total	% of Variance	Cumulated %	Total	% of Variance	Cumulated %	Total	% of Variance	Cumulated %
1	5.661	17.155	17.155	5.661	17.155	17.155	3.820	11.576	11.576
2	4.021	12.184	29.339	4.021	12.184	29.339	3.407	10.324	21.900
3	2.246	6.807	36.146	2.246	6.807	36.146	3.137	9.506	31.406
4	2.113	6.402	42.548	2.113	6.402	42.548	2.068	6.267	37.673
5	1.938	5.873	48.421	1.938	5.873	48.421	1.960	5.939	43.612
6	1.644	4.982	53.402	1.644	4.982	53.402	1.740	5.272	48.884
7	1.356	4.108	57.510	1.356	4.108	57.510	1.731	5.245	54.128
8	1.314	3.983	61.493	1.314	3.983	61.493	1.670	5.062	59.190
9	1.160	3.514	65.007	1.160	3.514	65.007	1.516	4.594	63.783
10	1.086	3.291	68.298	1.086	3.291	68.298	1.490	4.515	68.298
11	0.944	2.860	71.158						
12	0.864	2.619	73.778						
13	0.841	2.550	76.328						
14	0.767	2.324	78.651						
15	0.681	2.064	80.715						
16	0.653	1.979	82.694						
17	0.622	1.885	84.580						
18	0.566	1.714	86.294						
19	0.531	1.609	87.903						
20	0.515	1.561	89.464						
21	0.457	1.385	90.849						
22	0.446	1.351	92.200						
23	0.379	1.148	93.348						
24	0.359	1.087	94.435						
25	0.325	0.986	95.421						
26	0.304	0.921	96.342						
27	0.279	0.846	97.188						
28	0.218	0.659	97.847						
29	0.204	0.618	98.465						
30	0.180	0.545	99.010						
31	0.150	0.455	99.465						
32	0.124	0.375	99.840						
33	0.053	0.160	100.000						

Extraction method: principal component analysis

Appendix 5: Factor analysis testing for common method bias

Variables	Model 1	Model 2	Model 3	Model 4
Controls				
Growth of industry	0.066	0.092	0.041	0.053
Change in production technology	0.273**	0.194*	0.163*	0.167*
Firm size	0.164	0.107	0.037	0.044
Firm age	-0.018	-0.029	-0.048	-0.048
Number of family shareholders	-0.087	-0.123	-0.107	-0.115
Past performance	0.313***	0.214*	0.214*	0.214**
Independent Variables				
Family functioning		0.095	0.030	0.036
Family business serving		0.228**	0.161*	0.154†
Family focus on growth and change		0.165*	0.170*	0.161*
Decentralization of decision making		0.062	0.044	0.031
Moderator				
Formal strategic planning			0.376***	0.387***
Interaction Effect				
Formal strategic planning * family functioning				0.056
Formal strategic planning * family business serving				-0.026
Formal strategic planning * family focus growth & change				0.035
Formal strategic planning*decentralization of decision making				0.013
ΔR^2	0.296***	0.094***	0.116***	0.005
R^2	0.296	0.390	0.506	0.511
Adjusted R^2	0.258	0.333	0.455	0.440
F	7.847***	6.900***	9.969***	7.186***

† = p < 0.10; * = p < 0.05; ** = p < 0.01; *** = p < 0.001
N=134

Appendix 6: Multiple regression predicting entrepreneurship with strategic planning as moderator variable

Family firms by ownership concentration		Affiliation of CEO with owning family (in percent)		
		CEO is family member	CEO is professional hire	Total
Controlling Owner	**P**	**90%**	**10%**	**22%**
	N	26	3	29
Sibling Partnership	**P**	**91%**	**9%**	**64%**
	N	78	8	86
Cousin Consortium	**P**	**53%**	**47%**	**14%**
	N	10	9	19
Total	**P**	**15%**	**85%**	**100%**
	N	114	20	134

