KU LEUVEN
HOGESCHOOL-UNIVERSITEIT BRUSSEL
FACULTEIT ECONOMIE EN BEDRIJFSWETENSCHAPPEN

Intern aangestuurde masterproef

Does Team Management pay off in Family Businesses?

Thomas VANDERSTAPPEN

Masterproef aangeboden tot het behalen van de graad van
Master of Science handelsingenieur

Promotor: Diane ARIJS

Academiejaar: 2013 – 2014

Verdedigd: Juni 2014

FACULTEIT ECONOMIE EN BEDRIJFSWETENSCHAPPEN CAMPUS BRUSSEL (HUBRUSSEL)
WARMOESBERG 26 1000 BRUSSEL BELGIË

KU LEUVEN HOGESCHOOL-UNIVERSITEIT BRUSSEL HUB

FACULTEIT ECONOMIE EN BEDRIJFSWETENSCHAPPEN

Masterproef

Does Team Management pay off in Family Businesses?

Thomas VANDERSTAPPEN

Abstract

The main purpose of this study is to examine the effect of team management and other top management team (TMT) characteristics on the financial performance of private family businesses (FB's). The financial performance is measured by a three-year average (2010-2012) of the return on total assets. Using the agency theory, this study investigates whether FB's where a top management team is leading the company, perform better compared to FB's where one person is at the head of the firm. The evidence on 92 private FB's located in Flanders did not support this expectation. This could indicate that within a TMT, several factors may be able to influence family firm financial performance. By means of the agency theory, the resource-based view and psychological aspects, we examine some of these factors by using a subsample of 62 TMT's leading a family business. We explore nonlinear, direct, and interaction effects of the TMT size on financial performance. No support was found for an inverted U-shaped relationship between the TMT size and financial performance. Functional TMT characteristics were investigated and the results indicated that a higher satisfaction about the mutual relationship between the top managers results in better financial performance. Finally, we hypothesize an inverted U-shaped relationship between the family involvement in the TMT and firm financial performance. We did not find support for this kind of relationship.

Keywords: Family business, top management team, TMT characteristics, private family firm financial performance, agency theory, resource-based view, TMT size, family involvement

Introduction

The attention to family business research is increasing and the study of family businesses (FB's) and their activities is important (Chrisman, Chua, & Sharma, 2005; Sharma, 2004). In fact, Lambrecht and Baetens (2005) and Lambrecht and Molly (2011) state that the majority of the Belgian enterprises are family businesses. They are considered to be the backbone of the Belgian economy. Prove for this statement is that 77% of the Belgian firms with employees are family businesses and that FB's provide a significant contribution to the employment (45%) and the GDP (33%) in Belgium (Lambrecht & Molly, 2011). Research by FB International (2008, quoted by Lambrecht & Molly, 2011) and the European Commission (2009) also indicate that FB's play an essential role in the economy of other European countries (e.g. Germany). Moreover, FB's also dominate the economic landscape throughout the world (Chrisman et al., 2005; Chrisman, Chua, & Steier, 2003). Therefore, it is important to take a closer look at this kind of businesses and explore the factors that could contribute to the success of a family business.

With respect to team management, Aronoff (1998) pointed out in one of his ten megatrends for family businesses that management is becoming a team effort. In the past, team management was far from popular in FB's. It was rather a result of a large family instead of a vision to attain success (Van Gerven, 2005). At present, team management and team work have become more important,

also in family businesses (Aronoff, 1998; Lambrecht & Baetens, 2005). According to Lambrecht and Baetens (2005), the trend towards team management has four reasons. First of all, it was common practice in the past that only one child, usually the eldest son, took over the business. This practice is no longer or at least much less common in the present. Secondly, it is more accepted that women hold a top position in the family business. Thirdly, the younger generation is more and more interested in the family business and they want to be a part of it. Finally, team management has become the norm in general management thinking (Lambrecht & Baetens, 2005). More important, in their qualitative research, Lambrecht and Baetens (2005) discuss seven reasons why it can be beneficial when a team is leading the company. Besides the different and complementary competences of the top managers that could reinforce each other, the most important benefit with respect to this research is that performance of some companies improved thanks to team management. The added value of our study is that it empirically examines whether a team at the head of a FB indeed results in better financial performance compared to the financial performance of a FB where one person is leading the company. Also, we empirically test the effects of top management team (TMT) characteristics like for instance the TMT size, the family involvement in the TMT, the relationship between the top managers and the extent to which the responsibilities are separated. The study of these effects on the financial performance of private FB's located in Flanders can be seen as interesting and explorative research. Moreover, to the best of our knowledge, this research is the first study of its kind in Flanders. Hence, the findings and results could be of importance for private FB's and their owners and managers. It is important to notice that the greater part of management literature has focused primarily on publicly traded firms partly because of the easier access to reliable data (Sharma & Carney, 2012). Since the majority of family firms worldwide are small, unlisted companies, it can be interesting to shed more light on unlisted family businesses (Mazzola, Sciascia, & Kellermanns, 2013). Furthermore, the acquired financial data of the private family firms in our study are objective and more reliable since all non-financial private firms in Belgium are obliged to deposit their balance sheet and income statement data (Arijs & Praet, 2010).

A lot of theoretical frameworks like for instance the agency theory and the resource-based view (RBV) try to analyze and describe the advantages and/or disadvantages of family involvement in a business (e.g. Basco, 2013; Chrisman et al., 2005). Based on these frameworks, researchers try to explain the differences in financial performance between family businesses and non-family businesses or between firms with more or less family involvement in ownership and/or management (Basco, 2013; Chrisman, Chua, & Litz, 2004; O'Boyle Jr., Pollack, & Rutherford, 2012). This study will make use of the agency theory and the RBV as the lenses through which the effects of TMT characteristics on the financial performance of a family business are analyzed. Additionally, we explore some psychological aspects like trust and conflicts by examining the relationship and the interaction between the top managers since Pieper (2010) argued that next to the agency theory, psychological aspects could be incorporated in FB studies. The interaction between the top managers is represented by both the extent to which the responsibilities of the top managers are separated and the decision-making process in the TMT.

The core goal of this research is to find out if top team management in family businesses translates into better financial performance compared to the financial performance of family businesses with one leading manager. The financial performance of the firms will be measured by a three-year average of the return on assets or the ROA. Besides the effect of team management by itself, we will take a look at the influence of the TMT size and the family involvement in the TMT on family firm financial performance. Moreover, the influence of the TMT size in connection with the stability of the environment in which the company operates, will also be examined. Furthermore, we explore some functional TMT characteristics that could influence firm financial performance like the relationship within the TMT, the extent to which the responsibilities of the top managers are separated, and the fact that top managers take the final decisions in consultation or not.

The article is structured as follows. We start with the literature review and the development of the hypotheses. In that section, we first discuss the definition of a family business. Afterwards, we discuss the potential effect of team management on family firm financial performance by means of

the agency theory. Next, the potential effects on performance of TMT characteristics like the TMT size, the functional TMT characteristics, and the family involvement in the TMT are treated. The literature review and hypotheses are followed by the methodology in which the sample and variable measures are discussed and presented. In that section, we also verified the assumptions that must be met before we can generalize the results. The next two sections are devoted to the presentation and the discussion of the results. The article concludes by enumerating the limitations of this study and giving some directions for future research.

Literature review and hypotheses development

FB definition

In 1989, Handler pointed out that one of the first and most obvious challenges for family business researchers is defining the family firm (Handler, quoted by Astrachan, Klein, & Smyrnios, 2002). Even today, it remains difficult to define the family business because still no commonly acknowledged definition exists (Basco, 2013; Chrisman et al., 2005; Litz, 2008; Litz, Pearson, & Litchfield, 2012; Mazzi, 2011; Rutherford, Kuratko, & Holt, 2008). Litz (2008) was able to collect no less than 30 different FB definitions because many FB researchers make use of so called operational definitions that correspond with their research (Chua, Chrisman, & Sharma, 1999; Litz, 2008). All these different definitions of family businesses can lead to samples which are not homogeneous, making it difficult to compare FB research (Chua et al., 1999). However, the different FB definitions can be categorized into two main approaches: the demographic approach and the essence approach. It is noteworthy that these approaches are the most frequently used in FB definition research. This section starts with the explanation of the demographic approach, followed by the essence approach. The organizational identity and the FB as a system approach will also be briefly discussed. In the next section, the F-PEC scale of Astrachan et al. (2002) is introduced. This scale measures the influence of the family on the business by measuring the degree of familiness (Rutherford et al., 2008).

Demographic approach, essence approach, organizational identity and FB as a system

First of all, a lot of FB definitions are characterized by a combination of the components of family involvement in businesses, also called the components of involvement (COI) or the demographic approach. These components consist of the family involvement in ownership, management and governance, and the occurring of a transgenerational succession (Chrisman et al., 2005; Chua et al., 1999). The COI approach has the advantage of being an observable and objective measure (Chua et al., 1999; Zellweger, Eddleston, & Kellermanns, 2010). However, disadvantages occur when the COI approach is used to distinguish FB's from non-FB's. According to Chrisman, Chua and Litz (2003), researchers have come to realize that the components of family involvement do not fully determine whether a firm is a family firm or not. Actually, two FB's with the same level of involvement in ownership and management can have another perception whether they are a FB or not (Arijs & Praet, 2010). Misclassification of a non-family firm as a family firm (and vice versa) is possible and forms a threat to the interpretation of results (Zellweger et al., 2010). Basco (2013) complements this criticism and argues that the demographic approach does not incorporate the unique characteristics created by the family in the family firm. In other words, it is important to know whether the business behaves as a FB or not. This behavior can be captured by a second approach, called the essence or intention-based approach (Mazzi, 2011). This approach complements the COI approach and helps to solve some of its disadvantages. Chua et al. (1999, p. 25) launched the essence approach to define a FB: "The family business is a business governed and/or managed with the intention to shape and pursue the vision of the business held by a dominant coalition controlled by members of the same family or small number of families in a manner that is potentially sustainable across generations of the family or families". Besides the intention, the vision, and the transgenerational aspect, Chrisman, Chua, and Litz (2003) added a fourth inseparable element based on the resource-based view. More specifically, they propose that the essence of a family firm also consists of unique, inseparable, and synergistic resources and capabilities that arise from family involvement and their interactions. So on top of the behavioral

perspective, the essence approach is also based on the RBV (Basco, 2013). Zellweger et al. (2010) added the 'organizational identity' to the COI and essence approach as a complementary extension for defining the family business. The organizational identity dimension of familiness is unique for each family firm because it takes into account how the family defines and views the firm along with the collective behavior and identity of the organization (Zellweger et al., 2010). Finally, the system approach can be used to define a family business. In this approach, the FB is seen as a complete or a full system where three sub systems (family, business and the individual) can strengthen each other and create a synergy (Lambrecht & Pirnay, 2009). In that way, it is important to understand that sometimes suboptimal decisions from an economic perspective can be optimal from the FB perspective as a whole. Pieper and Klein (2007) proposed an open-systems approach by means of the bulleye representation in which the family business system is embedded in and interacts with the environment. In this representation, the individual is put in the center because the causal dynamics and the interactions between the subsystems and the individual are essential (Pieper & Klein, 2007).

