

Performance of family firms: A literature review and guidance for future research

By Joseph H. Astrachan, Kennesaw* and Thomas Zellweger, St. Gallen**

Abstract

This special issue ends with a comprehensive review article by Zellweger and Astrachan focused on understanding what we know about the ways in which family influence affects firm performance. Their literature review is organized along the dimensions of power, experience, and culture, through which a family can exert influence on a firm (Astrachan, Klein, Smyrnios 2002; Klein, Astrachan, Smyrnios 2005). André Hoffmann's commentary shares how the Hoffmann family has exercised its influence on the world's third largest pharmaceutical company, Roche Pharmaceuticals, for over a century. A combination of family involvement in ownership and governance of the firm has enabled the Hoffmann family to support the "Roche way of doing business".

* Joe Astrachan is Wachovia Eminent Scholar Chair of Family Business, Professor of Management and Entrepreneurship, and executive director of the Cox Family Enterprise Center at the Coles College of Business, Kennesaw State University in Kennesaw, Georgia, an Atlanta suburb. In addition he is Distinguished Research Chair of Family Business at Loyola University Chicago's Business School.

Astrachan is editor of Family Business Review, a scholarly publication of the Family Firm Institute (FFI) of which he is a former board member. He is also editor of the Family Business Casebook Annual which publishes the best in teaching and educational family business cases. Astrachan received the Richard Beckhard award, which is the Family Firm Institute's highest honor, the Family Business Network's award for best-unpublished research paper of 2001 (along with co-authors Smyrnios from Australia and Klein from Germany), the International Family Business Program Association's Lifetime Achievement in Research Award, and he received the McGregor Award from the Journal of Applied Behavioral Science. In addition to his non-profit and community board service, he serves on the boards of six privately-owned family businesses and comes from a family business background. His extended family has owned businesses ranging from container and tanker shipping to pharmaceuticals. Astrachan earned his B.A., M.A., M. Phil., and Ph.D. degrees at Yale University.

** Thomas Zellweger has studied at the universities of St. Gallen and Louvain (Belgium). With his dissertation work on "Risk, Return and Value in the Family Firm" he received a Doctor of Philosophy in Management (Ph.D. HSG) in 2006. He is member of the executive board of the University of St. Gallen's "Center for Family Business", and, since February 2008, senior lecturer for management and family business at the University of St. Gallen.

I. Introduction

Numerous studies have investigated the impact of family influence on the performance of a firm. The most-cited scholarly article in this respect was published by Anderson and Reeb (2003) who found that publicly quoted family firms outperformed their nonfamily counterparts. Since publication of Anderson and Reeb's (2003) article, comparable studies have been replicated throughout the world. Miller and Le Breton-Miller (2005) wrote a comprehensive overview of existing family business performance studies.

The research does not present a monolithic picture. The link between performance and family influence is greatly affected by the definition of the family firm employed in the research, the precise question analyzed by the researchers, and the definition of performance considered. Whereas the literature provided by Miller and Le Breton-Miller (2005, 14) includes studies that show superior performance of family firms along various performance dimensions, other studies draw a less positive picture of family firm performance. For example Bennedsen, Nielsen, Perez-Gonzalez and Wolfenzon (2006) find that overall, non-family CEOs provide valuable services to the organizations they head, thereby supporting the case that family managed firms have lower performance than non-family firms. In a similar vein, Perez-Gonzalez (2006) finds that firms where incoming CEOs are related to the departing CEO, to a founder, or to a large shareholder by either blood or marriage undergo large declines in operating returns on assets and market-to-book ratios, relative to firms that promote unrelated CEOs. Furthermore, Bloom and van Reenen (2006) find that that poor management practices are more prevalent when family-owned firms pass management control down to the eldest sons (primo geniture).

Because the available research is ambiguous as to whether family influence is beneficial or detrimental to firm performance, we need to further investigate in what ways family as an organizational variable affects firm performance. To this end, as researchers, we need to over-

come the artificial dichotomization between family and non-family firms. This differentiation has not proven to be satisfactory (Astrachan, Klein, Smyrnios 2002) since it does not address the core of the question what underlying characteristics of a certain type of firm (e.g. a family firm) cause such a firm to display superior performance than other firms. In addition, research findings opposing family and nonfamily firms are often not comparable since they use differing definitions of family firms. Therefore, to advance in the field of family firm performance, definitional dilemmas need to be resolved and underlying relationships indicative of individual family characteristics effect on performance need to be identified and researched.