Appendix 7: Affiliation CEO depending on family ownership concentration

Family firms by size (in FTE)		Affiliation of CEO with owning family (in percent)		
		CEO is family member	CEO is professional hire	Total
Small firms (<49)	**P**	**100%**	**0%**	**18%**
	N	24	0	24
Medium firms (50-249)	**P**	**95%**	**5%**	**34%**
	N	43	2	45
Large firms (250+)	**P**	**73%**	**27%**	**50%**
	N	49	18	67
Total	**P**	**85%**	**15%**	**100%**
	N	114	20	134

Appendix 8: Affiliation of CEO with family depending on firm size

Family firms by ownership concentration		Family influence measured with power scale of F-PEC index (in percent)			Total
		Low influence (< 0.4)	Medium influence (0.4-0.69)	Strong influence (> 0.7)	
Controlling Owner	**P**	**0%**	**31%**	**69%**	**28%**
	N	0	9	29	38
Sibling Partnership	**P**	**7%**	**28%**	**65%**	**64%**
	N	6	24	56	86
Cousin Consortium	**P**	**11%**	**68%**	**21%**	**14%**
	N	2	13	4	19
Total	**P**	**6%**	**34%**	**60%**	**100%**
	N	8	46	80	134

Note: The power scale is composed by calculating the percentage share of 1) family members in the top management team, 2) board of directors and 3) family control of family business ownership. The results in each dimension are then weighted with a third each and added to produce a value between 0 and 100 percent. A high percentage value corresponds to strong family influence, a low value evidently to low family influence (Astrachan et al., 2002)

Appendix 9: Family influence in family firms with different types of ownership concentration

Family firms by firm size		Family influence measured with power scale of F-PEC index (in percent)			Total
		Low influence (< 0.4)	Medium influence (0.4-0.69)	Strong influence (> 0.7)	
Small firms	**P**	**0%**	**21%**	**79%**	**18%**
(<49FTE)	N	0	5	19	24
Medium firms	**P**	**2%**	**23%**	**74%**	**32%**
(50-240 FTE)	N	1	10	32	43
Large firms	**P**	**10%**	**46%**	**43%**	**50%**
(250+ FTE)	N	7	31	29	67
Total	**P**	**6%**	**34%**	**60%**	**100%**
	N	8	46	80	134

Note: The power scale is composed by calculating the percentage share of 1) family members in the top management team, 2) board of directors and 3) family control of family business ownership. The results in each dimension are then weighted with a third each and added to produce a value between 0 and 100 percent. A high percentage value corresponds to strong family influence, a low value evidently to low family influence (Astrachan et al., 2002)

Appendix 10: Family influence in family firms with different types of firm size

Family firms by ownership concentration		Internationalization of family firms	
		Number of countries with activities	Relevance of domestic market for total sales
Controlling Owner	**Mean**	**29.5**	**64%**
	N	29.0	29
Sibling Partnership	**Mean**	**18.1**	**69%**
	N	86.0	85
Cousin Consortium	**Mean**	**51.6**	**43%**
	N	19.0	19
Total	**Mean**	**25.4**	**65%**
	N	134.0	134

Appendix 11: Internationalization according to ownership concentration

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2004-2009 **BOSTON CONSULTING GROUP, Vienna, Austria**
Consultant, work experience in Germany, Austria and Middle East
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- Member core group financial services practice
- Evaluated outstanding and promoted ahead of peer group

2004 **GOLDMAN SACHS, Frankfurt, Germany**
Summer analyst, advisory group, investment banking
- Assisted M&A sell side process
- Assisted European special situations group in valuation of distressed loan portfolio
- Client service projects in consumer goods, energy, financial institutions

2004 **JP MORGAN CHASE, London, United Kingdom**
Summer analyst, leverage finance - financial sponsors group, debt capital markets
- Assisted high yield bond execution for specialty chemicals business
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2002 **DEUTSCHE BANK, Milan, Italy**
Internship, global relationship management, corporate & investment banking
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EDUCATION

2006-2009 **UNIVERSITY OF ST GALLEN, St Gallen, Switzerland**
Doctoral studies in business administration
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