Financial performance of privately held family firms

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1 Introduction

The present text examines how the organizational input variable "family" and the financial output variable "return" are interrelated. This question is crucial since there are serious doubts brought forward by Schulze et al. (2003) whether family firms really exhibit the ideal precondition of low agency costs as hypothesized by Fama and Jensen (1983a and 1983b). Schulze et al. (2003) find that family firms suffer from costly agency conflicts induced by altruism between family principals (e.g. parents) and family agents (e.g. children). Hence there is a need for research that examines the question whether family influence on a firm is boosting or hampering the financial performance.

2 Literature review

In a sound review of the existing performance literature related to family firms, Jaskiewicz (2006) finds that the existing performance studies on family firms can be distinguished according to the following three criteria.

Firstly, methodology, defined as the width of the definition of family-owned businesses and the technique of performance measurement. Performance studies are rather homogenous regarding the measurement of the financial performance (for quoted firms: stock market performance, Tobin's Q, return on equity or return on assets; for unquoted firms: return on equity, return on assets or gross profit margin). However, the definition of the family firm varies widely across these studies. Whereas some authors consider a firm as a family enterprise when a family or a private person controls 20% or more of the voting rights (e.g. Anderson and Reeb, 2003a) others define family firms as those enterprises in which one or more family members are officers or directors, or own 5% or more of the firm's equity, either individually or as a group (Villalonga and Amit, 2006). Even if the real family influence exercised in practice is difficult to measure, there is evidence that ownership is, however, not a reliable measure of the degree to which and the way in which families are influencing their firms (Astrachan et al., 2002). Astrachan et al. (2002) find that in addition to bureaucratic control mechanisms as the fam-

ily's share in ownership, in management and supervisory board (Prahalad and Doz, 1981; Johnson and Kaplan, 1987; Mintzberg, 1994), the family's experience and its influence on the firm's culture are further determinants affecting family influence on a firm. Hence, the relevant issue is not whether a business is family or nonfamily, but the extent and manner of family involvement in and influence on the enterprise (Astrachan et al., 2002). Hence, studies that are limited to ownership concentration as a proxy for family influence compared to other variables do not produce satisfactory results regarding the question how family influence should be exercised, e.g. how it affects the financial performance of a family firm. Jaskiewicz (2006) makes an attempt in this direction by measuring a family's share in capital combined with a family's share in the management team. Jaskiewicz (2006) finds an inflection point for family influence at a ratio of 1 (= family management team share / family ownership share = 1) beyond and below which the performance of a family firm is suffering.

The second characteristic through which family performance studies can be distinguished relates to the stock market quotation of the firms examined in the respective study. According to Jaskiewicz (2006) only 20% of all family firm related performance studies analyze non-quoted family firms (e.g. Holderness and Sheehan, 1988; Chen et al., 1993; Lloyd et al., 1986) whereas the remaining 80% examined quoted family firms (e.g. Anderson and Reeb, 2003a; Gomez-Mejia et al., 2001).

Thirdly, some studies focus on family versus nonfamily firms (Anderson and Reeb, 2003a) others are investigating for example founder versus successor controlled firms (Villalonga and Amit, 2006).

In sum, whereas research on publicly quoted family firms versus nonfamily firms is abundant, academia and practice would very much profit from a research approach that, firstly, examines privately held family firms, the utmost part of all family firms, and secondly measures family influence on a continuous scale by integrating, at least, all three bureaucratic influence mechanisms as experienced in three tier governance system, including ownership, management board participation and supervisory board participation.

The goal of this article is to fill this research gap by asking how family influence in ownership, management board and supervisory board affect the financial performance of a firm. Next to this, it will be questioned whether the generation active in the firm affects the performance of a family firm.

The present article is structured as follows. In the next section, section 3, I will outline the definition of family influence used in the text and present the data sample used for the empirical investigation. In section 4, I will develop hypotheses that will be tested in section 5. Section 6 concludes and outlines the impact of the findings for theory and practice. This last section will also provide directions for future research.

3 Definitions and sample description

Smyrnios et al. (1998) point out that "complexities associated with a sound definition of a family firm raised a number of methodological concerns related to sampling issues, appropriate group comparisons and establishing appropriate measures used to derive statistics." The authors even mention that the complexity and the resulting confusion can call into question the credibility of family business research.

In the view of Astrachan et al. (2002) there are three dimensions of family influence that should be considered. These are power, experience and culture. This measure is called the Family-Power, Experience and Culture scale (= F-PEC).

Although F-PEC is a compelling instrument, its full use and practicability for empirical research is limited-for two reasons.

First of all, the culture subscale, one of the three subscales, is difficult to quantify as it intends to measure the values predominant in family firms. Measuring values can hardly be achieved via a one time assessment. As values remain constant over time, measuring values is difficult because one has to differentiate between emotions, which change over time (Klein, 1991) and values, which do not. Hence this requires measuring twice, which is hardly practicable for empirical research.