Development of scales: F-PEC

Besides the abovementioned approaches, scales are a useful instrument to capture various degrees of family involvement (Mazzi, 2011; Sharma, 2004). To measure the potential influence of the family on the business, Astrachan et al. (2002) provided the F-PEC scale which is further discussed and examined by Klein, Astrachan, and Smyrnios (2005) and Rutherford et al. (2008). Since this scale describes the extent or the type of family involvement in firms on a continuous scale rather than a dichotomous characterization, it can be used to make more effective comparisons across businesses with regard to the level of family involvement and its effect on the performance (Astrachan et al., 2002; Rutherford et al., 2008). Indeed, it allows researchers to utilize the scores on the scales as independent, dependent, mediating, or moderating variables. Holt, Rutherford, and Kuratko (2010) do acknowledge that the F-PEC scale represents a valid and reliable scale for family business researchers to more effectively classify family firms.

The F-PEC scale consists of three important dimensions of family influence: power, experience, and culture (Astrachan et al., 2002). The power scale illustrates the influence of the family by means of the ownership (% shares directly or via holding), management (% family), and/or governance (% family) (Sharma, 2004). The power sub scale can be compared to the COI approach since it also takes into account the percentage of family involved in the management and ownership. Next, the experience scale measures the family business experience through the number of family members who contribute to the business (actively or passively) and through the generations of family members involved in ownership, management and governance (Astrachan et al., 2002; Sharma, 2004). Experience can be seen as the sum of information knowledge, judgment, and intuition that comes through successive generations. It is argued that the level of experience gained in this succession process is the greatest during the shift from the first to the second generation, declining afterwards and characterized by a non-linear relationship (Astrachan et al., 2002; Rutherford et al., 2008). Finally, the culture scale takes into account the values of the family members, the family's commitment, loyalty, and pride to the business and their support for the business goals and vision (Astrachan et al., 2002; Rutherford et al., 2008; Sharma, 2004). The experience and the culture scale could be linked to the essence approach since they take into account the generational aspect and the vision of the business. However, Rutherford et al. (2008) remark that the F-PEC scale only measures the 'potential' family influence and not necessarily the actual influence of the family which captures the essence of familiness.

Effect of team management on family firm financial performance

The theoretical framework of the agency theory is often used to explain the relation between family involvement and firm performance (e.g. Basco, 2013; O'Boyle Jr. et al., 2012). Jensen and Meckling (1976, p. 5) define an agency relationship as "a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent". It is generally

accepted that the agent(s) or manager(s) will not always act in the best interests of the principal(s) or owner(s), which generates agency problems (Basco, 2013; Jensen & Meckling, 1976). These agency problems are often a consequence of asymmetric information between owner and manager (Chrisman et al., 2004). All owner-manager agency problems, for instance moral hazard and adverse selection, are also referred to as agency problems I by Villalonga and Amit (2006, quoted by Mazzi, 2011). To avoid these agency problems and to make sure that the agent does act in the best interests of the principals, principals are willing to incur costs, the so called agency costs (Jensen & Meckling, 1976). Chrisman et al. (2004) cite Jensen and Meckling (1976) and refer to agency costs as the costs associated with all activities to align the interests of managers and owners. In order to limit the suboptimal activities of the agent, monitoring expenditures and higher verification costs can be made, and pay incentives can be given (Chrisman et al., 2004; Greenwood, 2003; Mazzi, 2011). In summary, the agency relationship and the accompanied costs are associated with the separation of ownership and control and with information asymmetries between owner and manager (Schulze, Lubatkin, Dino, & Buchholtz, 2001). Since in family firms, ownership and control are likely to coincide in the same person(s), family firms do not or suffer less from agency costs (Schulze et al., 2001; Chrisman et al., 2005; O'Boyle Jr. et al., 2012). As a result, researchers like for instance Kang (2002, quoted by Schulze et al., 2001) suggested that family firms have one of the least costly forms of organizational governance. Jensen and Meckling (1976) also concluded that formal governance mechanisms and the associated costs are not necessary for family firms, which implies that FB's are able to outperform non-FB's. Although this reasoning appears to be flawless, private ownership and family management can result in new agency hazards for the firm, called owner-owner agency problems (Chrisman et al., 2004; Schulze et al., 2001). This means that members of the controlling family can use their dominant position to extract private benefits instead of maximizing the overall value of the firm, at the expense of minority shareholders (Mazzi, 2011). The new problems are based on altruistic behavior and management entrenchment (Basco, 2013; Schulze et al., 2001; Sharma, 2004). Although altruistic behavior could mitigate agency costs since it takes into account the wellbeing of others and stimulates loyalty and commitment, it can also have a dark side (Chrisman et al., 2004; Schulze, Lubatkin, & Dino, 2003). With respect to family, altruism may result in self-control problems and can cause family members like children to free-ride or to receive privileges and job opportunities they would not get in normal situations (Schulze et al., 2001, 2003). Together, these new agency hazards are referred to as agency problems II by Villalonga and Amit (2006, quoted by Mazzi, 2011). Because it is likely that family firms will be confronted with these types of problems, Schulze et al. (2001) concluded that agency costs are not necessarily minimized in family firms.

We use the agency theory and especially agency problems type II to postulate our first hypothesis. Team management in family businesses instead of one leader can eliminate or at least mitigate self-control problems and dark altruism behavior. Indeed, the top managers can exercise control on the decisions and activities of each other, which is not the case in family businesses with only one leader. The elimination or mitigation of self-control problems and dark altruism behavior due to team management is likely to be beneficial for firm financial performance. Based on the previous reasoning, we can postulate the following hypothesis:

H1: Private family businesses led by a top management team will have better financial performance (measured by ROA) than private FB's led by only one person.

TMT characteristics and effect on firm performance

TMT's play a fundamental role in influencing firm performance (Certo, Lester, Dalton, & Dalton, 2006). Whether or not team management has a positive effect on the financial performance of family businesses (H1), it is important to examine the effects of TMT characteristics like for instance the TMT size and the family involvement in the TMT on the performance of a family firm.

Effect of the TMT size in family businesses

So far, research on FB's has especially focused on the effects of familiness or family involvement on firm performance (e.g. Arijs & Praet, 2010; Basco, 2013; Habbershon, Williams, & MacMillan, 2003; O'Boyle Jr. et al., 2012; Rutherford et al., 2008). More recently, FB research started concentrating on the top management team by investigating the TMT formation, composition, diversity and behavioral dynamics, and their effect on performance (Ensley & Pearson, 2005; Ling & Kellermanns, 2010; Schjoedt, Monsen, Pearson, Barnett, & Chrisman, 2013). Schjoedt et al. (2013) for example, investigated the formation, composition and behavior of new venture and family business teams because they believe that these characteristics can have an influence on the survival and growth of a firm. Still, the TMT size as a potential factor influencing family firm performance has not been extensively examined in FB literature. This seems surprising since Lambrecht and Baetens (2005) found that team management could improve FB performance. Westhead and Howorth (2006) did investigate TMT size and hypothesized that private family firms with larger management teams will attain superior firm performance. They found partial support for their hypothesis since they reported significantly higher levels of sales growth for firms with larger management teams. However, they did not find significant results with respect to other firm performance indicators like absolute employment change. Minichilli, Corbetta, and MacMillan (2010) used TMT size as a control variable and noticed that it had no significant impact on ROA in all tested models. Complementary, Ling and Kellermanns (2010) found no significant impact of TMT size on perceived performance of family firms. Finally, De Massis, Kotlar, Campopiano, and Cassia (in press) also used TMT size as a control variable and although they found a positive effect on performance (ROA), this effect was not significant. In summary, there is still no consensus in the FB literature about the effect of TMT size on family firm performance. To postulate a hypothesis about the effect of the TMT size on family firm performance, we looked for inspiration in the literature that investigates the effect of TMT size on performance in businesses in general.

Effect of the TMT size in businesses in general

In the past, relatively little research was conducted on the effect of the TMT size as a predictor of firm performance (Haleblian & Finkelstein, 1993). More recently, this topic received more attention, resulting in more research into the relationship between TMT demographics like size and heterogeneity, and firm financial performance (Certo et al., 2006). To examine this relationship, Certo et al. (2006) executed a meta-analysis. This meta-analytic examination showed that larger TMT's are likely to be associated with superior firm performance. For example, both Hoffman, Lheureux, and Lamont (1997, quoted by Certo et al., 2006) and Carpenter, Sanders, and Gregersen (2001, quoted by Certo et al., 2006) found a consistent positive relationship between TMT size and financial measures of performance. Hambrick, Cho, and Chen (1996) indicated that the TMT size was positively related to the growth in market share, stating that large teams could provide some benefits. Still, other researchers like Iaquionto and Fredrickson (1997, quoted by Certo et al., 2006) did not find a significant relationship between firm performance and TMT size. Although Certo et al. (2006) reported no studies that found a negative relationship between TMT size and firm financial performance, results of research investigating this relationship remain inconclusive. Based on their analysis, Certo et al. (2006) hypothesized a positive relationship between TMT size and firm financial performance. Even though they did not find support for a positive and significant correlation with either ROA or return on equity (ROE), they reported a significant positive correlation between TMT size and sales growth. In general, their results of a positive relationship between TMT characteristics and firm financial performance were modest. Still, they indicate that TMT's can be seen as a valuable organizational resource. Certo et al. (2006) suggested a direction for future research with respect to the TMT size and its effect on performance. These authors wondered if there exists an inflection point at which the TMT size is optimal. They argued that the TMT size could have a positive influence on firm performance up to a certain size, due to increased information-processing capabilities. Indeed, based on the resource-based view, we can argue that the larger the TMT, the larger the pool of potential unique resources which can positively affect performance (Habbershon & Williams, 1999). However, past a certain point, the TMT size can become a hindrance for the firm to achieve its goals, affecting firm

performance in a negative way (Certo et al., 2006). Following these authors, we can postulate the following hypothesis:

H2: There exists an inverted U-shaped relationship between the TMT size and the financial performance of private family businesses.

