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## Faculteit Bedrijfseconomische Wetenschappen

master in de handelswetenschappen

### **Masterthesis**

***The impact of Family Entrepreneurial Orientation on the Entrepreneurial Orientation of the firm***

#### **Rik Vanhees**

Scriptie ingediend tot het behalen van de graad van master in de handelswetenschappen, afstudeerrichting ondernemerschap en management

#### **PROMOTOR :**

Prof. dr. Jelle SCHEPERS



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This master thesis was written during the COVID-19 crisis in 2020. This global health crisis might have had an impact on the (writing) process, the research activities and the research results that are at the basis of this thesis.

## **Preface**

This master thesis is part of my degree in Business Administrations at Hasselt University. The past year has required a lot of commitment and perseverance but it has taught me a lot and I am ready for the next step in my professional career. I would like to thank a few people who made it possible for me to bring this degree to a successful conclusion.

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At last, I would like to thank my family. They have given me the opportunity to start this education and throughout the years I could always rely on their continuous support and patience.

**Rik Vanhees**

**May 2020**

# THE IMPACT OF FAMILY ENTREPRENEURIAL ORIENTATION ON THE ENTREPRENEURIAL ORIENTATION OF THE FIRM

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Promotor: Prof. Dr. Jelle Schepers



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## Abstract

Existing research on the determinants of entrepreneurial orientation mainly focuses on firm-level analysis. By further exploring the concept of family entrepreneurial orientation, more specifically its impact on the entrepreneurial orientation of the firm, we fill this gap by shifting the level of analysis to the family. Our findings show that the family entrepreneurial orientation of the controlling family is a good predictor of the entrepreneurial orientation of the family firm. Further, we find that the family involvement in the firm has no significant impact on the relation FEO-EO. The results of this research are based on the data gathered by an electronic survey which was filled out by 95 CEOs of family firms who are also part of the controlling family. This study adds to research on determinants of entrepreneurial orientation and empirically explores the family as a level of analysis while connecting it to the firm-level of analysis. It therefore might be an antecedent for future research with the family as a distinct level of analysis.

## Introduction

In Belgium, at least 77% of the business are family businesses. 55% of the bigger companies (200+ employees) are family businesses. They account for 45% of Belgium's employment and 33% of the GDP. Looking at these figures, it is safe to say that family businesses are the backbone of our economy (<https://www.fbnbelgium.be/nl/>).

These overwhelming figures meant that a great deal of research was done on these family businesses. The aim of these studies was to find out exactly what makes family firms unique. Do family firms actually perform better than ordinary businesses and if so, why? There are several topics on which research has been done. The main topic, which is also the one this paper focuses on, is the entrepreneurial orientation of the firm. In his book 'Keeping the family business healthy', Ward (1987) introduced the 30/13/3 rule. With this rule, he stated that according to his research 30% successfully made it to the second generation, 13% to the third generation, and only a mere 3% made it to the fourth generation.

To successfully reach these further generations, a family firm needs to have an entrepreneurial orientation (EO) regarding their business activities. This is because, according to a lot of research conducted by several authors (e.g. Miller and Le Breton-Miller, 2011; Liu, 2014; Barroso-Martínez et al., 2016; Campbell and Park, 2016; Lee and Chu, 2017; Tripopsakul and Asavanant, 2017; Schepers et al., 2014), there is a significant link between the entrepreneurial orientation of a firm and its performance. Hernández-Perlines et al. (2016) even stated that the international performance of a family firm can be explained by its international EO. Cruz & Nordqvist (2012) follow Miller (1983) and Covin & Slevin (1989,1991) by defining EO as entrepreneurial strategy making and explain that it focuses on the extent to which decision-making style of a firm is proactive, risk-taking and innovative. Research by Madison, Runyan, and Swinney (2014) however pointed out that the EO has a greater impact on the performance of regular firms than on the performance of family firms.

Entrepreneurial orientation has mainly been researched on the level of the firm (Zellweger et al., 2011; Cruz & Nordqvist, 2012). Apart from the link between entrepreneurial orientation and performance, there has been a lot of other research regarding firm-level EO. Short et al. (2009) have found that family firms tended to have a lower EO than non-family firms. They can, however, in some sectors, be highly entrepreneurial since they might have to renew product lines and technology (Miller et al., 2009; Ward, 2006). Cruz & Nordqvist (2012) demonstrate why it is important to include the generational perspective when researching EO by examining the role of internal and external factors on EO depending on the generation of the firm. Research by Zellweger & Sieger (2010) was also very important as it showed that maximizing all the dimensions of EO is not always better.

This study adds to the extensive amount of research on identifying determinants of firm-level EO. The stream in this academic literature mainly focuses on the characteristics of the company and the personal characteristics of the CEO (e.g. Escribá-Esteve et al., 2009; Zainol, 2013; Kellermanns et al., 2008). Zellweger et al. (2011) indicate that by solely focusing on the EO on the firm level, we disregard a lot of information about the intensity and form of entrepreneurship in family businesses. Scott and Rosa (1996) have also disputed that fact by questioning whether firm-level analysis has

reached its limits. This study follows this logic and the three major reasons as to why future research should examine the family as a distinct level of analysis, as suggested by Zellweger et al. (2011).

The purpose of this present study is to try and fill this gap by shifting the level of analysis to the family. More specifically, this research investigates and explains a link between the EO on the firm level and the EO on a family-level, which will later be referred to as *family entrepreneurial orientation*.

The structure of this study is as follows. First, we take a look at some theoretical background literature. Here, we define a family business, look at the different dimensions within EO and FEO, and justify the relationship between these two by explaining the social learning theory. We also reflect on the importance of family as a level of analysis. After the background literature, we develop hypotheses regarding the impact of family entrepreneurial orientation on the entrepreneurial orientation of the firm. Thereafter we state the methodology that was used in this research. Afterwards, we present the empirical results and findings. We conclude by discussing the limitations and suggest several areas for future research.

### **Theoretical background and hypotheses development.**

#### Definition family business

In academic literature, there has been considerable confusion as to how to define the term family business (Litz, 1995).

Ownership is a well-researched construct of the family business research field, as a family business is often defined as a business owned by a family. As much as this definition of a family business seems logical, some family business scholars disagree. These scholars argue that family ownership is only a minimum threshold to classify a business as a family business. (Henssen, Voordeckers, Lambrechts, & Koiranen, 2011)

Litz (1995) addresses this definitional confusion issue through two complementary approaches: a structure-based approach, which considers family involvement in two central constructs: firm ownership and management, and an intention-based approach, which focuses on the preferences of the members of a business towards intraorganizational family-based relatedness.

Chrisman, Chua, and Sharma (2005) investigated the definitional disagreement among family business scholars and noticed a convergence towards two definitional approaches: a components of family involvement approach and an essence of family involvement approach. These approaches build on the approaches suggested by Litz (1995). Zellweger, Eddleston, et al. (2010) reached beyond these approaches and introduces "organizational identity" as a third dimension of familiness.

The essence approach aims to address the influence of the family on the firm's resource base with the family pursuing a transgenerational vision (Zellweger, Eddleston, et al., 2010). Even though a transgenerational outlook is an important factor in family business definitions, it is very hard to successfully realize the transgenerational succession.

John Ward's 30/13/3 statistic is perhaps the most quoted statistic in the world of family business (Aronoff, 1999). The 30/13/3 rule entails that 30% of the businesses make it to the second



generation, 10-15% make it to the third and 3-5% make it to the fourth generation. Aronoff (1999) doesn't argue with the numbers. He however does not agree with the way they are presented.

Zellweger et al. (2011) confirm that in John Ward's (1987) original sample of 200 firms in Illinois, only 13% remained the same and in possession of the controlling families after being passed on from the second to the third generation. However, not just 13% but 20% of the firms actually survived. Of the remaining 7%, 5% were sold to outsiders and 2% went public. This 7% should not be seen as a failure but as a success (Zellweger et al., 2011).

Yamakawa et al. (2010, as cited in Zellweger et al., 2011, p. 13) agree with this logic and state that when studying longevity using a perspective of transgenerational entrepreneurship, we should not tolerate a limited definition of family firm or organizational failure because even firm failure can be advantageous for long-term value.

In many academical studies regarding exit, in entrepreneurship as well as in organization studies, economics, and strategic management, exit has been used to describe the 'failure' of a new firm (Strotmann (2007, as cited in Wennberg & DeTienne, 2014, p. 9)). However, academic studies and practitioner-oriented literature point out that exit from entrepreneurship is not the same as failure (Knott & Posen, 2005). This means that failure in a certain family firm does not mean it will affect the controlling family's entrepreneurial orientation.

If a family member from the next generation is unwilling to step into the shoes of the parents, this may not be seen as failure but as a value-creating strategy regarding other options for the firm and its leadership (Zellweger et al., 2011).

Wennberg and DeTienne (2014) confirm this by arguing that the scholarly assumptions, that entrepreneurial exit is the same as failure, is strongly contradicted by the practitioner perspective where, mainly among firms of high growth, exit is very often seen as the ultimate objective of building a profitable venture.

### Entrepreneurial orientation

Corporate entrepreneurship (CE) has two main goals: the creation and pursuit of new venture opportunities and strategic renewal (Guth & Ginsberg (1990, as cited in Dess & Lumpkin, 2005, p. 147)). CE is very important for family firms, as it leads to success and transgenerational survival (Kellermans & Eddleston (2006); Rogoff & Heck (2003); Salvato (2004, as cited in Zellweger & Sieger, 2010, p. 68)).

Corporate entrepreneurship also refers to the construct of entrepreneurial orientation (EO). Covin et al. (1991, as cited in Dess & Lumpkin, 2005, p. 147) describe EO as "the strategy-making practices that businesses use to identify and launch corporate ventures. It represents a frame of mind and a perspective about entrepreneurship that are reflected in a firm's ongoing processes and corporate culture".

This definitional description is shared by Naldi et al. (2007). They describe EO as "a construct that addresses the mindset of firms engaged in the pursuit of venture creation and provides a useful framework for research into entrepreneurial activity".

In previous academic literature, family firms have been seen as firms that are not highly innovative (Block et al., 2013). Miller et al. (2009) however claim that evidence has come to light, suggesting that family businesses can be highly entrepreneurial. We can assume that this is due to a family firm's long-term vision, which causes them to invest in the future.

Entrepreneurial orientation has been found to support firm growth and survival and eventually causing a strong performance in family firms (Becherer & Mauer, 1997; Lumpkin & Sloat, 2001). According to Naldi et al. (2007), several studies have supported the positive impact of EO on firm performance and growth.