Secondly, it remains open to what degree one subscale can influence or partly replace the other. For example, one could imagine that high scores in the power subscale influence the culture prevailing in that company (culture subscale). In addition, it is questionable whether firms with the same total level of F-PEC but with differing subscales (e.g. one firm with high levels of power subscale and low levels of culture subscale compared to a firm with inverse power and culture subscale) can be considered the same.

Thirdly, any empirical research initiative that tries to measure the interdependence of a variable (e.g. ROE) and family influence needs to measure not only this variable but also family influence via F-PEC. This implies a voluminous questionnaire, only for the measurement of family influence, which limits the practicability of F-PEC for an empirical investigation.

One solution to the measurement problem is limiting family influence to the power subscale within F-PEC. Family shareholders have a strong preference for control (Hart, 1995), and tend to control equity, government and management board (Frey et al., 2004). This is exactly what the power subscale (F-Power) within F-PEC is measuring. Klein called the same measure "Substantial Family Influence (SFI)" (Klein, 2000).

The advantage of the F-Power respectively the SFI definition is its practicability while keeping the possibility of measuring family influence on a continuous scale. According to this definition, a family business is a company that is influenced by one or more families in a substantial way. A family is defined as a group of people who are descendants of one couple and their in-laws as well as the couple itself.

Substantial Family Influence (SFI) is composed of three elements (Klein, 2000):

1. The family's share in the capital of the firm, on condition that the family holds at least some shares, plus
2. The family's share of the seats on the governance board, plus
3. The family's share of the seats on the management board.

According to Klein (2000) a firm can be considered as a family firm, when the sum of the family's share in equity, in government and management board is equal to or larger than 1. At most, a family can fully control all three elements. Family influence then amounts to 3 (SFI = 3). In analytical terms this can be written as follows:

$$If\ \ S_{Fam} > 0\ \ SFI : (\frac{S_{Fam}}{S_{total}}) + (\frac{MoSB_{Fam}}{MoSB_{total}}) + (\frac{MoMB_{Fam}}{MoMB_{total}}) \geq 1$$

With:

S = stock; SFI = substantial family influence; MoMB = Members of management board; MoSB = Members of supervisory board; Fam = family.

As this broad definition is accepted in relevant scientific literature (Klein 2000; Shanker and Astrachan, 1996), choosing Substantial Family Influence (SFI) for this text assures international comparability of the research results with existing and future studies regarding the relation between financial issues and family influence.
The definition carries the advantage of being modular in the sense that it allows working out figures with differing definitions, including for example solely ownership and management and / or supervisory board participation.
To measure the financial performance of the firms I use the return on equity (ROE) of the fiscal year 2003. This is in line with the most literature using return on assets and return on equity as the performance measure (Jaskiewicz et al., 2005), as outlined above.
The data sample I use for this text was collected in 2004 for the fundamental study on the significance of family firms in Switzerland by Frey, Halter, Klein and Zellweger (2004). For this study a questionnaire was sent to 7000 companies registered in the commercial database of Schober, an independent business address provider (spring 2004). This database includes 99% of all registered companies in Switzerland. The addresses were chosen randomly. The sample was not stratified disproportionally for the size of the firm, as it was the intent of the authors to draw a reliable picture of family firms, where larger firms are not overrepresented. From the 7000 companies, 1221 returned valuable information, which amounts to a return rate of 17.4%. Of those 1221 questionnaires, 959 indicated sufficient information to calculate SFI and thus to determine whether they were family firms or not. All responding firms were privately held, the mean size of the firms was 12 million CHF with a standard deviation of 6.5 million CHF.
The questionnaire consisted of 4 parts: a general section, an ownership / governance section, a culture / experience and a capability section.
The data was analyzed using SPSS (statistical software package for social sciences) on the basis of above-given definition, but can also be used with other definitions, such as Shanker and Astrachan's (1996) and others', insofar as they are quantitative definitions.

4 Hypotheses

4.1 Family influence and financial performance

As outlined at the beginning of this text, there are serious doubts brought forward by Schulze et al. (2003) whether family firms really exhibit the ideal precondition of low agency costs as hypothesized by Fama and Jensen (1983a and 1983b). Schulze et al. (2003) find that family firms suffer from costly agency conflicts induced by altruism between family principals (e.g. parents) and family agents (e.g. children), despite the fact that principals and agents often stem from the same family and therefore have an innate agency advantage that spares these firms expensive control mechanisms. Schulze et al. (2003) argue that altruism can create agency problems that are costly to mitigate and therefore can make pay incentives to family members necessary. For example, since altruism is at least partly motivated by the parents' desire to enhance their own welfare, parents have incentive to be generous although that generosity may cause their child to free ride or to shirk responsibility (e.g. leave an assigned household chore for a parent to complete or to misuse their parents' money).