Haleblian and Finkelstein (1993) compared the effects of the top management team size on firm performance in different environments. Their overall conclusion was that firms with large teams performed better in turbulent environments than in stable ones. The authors argued that large TMT's have more information-processing and decision-making capabilities. Large teams, not necessarily TMT's, have more viewpoints or critical judgments, resources, and potential solution strategies. They are also able to absorb and recall more information (Haleblian & Finkelstein, 1993; Certo et al., 2006). These advantages can result in decisions of higher quality and effective information-processing, which both can result in higher performance (Certo et al., 2006). According to Haleblian and Finkelstein (1993), large teams and their associated advantages are especially useful in turbulent environments since these kinds of environments are volatile, difficult-to-predict and increase the information-processing requirements of a team. Still, the authors argue that large teams can also have disadvantages. They are more likely to have communication, coordination, and cohesiveness problems compared to smaller teams. Smaller teams are also associated with faster decision-making. The authors argue that in stable environments, the disadvantages of large teams are able to dominate the advantages, suggesting that small top teams can be efficient in stable environments (Haleblian & Finkelstein, 1993). Following the reasoning of these authors, we postulate the following hypothesis:

H3: The interaction effect of the TMT size with the stability of the environment is positively related to private family firm financial performance when small top teams operate in stable environments and large top teams operate in turbulent environments.

Functional TMT characteristics

Since Certo et al. (2006) concluded that the research examining the relationship between firm performance and TMT size remains ambivalent, this may indicate the existence of moderating or intervening factors. It is interesting to take a look at some functional TMT characteristics that have the potential to influence the relationship between team management and financial performance in family firms.

First of all, we examine the satisfaction about the mutual relationship between the top managers and its effect on financial performance. Each TMT in a family business can be characterized by its familiness, a term which is linked to the RBV. Habbershon and Williams (1999, p. 11) define the familiness as "the unique bundle of resources a particular firm has because of the systems interaction between the family, its individual members, and the business". Habbershon et al. (2003) slightly change this definition by referring to familiness as the unique, inseparable and synergistic resources and capabilities arising from family involvement and interactions. Thanks to this familiness, each family firm can seize the opportunity to create a competitive advantage which in turn can lead to superior performance (Habbershon & Williams, 1999; Mazzi, 2011). When the familiness results in the creation of a competitive advantage, it is regarded as distinctive familiness. When the familiness is not really assessed or not managed as a valuable resource, it cannot create a sustainable competitive advantage (Sirmon & Hitt, 2003). In fact, it can hinder the firm performance and then it is regarded as constrictive familiness (Habbershon & Williams, 1999; Habbershon et al., 2003). In other words, the performance of family firms could differ due to differences in their familiness. In this study, we try to measure the distinctiveness of the familiness by means of the mutual relationship between the top managers. We argue that a good mutual relationship between the top managers in a family business may indicate the presence of distinctive familiness. Though, also conflicts can arise between top managers, affecting firm performance. Fortunately, these conflicts are not necessarily a disadvantage for the firm (Lambrecht & Baetens, 2005). Kellermanns and Eddleston (2004) distinguish three kinds of

conflicts within family firms. The negative effects of conflicts are linked to relationship conflicts and the positive effects are connected to moderate levels of task and process conflicts (Ensley & Pearson, 2005; Kellermans & Eddleston, 2004; Pieper, 2010). Complementary, Schjoedt et al. (2013) argue that when relationships are strong and relationship conflicts are avoided, the team has more chance to succeed. In summary, we argue that when the mutual relationship between the top managers is rather good, this could lead to less relationship conflicts and could indicate the presence of distinctive familiness which are both likely to result in better firm financial performance. We postulate the following hypothesis:

H4a: The financial performance of private family businesses increases when the satisfaction about the mutual relationship between the top managers rises.

Secondly, we argue that the manner in which the responsibilities of the top managers are separated, can affect firm performance. When the responsibilities are strictly separated, it is more difficult for the top managers to control each other since they are less likely to have authority on the domain of the other. From an agency theory point of view, less strictly separating the responsibilities could decrease self-control problems and dark altruism behavior. As a consequence, we hypothesize that less strictly separating the responsibilities will increase financial performance:

H4b: The financial performance of private family businesses increases when the responsibilities of the top managers are less strictly separated.

Finally, we will test if TMT's where managers are more inclined to take the final decisions together, perform better than TMT's where one top manager takes this kind of decisions. We argue that when the final decisions are made in consultation, it is easier for the top managers to exercise control on each other because they can deliberate and make their own contribution to the decision. Based on the agency theory, this could again mitigate self-control problems and dark altruism behavior, improving firm financial performance. We postulate the following hypothesis:

H4c: The financial performance of private family businesses increases when the final decisions are made in consultation.

Family involvement in the TMT

The relationship between family involvement in the business and firm performance has been studied extensively by researchers. However, there is still no consensus about the existence of a relationship nor in which direction family involvement affects firm performance since the literature provides contradictory results (Basco, 2013; Mazzola et al., 2013; O'Boyle Jr. et al., 2012; Rutherford et al., 2008; Sciascia & Mazzola, 2008). Basco (2013) and Chrisman, Chua, Pearson, and Barnett (2012) try to explain these inconclusive results by arguing that they could be due to different methodological approaches like differences in samples, FB definition, and control variables or to empirical constructs used for independent variables (i.e. demographic and essence variables) and dependent variables (i.e. family firm performance). Audretsch, Hülsbeck, and Lehmann (2013) agree by arguing that family ownership and management indicators are indeed sensitive to sample selection and performance measures. Sciascia and Mazzola (2008) also mentioned that the different results could be due to the fact that some scholars did not separate family involvement in ownership (FIO) from family involvement in management (FIM) when examining the effect on family firm performance. Chrisman et al. (2012) indicated that theoretical issues can be present on top of the empirical issues. This suggests that the relationship between family involvement and performance is likely to be moderated or mediated by factors not always incorporated in each analysis.

In their meta-analysis, O'Boyle Jr. et al. (2012) reported that family involvement did not significantly affect the financial performance of a firm. In line with this finding, Basco (2013, p. 44) concludes that "there is no solid evidence to justify why, how, and in what direction the specific family variables (i.e. demographic and essence variables) affect family firm performance". Besides

his literature review, Basco (2013) examined the direct and indirect relationship between FIM and firm economic-centered performance of privately owned Spanish family firms. Relying on different theoretical frameworks, he postulated a negative and a positive relationship between FIM and firm performance. The negative relationship was based on the occurrence of agency problems type II and on conservative strategies that cause family firms to lose their entrepreneurial perspective which could result in less future profits and revenues. Sciascia and Mazzola (2008) also hypothesized a negative relationship between FIM and financial performance. They explained this relation by arguing that family managers lack professional management competencies and that they also have non-economic goals. Basco (2013) also hypothesized a positive relationship based on three theoretical perspectives: the agency theory, the stewardship theory, and the RBV. The author did not find a consistent relationship between FIM and firm economic-centered performance and questions the existence of a direct effect of FIM on firm financial performance.

Sciascia and Mazzola (2008) investigated nonlinear effects of FIO and FIM on perceived performance of privately held family firms in Italy. While they did not report a significant relationship between FIO and performance, they found a negative quadratic relationship between FIM and performance. They argue that the benefits of FIM, like for instance less agency problems I, do not compensate the disadvantages like the costs of solving family conflicts, the focus on non-economic goals, and a limited resource base. Similar to this finding, Arijs and Praet (2010) reported a significantly negative relationship between the percentage of family members in management and ROA. Contrary to Arijs and Praet (2010) and Sciascia and Mazzola (2008), Minichilli et al. (2010) found support for a U-shaped (or at least curvilinear) relationship between the ratio of family members in the TMT and ROA. These authors indicate that it is better to have either a high or a low family ratio than having equal proportions of family and non-family members in the TMT. Since family and non-family members are likely to differ in goals, having equal proportions of family and non-family managers could result in disagreement between family and non-family top executives, which can decrease firm financial performance (Minichilli et al., 2010). Contrary to Minichilli et al. (2010), Mazzola et al. (2013) hypothesized an inverted U-shaped relationship between family involvement in management and performance. However, they found no evidence to support this hypothesis. They did report a positive relationship between FIM and ROE but found no significant relationship between FIM and ROA. De Massis, Kotlar, Campopiano, and Cassia (2013) and De Massis et al. (in press) did find support for an inverted U-shaped relationship between family involvement in the TMT and financial performance. Looking at previous research, it becomes clear that researchers do not agree on the direction of the relationship between FIM and firm performance. De Massis et al. (in press) argue that the inconclusive nonlinear effects of family involvement in management on performance could be due to the differences in firm size across the studies. The study of De Massis et al. (in press) focused on small and medium-sized enterprises while Minichilli et al. (2010) especially studied large firms (with average turnovers of 771 million euros). Sciascia and Mazzola (2008) included more heterogeneous firms in their analysis since the average firm size was 87 employees with a standard deviation of 242 employees (De Massis et al., in press). Like Mazzola et al. (2013), De Massis et al. (2013) and De Massis et al. (in press), we will hypothesize an inverted U-shaped relationship between family involvement in the TMT and firm financial performance. In line with De Massis et al. (in press), we argue that instead of verifying if family involvement uniformly affects firm performance in a positive or a negative way, it is important to identify the optimal amount of family involvement in a company.

We believe that when no family members are present in the TMT of a family business, agency problems type I and their associated agency costs are more likely to occur, which would result in lower firm financial performance. When a number of family members are present in the TMT, the agency problems type I and their associated agency costs could decrease thanks to direct family control (Chrisman et al., 2004). Moreover, by introducing family members in the TMT, information asymmetries are reduced and the alignment between owners and managers is likely to increase (De Massis et al., in press). Additionally, family members are 'quasi' owners which can make them more interested in profit maximization (Ling & Kellermanns, 2010). They are motivated and committed to the business because they probably have invested in the family firm. Hence, the wealth of the firm is important for them (Ling & Kellermanns, 2010). Furthermore, the kinship

relationship and trust between familial top managers results in less need to control, further reducing agency costs type I and contributing to better firm performance (De Massis et al., in press). When a certain degree of family involvement is reached, firm financial performance would attain a peak and is likely to decline when more family members are added. This decline could partially be attributed to the rise of agency problems type II like self-control problems, nepotism, family relationship conflicts, and dark altruism behavior (Dyer, 2006; Mazzola et al., 2013; Schulze et al., 2001, 2003). Moreover, having none or few non-family top managers could be negative for firm performance. It is more likely that family managers lack professional management competencies and suffer from a limited availability of diverse knowledge and skills (Dyer, 2006; Sciascia & Mazzola, 2008; De Massis et al., in press). External managers can contribute to information diversity and to competencies of the TMT (De Massis et al., 2013; De Massis et al., in press; Lambrecht & Baetens , 2005; Mazzola et al., 2013). They can use their experience, formulate new ideas and can be objective in family conflicts (Lambrecht & Baetens, 2005). Non-family managers can also serve as a controlling mechanism, assuring that family members do not engage in too much dark altruism behavior (De Massis et al., 2013). Finally, too much family involvement could also lead to conservative strategies and to a focus on family economic or non-economic goals, diminishing the financial performance of the firm (Basco, 2013; Mazzola et al., 2013). Family firms could have family economic goals like sustaining the wealth of family employees, and family non-economic goals like maintaining family harmony and keeping control over the firm (Basco, 2013). In summary, we can argue that the firm will perform better when both family and non-family members are present in the TMT, resulting in higher financial performance. Hence, we formulate the following hypothesis with respect to the effect of family involvement in management on firm financial performance:

H5: There exists an inverted U-shaped relationship between the family involvement in the TMT and the financial performance of private family businesses.