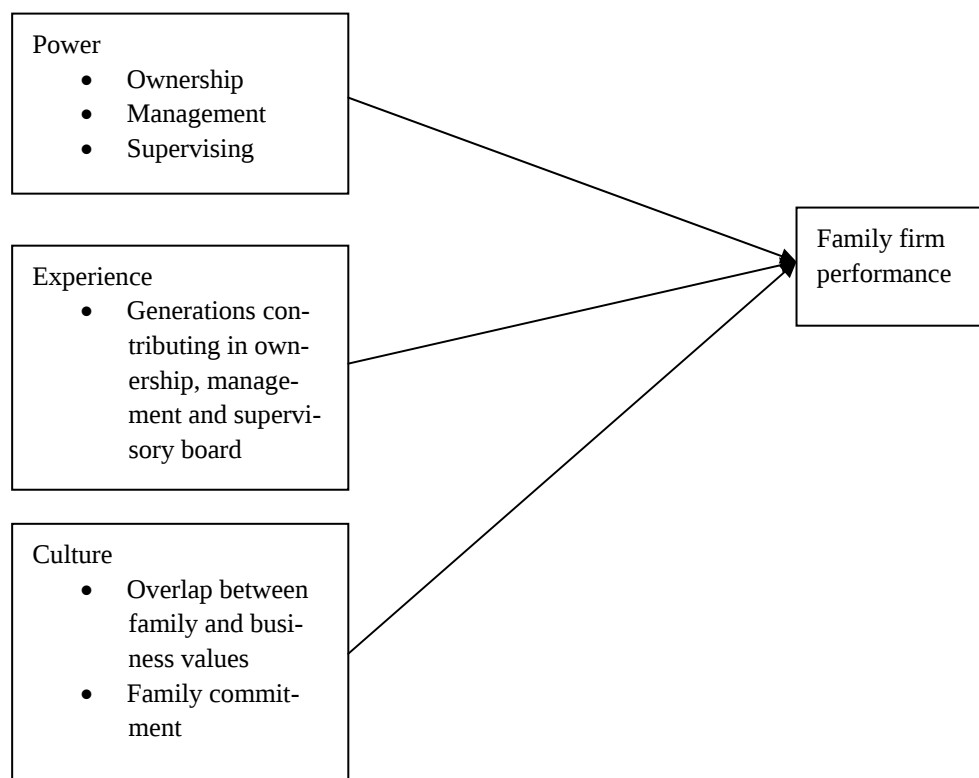
The goal of our examination of the relationship between family influence and performance is twofold. First, we will discuss the current status of research along a multi-dimensional understanding of family influence defined by Astrachan, Klein and Smyrnios (2002, 2005, F-PEC). Second, within the sub-dimensions of F-PEC, which we consider as potential antecedents to performance differences, we will propose avenues for future research to gain a more nuanced picture on how family affects performance across the different influence levels. Given the limited space of this article for the special issue of *Zeitschrift für KMU und Entrepreneurship*, we will not outline a new research model, but provide guidance along the F-PEC influence dimensions.

Our text is structured along these goals. In the second chapter we provide a short description of F-PEC and its sub-dimensions thereby clarifying our understanding of family firms. In the third we will outline the current status of research and provide guidance for future directions along the F-PEC subdimensions. We will conclude by summarizing our considerations and discuss their implications for theory and practice.

II. F-PEC and the measurement of family influence

As outlined above we use F-PEC developed by Astrachan, Klein and Smyrnios (2002) and validated by Klein, Astrachan and Smyrnios (2005) as a theoretical lens to investigate how family influence affects firm performance. F-PEC consists of three subscales intended to capture different levels of family influence on an organization. Figure 1 is intended to facilitate the reader's understanding of the influence dimensions along F-PEC.

Figure 1: Sub-dimensions of F-PEC as performance antecedents
(in accordance to Astrachan et al. 2002)



First, power, includes family influence in supervising, managing and owning positions. Second, experience, refers to the summed experience that the family brings into the business and is operationalized by the generation in charge of management and ownership (the more generations, the more opportunity for relevant family memory). Third, culture refers to the

values and the commitment and employs the Family Business Commitment Questionnaire by Carlock and Ward (2001). Family commitment is seen in the overlap of business and family values (Astrachan et al. 2002). Our understanding of family business and family influence as antecedents to performance differences is based on F-PEC.