Parents are therefore faced with a Samaritan's dilemma in which their actions give beneficiaries incentive to take actions or make decisions that may ultimately harm the parents' own welfare. Literature characterizes these problems as double moral hazard problems (Buchanan, 1975). More broadly, the Samaritan's dilemma is representative of a class of agency problems associated with the exercise (or lack) of self-control by the principal. Self-control problems arise whenever parties to a contract have both the incentive and the ability to take actions that "harm themselves and those around them" (Jensen, 1994).

Hence, there are reasons why family principals (e.g. parents) need to monitor family agents (e.g. children). For example, hire of family agents (e.g. children) is often determined by family status and not by professional qualifications. Monitoring may therefore be required to assure that the activities by the family agents are commensurate with their positions. Similarly, certain disciplinary measures as the exclusion of family members from the firm are hardly conceivable. Hence, monitoring may be necessary in order to minimize shirking and / or free riding. Furthermore, the controlling owner (principal) may undertake investments that other family members do not view as the best. This may lead family agents to prefer consumption to investment and to free ride on the controlling owner's equity. At this level, the controlling owner is obliged to monitor and limit the consumptions of the agents.

Similarly, Schulze et al. (2003) mention reasons why family agents (e.g. children) need to monitor family principals (e.g. parents). For example, as family agents are often minority shareholders, they need to assure that the controlling shareholder does not expropriate them. Similarly, the predominance of self-interest could lead the controlling owner to invest in projects with which the agents do not agree. For example, age might cause the controlling owner to avoid investments in new technology that other family members favor. Furthermore, altruism reduces the CEO's ability to effectively monitor and discipline family agents. Just as in a household, altruism biases the CEOs' perceptions. Agents must therefore see that the achievements of each one amongst them are considered justly and not equitably. And finally, the family agents must assure that family principals decide on the most suitable manager, determined by the requirements of the family *and* of the firm.

Hence, whereas certain family firms might display a high interest convergence between family agents and principals, with a supposed positive effect on performance, other family firms might experience an entrenchment effect of family influence caused by above-outlined conflicts, with an expected negative effect on the performance of the firm.

In line with the "combined argument theory" (Morck et al., 1988; Mc Connell and Servaes, 1990; Shleifer and Vishny, 1997; Wruck, 1989) who find that the dominance of interest convergence (positive performance effect) and entrenchment theory (negative performance effect) depends on the shareholding concentration, I hypothesize that family firm performance depends on the level of family influence. Just as with ownership concentration that has a positive effect on performance up to a certain level (depending on the above cited authors this inflection is between 20% and 50% insider ownership), I argue that family influence has a positive effect on firm performance up to a certain level. However, above this level, family influence can hamper the profitability of the firm, since effective corporate governance mechanisms are missing, which constrain the costly agency conflicts outlined above.

This is inline with the arguments by Tosi and Gomez-Mejia (1994) who posit that increased (family) CEO monitoring is associated with improved firm performance when monitoring is low but not when monitoring is high.

Hypothesis 1:
Return on equity is inversely U-related to family influence.

4.2 Family share in ownership and financial performance

Numerous studies have analyzed the relationship of firm value, return and insider ownership. From the diversity of the results of theoretical and empirical studies (next to the literature cited in the preceding subchapter, e.g. Jensen and Meckling, 1976; Demsetz and Lehn, 1985; Stulz, 1988) a clear conclusion as to whether and in what logic performance and managerial ownership levels are interrelated is impossible.

Mc Conaughy et al. (2001) present evidence that family control is associated with higher firm performance. But when they split up family control of a firm into different sub-factors, such as ownership concentration and monitoring, they find that the positive effect of family control on firm performance is *not* due to managerial ownership. Likewise, Cho (1998) discovers that managerial ownership does not explain firm characteristics such as investment and value. Too, the results presented by Mazzola and Marchisio (2002) show that ownership does not appear to affect a company's capacity to create value. Anderson et al. (2003b), who specifically focus on publicly quoted family firms, find a cut off level of 12% family equity ownership for impact. Already above a family ownership level of as low as 12%, more family ownership has no further lowering impact on the costs of debt financing. This connotes that further managerial ownership reduces the efficacy of the corporate governance mechanisms.

In sum, the above-cited literature on ownership concentration and firm performance discusses interest convergence and entrenchment effects under the assumption that agents and principals in firms are egoistic players who try to expropriate each other by maximizing their individual financial benefit.

The present text argues that family shareholders do not fully fit this reductive mono-dimensional view of economic players, since non-financial goals as image (Ehrhardt and Nowak, 2003) and independence (Ward, 1997) play an important role in that type of firm. Anderson et al. (2003b) argue that since family shareholders typically have undiversified portfolios, they are rather concerned with firm and family reputation. As they often desire to pass the firm on to their descendants, they represent a unique class of shareholders, possessing the voice and the power to force the firm to meet above needs. In that sense, family firms do not really fit into the Jensen and Meckling (1976) model of the firm.

In line with these considerations I argue that the importance of certain business goals switches with increasing family ownership concentration (Figure 1). In particular, the independence of the firm just as the strive of individuals to increase private wealth gets more important with increasing family ownership concentration (Figure 1).