Methodology

Approach to define FB's

Since the components of involvement approach can be used to explain family firm performance as a dependent variable, this research uses this approach to define family businesses (Basco, 2013). The European Group of Owner Managed and Family Enterprises (GEEF) provides a European operational definition for FB's, which consists of two main characteristics. The first characteristic states that the founder or the owning family has to possess the majority of the voting rights on the general shareholder's meeting. In case the family business is listed on the stock exchange, 25% is sufficient. The second characteristic is that at least one representative of the family has to be active in the management or the board of the company (European Group of Owner Managed and Family Enterprises, 2008; Lambrecht & Molly, 2011). In a final report by order of the European Commission (2009), experts proposed a definition of FB's that is very similar to the GEEF definition. This definition and approach are internationally accepted and will be followed in this research.

Data collection

To collect the information necessary to test the proposed hypotheses, a questionnaire inspired by Lambrecht and Baetens (2005) was developed. In this questionnaire, we applied the GEEF definition of a family business by verifying whether the business satisfied the two required characteristics. Convenience sampling was used to choose the family businesses to which the questionnaire could be sent. In fact, a list of 3589 probable family businesses located in Flanders was available thanks to the data collection by the "Studiecentrum voor Ondernemerschap (SVO)" and the "Instituut voor het Familiebedrijf (IFB)". From the 3589 businesses, 718 were randomly selected to constitute the sample. Since the database of the SVO and the IFB was only kept up to date till 2010, not all 718 selected businesses could be reached. A lot of businesses were already

inactive or lacked contact information. Finally, we were able to collect 511 e-mail addresses via the Bel-First database of "Bureau Van Dijk" and the Internet. In December 2013, the questionnaire was sent to all 511 businesses while addressing respondents that belong to the TMT of the family firm. To reduce concerns about a single respondent bias, we ensured anonymity to respondents. A lot of the sent e-mails did not reach target due to false or inactive e-mail addresses. After three months and a follow up-mail, 81 valid surveys were completed by the respondents, which indicates a response rate of 15.85%. In order to enlarge the sample size, the author contacted 30 other family businesses of acquaintances of which 25 were able to complete the survey. Although the collected sample consisted of 106 surveys, 14 surveys were rejected, which resulted in a sample size of 92. There were several reasons for these non-eligible respondents. Since this research only investigates private family businesses, the surveys of 2 listed businesses were rejected. Furthermore, the number of top managers in 11 businesses differed during the period 2010-2012. Since the change in the number of top managers could possibly affect the financial performance, these surveys were also deleted. Another survey was deleted because the financial data of that company were only available for the year 2012 so no average for the period 2010-2012 could be calculated.

Next to the questionnaire, firm financial data or the dependent and control variables were collected from the Bel-First database of "Bureau Van Dijk". This database contains detailed information of all Belgian companies that have filed financial statements. The acquired financial data are objective and more reliable since all non-financial Belgian private firms are obliged to deposit their balance sheet and income statement. As a consequence, validity is improved and common method bias is reduced.

Variables and measures

Dependent variable

We need a measure of financial performance to analyze whether team management pays off in family businesses. Since private or unlisted family firms are examined in this research, market based measures are inapplicable and financial performance will be measured by an accounting based measure. We will use the return on assets or the ROA since this ratio is one of the most used measures in research utilizing accounting based measures to value the financial performance of a firm (Anderson & Reeb, 2003; Basco, 2013; De Massis et al., in press; Mazzi, 2011; Minichilli et al., 2010; O'Boyle Jr. et al., 2012; Rutherford et al., 2008). In fact, the ROA is a common measure to study the impact of TMT characteristics or family involvement on firm performance (Minichilli et al., 2010). Although Minichilli et al. (2010) pointed out that family firms are more eager to be parsimonious on assets which would enhance ROA, this is not really a problem because only family businesses are taken into account in this research. In line with previous research (Certo et al., 2006; Lindow, Stubner, & Wulf, 2010), we use a three-year average (2010-2012) ROA to evaluate firm financial performance. In the Bel-First database, ROA as a European ratio is defined as the net operating income after interests but before extraordinary items and taxes divided by the total assets.

Independent variables

Our principal aim is to examine whether team management has an influence on family firm financial performance. Moreover, we also study several characteristics of the TMT like the TMT size, some functional characteristics of the TMT, and the family involvement in the TMT. All questions to the respondents were related to the period 2010-2012 since the financial performance data were collected for the same period. A dummy variable was created to indicate if the family firm was managed by a team (=1) or one person (=0). Next, we asked to indicate the number of top managers in the survey. This is represented by the TMT size. The TMT size was mean-centered to reduce the variance inflation factors (VIF). In order to be able to test hypothesis 2, we also squared the mean-centered TMT size. Although there is no univocal measure to operationalize the TMT (De Massis et al., in press), we defined top managers in the questionnaire as managers who

are responsible for the daily leadership of the company (e.g. chief executive officer or CEO, financial director,…). To test hypothesis 3, we needed to measure the stability of the environment. This stability was measured by asking the respondents to describe the sector in which the company operates as rather stable or dynamic on a 1-7 Likert scale. In the questionnaire, we defined dynamic as "difficult to predict and prone to changes", which equals the earlier mentioned definition of turbulence. We also mean-centered this variable and made an interaction variable with the mean-centered TMT size. Thanks to our survey, we could also determine the family involvement in the TMT since we inquired about the number of family members in the TMT. This variable was measured by dividing the number of family members in the TMT by the total number of TMT members as was done by Minichilli et al. (2010). However, to reduce the VIF, we also mean-centered this variable. Afterwards, we squared the mean-centered family involvement in the TMT so we could test the inverted U-shaped relationship between family involvement in the TMT and financial performance. Keeping the hypotheses in mind, we asked the respondents to indicate to which extent the responsibilities of the top managers were separated, ranging from strictly separated to a complete overlap in responsibilities. Moreover, we asked the respondents to assess the mutual relationship between the top managers on a 1-7 Likert scale. We also wanted to know whether the managers in the TMT take the final decisions in consultation or not. A dummy variable was created to represent this factor.

Control variables

The selection of the control variables was based on insights from prior research which investigated the ROA to represent firm financial performance (Anderson & Reeb, 2003; Arijs & Praet, 2010; De Massis et al., in press; Kowalewski, Talavera, & Stetsyuk, 2010; Lindow et al., 2010; Mazzola et al., 2013). Five factors were identified: firm age, firm size, debt structure, liquidity, and sector. The first control variable firm age was measured by the natural logarithmic function of the number of years since the incorporation of the firm till 2012 (Anderson & Reeb, 2003; De Massis et al., in press; Kowalewski et al., 2010; Lindow et al., 2010; Mazzola et al., 2013). Secondly, firm size was measured by the natural log of the three-year average (2010-2012) of the total assets of the firm (Anderson & Reeb, 2003; Kowalewski et al., 2010; Mazzi, 2011). The third control variable takes the debt structure of the firm into account and is represented by the three-year average (2010-2012) of the total debt to the assets (Anderson & Reeb, 2003; De Massis et al., in press; Kowalewski et al., 2010). We opted for the total debt to assets instead of the long term debt to assets because the latter suffered from more missing values. It is also important to control for liquidity (Arijs & Praet, 2010; De Massis et al., in press; Kowalewski et al., 2010), which we measured by the three-year average (2010-2012) of the acid test ratio. The acid test ratio is the ratio of the current assets less the inventories, and the short-term liabilities (De Massis et al., in press). Finally, three sector dummies were created to represent the sector in which the company operates (Arijs & Praet, 2010; Kowalewski et al., 2010; Lindow et al., 2010; Ling & Kellermanns, 2010; Mazzola et al., 2013; Rutherford et al., 2008). Two dummy variables, representing the services and trade sector, were entered as control variables while the third dummy variable, representing the manufacturing sector, served as a reference category.

Checking assumptions

To estimate the parameters of the models, we use the ordinary least squares method (OLS). Before the OLS estimator results in the best, linear and unbiased estimator, some assumptions have to be met. Before running the analyses, we tested for linearity of our predictors through plotting the dependent variable on each predictor. We took the natural log of the control variables firm age and size to make them more linear. After each analysis, we tested the necessary assumptions in order to be able to draw conclusions about a population based on a regression analysis done on a sample (Field, 2009). First of all, we checked for the independency of the errors through the Durbin-Watson test (Field, 2009; Garson, 2013). In each analysis, this assumption was satisfied. Secondly, we looked for the presence of quasi-multicollinearity or QMC between the predictors, indicated by the VIF. The variance inflation factors in almost all our analyses remained below a value of 2 which indicates no multicollinearity problems (Field, 2009). The highest

encountered VIF over all tested models was equal to 5.27, suggesting that QMC is not an issue (Field, 2009). Thirdly, we verified if the errors of each model were normally distributed through generating the histogram with a normality curve and a P-P plot of the standardized residuals (Garson, 2013). Moreover, we generated descriptive statistics like the skewness and the kurtosis to check the normality of the residuals. The residuals were not always normally distributed. However, we argue by means of the central limit theorem that our sample (92) and subsample (62) are large enough to assume that the sampling distribution will tend to be normal (Field, 2009; Garson, 2013). Fourthly, we checked the models for homoscedasticity by plotting the standardized residuals against the standardized predicted values (Field, 2009; Garson, 2013). Based on these plots, it seemed that there was no problem of heteroskedasticity. In addition, we tested the assumption of homoscedasticity through White's test, which confirmed this conclusion (Hill, Griffiths, & Lim, 2012). We also looked for outliers based on a standardized residual larger than three (Field, 2009; Garson, 2013). Two outliers were identified over all analyses. We checked for the influential character of these and other observations through analyzing their overall impact on the regression results via the Cook's distance. Furthermore, statistics like the standardized DfBetas were analyzed to assess the specific impact of an observation on the regression coefficients (Field, 2009; Garson, 2013). We did not encounter critical observations that had a large influence on the regression results. To be sure, we tested the influence of each outlier by deleting it in the relevant analysis. The outcomes of the analyses did not change significantly.

Results

Summary statistics

Table I presents the means, the standard deviations, and the correlations among the dependent, independent, and control variables that were used in the original and full dataset of 92 observations. Table II also presents the means, the standard deviations, and the correlations among the same dependent and control variables, but with other independent variables since these variables were used on a subsample that consists of 62 observations of the original dataset. The subsample consists only of cases where a team is leading the company. When comparing the means and standard deviations of the used dependent and control variables in table I and II, we can see that there are no large differences between them. In other words, the means and standard deviations of the dependent and control variables do not differ much between the full sample of 92 observations and the subsample of 62 observations.