III. Family influence along the F-PEC subdimensions

A business family can influence an organization in different ways. The most discussed control mechanisms are bureaucratic control or governance mechanisms (Mintzberg 1994), as ownership, management and supervisory board control. These measures allow answering the question whether family is a good at owning, managing, and/or supervising an organization.

1. Family influence in ownership, supervision and management

a. Family ownership

Since Jensen and Meckling (1976) predicted higher firm values for firms in which ownership and management are controlled by a single person or a small group of persons with aligned interests, a vast amount of literature has emerged concerning agency theory and ownership. From the diversity of research results (e.g. Demsetz, Lehn 1985; Stulz 1988; Morck et al. 1988; McConnell, Servaes 1990) no clear conclusion can be drawn as to whether and in what logic performance and managerial ownership levels are interrelated. There may be a large number of ownership and agency issues involved as many recent studies have suggested.

McConaughy et al. (2001) present evidence that family ownership control is associated with higher firm performance. But when these authors split 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 clearly due to managerial ownership. Likewise,

Cho (1998) discovers that managerial ownership does not explain firm characteristics such as investment and value. Mahéroult (2000) points out that this may reflect market concerns regarding insider entrenchment, given that the market for corporate control is less effective for family firms, where insiders have control over a majority of shares (McConaughy, Astrachan 2001), where management positions might be occupied for family ties (nepotism; Burkart, Panunzi, Shleifer 2003), and where majority shareholders potentially extract private benefits of control to the detriment of minority shareholders (Dyck, Zingales 2004). Similarly, Anderson et al. (2003a) find a cut off level of 12% family equity ownership for family impact on business returns. Above this point, more family ownership has no further effect on lowering the cost of debt financing. This connotes that further family ownership reduces the efficacy of the corporate governance mechanisms which apparently achieve a maximum at a family ownership level of as low as 12%. This may be different for later generation firms than for first generation firms as suggested by Miller, Le Breton-Miller and Scholnick (2008).

Other studies also suggest that it is paramount to distinguish between founding ownership (i.e. first-generation family influence) and descendant ownership (i.e. influence of the family via second or later generations). Several authors (Morck, Shleifer, Vishny 1988; McConaughy, Walker, Henderson, Mishra 1998; Anderson, Reeb 2003; Adams, Almeida, Ferreira 2005; Fahlenbrach 2006; Villalonga, Amit 2006 and Barontini, Caprio 2006) agree that family firms are outperforming their non-family counterparts when the founder remains active in the firm. However, this issue has not received unequivocal support either. For example, McConaughy et al. (1998) and Sraer and Thesmar (2006) show that family firms with descendant CEOs are better performers than non-family firms. Anderson and Reeb (2003) and Barontini and Caprio (2006), however, suggest that descendants serving as CEOs have no effect on market performance. And, Morck et al. (1988) just as Villalonga and Amit (2006) find that firm value is

destroyed when a descendant of the founding family serves as a CEO (Smith, Amoako-Ado 1999; Pérez-González 2006; Hillier, McColgan 2005).

In sum, there is no unanimous evidence on the impact of family ownership on firm performance. To gain further insight on how family ownership might affect performance of family firms we consider four avenues for future research.

First, further investigation of private benefits of control, hence money that controlling shareholders extract from companies to the detriment of minority shareholders (Grossman, Hart 1980; Dyck, Zingales 2004), might provide more transparency regarding the relationship between family ownership and actual financial performance of family firms. La Porta, Lopez-de-Silanes and Shleifer (2000) find that the legal system plays a significant role in the amount of private benefits controlling shareholders extract from companies they run. With the separation of control-rights and cash-flow rights the controlling shareholders often have substantial power in excess of their cash-flow rights (La Porta et al. 1999; Claessens, Djankov, Lang 2000; Faccio, Lang 2002; Claessens et al. 2002). The strong preference for control of many business families raises the question to what degree they capitalize on private benefits of control. Beyond the issue of expropriation of minority shareholders, financial measures of family firms might be understated since they do not reflect the private benefits owners earn from their firms (Demsetz, Lehn 1985; Holz-Eakin, Joulfaian, Rosen 1993; Zellweger 2006). In case of full control of a firm by a family or a single owner, expropriation of minority shareholders is not an issue. In this context, diverting funds to private accounts in order to reduce tax payments is a further avenue for research.