As shown by Zellweger (2006) the strive for independence switches the investment choices of family owners since they are specifically looking for investment projects with low control risk, represented by a low leverage level, and consequently lower return on equity. Hence, lower returns are not necessarily due to an inefficient governance system or operative weaknesses of this specific firm but rather reflect a deliberate choice by the entrepreneur on the risk / return continuum according to his preferences.

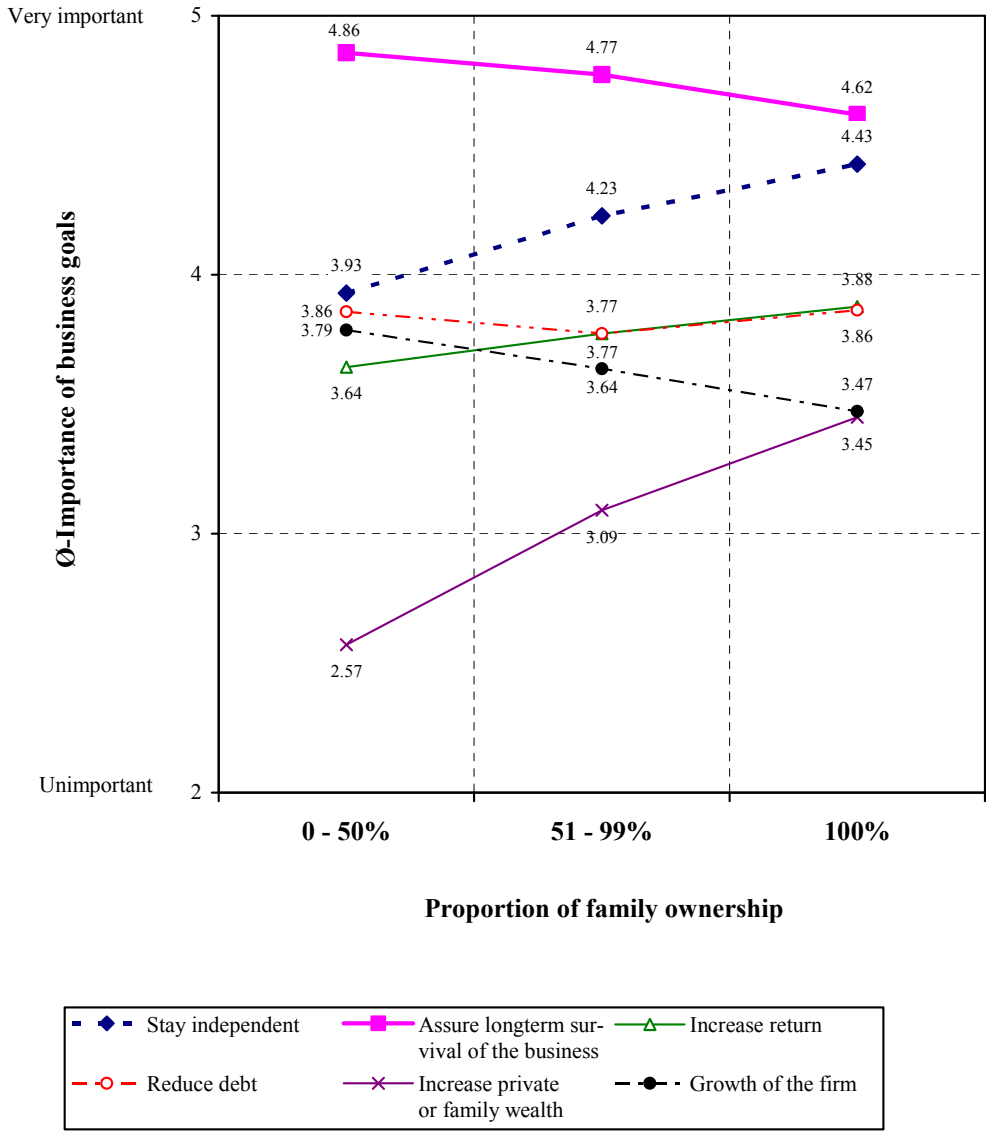
The goal "increase private or family wealth" refers to the fact that business families have large fractions of their wealth tied to their firms. Since business families often consider their firms as an illiquid asset, the family will only be able to financially profit from its firm through salary, dividends and

perks. Therefore, when the goal "increase private or family wealth" gets growing relevance with rising family ownership, salary, dividends and perks are rising as well, which reduces the resulting profit of the firm.

Consequently I argue that with increasing family ownership concentration the returns to equity of family firms are falling due to an increasing relevance of the independence goal and an increasing will to increase private or family wealth.

Hypothesis 2:

The return on equity of family firms is falling with an increasing family share from total equity.



Increase private or family wealth:
* = U-Test: Significant mean difference between proportion of family ownership 0 - 50% and 100%.
Increase private or family wealth:
* = U-Test: Significant mean difference between proportion of family ownership 51 - 99%% and 100%.