This research focuses on private family firms and will not distinguish between micro, small, medium, or large firms. Of the 92 family firms in the full dataset, 33 were micro firms and 2 were large firms according to the definition of the European Commission (n.d.). The remaining 57 firms can be categorized as small or medium-sized firms. In the full sample with N=92, the number of employees of the companies (in full time equivalents) ranges from 0 to 265 with an average workforce of 26.94 employees and a standard deviation of 38.12. The average company age is 27.62 years with a standard deviation of 14.74. The TMT size ranges from 1 to 8 top managers with an average of 2.48 managers and a standard deviation of 1.44. In the subsample with n=62, the average workforce of the companies (in full time equivalents) equals 34.19 employees with a standard deviation of 43.73. The average company age is 30.02 years with a standard deviation of 14.05. The TMT size ranges from 2 to 8 top managers with an average of 3.13 managers and a standard deviation of 1.24. Comparing the full sample and the sub sample on these properties, we can see that they do not differ much. On average, the companies in the subsample are slightly older and larger.

Table I Descriptive Statistics and Correlations (full sample of 92 observations)

	Variable	N	Mean	S.D.	1	2	3	4	5	6	7	8	9
1	ROA	92	4.86	6.89	1								
2	Firm age (ln)	92	3.16	0.61	-0.28***	1							
3	Firm size (ln assets)	92	14.80	1.65	-0.01	0.40***	1						
4	Total debt ratio	90	55.77	23.23	-0.20*	-0.26**	-0.03	1					
5	Liquidity (acid test)	92	1.70	1.90	0.17	0.06	-0.02	-0.57***	1				
6	Services sector°	92	0.24	0.43	0.07	-0.10	-0.07	0.04	0.08	1			
7	Trade sector°	92	0.28	0.45	-0.15	0.12	-0.13	0.10	-0.10	-0.35***	1		
8	Manufacturing sector°	92	0.48	0.50	0.08	-0.02	0.18*	-0.12	0.02	-0.54***	-0.60***	1	
9	Team management°	92	0.67	0.47	-0.06	0.25**	0.38***	-0.00	0.07	-0.15	0.08	0.06	1

* p<0.10 ; ** p<0.05 ; *** p<0.01

Pearson's correlation coefficients two tailed

ROA, return on assets; S.D., standard deviation; ° Dummy variable

Table II Descriptive Statistics and Correlations (subsample of 62 observations)

	Variable	N	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	ROA	62	4.58	5.61	1																
2	Firm age (ln)	62	3.27	0.58	-0.27**	1															
3	Firm size (ln assets)	62	15.23	1.42	0.05	0.38***	1														
4	Total debt ratio	61	55.72	23.57	-0.25**	-0.26**	-0.02	1													
5	Liquidity (acid test)	62	1.79	2.06	0.19	0.02	-0.04	-0.51***	1												
6	Services sector°	62	0.19	0.40	-0.12	-0.03	0.11	0.10	0.13	1											
7	Trade sector°	62	0.31	0.47	-0.10	0.03	-0.23*	0.12	-0.17	-0.33***	1										
8	Manuf. sector°	62	0.50	0.50	0.19	-0.01	0.12	-0.19	0.05	-0.49***	-0.67***	1									
9	TMT size cent.	62	0	1.23	0.06	0.14	0.52***	-0.02	-0.12	0.08	-0.18	0.11	1								
10	TMT size cent.²	62	1.50	3.19	-0.02	0.07	0.27**	0.09	-0.14	-0.06	-0.04	0.08	0.66***	1							
11	Environmental stability cent.	62	0	1.71	-0.06	-0.08	0.06	-0.03	-0.12	0.08	-0.01	-0.06	0.06	0.07	1						
12	Interaction of TMT size cent. and environmental stability cent.	62	0.12	1.73	0.08	-0.26**	0.03	0.05	-0.01	0.12	0.20	-0.28**	0.17	0.21	-0.12	1					
13	Relationship in TMT	60	6.19	0.80	0.29**	0.04	0.20	0.09	0.12	-0.02	-0.02	0.03	-0.03	0.08	-0.19	0.02	1				
14	Responsibilities less strictly separated	60	3.15	1.01	0.13	-0.29**	-0.29**	-0.07	0.19	0.23*	0.01	-0.19	-0.29**	-0.29**	0.02	-0.09	-0.18	1			
15	Final decisions in consultation°	62	0.40	0.49	0.09	-0.04	-0.16	0.16	0.14	-0.07	-0.05	0.10	-0.30**	-0.11	-0.23*	-0.20	0.29**	0.26**	1		
16	Family involvement in TMT cent.	62	0	26.18	-0.12	-0.15	-0.38***	0.05	0.04	-0.11	-0.03	0.11	-0.62***	-0.28**	-0.08	-0.12	0.05	0.25*	0.30**	1	
17	Family involvement in TMT cent.²	62	674.12	915.70	0.12	0.12	0.20	-0.03	-0.09	0.04	0.06	-0.09	0.43***	0.16	0.02	0.07	0.02	-0.19	-0.20	-0.87***	1

* p<0.10; ** p<0.05; *** p<0.01

Pearson's correlation coefficients two tailed

ROA, return on assets; S.D., standard deviation; ° Dummy variable

Results of the analyses

To test our hypotheses, we execute a cross-sectional regression analysis of our financial performance indicator ROA on the relevant control and independent variables. All hypotheses are tested through hierarchical multiple regression analyses in which the OLS method is used to estimate the parameters. In each analysis, the control and independent variables are entered in multiple steps. Model I or the base model represents the first step and consists of the six control variables: firm age and size, total debt to assets, liquidity, a dummy for the service sector and another one for the trade sector. Afterwards, the relevant independent variables are entered in one or more subsequent blocks, depending on the hypothesis to be tested. Each time, the F-test is used to assess the significant change in R^2.

Hypothesis 1 is tested on the full and original sample of 92 observations while hypotheses 2 to 5 are tested on a subsample of the original dataset with 62 observations. This subsample only consists of observations where a team is leading the company. This is necessary because hypotheses 2 to 5 represent characteristics of the TMT and we can only test these characteristics on family firms where a team is leading the company. For each hypothesis, a regression analysis consisting of several models was conducted. In total, two classes of models are generated in two tables. The results of hypothesis 1 are presented in table III while the results of hypotheses 2 to 5 are shown in table IV. Due to missing values, the number of observations for an analysis can be lower. For this reason, we indicate the number of observations that was taken into account in each analysis.

Regarding the control variables, firm age had a negative and significant effect on ROA in all the tested models, whereas the effect of the firm size, measured by the natural log of the total assets, was never significant. The total debt ratio had a negative and significant impact in all tested models. The control variables representing the sector in which the company operates, were never significant, neither was the liquidity. The first class of models is presented by table III. Here, only the team dummy is added to the base model in model II to test the first hypothesis. This hypothesis proposed that a private family business led by a TMT will have better financial performance, measured by ROA, than private FB's led by only one person. Model II showed no support for this hypothesis. In the second class of models, presented by table IV, hypotheses 2 to 5 are tested. To test hypothesis 2 about the inverted U-shaped relationship between the TMT size and financial performance, the mean-centered TMT size and its square are added to the base model in model II and III, respectively. Although model III offered no significant support for the inverted U-shaped relationship between TMT size and financial performance, we plotted this relationship and saw an indication of an inverted U-shape. Hypothesis 3 postulated that the TMT size is positively related to private family firm financial performance only when small teams operate in stable environments and large teams operate in turbulent environments. First, both the mean-centered TMT size and the mean-centered environment variable are entered on top of the base model in model IV. Afterwards, the interaction effect of these two variables is added in model V to test hypothesis 3. Model V did not support this hypothesis. Model VI shows the base model for hypothesis 4 and has slightly different standard deviations compared to model I. This is due to three missing values and as a consequence, a smaller number of observations. In model VII, we test hypotheses 4a, 4b, and 4c with respect to the functional TMT characteristics that have the potential to influence the relationship between team management and firm performance. More specifically, hypotheses 4a, 4b, and 4c proposed that the financial performance of private FB's increases when the satisfaction about the mutual relationship between the top managers rises, when the responsibilities of the top managers are less strictly separated, and when the final decisions are made in consultation, respectively. Although the three variables each have a positive effect on ROA, only hypothesis 4a is significantly supported ($p < 0.05$). Finally, hypothesis 5 proposed the existence of an inverted U-shaped relationship between the family involvement in the TMT and the financial performance. We have tested this by adding the mean-centered family involvement in the TMT and its square in model VIII and IX, respectively. No support was found for the hypothesis. When we plotted the effect of family involvement on ROA, we saw an indication of

a curvilinear strictly negative curve. However, this relationship was not significant. In summary, we did not find support for H1, H2, H3, H4b, H4c, and H5. We did find support for H4a.

Table III
Results of Multiple Regression Analysis of Hypothesis 1

Variables	Model I	Model II (H1)
Constant	14.91**	14.80*
	(7.19)	(7.50)
Firm age (ln age)	-4.54***	-4.53***
	(1.32)	(1.33)
Firm size (ln assets)	0.59	0.60
	(0.47)	(0.50)
Total debt ratio	-0.08**	-0.08**
	(0.04)	(0.04)
Liquidity (acid test)	0.11	0.12
	(0.45)	(0.45)
Services sector°	0.53	0.52
	(1.74)	(1.76)
Trade sector°	-0.70	-0.70
	(1.69)	(1.70)
Team management°		-0.09
		(1.63)
Δ F	3.02**	0.003
Adj. R^2	0.12	0.109
Observations (N)	90	90
Max VIF	1.65	1.66

* p<0.10; ** p<0.05; *** p<0.01

Significance levels are based on two-tailed tests for all models and coefficients.