Miller (1983) suggested three dimensions of entrepreneurial orientation (innovativeness, risk-taking, and proactiveness) when he argued that an entrepreneurial firm deals with product-market innovation, engages in rather risky ventures, and launches proactive innovations before its competitors. A couple of years later, Lumpkin and Dess (1996) added 2 other entrepreneurial behaviors: competitive aggressiveness and autonomy, forming the five dimensions of EO that are now generally accepted and referred to in academic literature. Even though Lumpkin and Dess (1996) didn't fully agree with the scale provided by Miller (1983), neither one of them is superior. Some authors like Martin and Lumpkin (2003) and Short et al. (2009) incorporated the scale by Lumpkin and Dess (1996). We, however, in order to keep our electronic survey from becoming too lengthy, relied on the EO scale provided by Miller (1983) / Covin & Slevin (1989, 1991), just like many other authors (e.g. Cruz & Nordqvist, 2012; Naldi et al., 2007; Sciascia et al., 2013; Pimental et al., 2017).

The first dimension is *innovativeness*. Innovativeness refers to "a firm's tendency to engage in and support new ideas, novelty, experimentation and creative processes that may result in new products, services, or technological processes" (Lumpkin & Dess, 1996).

Innovativeness is one of the largest parts of an entrepreneurial strategy. A requirement of innovativeness is that firms diverge from existing technologies and practices and venture beyond the latest and most advanced stage of a technology (Dess & Lumpkin, 2005).

Short et al. (2009) explain that innovativeness is often extensively expressed within organizational narratives through thoughts and actions, in order to keep the founding entrepreneurial spirit of the firm alive. Research by T. Zellweger and Sieger (2010) also revealed internal and "invisible" innovations such as capitalizing on existing solutions and the enhancement of current management systems and government structures. Dess et al. (2003, as cited in Zellweger & Sieger, 2010, p. 80) point out that researchers should consider the lagged effects of corporate entrepreneurship (CE) as innovations have to be absorbed and may not be instantly noticeable (T. Zellweger & Sieger, 2010).

Innovativeness is a very important dimension of EO in terms of long-term performance (Nordqvist et al., 2008). Investments in innovativeness also involve risks, as they may not always pay off (Dess & Lumpkin, 2005).

The second dimension is *risk-taking*. Miller & Friesen (1978, as cited in Lumpkin & Dess, 1996) explain risk-taking as "the degree to which managers are willing to make large and risky resource commitments – i.e., those which have a reasonable chance of costly failures". Dess and Lumpkin

(2005) refer to risk-taking as a firm's willingness to pursue opportunities without knowledge of probable outcome.

Thanks to the many different authors, Naldi et al. (2007) argue that there are two reasons as to why family firms will handle risk differently than other types of firms. The main reason is the family nature of ownership and management.

Organizations and their executives face three types of risks, according to Dess and Lumpkin (2005): business risk, financial risk, and personal risk.

Gómez-Mejía et al. (2007) claim that family firms use reference points to determine whether a decision is good or bad. They use this kind of decision-making to protect their socio-emotional wealth and to avoid decisions that aggravate risk.

Bartholomeusz & Tanewski (2006, as cited in Naldi et al., 2007, p. 36) point out that reputation is also very important to most family firms. As taking risks might compromise this reputation, family firms tend to be risk-averse.

Naldi et al. (2007) have found that, in comparison to non-family firms, family firms take statistically significantly fewer risks. Family dominance prefers conservatism over risk-taking (Short et al., 2009). However, T. Zellweger and Sieger (2010) claim that academic literature is divided on whether a family firm is risk-averse or risk-inclined. They believe the inconsistencies regarding the definition and measurement of risk-taking strongly affect the validity of the research.

The third dimension of entrepreneurial orientation is *proactiveness*. Proactiveness refers to a firm's efforts to seize new opportunities. T. Zellweger and Sieger (2010) quote Lumpkin and Dess (2001) when defining proactiveness as "opportunity seeking, forward-looking perspective involving introducing new products or services ahead of the competition and acting in an anticipation of future demand to create change and shape the environment."

Proactiveness is important for firms that want to be market leaders, as anticipating marketplace changes or future needs and problems can lead to a competitive advantage (Dess & Lumpkin, 2005); (Short et al., 2009).

Again there are differences between family firms and non-family firms. Even though Nordqvist et al. (2008) believe that proactiveness, together with innovativeness and autonomy is more important in the context of family businesses, Short et al. (2009) expect that family firms will show less proactiveness than non-family firms.

T. Zellweger and Sieger (2010) also point out that academic literature presents different findings regarding the relevance of proactiveness as a dimension of entrepreneurial orientation (EO). According to Martin and Lumpkin (2003), prior research claimed that proactiveness decreases as later generations assumed control of the family business. Their own research did not support this hypothesis. Martin and Lumpkin (2003) also found that proactiveness does not seem to be a persistent way to determine family firm success beforehand.

The fourth dimension of EO is *competitive aggressiveness*. Lumpkin and Dess (1996) refer to competitive aggressiveness as "a firm's propensity to directly and intensely challenge its competitors

in order to achieve entry or improve position that is, to outperform industry rivals in the marketplace”.

As previously mentioned, family firms attach a lot of importance to their reputation and caring for the needs of their community. Showing high levels of competitive aggressiveness might damage the positive perception held by stakeholders (Shanker & Astrachan, 1996; Dyer & Whetten (2006, as cited in Short et al., 2009, p. 12)).

Research done by Martin and Lumpkin (2003) shows that later generations in family firms show less competitive aggressiveness. The objective of later generations is significantly more likely to be increasing the value of the business instead of more aggressive measures (Martin & Lumpkin, 2003). T. Zellweger and Sieger (2010) therefore believe that competitive aggressiveness is of lower relevance in the context of family businesses.

The fifth and final dimension is *autonomy*. Lumpkin and Dess (1996) define 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. In general, it means the ability and will to be self-directed in the pursuit of opportunities”.

Research conducted by Martin and Lumpkin (2003) proves that autonomy decreases as later generations assume control of the family business. These successive generations shift to a more participative leadership style (Spinelli & Hunt (2000, as cited in Martin & Lumpkin, 2003)) as they involve more people in the decision-making process (Martin & Lumpkin, 2003).

Nordqvist et al. (2008) agree that autonomy should be divided into internal and external autonomy. T. Zellweger and Sieger (2010) define external autonomy as the independence from stakeholders such as banks, suppliers, customers, and financial markets and refer to internal autonomy as the independence or freedom of individuals and teams within an organization”.

T. Zellweger and Sieger (2010) state that external autonomy always has been and still is more important. They, therefore, agree with the notion of Martin and Lumpkin (2003) and Nordqvist et al. (2008) that as successive generations assume control of the family firm, the internal autonomy increases. External autonomy however remains very important over time across all firms (T. Zellweger & Sieger, 2010);(Nordqvist et al., 2008).

The five dimensions can work together resulting in the improvement of a firm’s entrepreneurial performance. Firms can however also be successful if they are strong in only a few dimensions of EO (Lumpkin & Dess (2001, as cited in Lumpkin & Dess, 2005, p. 147)).

### *Family entrepreneurial orientation*

When researching entrepreneurship in family firms, there is a lot of academic literature that focuses on either the level of the firm or the level of the individual entrepreneur (Davidsson & Wiklund (2001, as cited in Zellweger et al., 2011, p. 4)).

The understanding of families and their businesses as a source for new business activities, innovation, and strategic renewal has received little attention (Habbershon and Pistrui (2002, as cited in Nordqvist & Melin, 2010, p. 213)).

By only focusing on the firm level we disregard a lot of information about the intensity and form of entrepreneurship in family businesses (Zellweger et al., 2011). The ascent of portfolio entrepreneurship literature has partly tried to fill this gap by shifting the level of analysis from the firm-level toward the team or group level (Scott & Rosa, 1996; Westhead & Wright, 1998).

Zellweger et al. (2011) believe that the incompleteness in previous entrepreneurial research in family firms is partly because of the oversight of the family as a distinct level of analysis. They suggest 3 major reasons as to why future research should examine the family as a distinct level of analysis.

The first reason being that the family embodies an important element of any family business (Chua, Chrisman, & Sharma (1999, as cited in Zellweger et al., 2011, p. 4)) and it can be seen as a stakeholder category that is unique to this type of organization (Zellweger & Nason (2008, as cited in Zellweger et al., 2011, p. 4)).

The second reason relates to the effects caused by the family being a unique stakeholder category. Zellweger et al. (2011) mention that the presence does not only have an effect on the behavioral outcome but also on the logic behind the decision making of both the family and the firm.

The third and last reason states that including the family as a level of analysis is justified if the controlling families of family firms are active in the ownership and management of multiple businesses (Zellweger et al., 2011).

The implicit assumption in most research regarding longevity is that the family business consists of only one business entity. Because of this oversimplified assumption, a discussion arises about whether that core company succeeds or fails in regard to remaining in control. This perspective does however not take into account even smaller family firms who start or acquire multiple firms in a portfolio of activities (Naldi et al., (2011); Sieger et al. (in press, as cited in Zellweger et al., 2011, p. 5)).

Martin and Lumpkin (2003) introduce the concept of "family orientation". Their research data proves that as time passes and later generations take control, the entrepreneurial orientation (EO) of the firm will be replaced with a "family orientation", defined as "a family related orientation that influences decision making and actions and impedes the long-term survival of the firm" (Martin & Lumpkin, 2003, page unknown). According to Martin & Lumpkin (2003, as cited in Zellweger et al., 2011, p. 8), the dimensions of family orientation are interdependency, security, tradition, loyalty, and stability.

Zellweger et al. (2011) build on this by taking the first steps towards "Family Entrepreneurial Orientation" (FEO). They define FEO as "the attitudes and mindsets of families to engage in entrepreneurial activity".

It seems inappropriate to simply translate the dimensions of EO on the firm level to the family level. If the goal is to study family business by looking at entrepreneurship, the correct approach will have to determine what actually is relevant to study, given the characteristics of the family firm context. In other words, because specific family-related factors are not covered in dominant corporate entrepreneurship approaches, it is inadequate to simply apply these approaches to explain transgenerational entrepreneurship without correct contextualization (Zellweger et al., 2011).

Zellweger et al. (2011) therefore suggest that an FEO scale is necessary to ensure its overall applicability for the specific family firm context. Such a scale should combine attributes that are prototypical of the family and business domains.