Figure 1: The importance of different business goals with increasing family ownership

4.3 Generation and financial performance

There is anecdotal evidence that family firms face different financial success depending on the generation active in the firm. Often practitioners refer to the Buddenbrooks syndrome (Bull, 2002) stating that later generations are less interested in entrepreneurial activities and the dynamics of the family firm fades away. Certain authors argue that second and third generations in the family firms are incapable to continue the work of their predecessors (Pollard, 1965; Landes, 1969).

Recent studies (Ojala, 2001), however, have stressed the capabilities and willingness of the former generations in providing such conditions to the future generations that they are able and capable to continue the work of their predecessors; these conditions include training and education. On the one hand it is being stressed that the problems in the succession process are not necessarily the fault of the younger generations, but rather the older ones who are not willing to back off. On the other hand, it has been questioned whether the continuation of the family firm even is the primary goal of the family. The best for the family and for the children might not be the continuation of the firm, thus, landed property, securities and so on are acquired. In that case also the training to business activities is consciously avoided and higher education emphasised in order to get the children other, perhaps better career possibilities (Supple, 1977, 418 - 423; Rose, 1993, 131 - 140; Casson, 1999).

Studies on the survival rates of family firms across generations are not able to provide further insight into the success of different generations. Aronoff (2001) reports that 30% of family businesses make it to the second generation, 10-15% make it to the third and 3-5% make it to the fourth generation. These numbers were replicated globally and seem to have a large validity. Many family business consultants judge these survival rates as meager, particularly those of the third generation. Consultants often imply that the survival rates from one generation to the next indicates a problematic economic situation. Aronoff (2001) however shows that this survival rate is comparable to the one found in publicly quoted nonfamily firms. In addition, this survival rate remains constant at a level of 30% across generations. These considerations do not support the finding that one generation is less successful.

One argument for differing returns on equity figures derives from the fact that many families follow a "leave in the company" dividend policy (Jaskiewicz et al., 2005) with a preference for burying profits in the firm, for example due to tax reasons (Donnelley, 1964). Consequently, family firms are expected to display lower returns on equity with continuing generations (Levin and Travis, 1987) due to decreasing leverage levels. However, even if one controls for differing leverage levels, Mc Conaughy and Phillips (1999) find that descendant controlled firms are less profitable than founder controlled firms. Villalonga and Amit (2006) report that family management adds value when the founder serves as the CEO of the family firm or as its chairman with a nonfamily CEO, but destroys value when descendants serve as chairman or CEO.

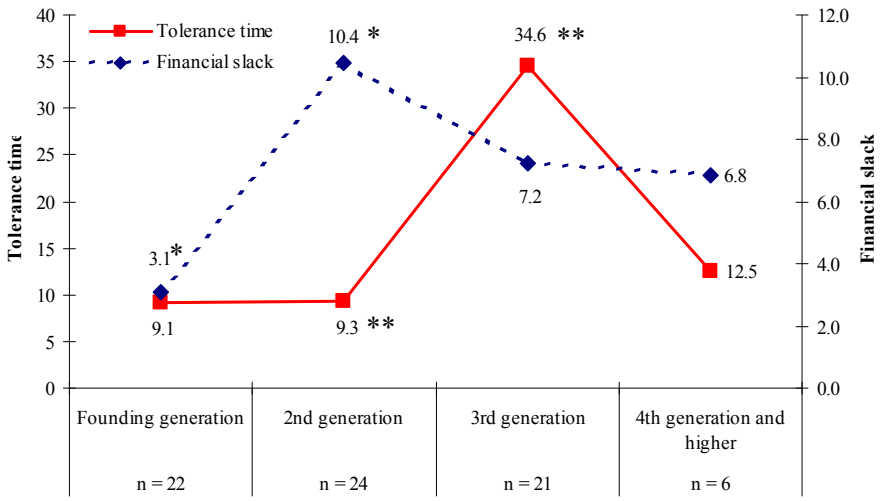
Mc Conaughy and Philips (1999) consider that the performance differences they find are consistent with a life-cycle view of firms. According to Mc Conaughy and Phillips (1999) founder controlled firms are exploiting new ideas and technologies through investments in capital equipment and research and development, whereas firms in second and later generations are rather exploiting their established positions in the market and potentially also the wealth the preceding generations have built up. Lack of ambition might be one reason for the decline with continuing generations, as the wealth and social status acquired for example by the first and second generation do not immediately require further efforts in these directions.