VIF = Variance Inflation Factors; ° Dummy Variable

Δ F = change of the F value compared to the previous relevant model

Table IV
Results of Multiple Regression Analysis of Hypotheses 2, 3, 4 and 5

Variables	Model I	Model II (H2)	Model III (H2)	Model IV (H3)	Model V (H3)	Model VI (H4)	Model VII (H4)	Model VIII (H5)	Model IX (H5)
Constant	9.66	9.90	10.13	10.07	10.21	9.66	-3.46	12.48	10.38
	(8.12)	(9.01)	(9.14)	(9.04)	(9.15)	(8.35)	(10.38)	(8.63)	(9.35)
Firm age (ln)	-4.28***	-4.27***	-4.26***	-4.42***	-4.54***	-4.28***	-4.02***	-4.23***	-4.31***
	(1.32)	(1.33)	(1.35)	(1.35)	(1.47)	(1.35)	(1.37)	(1.32)	(1.33)
Firm size (ln assets)	0.87	0.86	0.84	0.90	0.91	0.87	0.72	0.67	0.78
	(0.53)	(0.61)	(0.62)	(0.61)	(0.62)	(0.54)	(0.55)	(0.57)	(0.60)
Total debt ratio	-0.08**	-0.07**	-0.07*	-0.08**	-0.08**	-0.08**	-0.09**	-0.07*	-0.07*
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Liquidity (acid test)	0.16	0.16	0.16	0.10	0.10	0.16	-0.15	0.18	0.21
	(0.39)	(0.40)	(0.40)	(0.41)	(0.41)	(0.40)	(0.41)	(0.39)	(0.40)
Services sector°	-2.05	-2.05	-2.12	-1.87	-1.77	-2.05	-2.04	-2.30	-2.21
	(1.82)	(1.84)	(1.88)	(1.86)	(1.93)	(1.88)	(1.94)	(1.84)	(1.86)
Trade sector°	-0.47	-0.47	-0.45	-0.41	-0.27	-0.47	-0.62	-0.73	-0.68
	(1.59)	(1.61)	(1.62)	(1.62)	(1.75)	(1.64)	(1.61)	(1.61)	(1.62)
TMT size cent.		0.04	0.17	0.04	0.07				
		(0.65)	(0.85)	(0.65)	(0.67)				
TMT size cent.²			-0.07						
			(0.29)						
Environmental stability cent.				-0.33	-0.35				
				(0.41)	(0.42)				
Interaction TMT size cent. and environ. stability cent.					-0.10				
					(0.46)				

Table IV (continued)
Results of Multiple Regression Analysis of Hypotheses 2, 3, 4 and 5

Variables	Model I	Model II (H2)	Model III (H2)	Model IV (H3)	Model V (H3)	Model VI (H4)	Model VII (H4)	Model VIII (H5)	Model IX (H5)
Relationship in TMT							2.24** (0.93)		
Responsibilities less strictly separated							0.73 (0.80)		
Final decisions in consultation°							0.36 (1.61)		
Family involvement in the TMT cent.								-0.03 (0.03)	0.004 (0.059)
Family involvement in the TMT cent.²									0.001 (0.002)
Δ F	2.89**	0.004	0.06	0.32	0.05	2.73**	2.82**	0.93	0.37
Adj. R²	0.159	0.143	0.128	0.137	0.121	0.154	0.223	0.158	0.148
Observations (N)	61	61	61	61	61	58	58	61	61
Max VIF	1.58	1.67	2.42	1.69	1.71	1.58	1.84	1.59	5.27

* p<0.10; ** p<0.05; *** p<0.01

Significance levels are based on two-tailed tests for all models and coefficients.

VIF = Variance Inflation Factors; ° Dummy variable

Δ F = change of the F value compared to the previous relevant model

Discussion

The primary goal of this research was to examine whether team management pays off in family businesses. We did not find support for this expectation. To gain in-depth insight in the effect of team management on financial performance, we have taken a look at factors within a TMT that could have an influence on the financial performance of family businesses. The TMT size and the extent of family involvement in the TMT did not significantly affect the financial performance of family businesses, nor did they show a significant inverted U-shaped relationship with financial performance. Another finding was that one of the functional TMT characteristics was able to significantly influence performance in a positive way. When the satisfaction about the mutual relationship between the top managers in the TMT increased, firm financial performance also improved. A possible explanation for the insignificant findings is that family businesses are heterogeneous in nature. There are several types of private family firms, which may lead to differences in financial performance (Dyer, 2006; Westhead & Howorth, 2007). In general, each family runs a family business in their own way, creating a unique organizational identity which could explain significant portions of performance variance in these firms (Zellweger et al., 2010). In that way, it is not completely surprising that team management by itself does not significantly affect family firm financial performance. Another plausible explanation for the insignificant findings is that other controls and moderators could influence the hypothesized relationships and the financial performance of FB's. For instance, a potential moderator of the family involvement in the TMT (FIM) is the family involvement in ownership (FIO) (De Massis et al., in press). It is plausible that higher degrees of family involvement in ownership are associated with higher degrees of family involvement in the TMT. Since FIO can also influence firm financial performance, it can moderate the effect of FIM on performance (De Massis et al., in press). Finally, the insignificant results could be caused by our relatively small sample size. Indeed, a small sample size can damage the statistical power and can increase the chance of incorrectly sustaining the null hypothesis (Lindow et al., 2010).

We controlled firm financial performance for six variables: company age and size, 2 dummy variables representing the sector in which the company operates, total debt ratio, and liquidity. Only the company age and the total debt ratio had a significant (and negative) effect on family firm financial performance. The negative effect of the total debt ratio was not unexpected since Arijs and Praet (2010) and De Massis et al. (in press) also found that the debt ratio negatively influenced financial performance measured by the ROA. The negative effect of the company age

can possibly be explained by the fact that the age is linked to the generation leading the firm. Gedajlovic, Carney, Chrisman, and Kellermanns (2012) indicated that firms controlled by the founder generation are more profitable than firms controlled by second and subsequent generations. A possible explanation for this expectation is that family firm leaders, which are more likely to have longer tenures than other firm leaders (Lambrecht & Molly, 2011; Minichilli et al., 2010), possess a lot of tacit and idiosyncratic knowledge, and value-adding skills that could improve financial performance (Anderson & Reeb, 2003; Sharma, 2004). Not all knowledge can be properly passed on to the next generation, which can hurt the financial performance of a family firm. Another plausible explanation for the poorer performance of later generations is an increased chance on intra-family conflicts (Gedajlovic et al., 2012). For instance, when the next generation takes over, it can be difficult to distribute the important positions equally among the family members. This could cause intra-family conflicts, affecting performance negatively.

Following the results of our analysis for H1, we conclude that FB's where a team is leading the business do not significantly perform better nor worse than FB's with one leading manager. It seems that the elimination or the mitigation of self-control problems and dark altruism behavior thanks to a team controlling the company is less significant than originally thought. Moreover, the insignificant results could be due to the fact that within a TMT, several factors may be able to influence firm financial performance. Following this argument, we further examined TMT characteristics like the TMT size itself, its interaction with the environmental stability, family involvement in the TMT, the relationship between the top managers, the decision-making process in the TMT, and the extent of separation of the responsibilities of the top managers. The TMT size by itself did not significantly affect the financial performance of FB's. This insignificant result is in line with previous research like Certo et al. (2006), De Massis et al. (in press), and Minichilli et al. (2010) which did not find any significant relationship between TMT size and ROA. However, the TMT size can influence other performance indicators since Westhead and Howorth (2006) and Certo et al. (2006) did report significantly higher levels of sales growth for companies with larger TMT's. The findings of these authors seem logical since a larger TMT implies having more resources available to increase the sales. Although a higher sales level could improve the financial performance, these extra resources need to be paid, which in turn could negatively affect financial performance. This could be a possible explanation why these researchers found a positive effect of TMT size on sales growth, but not on other financial performance measures that reflect efficiency gains like for instance the ROA. H2 proposed an inverted U-shaped relationship between the TMT size and financial performance. Although our results showed an indication of this kind of relationship, they were not significant, suggesting that there is no optimal TMT size. H3 concerning the interaction effect of the TMT size and the stability of the environment in which the company operates, was to some extent different to what Haleblian and Finkelstein (1993) postulated. These authors suggested that large teams performed better in turbulent environments than in stable ones. We added the assumption that small teams would perform better in stable environments than in turbulent environments. We argue that the benefits of large teams like higher information-processing and decision-making capabilities are less necessary in stable environments and that large teams could also have disadvantages like communication, coordination, and cohesiveness problems (Haleblian & Finkelstein, 1993). In other words, the disadvantages of large teams could outweigh the advantages in stable environments. Contrary to Haleblian and Finkelstein (1993), we could not provide support for our hypothesis. To explain the unsupported results for H2 and H3, we argue that in line with Certo et al. (2006), it is likely that there are other factors moderating the effect of TMT size on financial performance. Potential moderating factors are for instance incentives and TMT heterogeneity. Larger teams provide more resources to a business, but when these teams are not encouraged by incentives, they could be less motivated to improve firm performance (Certo et al., 2006). TMT heterogeneity is another potential moderator of the TMT size-performance relationship. Certo et al. (2006) find it logical that a large team which is also heterogeneous, is more capable to process information compared to a TMT of similar size but consisting of homogeneous members. Another possible explanation for the insignificant results for H3 is that we did not measure the environmental discretion, as suggested by Haleblian and Finkelstein (1993). This means that we were not capable to verify if top managers were indeed able to influence the

outcomes. It seems logical that when top managers cannot influence the outcomes, TMT size plays a less important role.

Next to the TMT size, we examined functional TMT characteristics like the mutual relationship in the TMT, the separation of the responsibilities of the top managers, and the decision-making process in hypotheses 4a, 4b, and 4c, respectively. We did not find significant effects of taking the final decisions in consultation nor of the extent to which the responsibilities were separated, on financial performance. This suggests that making the final decisions in consultation is not a guarantee for performance improvement. Likewise, it seems unnecessary that one top manager within the TMT takes the final decisions. Maybe it is not necessary that all final decisions are made in consultation as long as the top managers can rely on each other and make decisions in favor of the wellbeing of the company. For instance, when the top managers agree with having one top manager taking the final decisions, this could be an indication that they have complete confidence in this manager. In this situation, the mitigation of self-control problems and dark altruism behavior is less important. Contrary, when the top managers are inclined to take the final decisions together, this could indicate that they want to exercise control on each other, suggesting a lack of confidence. The insignificant result for the effect of less strictly separating the responsibilities could be explained by arguing that it is not always necessary to constantly control each other. Indeed, Lambrecht and Baetens (2005) suggest that top managers should trust and respect one another on their own domain. These authors propose a permeable demarcation of responsibilities. This means that the responsibilities of each top manager should be clearly defined to avoid tensions and functional conflicts. However, it is important that the responsibilities are not strictly separated in order to create unity in diversity (Lambrecht & Baetens, 2005). Contrary to the abovementioned insignificant results, we did find that a higher satisfaction about the mutual relationship between the top managers results in better financial performance of the firm, supporting hypothesis 4a. This can be explained by reasoning that a good and strong relationship is expected to result in less relationship conflicts. Since relationship conflicts were likely to be detrimental for firm performance, avoiding them could improve financial performance (Kellermanns & Eddleston, 2004; Schjoedt et al., 2013). Moreover, a good and strong relationship between the top managers could indicate the presence of distinctive familiness which is likely to be beneficial for firm performance.