Zellweger et al. (2011) identified two possible underlying components of their FEO scale: *transgenerational entrepreneurial orientation* and *risk and innovation orientation*. These two components embody the considerations of Zellweger et al. (2011) regarding the following business and family orientation in a combined measure.

Transgenerational entrepreneurial orientation refers to the creation of new ventures but when it comes to decision-making, it also keeps in mind the next generation (Zellweger et al., 2011).

According to Zellweger et al. (2011), families are willing to cultivate change and growth of business activities, but they do so for the benefit of the next generation instead of for the benefit of the current owners.

Findings accumulated by Zellweger et al. (2011) suggest that risk-taking and innovativeness are important dimensions of a business family's entrepreneurial orientation. According to various authors cited in Zellweger et al. (2011) (e.g. Andriopoulos & Lewis, 2009; He & Wong, 2004; March, 1991; Sharma & Salvato, in press), organizations need to equally combine exploration and exploitation as an unequal ratio might result in various constraints.

On one hand, FEO incorporates business-related dimensions such as autonomy, innovativeness, risk-taking, proactiveness, and competitive aggressiveness. On the other hand, it includes family-related dimensions such as security, tradition, stability, control, and a transgenerational outlook.

*Tradition* might be the most well-known characteristic of family systems as it is an essential dimension of family orientation. Reiss (1981, as cited in Lumpkin et al., 2008, p. 131) refers to tradition as "recognition of a shared history and the practices that serve to connect family members to one another – family routines, rituals and role expectations".

The second dimension is *(job) security*. According to Bassanini et al. (2013), the dismissal rate in family firms is lower than in regular non-family firms. Additionally, when a negative shock occurs that leads to employment downsizing, family firms turn to hiring contraction instead of dismissals. A compensating wage differential mechanism is visible in family firms since they offer lower wages but greater job security.

The findings of Bassanini et al. (2013) match a multiple equilibrium model. This model suggests that family firms are in a low-pay/high-job-security equilibrium. Non-family firms on the other hand are in a high-pay/low-job-security equilibrium.

This dimension closely relates to the next dimension: *stability*. A survey by Astrachan and Allen (2003, as cited in Lee, 2006, p. 106) showed that during the massive layoffs in the most recent economic recession, family businesses tried to avoid downsizing and keep their employment levels stable. Such behavior is due to the distinctive features of a family business, in particular, the dedication of the founding family to firm continuity and stability.

According to J. Lee (2006), it has been reported that over time, families introduce more consistency and stability than diverse shareholders do, especially on employment stability. Even though the empirical evidence stating that families have an impact on long-term stability is insubstantial, recent business cycle data shows that family firms struggle just as much as other firms during temporary market downturns but are less likely to lay off employees (J. Lee, 2006). Stability is referred to by Lumpkin et al. (2008) as a sense of permanence that families provide.

Aspects of family life that guarantee the sustainability of the family's legacy in the future are also included (Lumpkin et al., 2008). This hints at the next dimension, the *transgenerational outlook* that families demonstrate.

Habbershon et al. (2010) define transgenerational entrepreneurship as "processes through which a family uses and develops entrepreneurial mindsets and family influenced capabilities to create new streams of entrepreneurial, financial and social value across generations".

The *transgenerational outlook* corresponds with the fifth dimension of socioemotional wealth (SEW) and refers to the intent to turn over the company to future generations (Berrone et al., 2012). This concept of dynasty has significant consequences for the time horizons in the decision-making process. For example, the company is not something that can easily be sold since it symbolizes the family's history and culture (Casson, 1999; Tagiuri & Davis (1992, as cited in Berrone et al., 2012, p. 264)). Data shows that preserving the company for the following generations is seen as one of the main goals of family firms (Kets de Vries, 1993; Zellweger, Kellermanns, et al. (2011, as cited in Berrone et al., 2012, p. 264)) and that the planning horizon of family firms is usually longer than non-family firms (Miller & Le Breton-Miller, 2006b; Miller, Le Breton-Miller, & Scholnick, 2008; Sirmon & Hitt (2003, as cited in Berrone et al., 2012, p. 264)).

The last dimension is *control*. Even though previous literature suggests that family firms are more risk-averse, Gómez-Mejía et al. (2007) have shown that when family firms are given the choice between (1) a certain improvement of financial benefits but a loss of family control and (2) greater risk of decreasing performance and business failure but the preservation of family control, the obvious winner is the risk-taking decision. According to results provided by Gómez-Mejía et al. (2007), the ability to relinquish family control is lowest at those levels where family influence is greatest. In conclusion, family businesses are willing to risk financial losses and failure as long as that means that the family maintains control of the firm.

The business-related dimensions are the same as previously mentioned under *entrepreneurial orientation*. The only difference is that, when investigating the concept of family entrepreneurial orientation, these dimensions should be analyzed at the family level instead of the business level.

Tagiuri and Davis (1996) believe that it is impossible to successfully secure these bivalent attributes as they will result in tensions within the family firm. According to Martin and Lumpkin (2003), entrepreneurial orientation and family orientation are two postures that cannot exist simultaneously.

Nordqvist et al. (2008, as cited in Zellweger et al., 2011, p. 10) contradict this logic and suggest the concept of duality. Jackson (1999, as cited in Nordqvist et al., 2008, p. 96) explains that a duality is something that considers two opposite principles which might form an entity without becoming a

unity. We should however not choose either one but rather accept, support, and manage their simultaneous existence (Achtenhagen & Melin (2003, as cited in Nordqvist et al., 2008, p. 96)).

Nordqvist et al. (2008) used the concept of duality to interpret what characterizes entrepreneurship in family firms across generations by drawing on the five dimensions of entrepreneurial orientation. The authors find three dualities regarding the dimensions of EO: the first duality is the one of the historical path and the new path, the second one is the duality of independence and dependence and the last duality is the one of formality and informality.

"Instead of maximizing their entrepreneurial orientation at any point in time, long-term value-creating family firms seem to manage these dualities to combine the attribute of family and business" (Nordqvist et al. (2008, as cited in Zellweger et al., 2011, p. 10)).

Zellweger et al. (2011) however suggest using a paradox perspective for the FEO concept as it assumes that tensions continue within complex and dynamic systems such as in family businesses. A paradox perspective argues that managing these dualities will result in long-term sustainability and will be value-creating in family firms (Smith & Lewis, 2011);(Nordqvist et al., 2008). This moves away from the original definition of paradox which refers to the concurrent of at least two incompatible dimensions (Zellweger et al., 2011). A definition constructed by Smith and Lewis (2011) is more suitable for this research: "contradictory yet interrelated elements that exist simultaneously and persist over time".

### Social learning theory

The impact of family entrepreneurial orientation (FEO) on entrepreneurial orientation (EO) on the firm level can be explained by Bandura's social learning theory (SLT).

Kunkel et al. (2006) describe the social learning theory as "the process by which human beings acquire behaviors through observation of their external environments and provide a useful framework for the study of communication within the family". According to Pratelli (2018), the basic assumption of SLT is that behaviors are developed and learned through observation and subsequently through imitation of a specific role model, especially if the model is effective.

Lam et al. (2010) describe two types of individual learning, proposed by Bandura and Walters (1977). The first, reinforcement learning, refers to learning from consequences of your own behavior. The frequency of behavior that resulted in positive consequences will be increased and vice versa. Vicarious learning or observational learning is the second type. This type regards learning by observing others before engaging in a certain behavior because doing so prevents unnecessary and costly errors (Lam et al, 2010; Bandura, 1977; Manz & Sims, 1981).

Bandura and Walters (1977) differentiate four stages of social learning. The first stage is called *attentional processes*. This stage refers to the fact that a person cannot learn much by observation if that person is not present for, or does not recognize the essential features of the model's behavior. The 'model' refers to the person whose behavior is being copied. When deciding which models will be closely studied and which will be overlooked, the functional value of the behaviors exhibited by different models is highly influential (Bandura & Walters, 1977).



The second stage is called *retention processes*. According to Bandura & Walters (1977), an individual cannot be profoundly influenced by observing the actions of a model if he has no recollection of it. A long term memory of activities or actions that happened at one time or another is a key part of observational learning (Bandura & Walters, 1977).

*Motoric reproduction* is the third stage. Kunkel et al. (2006) note that this stage takes place when the person in question can reproduce what has been seen or heard. If however, some response components are lacking, motoric reproduction will be faulty.

The fourth and final stage of social learning is *reinforcement and motivational processes*. The individual chooses whether to accept the model's behavior as a performance template. This decision is largely determined by the anticipated consequences of the behavior for the model (Kunkel et al., 2006).

Gioia & Manz (1985, as cited in Pratelli, 2018, p. 59) state that these four stages of Bandura's social learning theory, and more specifically the theory of observational learning, also could be applied for organization-related issues such as leadership.

Mayseless (2007, as cited in Pratelli, 2018, p. 59) explains that the social learning theory is rarely used in analyzing developmental experiences of leadership but that it's very important nonetheless. Zacharatos et al. (2000) use a social learning framework (Bandura & Walters, 1977) when researching the development of leadership. The authors emphasize the role of parental modeling on the development of adolescents' leadership. Since all leadership includes a sequence of interactions occurring within the context of relationships, the authors believe that adolescents learn from their interactions with their parents, both experientially and vicariously. Subsequently, adolescents will, in their interactions with others, use behaviors similar to those used with them by their parents. We can assume that this learning effect is also visible between siblings and other family members, not solely between children and their parents.

Hartman & Harris (1992, as cited in Zacharatos et al., 2000, p. 213) support this idea. They found that college students have based their management style on the leadership style of people they admired in their lives. Most of whom were parents or family of the respondents.

Vallejo (2011) claims that the SLT is a way to explain the distinctive characteristics of the process of learning the family values passed on by the leader.

"It will be precisely thanks to the family leadership of a marked transformational type that the imitation of the family leader's behavior – itself clearly influenced and determined by the family's own values – can be more generalized, intense, and continual, thereby ensuring an effective assumption of the values and other elements of the family culture" (Vallejo, 2011).

According to the literature (e.g. Bandura and Walters, 1977; Pratelli, 2018; Zacharatos et al., 2000; Vallejo, 2011), a CEO who is part of the controlling family may copy the values and entrepreneurial orientation of the family and carry them out in his own company. This may even lead to non-family employees copying the EO and values of the CEO. Further research towards this assumption however is advised.