In addition, private costs of control have gained insufficient consideration (Dyck, Zingales 2004), for example in the form of increased risks due to lower wealth diversification, inflicted family and personal reputation or legal liabilities. Next to the sheer monetary amount of pri-

vate benefits of control family shareholders extract from their firms, the efficiency of their use is a further rewarding research topic, since private benefits of control might be the most efficient way for the company to capture some value created by the company (Dyck, Zingales 2004, 541).

In a similar vein, researchers have started examining the transparency of family firms, more specifically, how the financial community (i.e. analysts) views family firms. Given that family firms display more stable earnings per share and have a lower variance in analyst forecast dispersion than non-family firms, Zellweger (2007c) argues that family firms provide a transparent information setting to investors; in contrast to the lore that family firms are opaque. Extending literature on analyst forecast dispersion (Johnson 2004; Diether, Malloy, Scherbina 2002) and stock market performance of family firms, Zellweger (2007c) argues that the stable earnings per share lead to more narrow earnings estimates and hence less disappointment once the real financial figures are published, thereby supporting the share prices of this type of firm. Apparently, family firms provide a certain information setting that positively impacts the financial community. Beyond analyst forecast dispersion, it might be insightful to test the credibility and precision of earnings forecasts just as the role of investor relations in family firms. Given that family firms are already seen as reliable market participants raises the question to what degree family firms actually need investor relations activity intended to build credibility and an image of reliability in the market place.

Second, even though Anderson, Mansi and Reeb (2003) show that family firms display lower costs of debt financing, costs of equity capital have not received sufficient conceptual (e.g. McConaughy 1999; De Visscher, Aronoff, Ward 1995) and in particular empirical attention. Whereas the argument of entrenched minority shareholders who require higher returns for this disadvantage makes the case for heightened costs of equity capital, the extended time horizon of decision makers in family firms points in the other direction. As the annual default risk of

an investment diminishes with increasing holding period (Hull 2003; McNulty, Yeh, Schulze, Lubatkin 2002), the risk-equivalent cost of equity capital of firms with longer planning horizons (e.g., family firms) can be lower as well (Zellweger 2007b). Adams, Manners, Astrachan and Mazzola (2004) propose that it is the owners own aspiration levels that yield their cost of equity. These aspiration levels are captured in the goals for the growth of the business and the ability of the business to fund their personal liquid wealth through dividends and other withdrawals.

Assuming that family firms apply different costs of capital than their nonfamily counterparts either implies that family firms underinvest (in case of higher costs) or overinvest (in case of lower costs). The challenge for future researchers regarding a more solid understanding of costs of (equity) capital is therefore twofold. First, we need a more solid understanding about the levels of the costs of equity capital, by measuring them *ex ante* – before investing – as the hurdle rate or minimum return required by the family shareholders, and not as implied costs of equity capital derived from some market value. Second, we might gain additional insight in how family firms operate by investigating how a seemingly underperforming investment portfolio, accepted as a consequence of lower costs of equity capital, can produce outperformance in the long run, for example due to risk diversification effects of the larger number of investment projects or the longer time horizon in which projects that *a priori* are not very promising outperform contrary to prior expectation.

Third, based on research on transfer of corporate control and divestment, researchers present evidence that emotional attachment to the entrepreneurial activity might affect performance. Sharma and Manikutty (2005) find that emotional attachment of executives for their firms can inhibit resource shedding in a timely manner, and that emotional entrapment with an activity can lead to strategic inertia. Sharma and Manikutty (2005) find that attachment might be particularly pronounced in privately held family due to nostalgia, traditions and social con-

straints. Sirmon and Hitt (2003) find that even when warranted by objective information, executives may postpone divestment decisions to address other reasons for a firm's or a business unit's existence. In fact, managerial attachment has been proposed to be a central factor explaining divestment decisions of firms (Duhaime, Grant 1984). Whereas the positive non-financial aspects of firm ownership (e.g. decision making autonomy, personal challenge of job) may be one source of attachment, it has not been thoroughly investigated in what way negative non-financial aspects of firm ownership (e.g. exhaustion, role conflicts, social constraints; Sharma, Manikutty 2005) affect emotional attachment and performance aspiration levels

The current status of research is unable to answer the question how emotional attachment could be valued in monetary terms. Duhaime and Grant (1984, 303) find that many divested units for which owners or managers felt some attachment deteriorated to unprofitability before divestment. Therefore, since personal attachment seems (at least partly) to prevent earlier, more timely decisions, thereby inducing economic loss and lower performance, attachment may in itself have an economic value for these owners or managers.