Therefore, slack of, for example, financial resources might be one reason for the performance differences of descendant controlled firms. Slack is potentially utilizable resources that can be diverted or redeployed for the achievement of organizational goals. These resources vary in type (e.g. social or financial capital) and form (e.g. discretionary or nondiscretionary). It is argued that financial slack, which is measured as the share of cash and marketable securities from total assets (Mc Conaughy and Mishra, 1999) reduces the likelihood of efficient leverage of these resources (George, 2005; Baker and Nelson, 2005; Starr and Macmillan, 1990). The claim is that resource constraints alter the behavior by which resources are garnered and expended, forcing managers to improve allocative efficiency. Slack is used to stabilize a firm's operations by absorbing excess resources during periods of growth and by allowing firms to maintain their aspirations and internal commitments during periods of distress (Cyert and March, 1963; Levinthal and March, 1981; Meyer, 1982). Financial slack provides that cushion of actual or potential financial resources that allows an organization to adapt successfully to internal pressures for change in policy as well as to initiate changes in strategy (Bourgeois, 1981). Through this dual internal and external role, slack influences performance.

Indeed, in a sample of 73 privately held Swiss construction firms I find empirical evidence that third generation family firms have a tendency to live on the financial slack accumulated by the preceding generations and that this ownership generation displays a lower profit discipline in contrast to the first and second generation.

Profit discipline is measured by tolerance time, which is defined as the share of negative EBITs of all observed past EBITs for one firm (EBIT = earnings before interest and taxes). For example, if a firm displays a tolerance time of 20%, 1 out of 5 EBITs observed for this firm is negative. Tolerance time is inversely related to profit discipline and is expected to be an indicator of a family's will and ability to assure the profitability of the firm. This means that a tolerance time of 50% indicates a lower profit discipline than a tolerance time of 20%.

As hypothesized, tolerance time (as a proxy for profit discipline) is highest in third generation family firms, and is presumably affected by the financial slack the preceding generations have accumulated (Figure 2). Since the first and second generations are accumulating cash and marketable securities, the third generation uses the funds to live on it, which is represented by an increasing propensity to tolerate negative financial performance.



The analysis includes only privately held family firms, all from construction industry. Financial slack: share of cash and marketable securities as a percentage of total assets. Tolerance time: the share of negative EBITs of all observed EBITs for one firm. Tolerance time is considered as a proxy for profit discipline, in the sense that the higher the tolerance time, the lower the profit discipline. Statistical test applied: Mann-Whitney-U-Test. Significance level: 0.05.
*: Financial slack: significant difference between founding and 2nd generation.
**: Tolerance time: significant difference between 2nd and 3rd generation.

Figure 2: Mean financial slack and mean tolerance time for different generations

Above empirical findings support the above-outlined view of Mc Conaughy and Phillips (1999) and George (2005) who finds that financial performance of privately held firms decreases with growing financial slack at later stages in the development of the firm. Consequently, these findings provide evidence supporting the assumptions of Schulze et al. (2002) and Zahra et al. (2000) who mention that financial inertia can deprive the family firm of the necessary funds for pursuing entrepreneurial activities, which presumably hampers the profitability of the firms with continuing generation.

Hypothesis 3:
The return on equity of family firms falls with continuing ownership generation.

4.4 Number of family shareholders and financial performance

As outlined Jensen and Meckling (1976), controlling owners display high degrees of incentive alignment. Agency problems induced by altruism are low, as none of the shareholders can be expropriated. In addition, in fully controlled family firms profit discipline needs to be larger as the profitability of these firms needs to feed the family and its employees. Therefore, profit discipline is of crucial importance for this type of firm.
Sibling partnerships with 2 to 4 family shareholders, however, are more concerned about their own welfare and that of their immediate families than they are about each other's welfare. Schulze et al. (2003b) argue that firms in the status of sibling partnership display an increased concern for their own children and the added pressure from outside family directors (and in-laws) to sustain or enhance the

dividend pay out. In turn this can engender the family firm specific agency problems outlined in chapter 4.1, which are expected to lower the profitability of the firm.
Once a firm enters the stage of cousin consortium, with 5 and more shareholders, ownership has become more dispersed, which reduces the agency costs of expropriation by majority shareholders. Furthermore, since family ties are more wide-spread altruistic feelings are expected to be lower between distantly related family members in contrast to closely related family members. Hence, agency conflicts due to altruism amongst family members are expected to be lower as well. In addition, due to an increased liquidity of the market for these shares, exit costs of underperforming family members are lowered. In sum, once a business family has arrived at this stage, it has, at least partially, overcome the altruism challenge most family firms are facing. In turn, I expect that the financial performance of the firm is rising again.

Hypothesis 4:
The return on equity of family firms is U-related to the number of family shareholders.