The findings of the authors mentioned above justify the assumption that the impact of family entrepreneurial orientation on the EO on the firm level can be explained by the social learning theory. Thus leading to the first hypothesis:

*Hypothesis 1: The FEO of the controlling family will positively influence the EO of the firm.*

#### The moderating role of family involvement in the company

New studies argue that family businesses are a unique context to analyze entrepreneurial orientation (Naldi et al., 2007; Nordqvist et al., 2008; Zellweger et al. (2009, as cited in Casillas & Moreno, 2010, p. 271)). Not all family businesses are however homogeneous (Westhead & Howorth (2007, as cited in Casillas & Moreno, 2010, p. 271)). Revilla et al. (2016) state that all families have a different way of participating in businesses, this also results in a variety of outcomes. The previously mentioned unique context that family business possesses, can be traced back to three main issues.

This paper solely focusses on the third issue, being the fact that family-company interactions and ownership-governance interactions have a relevant influence on the family business' decision-making process, related to time orientation, culture, willingness to take risks and so on (Nordqvist et al., 2008; James, 1999; Zahra, 2005; Naldi et al., 2007; Zahra et al. (2004, as cited in Casillas & Moreno, 2010, p. 271)). The family-company interactions refer to the involvement of the family in the business. According to several authors (Chua et al., 1999; Zahra, 2005) family involvement alludes to the extent by which family members control the company's ownership and engage in its management organization and structure (Casillas & Moreno, 2010).

Casillas & Moreno (2010) cite Zahra et al. (2004) when stating that it is possible to notice arguments favoring a lower growth-orientation in family-owned firms. Gersick et al, 1997; Salvato (2004, as cited in Casillas & Moreno, 2010) add to this by arguing that family businesses prefer continuity over growth and try to maintain the status quo. Family firms with a high level of family involvement in the board are usually risk-averse, which has a negative impact on the firm's EO since willingness to take risks is necessary to develop entrepreneurial activities (Covin & Wales, 2012; Kollman & Stockman (2014, as cited in Arzubiaga et al., 2017, p. 9)).

However, in this study, we look at the impact of family involvement on the relationship between the family entrepreneurial orientation (FEO) of the controlling family and the entrepreneurial orientation (EO) of the firm. In this case, we assume the amount of family involvement in the firm will have a positive influence because the family CEO is more likely to adopt the entrepreneurial orientation of the family into his firm if this family is more engaged in the company's ownership, management and governance. Theoretically, we assume that the positive effect of the social learning theory in the FEO-EO relation gets stronger when the amount of family involvement in the firm is higher.

To improve the quality of this study, we decided to divide family involvement in the firm into three separate parts: ownership, management, and governance.

Thus, we hypothesize:

*Hypothesis 2a: The relation FEO-EO gets stronger as the family involvement in the ownership increases.*

*Hypothesis 2b: The relation FEO-EO gets stronger as the family involvement in the management team increases.*

*Hypothesis 2c: The relation FEO-EO gets stronger as the family involvement in the board of governance increases*

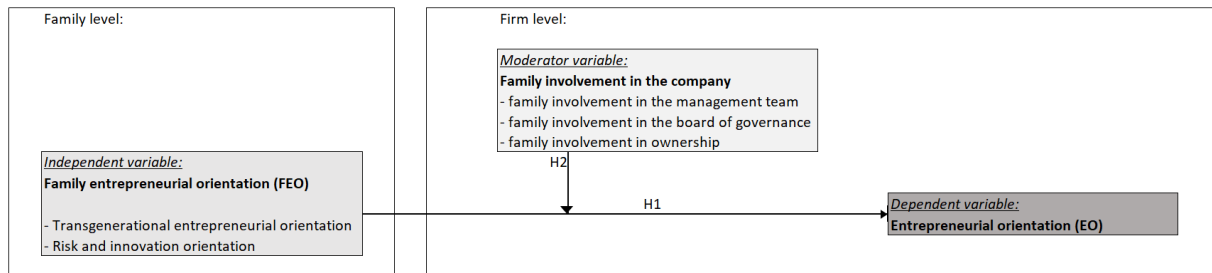


Figure 1: Research Model

## Method

In order to answer these hypotheses, 4 colleague-students (Hasselt University) and I composed an electronic survey, consisting of 33 questions, that was sent to around 500 family firms from Belgium (n= 500, excluding those reached by social media). The survey covers several topics regarding entrepreneurship, meaning that not every question or topic was relevant to this research. Even though the response rate took a hit due to the Coronavirus, we received answers from 205 respondents, after sending one reminder e-mail, calling them by telephone and sharing the link to the survey on social media platforms such as Facebook and LinkedIn. It is however impossible to know how many of those respondents were reached by social media. The response rate was 41%. The respondents are the CEO of the family business who is also a member of the controlling family. To improve the quality of our research, we evaluated the responses and excluded the data sets from our analysis where the respondents did not provide an answer to all questions.

This quality-measure decreased the number of respondents to 95 data sets, resulting in a response rate of only 19%. There may be several reasons for the high amount of incomplete data sets. The first reason is the COVID-19 Coronavirus pandemic. Due to this virus, a lot of businesses had to remain closed or drastically change their way of operations. This caused for family business owners to have less time and less interest in filling out our electronic survey. A second reason might be due to the fact that the survey serves a purpose for 5 research questions in total. This caused for it to be quite lengthy which may have demoralized many respondents.

### Processing of the data:

The data was examined on the basis of the variables that are explained in the following section. The empirical study was executed by using the statistical software program IBM SPSS Statistics Version 25. Thanks to this program we were able to offer an answer to the hypotheses.

We started by executing a descriptive analysis, describing every variable individually. Then we researched if there were links between the variables. Afterwards, we examined the correlation between multiple variables. At last, we executed a linear regression analysis and examined the effect of the moderator variable using the PROCESS-macro, developed by Andrew Hayes. The goal was to see if the family involvement in the firm had any influence on the relation between family entrepreneurial orientation and the entrepreneurial orientation of the firm.

Descriptive statistics for our data-set can be seen in table 1 through 12. The composition and the explanation of the regression analysis as well as the results can be seen in the following chapters.

## **Measures**

### Control variables

The first control variable was firm size. According to Zahra et al. (2004), larger family businesses are more likely to have extra resources, which they can use to engage in entrepreneurship. We used the amount of employees to control for size.

The second control variable was firm age. To determine the firm age, the respondent was asked to state the year in which the family business was founded. This date was then used to compute the firm age.

The third control variable was performance. Tasi (2001); Wiklund and Shepherd (2005, as cited in Cruz & Nordqvist, 2012, p. 42) advise controlling for this variable as it could improve organizational-slack resources. Because of the fact that the objective measures of performance were not accessible, we had to use measures of performance that were subjective. We measured this by asking the respondent (CEO of the family business) to indicate his/her level of satisfaction with the company's performance, using a 7-point Likert scale, ranging from "very dissatisfied" to "very satisfied".

The last control variable was the industry. For this variable, we followed Cruz & Nordqvist (2012) by using four dummy variables: manufacturing, retail, service, and technology.

### Independent variable

As this research builds upon the findings, conclusions, and recommendations towards future research by Zellweger et al. (2011), we implemented their scale to measure FEO. This scale consists of two components: *transgenerational entrepreneurial orientation of the family* and *risk and innovation orientation of the family*. Zellweger et al. (2011) define the FEO scale as "the attitudes and mind-sets of families to engage in entrepreneurial activity" and distinguished family-related dimensions and firm-related dimensions. On the family-side, they followed Lumpkin et al. (2008) and incorporated attitudes such as transgenerational orientation, stability, security, and control. On the business-side, they followed many other authors, as there is more literature available regarding corporate entrepreneurship. By following several authors (e.g. Covin & Slevin (1991); Lumpkin & Dess (1996); Zahra (2005), as cited in Zellweger et al. (2011)), they included attitudes such as autonomy, innovativeness, proactiveness, and risk-taking. Zellweger et al. (2011) ended up leaving out three items of the scale. We did not leave these out and our scale showed acceptable reliability (Cronbach alpha = 0,76).

### Dependent variable

Wiklund & Shepherd (2003, as cited in Cruz & Nordqvist, 2012, p.42) state that, regarding small and medium-sized businesses, it is acceptable to implement firm-level EO from the perspective of the CEO of the family business. To measure this firm-level EO, we used the nine-item, seven-point Likert scale developed by Miller (1983). This scale, covering three dimensions such as proactiveness, risk-taking, and innovativeness, is widely accepted and adopted by many (e.g. Covin & Slevin, 1989). As expected, the results of this scale showed its reliability with a Cronbach alpha of 0,79.

### Moderator variable

As a moderator variable, we used family involvement in the firm as we suspected that the relation FEO-EO gets stronger as the family involvement in the company increases (hypothesis 2). Family involvement in the firm was measured by following "part 1: the power subscale" from the F-PEC scale as presented by Klein et al. (2005). This scale first asks the respondent about the proportion of share ownership held by family and non-family members.

Next, the respondent is asked whether the family business has a governance board. If it does, the respondent discloses how many board members it comprises of and how many of those are family members. At last, the respondent is asked if the family firm has a management team. If yes, the same two questions are asked. When statistically analyzing the data, the moderator variable, family involvement in the firm, was divided into three sub-parts: percentage of shares owned by the family (ownership), percentage of family members in the management team (management) and the percentage of family members in the board of governance (governance). If the firm did not have a management team, we assumed the family CEO has those responsibilities resulting in a percentage of 100%. The same logic was used when looking at the percentage of family members on the board of governance. The Cronbach alpha of the family involvement in the firm is 0,664.

## **Results**

As previously mentioned we used the statistical program IBM SPSS 25.0 to process the data and to test the hypotheses. We started off by executing a descriptive analysis. Hereby we looked at the general descriptive statistics of the data-set as well as the most important statistics of the variables. Afterwards, we executed a regression analysis to test the hypotheses.

### General descriptive analysis

After the quality-check of the data-set, only 95 respondents remained. Of these 95 respondents, 5 of them did not disclose the current generation. When looking at the 90 remaining respondents, 38,9% of the CEOs are a member of the first generation, 34,4% is a member of the second generation, 22,2% is a member of the third generation and the remaining 4,4% is a member of the fourth generation or later.

		Generation			Cumulative
		Frequency	Percent	Valid Percent	Percent
Valid	First generation	35	36,8	38,9	38,9
	Second generation	31	32,6	34,4	73,3
	Third generation	20	21,1	22,2	95,6
	Fourth generation or later	4	4,2	4,4	100,0
	Total	90	94,7	100,0	
Missing	System	5	5,3		
Total		95	100,0		

Table 1: Frequency table generation

In Table 2 you can see that the amount of employees ranges from 0 to 2500. The mean amount of employees is 104,35 employees. Given these figures, we can see that the sample mostly consists of smaller firms.