In line with Basco (2013), we did not find proof for a significant relationship between the family involvement in the TMT and the financial performance of the firm. Moreover, H5 about the inverted U-shaped relationship between family involvement in the TMT and financial performance was not supported. Despite the fact that the results were insignificant, it seems that the relationship follows a strictly negative curvilinear pattern. This finding does not confirm the results of De Massis et al. (in press) who did find support for an inverted U-shaped relationship between family involvement in the TMT and financial performance. De Massis et al. (in press) suggested that the potential benefits of FIM like for example the alignment between family managers and owners, are likely to be more present in small firms. Therefore, a possible explanation for our insignificant result is that while De Massis et al. (in press) only examined small-to-medium sized enterprises, our sample is more of a mix of micro to large enterprises. This could suggest that the company size can be an important moderator of the relationship between FIM and performance (De Massis et al., in press). To be sure, this topic needs further examination. In line with Basco (2013), another explanation for the insignificant result can be sought in the possibility that the family involvement in the TMT does not have a direct but an indirect effect on family firm performance through a third variable. As an example for this third variable, Basco (2013) suggests firm behavior that could subsequently affect firm performance. When following our indication of the negative (but insignificant) curvilinear relationship between FIM and financial performance, we can argue that this is similar to the results of Sciascia and Mazzola (2008) and Arijs and Praet (2010) who also found that family involvement in the TMT negatively affects performance. One possible reason for the negative impact of more family involvement in the TMT on performance, could be linked to an increase in relationship conflicts between family and non-family members or even between family members themselves. Minichilli et al. (2010) argued that family and non-family managers are more likely to differ in goals. These differences and resulting conflicts between family and non-family managers can have a negative impact on the firm's ability to perform. Likewise, family managers can get involved in

family conflicts that can be costly to solve (Sciascia & Mazzola, 2008). More family involvement could also cause a larger focus on non-monetary goals (Sciascia & Mazzola, 2008). Another possible explanation for the negative impact of family involvement in the TMT on financial performance is that family managers could lack professional management competencies and possess less diverse knowledge and skills than professionals from outside the family (De Massis et al., in press; Dyer, 2006; Sciascia & Mazzola, 2008). Therefore, it could be important to also involve non-family managers who can contribute to the TMT by adding competencies, experience, new ideas, and objectivity in family conflicts (Lambrecht & Baetens, 2005; Mazzola et al., 2013). Non-family managers can also mitigate the dark altruism behavior and the non-monetary goals of the family members (De Massis et al., 2013; Sciascia & Mazzola, 2008).

This study has addressed some calls of previous research. First of all, Basco (2013) requested future research to incorporate the likely existence of a curvilinear relationship between independent demographic variables and family firm performance. We examined the possible curvilinear relationship between family involvement in the TMT and financial performance of private family firms. Secondly, Mazzi (2011) asked to intensify the study of unlisted family firms and the possible critical variables that affect their economic goals. We addressed this call by exclusively examining private family businesses and some TMT characteristics like the family involvement that could affect their goals and performance. Finally, this study tried to answer the question of Certo et al. (2006) who wondered if there existed an inflection point at which the TMT size is optimal.

Limitations and directions for future research

This section will discuss the most important limitations of this study. Some of these limitations could indicate directions for future research. A first limitation is that this study only investigated non-listed FB's located in Flanders. This means that the findings are not necessarily generalizable for other regions or countries, nor for listed FB's. Family business researchers may in the future conduct international research into listed and/or non-listed FB's in order to make more generalized conclusions about family businesses. Though, studying private firms in Flanders is interesting since objective accounting based measures for performance can be used instead of subjective performance measures. Another remark is that we implicitly assume that the studied FB's are rather homogeneous since they can only differ in the control variables. We already mentioned that FB's are heterogeneous in nature and that this can cause variations in performance (Zellweger et al., 2010). We recommend researchers to examine the influence of the different types of family firms on performance.

A second limitation is the relatively small size of the sample and the subsample (N=92 and n=62) since this could endanger the generalizability of the results. This issue can pose a threat to the statistical power and can raise concerns about incorrectly sustaining the null hypothesis due to an increased chance of a type II error (Lindow et al., 2010). Indeed, Garson (2012) states that a loss of statistical power will result in a higher chance of making type II errors. Thus, the results of this study should be approached with caution. In our defense, the sample size does not differ much from previous studies on TMT's (Minichilli et al., 2010). Furthermore, this study meets the requirements of Garson (2013) and VanVhooris and Morgan (2007). Garson (2013) indicated that at least five observations per independent variable are needed to do multiple regression. Moreover, VanVhooris and Morgan (2007) pointed out that at least 50 observations are needed to have an acceptable sample size when investigating relationships through regression. Still, we encourage future research to make use of a larger sample size. The replication of our study with a larger sample could improve the external validity of our observed results. Besides, our sample was collected through convenience sampling which could jeopardize the representativeness of the sample. Still, this approach is not uncommon in FB research (Chrisman, Chua, & Sharma, 1998). Our regression models display adjusted R^2 values between 10.9% and 22.3%. Sciascia and Mazzola (2008) argued that low adjusted R^2 are not unusual when regressing on performance measures in privately held firms. Anyway, other control variables than the obvious ones we used, could be considered. For instance, TMT heterogeneity, which Hambrick and Mason (1984) describe

as the amount of dispersion within a managerial team, could be able to influence firm financial performance. TMT heterogeneity can be linked to the upper echelons perspective explained by Hambrick and Mason (1984). This perspective states that the organizational outcomes, like the strategic choices and the performance, could be partially explained by characteristics of the managers who constitute the top management (Hambrick, 2007; Hambrick & Mason, 1984). Observable demographic characteristics like age, tenure in the organization, and educational background are often used as proxies for the characteristics of the managers (Hambrick & Mason, 1984). Apart from Ensley and Pearson (2005), family business literature has not yet given much attention to the role and importance of family top executives (Minichilli et al., 2010). We encourage future research to incorporate the potential effect of TMT heterogeneity on family firm performance.

Thirdly, the questionnaire was probably completed by a single respondent, which could cause a single source bias. However, we collected objective financial data and information via Bel-First, which decreases the impact of this problem. Still, future research could consider to question multiple respondents from one firm. Another important limitation is that we only examined the financial performance by means of the ROA. Including other financial performance measures as the dependent variable like for instance the ROI or the ROE may yield different results (Minichilli et al., 2010). In addition to objective financial performance measures, future research could also make use of family-oriented economic measures of performance or even family or firm-oriented non-economic measures of performance. Including these measures in the analyses can be important since family businesses are not always interested in maximizing firm economic-centered performance (Chrisman et al., 2012). They could have family and/or firm non-economic goals (e.g. family harmony, firm survival or control) or family-economic goals like sustaining the wealth of family employees (Basco, 2013; Chrisman et al., 2005; Mazzi, 2011).

A fifth limitation of this study is that the analyses are cross-sectional. This approach can be justified because only observations of FB's where the number of top managers remained constant in the period 2010-2012, were used. As a result of the cross-sectional approach, we cannot make strong conclusions about the causal relationships. For instance, suppose that team management positively affects performance, we cannot be completely sure if team management improves performance or if a high performance leads to management by a team. However, by taking a stable team setting for three years and investigating the possible link with the averaged financial performance over the same three years, we have a stronger indication for the persistent effect of team management on performance, of course without claiming to have causal certainty. Nevertheless, we encourage researchers to use a longitudinal design to generate new or additional insights in the relationship between TMT characteristics and performance by taking into account potential lagged effects. Also, by using longitudinal data, the causal links in the studied relationships could become clear.

Furthermore, we did not make use of the essence approach to define FB's. The essence approach verifies whether the values and the vision of the family members are incorporated in the FB, whether the family has an influence on the strategic direction of the business, and whether they want to keep the business under family control (Arijs & Praet, 2010; Chua et al., 1999). In other words, it verifies whether the company behaves as a FB and whether this behavior is sustainable across generations. There are two main reasons for not using this approach. First, since the essence variables cannot be observed directly, measurement consensus is more problematic. Secondly, the GEEF definition is also an internationally accepted operational definition to define FB's. Still, future studies can take a look at the familiness measured by the essence approach.

There are some other minor limitations linked to the study. We also incorporated FB's with a firm size of zero full time equivalents. However, this is a minor problem since we controlled for the firm size through the total assets. Furthermore, we did not define a 'family member' in the questionnaire. This could have caused that some respondents did not include in-laws, while we supposed that in-laws are a part of the family. Another minor limitation is that we did not measure the exact family involvement in ownership and only asked whether the family disposes of the

majority of the voting rights to satisfy our FB definition. Hence, we did not examine the relationship between family involvement in ownership and financial performance. Finally, we did not measure the environmental discretion. Haleblian and Finkelstein (1993) argued that the TMT size is only related to performance when the environmental discretion is high, which means that the top managers have a high degree of control over the outcomes. However, these authors especially investigated large firms and indicated that managerial effects may be more intense in smaller firms. Since the major part of our sample consisted of micro to medium-sized firms, this is less of a problem. Nevertheless, we suggest future research to take this factor into account when investigating the influence of the TMT size on firm performance.

Conclusion

The aim of this study was to find out whether team management pays off in family businesses. The financial performance of the FB's was measured by the three-year average ROA of 2010-2012. The information with respect to the independent variables was collected by interviewing private family businesses which resulted in a final sample of 92 observations. Our results showed no support for team management significantly affecting firm financial performance. Furthermore, evidence on a subsample of 62 TMT's leading a family business showed no support for the hypothesized inverted U-shaped relationship between TMT size and financial performance, neither for the same kind of relationship between the family involvement in the TMT and the financial performance. Moreover, the interaction effect of the TMT size with the type of environment in which the company operates, was not significant. In addition, functional TMT characteristics like the extent to which the responsibilities of the top managers were separated, the mutual relationship between the top managers, and the fact whether the top managers take the final decisions in consultation or not, were investigated. Our results indicated that the higher the satisfaction about the mutual relationship between the top managers, the better the financial performance. We did not find significant results with respect to the decision-making process and the separation of the responsibilities of the top managers. Overall, based on our results, it seems that team management by itself does not influence the financial performance of private family businesses in Flanders. However, future research on the TMT and its characteristics could provide more certainty about this conclusion.

Acknowledgements

The author would like to thank Prof. Dr. Diane Arijs for her helpful comments, corrections and suggestions with respect to this study. Special thanks go to Prof. Dr. Christiane Verschooten for her help with editing the text and to Prof. Dr. Filip Van den Bossche and Prof. Dr. Jef Hendrickx for their help with the statistical analyses. Furthermore, we would like to thank the respondents of the family businesses since without them, this study would not have been possible.

References

Anderson, R. C., & Reeb, D. M. (2003). Founding-family ownership and firm performance: Evidence from the S&P 500. *The Journal of Finance, 58*(3), 1301-1328.

Arijs, D., & Praet, A. (2010, July). *The link between familiness and performance using an essence and components approach*. Paper presented at the 10th Annual IFERA World Family Business Research Conference, University Management School, Lancaster, UK. Retrieved from http://www.lums.lancs.ac.uk/files/PPR092.pdf

Aronoff, C. E. (1998). Megatrends in family business. *Family Business Review, 11*(3), 181-186.

Astrachan, J. H., Klein, S. B., & Smyrnios, K. X. (2002). The F-PEC scale of family influence: A proposal for solving the family business definition problem1. *Family Business Review, 15*(1), 45-58.