5 Results

The empirical investigation is based on a linear regression analysis supported by a Pearson correlation analysis.
I use return on equity as the dependent variable. I use five independent variables, namely, Substantial Family Influence (SFI), SFI_square (= SFI * SFI) to measure the quadratic effect of family influence on performance, family ownership share, ownership generation and number of shareholders. Furthermore I integrated five control variables, namely, three industry dummies (services, craftsmen and other industries), debt from total assets to control for leverage level and size of the firms.
Table 1 provides descriptive statistics and Pearson correlations for all the variables entering the regression model. The correlation analysis provides evidence that ownership generation and return on equity are negatively correlated on the 5% significance level. The service industry dummy also displays a significant correlation with return on equity on the 1% significance level.
Table 2 reports two multiple linear regression models, model 1 without control variables, model 2 including the control variables.
The regression analysis provides support for hypothesis 1, which assumed an inversely U-formed effect between family influence and performance. Both variables, SFI and SFI-square are significant at the 1% or 5% level, depending on the regression model.
Hypothesis 2, which expected a negative relation between the family share from total equity and return on equity is accepted as well. The B values are significant at the 1% level in both regression models.
Hypothesis 3 on a supposed negative relation between ownership generation and return on is not supported by the data.
Hypothesis 4 is not supported either. The Pearson correlations and the regression models solely show a limited linear negative relation between the number of shareholders and return on equity. The regression analysis could not reveal any quadratic effect as supposed with hypothesis 4.

	Mean	Std. Deviation	N	Return on Equity	SFI	SFI_ square	Family ownership	Ownership generation	Number of shareholders	Dummy (other industries)	Dummy (service)	Dummy (craftsmen)	Debt from total assets
Return on Equity	15.126	18.587	754	1									
SFI	1.506	0.749	620	-0.015	1								
SFI_ square	2.828	2.272	620	-0.015	0.952 **	1							
Family ownership	80.751	32.174	523	-0.057	0.781 **	0.611 **	1						
Ownership generation	1.776	1.199	671	-0.079 *	0.089 *	0.080	0.122 **	1					
Number of shareholders	609.857	9'185.027	718	-0.014	-0.136 **	-0.088 *	-0.154 **	0.027	1				
Dummy (other industries)	0.024	0.153	754	-0.050	-0.013	-0.012	-0.092 *	-0.060	-0.001	1			
Dummy (service)	0.410	0.492	754	0.118 **	-0.194 **	-0.179 **	-0.186 **	-0.193 **	0.005	-0.130 **	1		
Dummy (craftsmen)	0.046	0.211	754	-0.028	0.022	0.028	0.003	0.088 *	-0.014	-0.035	-0.184 **	1	
Debt from total assets	58.130	27.113	723	-0.012	-0.004	0.016	-0.041	0.024	0.019	-0.014	0.006	0.056	1
Sales volume	2.340	1.404	750	-0.052	-0.153 **	-0.125 **	-0.097 *	0.231 **	0.239 **	0.055	-0.097 **	-0.076 *	0.086 *

* : 5% significance level

** 1% significance level

Table 1: Descriptive statistics and Pearson correlation

	Model 1 (without control variables)	Model 2 (with control variables)
	Coefficient (T-value)	Coefficient (T-value)
Constant	14.487 (4.300) ***	12.153 (2.691) **
SFI	15.737 (2.612) **	15.644 (2.501) **
SFI_square	-3.320 (-2.141) **	-3.168 (-1.971) *
Family ownership	-0.173 (-3.286) **	-0.172 (-3.106) **
Ownership generation	-0.507 (-0.777)	-0.487 (-0.702)
Number of shareholders	-0.007 (-0.830)	-0.007 (-0.873)
Dummy (other industries)		-7.002 (-1.178)
Dummy (services)		3.951 (2.089) *
Dummy (craftsmen)		-1.887 (-0.491)
Debt from total assets		-0.004 (-0.128)
Size		0.526 (0.685)
p-value of F-test	0.026 *	0.042 *
Adjusted R^2	0.019	0.016
N	488	469

* $p \leq 0.05$
** $p \leq 0.01$
** $p \leq 0.001$

Table 2. Multiple linear regression models for return on equity

6 Discussion

The results support two of the four hypotheses outlined at the beginning of this text. In particular, I find a significant quadratic relation between family influence and the return on equity of the firm. Figure 3 provides a graphical depiction of the quadratic relation I find. For the sample analyzed, I find that family influence has a performance increasing effect up to a SFI level of 2.469, being the maximum in the equation ROE = 15.644 * SFI - 3.168 * SFI ^{2}.

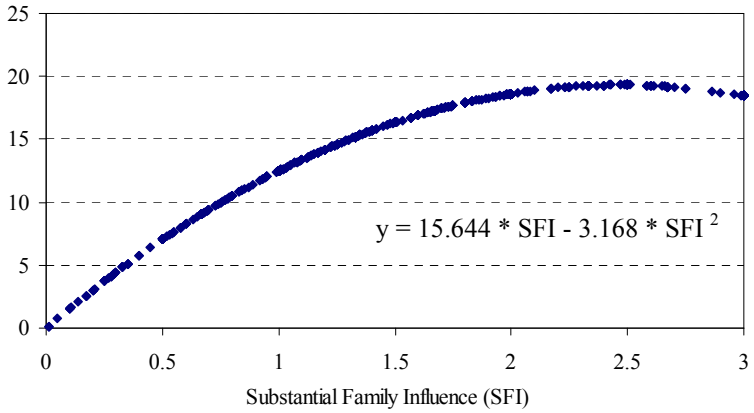


Figure 3: Relation between Return on equity and Substantial Family Influence

Hence, as expected, family influence is not generally good or bad. It can have a performance increasing effect as long as the supposed positive impact of family influence (e.g. interest alignment, lean governance structure) are prevailing. Beyond an SFI level of 2.5, I find an entrenchment effect of family influence. Beyond this inflection point, family influence seems to hamper the profitability of the firm supposedly due to altruism induced by agency conflicts, due to missing family external control, and presumably also a limited access to external financial and human resources.