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Number of employees	95	0	2500	104,35	425,941
Valid N (listwise)	95				

Table 2: Descriptive statistics amount of employees

Table 3 shows the different ages of the family firms that are being led by our respondents. These ages range from 1 year to 118 years with a mean age of 36,60.

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Firm Age	95	1	118	36,60	27,140
Valid N (listwise)	95				

Table 3: Descriptive statistics firm age

We also took a look at the industry in which the CEO's are active. This was measured using 4 dummy-variables. By doing this we differentiated 5 industries: manufacturing, retail, technology, service, and other. 21,1% of the CEO's are active in the manufacturing industry. The percentage of CEO's that are active in the retail industry is 15,8%. 5,3% is active in the technology industry and 17,9% in the service industry. This leaves 40% of the CEOs that are active in other industries.

		Industry			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Manufacturing	20	21,1	21,1	21,1
	Retail	15	15,8	15,8	36,8
	Technology	5	5,3	5,3	42,1
	Services	17	17,9	17,9	60,0
	Other	38	40,0	40,0	100,0
	Total	95	100,0	100,0	

Table 4: Frequency table industry

The respondents indicated that in some cases there are multiple companies that are being controlled by the family. 51,6 % of the respondents stated that their family controls more than one firm. The other 48,4% expressed not to have any additional firms. The amount of additional family firms from the first 51,6% ranges from 1 to 26 firms. The mean amount lies between 3 and 4. This can be seen in the following tables.

		More family businesses			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	46	48,4	48,4	48,4
	Yes	49	51,6	51,6	100,0
	Total	95	100,0	100,0	

Table 5: Frequency table additional businesses

Descriptive Statistics						
		N	Minimum	Maximum	Mean	Std. Deviation
Amount of family businesses		46	1	26	3,41	3,862
Valid N (listwise)		46				

Table 6: Descriptive statistics amount of additional businesses

### Descriptive analysis variables

The different variables were clearly defined in the previous chapter. In this section, we will look at the descriptive statistics of these variables as well as combine them to give a more detailed description of the respondents.

Both family entrepreneurial orientation and entrepreneurial orientation were measured using a 7-point Likert scale. The mean score for family entrepreneurial orientation is 4,23 and the mean score for entrepreneurial orientation is 3,96. This can be seen in Table 7.

The mean scores for the separate dimensions of FEO and EO can be seen in Attachment 1 and Attachment 2. Like previously mentioned ownership, management and governance were separately used to look at the family involvement in the firm. Table 7 shows that the mean percentage of family involvement in ownership is 95,87%. The mean percentage of family involvement in the management team is 85,21% and the mean percentage of family involvement in the board of governance is 93,55%.

### Descriptive Statistics

	N	Mean	Std. Deviation
Mean family entrepreneurial orientation	95	4,23242	,847128
Mean entrepreneurial orientation	95	3,96061	,913847
Family involvement ownership	95	95,8737	14,61655
Family involvement management team	95	85,2080	27,77782
Family involvement board of governance	95	93,5526	17,51781
Valid N (listwise)	95		

*Table 7: Descriptive statistics FEO, EO and family involvement in the firm*

Attachment 3 shows the correlation between the different Likert items of the entrepreneurial orientation construct. As previously mentioned, this scale is constructed by Miller (1983) and academically accepted. The scale consists of three dimensions: innovativeness (EO1, EO2, EO3), proactiveness (EO4, EO5, EO6), and risk-taking (EO7, EO8, EO9). In the table, you can see that they are inter-correlated to a certain degree. A reason for this correlation might be the fact that these scales have been extensively used in empirical research and they have the same origin.

In Attachment 4, the general correlations table, we can see a positive significant correlation between the mean family entrepreneurial orientation and the mean entrepreneurial orientation. This correlation is in support of our hypothesis, which states that we suspect a positive relation. Secondly, we can also see that our dependent variable (EO) is positive and significantly correlated with the variable 'more family businesses'. This correlation is also expected because having additional firms within the family shows entrepreneurial orientation. Another notable correlation is the one between the dependent variable (EO) and having a management team as it is negative and significant at the 0,01 level. Several authors (e.g. Covin & Wales, 2012; Kollman & Stockman, 2014; Arzubiaga et al., 2017) have confirmed this result by stating that a high level of family involvement in the management team would have a negative impact on the family firm's EO since they are less willing to take risks.

When we take a look at the correlations table of our independent variable (Attachment 5), family entrepreneurial orientation, we can see that not all the dimensions are intercorrelated. A possible reason for this might be the fact that the FEO scale stems from research done by Zellweger et al. (2011). The purpose of this study was not to compose a scale but to research the concept of family



entrepreneurial orientation. Zellweger et al. (2011) also stated that further scale-building was advised for future research.

As we can see in Table 8, 69,1% of the family firms do not have a board of governance. The remaining 30,9% does have a board of governance with the amount of members ranging from 1 to 10. The mean amount lies between 3 and 4 members. The amount of family members within these boards of governance ranges from 1 to 6 with a mean amount between 2 and 3 family members.

### Board of governance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	29	30,5	30,9	30,9
	No	65	68,4	69,1	100,0
	Total	94	98,9	100,0	
Missing	System	1	1,1		
Total		95	100,0		

Table 8: Frequency table board of governance

### Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Amount of members board of governance	29	1	10	3,86	2,356
Amount of family-members board of governance	29	1	6	2,66	1,203
Valid N (listwise)	29				

Table 9: Descriptive statistics board of governance

Table 10 shows that 31,2% of the respondents have a management team. The amount of members in these management teams ranges from 2 to 15 with a mean amount between 4 and 5 members. The amount of family members within these management teams ranges from 1 to 6 with a mean amount between 2 and 3 family members.

### Management team

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	29	30,5	31,2	31,2
	No	64	67,4	68,8	100,0
	Total	93	97,9	100,0	
Missing	System	2	2,1		
Total		95	100,0		

Table 10: Frequency table management team

### Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Amount of members management team	29	2	15	4,93	3,035
Amount of family-members management team	29	1	6	2,03	1,052
Valid N (listwise)	29				

*Table 11: Descriptive statistics management team*

The gathered results regarding the family involvement in the management team and the board of governance, alongside the amount of shares held by family members, are shown in table 12. It shows that the amount of family involvement in the management team ranges from 6,67% to 100%. The percentages of family involvement in the board of governance lie between 25% and 100% and at last, the amount of shares owned by family members ranges from 0% to 100%. The high mean percentages were expected since the controlling family of smaller family firms, of which our sample mostly consists, are usually very involved in the company. Due to the small amount of respondents, caused by the several reasons previously mentioned under 'Method', we defined a family firm as a firm that was being led by a family member and behaves/identifies itself as a family business. This explains the fact that even a company that has 0% of the shares owned by family members, remained in our data-set.

### Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Family involvement ownership	95	,00	100,00	95,8737	14,61655
Family involvement management team	95	6,67	100,00	85,2080	27,77782
Family involvement board of governance	95	25,00	100,00	93,5526	17,51781
Valid N (listwise)	95				

*Table 12: Descriptive statistics family involvement in the firm*

#### Linear regression:

We will test two different models in SPSS. First, we test the linear relation between the dependent variable and several independent variables. Afterwards, we use the PROCESS-macro, developed by A. Hayes, within SPSS to measure the impact of the moderating variable on the relationship between the dependent and independent variables.

The regression model with k independent variables, goes as follows:

$$Y = \beta_0 + \beta_1 * X_1 + \beta_2 * X_2 + \dots + \beta_k * X_k$$

In this model, Y refers to the dependent variable (entrepreneurial orientation of the firm),  $X_i$ , ( $i = 1, 2, \dots, k$ ), are the independent variables and  $\beta_1, \beta_2, \dots, \beta_k$  are the regression coefficients. The coefficient

$\beta_1$  shows the amount with which Y will increase if  $X_1$  increases by 1, taking into account the impact of other variables by keeping these constant. By doing this we can measure the impact of  $X_1$  on Y, without the impact of other variables.

### Model Summary

Model	R	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	,610 <sup>a</sup>	,372	,757156	,372	6,366	8	86	,000

a. Predictors: (Constant), Mean performance satisfaction, Dummy\_Manufacturing, Firm Age, Dummy\_Technology, Mean family entrepreneurial orientation, Dummy\_Services, Dummy\_Retail, Number of employees

Table 13: Model summary linear regression analysis

### Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,937	,633		3,058	,003
	Mean family entrepreneurial orientation	,521	,096	,483	5,431	,000
	Firm Age	,000	,003	,015	,156	,876
	Number of employees	,000	,000	,102	1,051	,296
	Dummy_Manufacturing	,373	,213	,167	1,747	,084
	Dummy_Retail	-,378	,239	-,152	-1,587	,116
	Dummy_Technology	,538	,375	,132	1,435	,155
	Dummy_Services	,017	,225	,007	,075	,941
	Mean performance satisfaction	-,057	,106	-,048	-,538	,592

a. Dependent Variable: Mean entrepreneurial orientation

Table 14: Coefficients linear regression analysis

In Table 13 and Table 14 we can interpret the following results.

We can see that the  $R^2$  is 0,372. This means that 37,2% of the variance in our dependent variable, entrepreneurial orientation, can be explained by our independent variable, family entrepreneurial orientation. Based on this  $R^2$  we can derive that the predictive power of our model is quite low.

However, in Table 14, we can see that the p-value of mean family entrepreneurial orientation is lower than alpha ( $\alpha = 0,05$ ) which means that we can say that the mean family entrepreneurial orientation is a significant predictor of the mean entrepreneurial orientation. This finding indicates that we can confirm our first hypothesis.

To measure the impact of the moderating variable (family involvement in the company), we used the PROCESS-macro by Andrew Hayes. Since we divided this moderator variable into three parts, to improve the quality of this study, we looked at the interaction-effect of all three parts separately. This way we could see if they all, neither one of them or just some of them have a moderating impact on the relation between the dependent (EO) and the independent variable (FEO). Table 15 shows the interaction effect of the first part: family involvement in the ownership of the firm.