Audretsch, D. B., Hülsbeck, M., & Lehmann, E. E. (2013). Families as active monitors on firm performance. *Journal of Family Business Strategy, 4*(2), 118-130.

Basco, R. (2013). The family's effect on family firm performance: A model testing the demographic and essence approaches. *Journal of Family Business Strategy, 4*(1), 42-66.

Certo, S. T., Lester, R. H., Dalton, C. M., & Dalton, D. R. (2006). Top management teams, strategy and financial performance: A meta-analytic examination. *Journal of Management Studies, 43*(4), 813-839.

Chrisman, J. J., Chua, J. H., & Litz, R. A. (2003). A unified systems perspective of family firm performance: An extension and integration. *Journal of Business Venturing, 18* (4), 467-472.

Chrisman, J. J., Chua, J. H., & Litz, R. A. (2004). Comparing the agency costs of family and non-family firms: Conceptual issues and exploratory evidence. *Entrepreneurship Theory and Practice, 28*(4), 335-354.

Chrisman, J. J., Chua, J. H., Pearson, A. W., & Barnett, T. (2012). Family involvement, family influence, and family-centered non-economic goals in small firms. *Entrepreneurship Theory and Practice, 36*(2), 267-293.

Chrisman, J. J., Chua, J. H., & Sharma, P. (1998). Important attributes of successors in family businesses: An exploratory study. *Family Business Review, 11*(1), 19-34.

Chrisman, J. J., Chua, J. H., & Sharma, P. (2005). Trends and directions in the development of a strategic management theory of the family firm. *Entrepreneurship Theory and Practice, 29*(5), 555-575.

Chrisman, J. J., Chua, J. H., & Steier, L. P. (2003). An introduction to theories of family business. *Journal of Business Venturing, 18*(4), 441-448.

Chua, J. H., Chrisman, J. J., & Sharma, P. (1999). Defining the family business by behavior. *Entrepreneurship Theory and Practice, 23*(4), 19-39.

De Massis, A., Kotlar, J., Campopiano, G., & Cassia, L. (2013). Dispersion of family ownership and the performance of small-to-medium size private family firms. *Journal of Family Business Strategy, 4*(3), 166-175.

De Massis, A., Kotlar, J., Campopiano, G., & Cassia, L. (in press). The impact of family involvement on SME's performance: Theory and evidence. *Journal of Small Businesses Management.* Retrieved from http://proxy.ehsal.be:2312/doi/10.1111/jsbm.12093/pdf

Dyer, W. G. (2006) Examining the family effect on firm performance. *Family Business Review, 19*(4), 253-273.

Ensley, M. D., & Pearson, A. W. (2005). An exploratory comparison of the behavioral dynamics of top management teams in family and nonfamily new ventures: Cohesion, conflict, potency, and consensus. *Entrepreneurship Theory and Practice, 29*(3), 267-284.

European Commission, enterprise and industry directorate-general. (2009). *Final report of the expert group. Overview of family-business-relevant issues: Research, networks, policy measures and existing studies.* Retrieved from http://ec.europa.eu/enterprise/policies/sme/promoting-entrepreneurship/family-business/family_business_expert_group_report_en.pdf

European Commission, enterprise and industry publications. (n.d.). *The new SME definition. User guide and model declaration.* Retrieved from http://ec.europa.eu/enterprise/policies/sme/files/sme_definition/sme_user_guide_en.pdf

European Group of Owner Managed and Family Enterprises. (2008). *GEEF annual report 2008.* Retrieved from http://www.europeanfamilybusinesses.eu/documents/docs/annual%20report.pdf

Field, A. (2009). *Discovering statistics using SPSS.* London: SAGE Publications Ltd.

Garson, G. D. (2012). *Power analysis (e-book).* North Carolina: Statistical Publishing Associates.

Garson, G. D. (2013). *Multiple regression (e-book).* North Carolina: Statistical Publishing Associates.

Gedajlovic, E., Carney, M., Chrisman J. J., & Kellermanns, F. W. (2012). The adolescence of family firm research: Taking stock and planning for the future. *Journal of Management, 38*(4), 1010-1037.

Greenwood, R. (2003). Comment on: "Toward a theory of agency and altruism in family firms". *Journal of Business Venturing, 18*(4), 491-494.

Habbershon, T. G., & Williams, M. L. (1999). A resource-based framework for assessing the strategic advantages of family firms. *Family Business Review, 12*(1), 1-25.

Habbershon, T. G., Williams, M. L., & MacMillan, I. C. (2003). A unified systems perspective of family firm performance. *Journal of Business Venturing, 18*(4), 451-465.

Haleblian, J., & Finkelstein, S. (1993). Top management team size, CEO dominance, and firm performance: The moderating roles of environmental turbulence and discretion. *Academy of Management Journal, 36*(4), 844-863.

Hambrick, D. C. (2007). Upper echelons theory: An update. *Academy of Management Review, 32(2), 334-343.*

Hambrick, D. C., Cho T. S., & Chen M-J. (1996). The influence of top management team heterogeneity on firms' competitive moves. *Administrative Science Quarterly, 41*(4), 659-684.

Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top management. *Academy of Management Review, 9*(2), 193-206.

Hill, R. C., Griffiths, W. E., & Lim, G. C. (2012). *Principals of econometrics: International student version.* Asia: John Wiley & Sons.

Holt, D. T., Rutherford, M. W., & Kuratko, D. F. (2010). Advancing the field of family business research: Further testing the measurement properties of the F-PEC. *Family Business Review, 23*(1), 76-88.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Finance Economics, 3*(4), 305-360.

Kellermanns, F. W., & Eddleston, K. A. (2004). Feuding families: When conflict does a family firm good. *Entrepreneurship Theory and Practice, 28*(3), 209-228.

Klein, S. B., Astrachan, J. H., & Smyrnios, K. X. (2005). The F-PEC scale of family influence: Construction, validation, and further implication for theory. *Entrepreneurship Theory and Practice, 29*(3), 321-339.

Kowalewski, O., Talavera, O., & Stetsyuk, I. (2010). Influence of family involvement in management and ownership on firm performance: Evidence from Poland. *Family Business Review, 23*(1), 45-59.

Lambrecht, J., & Baetens, K. (2005). *Teammanagement van het familiebedrijf.* Tielt: Uitgeverij Lannoo.

Lambrecht, J., & Pirnay, F. (2009). *L'harmonie entre l'entreprise, la famille et l'individu. La clef de la longévité*. Liège: L'Institut de l'Entreprise Familiale.

Lambrecht, J., & Molly, V. (2011). *Het economische belang van familiebedrijven in België* – Studiecentrum voor Ondernemerschap, Hogeschool-Universiteit Brussel, FBNet Belgium.

Lindow, C. M., Stubner, S., & Wulf, T. (2010). Strategic fit within family firms: The role of family influence and the effect on performance. *Journal of Family Business Strategy, 1*(3), 167-178.

Ling, Y., & Kellermanns, F. W. (2010). The effects of family firm specific sources of TMT diversity: The moderating role of information exchange frequency. *Journal of Management Studies, 47*(2), 322-344.

Litz, R. A. (2008). Two sides of a one-sided phenomenon: Conceptualizing the family business and business family as a möbius strip. *Family Business Review, 21*(3), 217-236.

Litz, R. A., Pearson, A. W., & Litchfield S. (2012). Charting the future of family business research: Perspectives from the field. *Family Business Review, 25*(1), 16-32.

Mazzi, C. (2011). Family business and financial performance. Current state of knowledge and future research challenges. *Journal of Family Business Strategy, 2*(3), 166-181.

Mazzola, P., Sciascia, S., & Kellermanns, F. W. (2013). Non-linear effects of family sources of power on performance. *Journal of Business Research, 66*(4). 568-574.

Minichilli, A., Corbetta, G., & MacMillan, I. C. (2010). Top management teams in family-controlled companies: 'Familiness', 'Faultlines', and their impact on financial performance. *Journal of Management Studies, 47*(2), 205-222.

O' Boyle Jr., E. H., Pollack, J. M., & Rutherford, M. W. (2012). Exploring the relation between family involvement and firms' financial performance: A meta-analysis of main and moderator effects. *Journal of Business Venturing, 27*(1), 1-18.

Pieper, T. M. (2010). Non solus: Toward a psychology of family business. *Journal of Family Business Strategy 1*(1), 26-39.

Pieper, T. M., & Klein, S. B. (2007). The bulleye: A systems approach to modeling family firms. *Family Business Review, 20*(4), 301-319.

Rutherford, M. W., Kuratko, D. F., & Holt, D. T. (2008). Examining the link between „familiness" and performance: Can the F-Pec untangle the family business theory jungle? *Entrepreneurship Theory and Practice, 32*(6), 1089-1109.

Schjoedt, L., Monsen, E., Pearson, A., Barnett, T., & Chrisman, J. J. (2013). New venture and family business teams: Understanding team formation, composition, behaviors and performance. *Entrepreneurship Theory and Practice, 37*(1), 1-15.

Schulze, W. S., Lubatkin, M. H., & Dino, R. N. (2003). Exploring the agency consequences of ownership dispersion among the directors of private family firms. *Academy of Management Journal, 46*(2), 179-194.

Schulze, W. S., Lubatkin, M. H., Dino, R. N., & Buchholtz, A. K. (2001). Agency relationships in family firms: Theory and evidence. *Organization Science, 12*(2), 99-116.

Sciascia, S., & Mazzola, P. (2008). Family involvement in ownership and management: Exploring nonlinear effects on performance. *Family Business Review, 21*(4), 331-345.

Sharma, P. (2004). An overview of the field of family business studies: Current status and directions for the future. *Family Business Review, 17*(1), 1-36.

Sharma, P., & Carney, M. (2012). Value creation and performance in private family firms: Measurement and methodological issues. *Family Business Review, 25*(3), 233-242.

Sirmon, D. G., & Hitt, M. A. (2003). Managing resources: Linking unique resources, management, and wealth creation in family firms. *Entrepreneurship Theory and Practice, 27*(4), 339-358.

Van Gerven, K. (2005). Woord vooraf. In J. Lambrecht, & K. Baetens, *Teammanagement van het familiebedrijf* (pp. 9-10). Tielt: Uitgeverij Lannoo.

VanVhooris, C. R. W., & Morgan, B. L. (2007). Understanding power and rules of thumb for determining sample sizes. *Tutorials in Quantitative Methods for Psychology, 3*(2), 43-50.

Westhead, P., & Howorth, C. (2006). Ownership and management issues associated with family firm performance and company objectives. *Family Business Review, 19*(4), 301-316.

Westhead, P., & Howorth, C. (2007). 'Types' of private family firms: an exploratory conceptual and empirical analysis. *Entrepreneurship and Regional Development, 19*(5), 405-431.

Zellweger, T. M., Eddleston, K. A., & Kellermanns, F. W. (2010). Exploring the concept of familiness: Introducing family firm identity. *Journal of Family Business Strategy, 1*(1), 54-63.