In addition, I find strong empirical support for the hypothesis that family ownership has a negative impact on the performance of privately held family firms. At this stage of the analysis it is important to note that the share of total equity the family holds makes part of the definition of SFI (refer to chapter 3) for which the model provides evidence for the above outlined quadratic relation. This results is inline with the findings by Mc Conaughy et al. (2000) who find that family control can lead to higher performance but that the positive effect of family control on firm performance is not due to ownership. Mazzola and Marchisio (2002) present similar results.

Hence, since the positive performance effects of family influence are not due to ownership we can conclude that other types of control (e.g. family control in management and supervisory board) constitute the positive performance effects. In particular, family firms seem to have performance increasing governance structures.

Above findings on family influence as measured by SFI and the impact on ROE raise the question whether business families should adapt their influence on their firms to a level of roughly 2.5 to garner the highest performance impact.

The answer to this question needs to be seen in the light of the sample analyzed. For the firms in the sample we can say that full family control (SFI > 2.5) has a performance decreasing effect. However,

my data does not allow us to say that any type of fully family-controlled firm, even small ones, should reduce family influence.

For example, in very small family enterprises, with less than 10 employees, with husband, wife and may be even children working in the enterprise, the presence of the family and the resources the family members provide can be a conditio sine qua non for the establishment but also for the survival of the firm. For example, studies on the significance and structure of family firms in different countries (USA: Astrachan and Shanker, 2003; Germany: Klein, 2000; Netherlands: Flören, 1998; Switzerland: Frey et al., 2004) reveal that most firms are founded as family firms, with one owner-manager. Thus the life cycle of most firms starts in the form of a family enterprise.

The firms in this study, however, are not start up firms – the mean number of employees being 55. For these firms, family influence is still positive, at least up to a level of 2.5, as outlined above. Studies on publicly quoted firms find that the relation between family influence on management and ownership should however display a ratio of 1 (Jaskiewicz et al., 2005). Hence, family influence needs to be adapted throughout the evolvement and the life cycle of the firm.

These considerations provide empirical evidence to Muehlebach's (2004) qualitative study on the opportunities and threats family firms are facing. Muehlebach (2004) underlines the importance of the management of family dynamics in order to make use of advantages of family involvement. For example, Muehlebach (2004) points out that family firms need to manage their familiness (resources and capabilities the family provides to its firm, Habbershon et al., 2003) dynamically depending on the inherent strengths of the family (firm) and the opportunities on the markets. According to Muehlebach (2004) family firms need either to increase (consolidate) or to reduce (open) family influence within management, the government board and ownership.

7 Limitations and conclusion

In 1964 Donnelley generally questioned the sharpness of profit discipline of family managers. Similarly De Visscher (2004) finds that many families are found to be content to run a good business without ambitious growth targets and the will to bring in outside capital and control. The above empirical results draw a more differentiated picture on the relation between family control and the financial performance of privately held family firms. I find an inversed U-relation between family influence as measured by Substantial Family Influence and return on equity.

My findings support the case that family influence is beneficial up to a level of 2.5 within the definition of SFI, but that below and beyond this level the performance is falling. Furthermore, the data shows that with an increasing family share from equity, the performance is linearly decreasing. Hence, since family ownership makes part of the definition of SFI, I conclude that the positive performance effects of family influence are rather related to the governance structure (family participation in management and supervisory board).

The data however does not support the case that the number of family shareholders has an impact on the financial performance of the family firm. Neither, the data does not lend support to the assumption that with growing ownership generation, the performance of family firms is lowering, although I present evidence that third generation family firms have a lower profit discipline and tend to live on the financial slack accumulated by the preceding generations.

The present study displays two shortcomings. Firstly, a family's share in ownership makes part of the three elements that constitute Substantial Family Influence (SFI; family's share in equity, in management team, in supervisory board). Hence, the two variables (SFI and family ownership) are linearly dependent. Future research is necessary that splits SFI into its three subcategories and examines the effect of each one of those separately. Secondly, further research is missing on the performance impact of the other two elements of SFI, management board and supervisory board participation. As outlined above those elements are expected to have a positive performance impact which needs be understood better.

For theory and practice answering the question, how family influence should be exercised across ownership, management team and supervisory board is of crucial importance. In particular we need a better understanding on the governance structures of family firms and how they affect the prosperity of this type of firm.

8 Literature

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