Model Summary							
	R	R-sq	MSE	F	df1	df2	p
	,6187	,3828	,5768	5,2105	10,0000	84,0000	,0000
Model							
	coeff	se	t	p	LLCI	ULCI	
constant	4,1060	,5453	7,5294	,0000	3,0216	5,1905	
Mean_FEO	,5321	,0970	5,4856	,0000	,3392	,7249	
Own_Fam_	-,0082	,0067	-1,2169	,2271	-,0216	,0052	
Int_1	-,0036	,0054	-,6632	,5090	-,0144	,0072	
Firm_Age	,0009	,0032	,2907	,7720	-,0055	,0074	
Employee	,0002	,0002	,9616	,3390	-,0002	,0006	
Manufact	,3640	,2145	1,6969	,0934	-,0626	,7906	
Retail	-,4028	,2402	-1,6773	,0972	-,8804	,0748	
Technolo	,4576	,3820	1,1978	,2344	-,3021	1,2173	
Services	-,0517	,2365	-,2187	,8274	-,5221	,4187	
Mean_PS	-,0468	,1064	-,4402	,6609	-,2583	,1647	

Table 15: Regression analysis output with moderator variable family involvement in ownership

In the model summary, we can see that overall our model is significant with a p-value of ,0000. We have an R<sup>2</sup> of 0,3828 which means that our model explains about 38,28% of what the mean EO is comprised of in this model. We are also interested in the interaction-effect, this effect can be seen in Table 15 at the row Int\_1. The interaction-coefficient is negative (-0,0036) and the p-value of this interaction is 0,5090 and therefore not significant.

On the graph, shown in Figure 2, we can see that an increase in FEO with a higher level of family involvement in ownership is lower than an increase in FEO with a lower level of family involvement in ownership. This effect is not statistically significant and we can, therefore, reject hypothesis 2a.

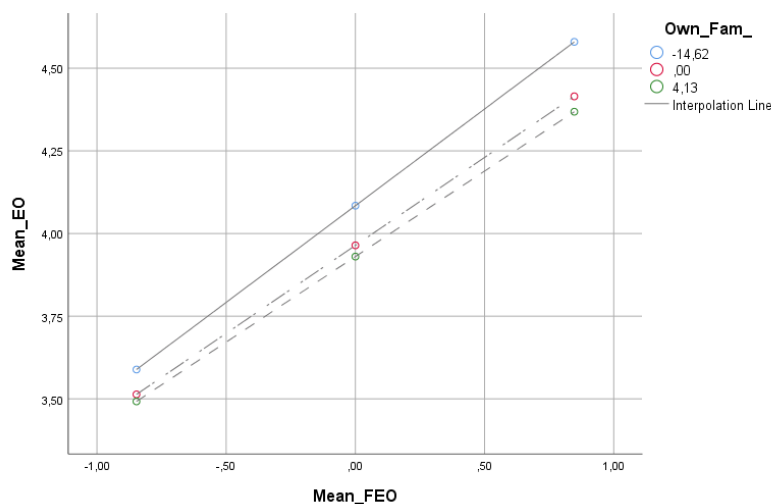


Figure 2: Effect family involvement in ownership on the relation FEO-EO

Next, we take a look at the interaction-effect of the family involvement in the management team on the relationship between FEO and EO. Table 16 shows that overall, our model is significant with a p-value of ,0000. The R<sup>2</sup> of our model is 0,3999, meaning that our model explains 39,99% of what the mean EO is comprised of in this model. The interaction-effect, which can be seen in table 16 at the row Int\_1 is positive (0,0046) with a p-value of 0,1590. This means that this interaction-effect is a lot stronger than the interaction-effect of hypothesis 2a but it is still not statistically significant.

Model Summary

	R	R-sq	MSE	F	df1	df2	p
	,6323	,3999	,5609	5,5966	10,0000	84,0000	,0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	4,1555	,5397	7,6992	,0000	3,0822	5,2288
Mean_FEO	,5079	,0953	5,3315	,0000	,3185	,6973
MT_Fam_I	-,0054	,0035	-1,5348	,1286	-,0124	,0016
Int_1	,0046	,0033	1,4210	,1590	-,0019	,0111
Firm_Age	-,0008	,0033	-,2517	,8019	-,0074	,0057
Employee	,0001	,0002	,5815	,5625	-,0003	,0006
Manufact	,3373	,2119	1,5913	,1153	-,0842	,7587
Retail	-,3767	,2363	-1,5940	,1147	-,8467	,0933
Technolo	,4149	,3759	1,1038	,2728	-,3326	1,1624
Services	-,0766	,2279	-,3362	,7375	-,5299	,3766
Mean_PS	-,0395	,1063	-,3720	,7108	-,2509	,1719

Table 16: Regression analysis output with moderator variable family involvement in the management team

On the graph, shown in Figure 3, we can see that an increase in FEO with a higher level of family involvement in the management team is stronger than an increase in FEO with a lower level of family involvement in the management team. This effect is also not statistically significant and we can, therefore, reject hypothesis 2b.

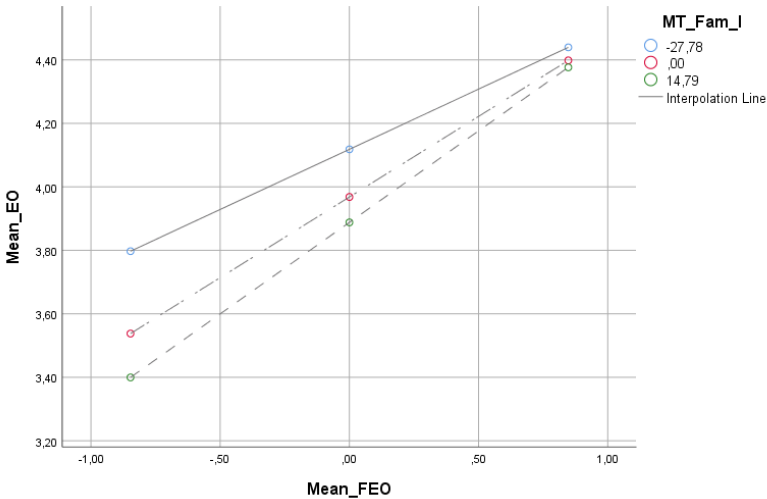


Figure 3: Effect family involvement in the management team on the relation FEO-EO

At last, we test hypothesis 3c by looking at the interaction-effect of the family involvement in the board of governance on the relation between FEO and EO. Table 17 indicates that this model is also significant, with a p-value of ,0000. This can be seen in the model summary. In Table 17 we can also see that our R<sup>2</sup> is 0,4164. This means that our model explains 41,64% of what the mean EO is comprised of in this model. At the row Int\_1, we can see that the interaction-effect is positive (0,0043) with a p-value of 0,3703. We can, therefore, conclude that even the interaction-effect of our hypothesis 2c is not statistically significant.

Model Summary

	R	R-sq	MSE	F	df1	df2	p
	,6453	,4164	,5454	5,9931	10,0000	84,0000	,0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	4,2788	,5340	8,0122	,0000	3,2168	5,3408
Mean_FEO	,5568	,0947	5,8813	,0000	,3685	,7451
BOG_Fam_	-,0112	,0055	-2,0340	,0451	-,0221	-,0002
Int_1	,0043	,0048	,9007	,3703	-,0052	,0138
Firm_Age	-,0009	,0032	-,2798	,7803	-,0072	,0054
Employee	,0001	,0002	,2197	,8266	-,0004	,0005
Manufact	,3257	,2090	1,5584	,1229	-,0899	,7414
Retail	-,4147	,2343	-1,7701	,0803	-,8806	,0512
Technolo	,3644	,3717	,9802	,3298	-,3748	1,1035
Services	-,1205	,2264	-,5324	,5958	-,5707	,3297
Mean_PS	-,0616	,1035	-,5954	,5532	-,2674	,1442

Table 17: Regression analysis output with moderator variable family involvement in the board of governance

On the graph (Figure 4), we can see that an increase in FEO with a higher level of family involvement in the firm is stronger than an increase in FEO with a lower level of family involvement in the board of governance. This effect is not statistically significant and hypothesis 2c will, therefore, be rejected as well.

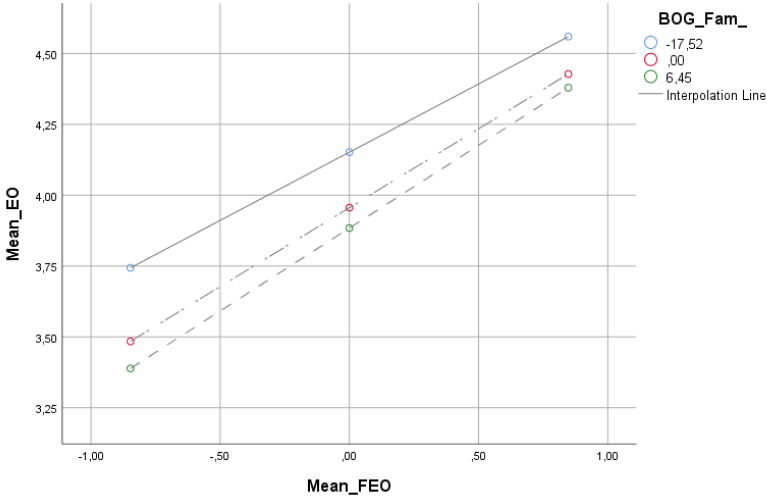


Figure 4: Effect family involvement in the board of governance on the relation FEO-EO

## **Discussion**

Academic literature has provided us with a lot of research on the entrepreneurial orientation of family firms. This study contributes to the research on identifying the determinants of this firm-level entrepreneurial orientation. A lot of research has focused on characteristics of the firm or the CEO as a determinant of EO (e.g. Escribá-Esteve et al., 2009; Zainol, 2013; Kellermanns et al., 2008). EO should however not solely be measured on the level of the firm since the controlling family is an important element of any family business (Chua, Chrisman & Sharma, 1999; Scott & Rosa, 1996; Zellweger et al., 2011).

This study tries to fill that gap by looking at the family entrepreneurial orientation (family-level) as a determinant of the entrepreneurial orientation of the family firm (firm-level). Since the concept of FEO was introduced by Zellweger et al. in 2011, there has not been a lot of research further exploring this concept. The purpose of this research was not to gain more insight into the concept of family entrepreneurial orientation but to be a first step in exploring this new level of analysis. By looking at the impact of a variable on the family-level on a variable on the firm level, we have also found that these two levels of analysis are connected.

Future research calls have also been answered by this current study. Not only the future research call by Zellweger et al. (2011) and Nordqvist & Melin (2010), stating that the family as a distinct level of analysis should be further explored, but other also other future research calls were tended to in this research. Craig & Moores (2006) stated that there has been limited research on the impact of family on the innovation of the firm. Since innovativeness is one of the dimensions of EO, this future research call has only been answered to a certain extent.

To provide a foundation for future research on this topic, we decided to see if there was a positive relationship between the FEO of the controlling family and the EO of the firm. While controlling for several variables such as firm size, firm age, industry, and perceived performance, the only significant result in our regression analysis was the family entrepreneurial orientation. This means that family entrepreneurial orientation is a good predictor for entrepreneurial orientation and that the FEO of the controlling family positively influences the EO of the firm. This finding was consistent with the first hypothesis and answers the future research call by Cruz & Nordqvist (2012) who requested future research on the determinants of EO, which would eventually lead to positive performance. Even though the connection to firm performance was not the purpose of this study, it did confirm FEO as a determinant of EO.

This result also proves the connection between the controlling family and the family firm which supports the suspicion of several researchers (e.g. Zellweger et al, 2011; Cruz & Nordqvist, 2012; Lumpkin et al, 2008) that entrepreneurial orientation should not just be measured on the level of the firm. This study thus proves the importance of incorporating or researching the family as a level of analysis and not only adds to the already existing pile of research on EO but it also broadens the scope of researchers for future studies.

Secondly, we studied the moderating effect of family involvement in the firm.

We hypothesized that the amount of family involvement in these family firms would strengthen the relationship between FEO and EO. To improve the quality and delivered insights of this study, we divided the family involvement in the firm into three separate parts (ownership, management, and governance), resulting in hypotheses 2a, 2b, and 2c.

The results have shown that the interaction-effect of family involvement in ownership on the relation FEO-EO was negative but not statistically significant. This means that when increasing the FEO with a high level of family involvement in ownership, the EO of the firm will be lower than if this level of family involvement in ownership were lower. This effect was however very small.

When looking at the interaction effect of family involvement in the management team on the relation FEO-EO, the results indicated that this was positive but also not statistically significant. This means that when increasing FEO with a high level of family involvement in the management team, the EO of the firm will be higher than if this level of family involvement in the management team were lower. This effect was also very small. The same conclusion was found when looking at the interaction-effect of the family involvement in the board governance on the relation FEO-EO. We can, therefore, reject all three parts of the second hypothesis.

This finding was not the expected outcome. We assumed that the amount of family involvement in the firm would have a strong positive influence because the family CEO is more likely to adopt the entrepreneurial orientation of his family into the family firm if the controlling family is more engaged in the company's ownership, management and governance. This result would suggest that future research on this relation should not necessarily take this issue into account when acquiring new respondents although it is encouraged to confirm the validity of this conclusion.

#### **Limitations and future research:**

Just like in all studies and research, we need to point out some limitations and suggestions for future research. Most of these limitations regard the empirical part of our research. The first limitation is related to the sample size. To improve the quality of this study, it was affected by selection bias. The respondents (CEO's) had to be a part of the controlling family. By evaluating the responses and excluding the data-sets from our analysis where respondents did not provide an answer to all questions, we ensured an even greater quality but it had a definite impact on our sample size.

A second limitation might be the fact that the data-gathering phase of this research took place in March and April of 2020, the exact time of the COVID-19 Coronavirus pandemic. This did not only have an impact on the amount of respondents but also of the kind of responses received. During these uncertain and volatile times, our respondents might felt less secure by being entrepreneurs.

A third limitation of this study is the country-specific bias. The characteristics of entrepreneurship and family businesses themselves might be different in other cultures and countries (Cruz & Nordqvist, 2012). Common method bias has also been tested using the Hermann single factor test in SPSS. A single factor is extracting 21,684% of the total and since this is smaller than 50%, we can conclude that there is no track of common method bias.

The last limitation is already acknowledged in many studies and regards the single-respondent bias. For this research, only the CEO of the family firm, who is also part of the controlling family filled out



the electronic survey. The responses received therefore only took into account this single respondent's personal opinion. This, however, is common practice in research on entrepreneurial orientation (Lyon et al., 2000; Wiklund & Shepherd, 2005; Cruz & Nordqvist, 2012)

Just like the research conducted by Zellweger et al. in 2011, the purpose of this study was not to compose a scale to measure FEO. Further attempts to advance the composition of such a scale are needed. Further research might also entail the further exploration of the family as a level of analysis. This can be done by recreating this current study with a larger sample size to confirm its validity and reliability. Having a larger sample size also opens up options for defining family firms more strictly.

At last, the  $R^2$  of our model, even when taking into account the family involvement in the firm, was significant but rather low. This suggests that there are other factors that have an impact on the EO of family firms. Future research might be able to point out what these other variables are.

### **Acknowledgments**

I would like to thank Prof. Dr. Jelle Schepers and Ph.D. researcher Nils Wuytens from Hasselt University for their continuous insightful guidance and knowledge throughout the process of this research as well as 2 anonymous reviewers.

## Attachments

Attachment 1: Descriptive statistics of the dimensions of FEO

Descriptive Statistics			
	N	Mean	Std. Deviation
Family entrepreneurial orientation 1	95	4,35	1,767
Family entrepreneurial orientation 2	95	4,05	1,887
Family entrepreneurial orientation 3	95	5,11	1,433
Family entrepreneurial orientation 4	95	5,38	1,775
Family entrepreneurial orientation 5	95	3,60	1,323
Family entrepreneurial orientation 6	95	2,83	1,419
Family entrepreneurial orientation 7	95	4,39	1,646
Family entrepreneurial orientation 8	95	4,05	1,483
Family entrepreneurial orientation 9	95	4,31	1,558
Family entrepreneurial orientation 10	95	4,06	1,435
Family entrepreneurial orientation 11	95	4,40	1,275
Valid N (listwise)	95		

Attachment 2: Descriptive statistics of the dimensions of EO.

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Entrepreneurial orientation 1	95	1	7	3,85	1,368
Entrepreneurial orientation 2	95	1	7	4,57	1,718
Entrepreneurial orientation 3	95	1	7	4,05	1,567
Entrepreneurial orientation 4	95	1	7	4,54	1,277
Entrepreneurial orientation 5	95	1	7	4,30	1,549
Entrepreneurial orientation 6	95	1	7	3,49	1,628
Entrepreneurial orientation 7	95	1	6	3,55	1,334
Entrepreneurial orientation 8	95	1	7	3,53	1,303
Entrepreneurial orientation 9	95	1	7	3,79	1,436
Valid N (listwise)	95				

Attachment 3: Correlations table of the dimensions of EO

**Correlations**

		Entrepreneu rial orientation 1	Entrepreneu rial orientation 2	Entrepreneu rial orientation 3	Entrepreneu rial orientation 4	Entrepreneu rial orientation 5	Entrepreneu rial orientation 6	Entrepreneu rial orientation 7	Entrepreneu rial orientation 8	Entrepreneu rial orientation 9
Entrepreneurial orientation 1	Pearson Correlation	1	,161	,001	,230*	,290**	,092	,371**	,291**	,165
	Sig. (2-tailed)		,119	,992	,025	,004	,373	,000	,004	,110
	N	95	95	95	95	95	95	95	95	95
Entrepreneurial orientation 2	Pearson Correlation	,161	1	,732**	,379**	,405**	-,026	,257*	,074	,265**
	Sig. (2-tailed)	,119		,000	,000	,000	,805	,012	,476	,010
	N	95	95	95	95	95	95	95	95	95
Entrepreneurial orientation 3	Pearson Correlation	,001	,732**	1	,371**	,334**	,065	,338**	,169	,350**
	Sig. (2-tailed)	,992	,000		,000	,001	,534	,001	,102	,001
	N	95	95	95	95	95	95	95	95	95
Entrepreneurial orientation 4	Pearson Correlation	,230*	,379**	,371**	1	,460**	,068	,244*	,358**	,431**
	Sig. (2-tailed)	,025	,000	,000		,000	,513	,017	,000	,000
	N	95	95	95	95	95	95	95	95	95
Entrepreneurial orientation 5	Pearson Correlation	,290**	,405**	,334**	,460**	1	,176	,455**	,275**	,357**
	Sig. (2-tailed)	,004	,000	,001	,000		,088	,000	,007	,000
	N	95	95	95	95	95	95	95	95	95

Entrepreneurial orientation 6	Pearson Correlation	,092	-,026	,065	,068	,176	1	,417**	,450**	,204*
	Sig. (2-tailed)	,373	,805	,534	,513	,088		,000	,000	,047
	N	95	95	95	95	95	95	95	95	95
Entrepreneurial orientation 7	Pearson Correlation	,371**	,257*	,338**	,244*	,455**	,417**	1	,685**	,614**
	Sig. (2-tailed)	,000	,012	,001	,017	,000	,000		,000	,000
	N	95	95	95	95	95	95	95	95	95
Entrepreneurial orientation 8	Pearson Correlation	,291**	,074	,169	,358**	,275**	,450**	,685**	1	,446**
	Sig. (2-tailed)	,004	,476	,102	,000	,007	,000	,000		,000
	N	95	95	95	95	95	95	95	95	95
Entrepreneurial orientation 9	Pearson Correlation	,165	,265**	,350**	,431**	,357**	,204*	,614**	,446**	1
	Sig. (2-tailed)	,110	,010	,001	,000	,000	,047	,000	,000	
	N	95	95	95	95	95	95	95	95	95

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Attachment 4: General correlations table

**Correlations**

		Firm Age	Number of employees	Generation	Industry	More family businesses	Board of governance	Management team	Mean family entrepreneurial orientation	Mean entrepreneurial orientation
Firm Age	Pearson Correlation	1	,364**	,710**	-,129	,161	-,312**	-,327**	-,102	-,001
	Sig. (2-tailed)		,000	,000	,213	,119	,002	,001	,325	,989
	N	95	95	90	95	95	94	93	95	95
Number of employees	Pearson Correlation	,364**	1	,262*	,039	-,059	-,307**	-,331**	,036	,167
	Sig. (2-tailed)	,000		,013	,706	,567	,003	,001	,730	,106
	N	95	95	90	95	95	94	93	95	95
Generation	Pearson Correlation	,710**	,262*	1	-,239*	,063	-,217*	-,308**	-,110	-,017
	Sig. (2-tailed)	,000	,013		,023	,557	,041	,003	,304	,877
	N	90	90	90	90	90	89	89	90	90
Industry	Pearson Correlation	-,129	,039	-,239*	1	,174	,158	,083	-,085	-,123
	Sig. (2-tailed)	,213	,706	,023		,091	,128	,427	,411	,236
	N	95	95	90	95	95	94	93	95	95
More family businesses	Pearson Correlation	,161	-,059	,063	,174	1	,052	-,094	,081	,246*
	Sig. (2-tailed)	,119	,567	,557	,091		,622	,368	,437	,016
	N	95	95	90	95	95	94	93	95	95

Board of governance	Pearson Correlation	-,312**	-,307**	-,217*	,158	,052	1	,212*	-,034	-,046
	Sig. (2-tailed)	,002	,003	,041	,128	,622		,042	,747	,657
	N	94	94	89	94	94	94	92	94	94
Management team	Pearson Correlation	-,327**	-,331**	-,308**	,083	-,094	,212*	1	-,119	-,266**
	Sig. (2-tailed)	,001	,001	,003	,427	,368	,042		,256	,010
	N	93	93	89	93	93	92	93	93	93
Mean family entrepreneurial orientation	Pearson Correlation	-,102	,036	-,110	-,085	,081	-,034	-,119	1	,522**
	Sig. (2-tailed)	,325	,730	,304	,411	,437	,747	,256		,000
	N	95	95	90	95	95	94	93	95	95
Mean entrepreneurial orientation	Pearson Correlation	-,001	,167	-,017	-,123	,246*	-,046	-,266**	,522**	1
	Sig. (2-tailed)	,989	,106	,877	,236	,016	,657	,010	,000	
	N	95	95	90	95	95	94	93	95	95

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

Attachment 5: Correlations table of the dimensions of FEO

**Correlations**

		Family entrepren eurial orientation 1	Family entrepren eurial orientation 2	Family entrepren eurial orientation 3	Family entrepren eurial orientation 4	Family entrepren eurial orientation 5	Family entrepren eurial orientation 6	Family entrepren eurial orientation 7	Family entrepren eurial orientation 8	Family entrepren eurial orientation 9	Family entrepren eurial orientation 10	Family entrepren eurial orientation 11
Family entrepreneurial orientation 1	Pearson Correlation	1	,384**	,158	-,108	,347**	,316**	,282**	,269**	,417**	,117	,367**
	Sig. (2-tailed)		,000	,127	,297	,001	,002	,006	,008	,000	,259	,000
	N	95	95	95	95	95	95	95	95	95	95	95
Family entrepreneurial orientation 2	Pearson Correlation	,384**	1	,285**	-,131	,322**	,369**	,192	,235*	,320**	,266**	,168
	Sig. (2-tailed)	,000		,005	,207	,001	,000	,062	,022	,002	,009	,104
	N	95	95	95	95	95	95	95	95	95	95	95
Family entrepreneurial orientation 3	Pearson Correlation	,158	,285**	1	,150	,211*	-,007	,249*	,353**	,286**	,173	,023
	Sig. (2-tailed)	,127	,005		,146	,040	,947	,015	,000	,005	,094	,823
	N	95	95	95	95	95	95	95	95	95	95	95
Family entrepreneurial orientation 4	Pearson Correlation	-,108	-,131	,150	1	,170	-,138	,213*	,111	-,038	,094	-,051
	Sig. (2-tailed)	,297	,207	,146		,099	,181	,038	,284	,712	,365	,625
	N	95	95	95	95	95	95	95	95	95	95	95
Family entrepreneurial orientation 5	Pearson Correlation	,347**	,322**	,211*	,170	1	,396**	,379**	,450**	,378**	,266**	,154
	Sig. (2-tailed)	,001	,001	,040	,099		,000	,000	,000	,000	,009	,137
	N	95	95	95	95	95	95	95	95	95	95	95

Family entrepreneurial orientation 6	Pearson Correlation	,316**	,369**	-,007	-,138	,396**	1	,206*	,323**	,442**	,433**	,220*
	Sig. (2-tailed)	,002	,000	,947	,181	,000		,045	,001	,000	,000	,032
	N	95	95	95	95	95	95	95	95	95	95	95
Family entrepreneurial orientation 7	Pearson Correlation	,282**	,192	,249*	,213*	,379**	,206*	1	,353**	,231*	,242*	,031
	Sig. (2-tailed)	,006	,062	,015	,038	,000	,045		,000	,024	,018	,762
	N	95	95	95	95	95	95	95	95	95	95	95
Family entrepreneurial orientation 8	Pearson Correlation	,269**	,235*	,353**	,111	,450**	,323**	,353**	1	,509**	,368**	,146
	Sig. (2-tailed)	,008	,022	,000	,284	,000	,001	,000		,000	,000	,157
	N	95	95	95	95	95	95	95	95	95	95	95
Family entrepreneurial orientation 9	Pearson Correlation	,417**	,320**	,286**	-,038	,378**	,442**	,231*	,509**	1	,358**	,388**
	Sig. (2-tailed)	,000	,002	,005	,712	,000	,000	,024	,000		,000	,000
	N	95	95	95	95	95	95	95	95	95	95	95
Family entrepreneurial orientation 10	Pearson Correlation	,117	,266**	,173	,094	,266**	,433**	,242*	,368**	,358**	1	,085
	Sig. (2-tailed)	,259	,009	,094	,365	,009	,000	,018	,000	,000		,414
	N	95	95	95	95	95	95	95	95	95	95	95
Family entrepreneurial orientation 11	Pearson Correlation	,367**	,168	,023	-,051	,154	,220*	,031	,146	,388**	,085	1
	Sig. (2-tailed)	,000	,104	,823	,625	,137	,032	,762	,157	,000	,414	
	N	95	95	95	95	95	95	95	95	95	95	95

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).



Attachment 6: The Miller/Covin and Slevin (1989) EO Scale

Innovativeness items

In general, the top managers of my firm favor . . .

A strong emphasis on the marketing of tried-and-true products or services	1 2 3 4 5 6 7	A strong emphasis on R&D, technological leadership, and innovations
---	---------------	---

How many new lines of products or services has your firm marketed in the past five years (or since its establishment)?

No new lines of products or services	1 2 3 4 5 6 7	Very many new lines of products or services
Changes in product or service lines have been mostly of a minor nature	1 2 3 4 5 6 7	Changes in product or service lines have usually been quite dramatic

Proactiveness items

In dealing with its competitors, my firm . . .

Typically responds to actions which competitors initiate	1 2 3 4 5 6 7	Typically initiates actions to which competitors then respond
Is very seldom the first business to introduce new products/services, administrative techniques, operating technologies, etc.	1 2 3 4 5 6 7	Is very often the first business to introduce new products/services, administrative techniques, operating technologies, etc.
Typically seeks to avoid competitive clashes, preferring a "live-and-let-live" posture	1 2 3 4 5 6 7	Typically adopts a very competitive, "undo-the-competitors" posture

Risk-taking items

In general, the top managers of my firm have . . .

A strong proclivity for low-risk projects (with normal and certain rates of return)	1 2 3 4 5 6 7	A strong proclivity for high-risk projects (with chances of very high returns)
---	---------------	--

In general, the top managers of my firm believe that . . .

Owing to the nature of the environment, it is best to explore it gradually via cautious, incremental behavior	1 2 3 4 5 6 7	Owing to the nature of the environment, bold, wide-ranging acts are necessary to achieve the firm's objectives
---	---------------	--

When confronted with decision-making situations involving uncertainty, my firm . . .

Typically adopts a cautious, "wait-and-see" posture in order to minimize the probability of making costly decisions	1 2 3 4 5 6 7	Typically adopts a bold, aggressive posture in order to maximize the probability of exploiting potential opportunities
---	---------------	--

Attachment 7: The Zellweger et al. (2011) FEO Scale (7-point Likert Scale)

Item description	Introductory question: "The family as a whole ..."
Preservation orientation	... strives to preserve existing businesses//Strives to create new businesses.
Transgenerational outlook	... makes decisions primarily with the success of the current generation in mind//Makes decisions primarily with the success of future generations in mind.
Change orientation	... is resistant to change//Is very willing to change.
Autonomy (external)	... is highly dependent on relationships with external stakeholders to grow the business//Is not at all dependent on external stakeholders to grow the business.
Risk orientation	... favors low-risk projects with normal and certain rates of return//Favors high-risk projects with chances of very high returns.
Resource focus	... pursues opportunities with close attention to the resources we currently control//Pursues opportunities without regard to resources currently controlled.
Proactiveness	... is seldom the first to introduce new products/ services, technologies, etc.//Is often the first to introduce new products/services, technologies, etc.
Innovativeness	... favors a strong emphasis on existing internal processes (e.g., managerial, technological)//Favors a strong emphasis on new internal processes (e.g., managerial, technological).
Stability versus growth	... values growth and expansion//Values stability and continuity.
Formality of strategizing	... tends to grow through a formal strategy//Tends to grow through an informal strategy.
Autonomy (internal)	... allows individuals/teams to pursue business opportunities on their own//Expects individuals/teams pursuing business opportunities to obtain approval from their supervisor(s).

Attachment 8: The F-PEC Scale of family involvement by Klein et al. (2005): The Power Subscale

1. Please indicate the proportion of share ownership held by family and nonfamily members:
  - (a) Family \_\_\_\_\_%
  - (b) Nonfamily \_\_\_\_\_%
2. Are shares held in a holding company or similar entity (e.g., trust)? 1.  Yes    2.  No  
If YES, please indicate the proportion of ownership:
  - (a) Main company owned by:
    - (i) direct family ownership: \_\_\_\_\_%
    - (ii) direct nonfamily: \_\_\_\_\_% ownership: \_\_\_\_\_%
    - (iii) holding company: \_\_\_\_\_%
  - (b) Holding company owned by:
    - (i) family ownership: \_\_\_\_\_%
    - (ii) nonfamily ownership: \_\_\_\_\_%
    - (iii) 2nd holding company: \_\_\_\_\_%
  - (c) 2nd holding company owned by:
    - (i) family ownership: \_\_\_\_\_%
3. Does the business have a governance Board? 1.  Yes    2.  No  
If YES:
  - (a) How many Board members does it comprise? \_\_\_\_\_ members
  - (b) How many Board members is family? \_\_\_\_\_ family members
  - (c) How many nonfamily (external) members nominated by the family are on the Board? \_\_\_\_\_ nonfamily members
4. Does the business have a management Board? 1.  Yes    2.  No  
If YES:
  - (a) How many persons does it comprise? \_\_\_\_\_ members
  - (b) How many management Board members is family? \_\_\_\_\_ family members
  - (c) How many nonfamily Board members are chosen through them? \_\_\_\_\_ nonfamily member

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