The central challenge related to the further investigation of attachment to firm ownership is its theoretical foundation. Next to attachment theory (e.g. possession attachment, Schultz-Kleine, Kleine, Allen 1995; and the proposed literature therein) that represents the most promising stream of research, scholars have tapped into psychological ownership literature (e.g. Pierce, Kostova, Dirks 2001). However, psychological ownership has been developed in the context of organizational employment and not organizational ownership, and does not account for negative emotions related to the organization respectively the ownership stake.

Fourth, in an attempt to explain performance in family firms, research has historically focused on a single mostly financial performance measurement (Westhead, Cowling 1997), as profits, value-added, sales revenue, equity, assets or return on assets or equity. Westhead and

Cowling (1997) suggested that profit maximization may have been inaccurately assumed to be the primary or even sole objective of a family business. Similarly, Chua, Chrisman, and Steier state "... a paradigm for family firms would have to expand its goal set to include benefits unrelated to financial and competitive performance" (2003, 333).

Scholars have suggested that family firms display a strong preference towards noneconomic outcomes as independence, firm survival or family harmony (Lee, Rogoff 1996; Chrisman, Chua, Litz 2004; Dunn 1995; Gimeno, Folta, Cooper, Woo 1997; Smith, Miner 1983; Lafuente, Salas 1989). Non-financial goals have also been characterized as family goals (Tagiuri, Davis 1996; Corbetta, Salvato 2004). Sorenson (1999), based on Dunn (1995), developed a scale to measure family outcomes, like family independence and satisfaction, tight-knit family, respect in the community and child and business development. In addition, there is empirical evidence beyond the family firm arena suggesting that traditional financial measures based on firm profitability are inadequate for evaluating the strategic performance of any firm (Chakravarthy 1986). In this context Sharma (2004) has proposed to use stakeholder theory (Freeman 1984) to provide clarity to performance dimensions in family firms.

Due to the pivotal role of non-financial outcomes in this type of firm, we perceive several avenues for future research to explore the utility function of family owners that includes financial and non-financial outcomes.

Firstly, building on Sharma's (2004) call to use stakeholder theory to explore family performance relationships, researchers could develop a comprehensive framework that assigns different financial and non-financial performance dimensions to different stakeholders.

Secondly, even though there seems to be wide agreement on the relevance of non-financial outcomes in family firms, we still lack a more solid understanding as to *why* these outcomes are more relevant in family firms in comparison to non-family firms. This question could be addressed through the lens of social identity theory (Hogg, Terry, White 1995; Dyer, Whetten 2006). The tight overlap between the entrepreneur, the family and the firm should lead to a

heightened reputation concern of the owners and therefore an incentive to satisfy multiple stakeholders (e.g. entrepreneur, family members, organization, societal stakeholders), thereby considering the financial and non-financial performance dimensions particularly relevant to these stakeholders.

Thridly, it would also be rewarding to gain a more nuanced understanding as to whether the relationship between financial and non-financial outcomes are substitutable (family versus business goals), or whether synergistic effects between financial are non-financial outcomes can be observed. For example it is conceivable that building reputation is a positive outcome for the family and for the business, which can also be turned into customer loyalty, which synergistically impacts the financial performance of the firm (Chrisman, Carroll 1984).

b. Family supervision

The scarce evidence on the relationship between the presence of family members on the board and performance is controversial as well. For instance, Barontini and Caprio (2006) show that family firms perform better than non-family ones when descendants sit on the board, whereas Villalonga and Amit (2006) report that firm value is destroyed when a founder's descendants serve as chair. Anderson and Reeb (2004) find a non-monotonic relationship such that descendants of founders should sit on board in a one-to-two ratio with independent outsiders to maximize value; a higher or lower ratio can turn the effect of family on a board negative.

In this context it might not be sufficient to study who is in the supervisory board, hence examining the question "who is controlling?" It may be more insightful to examine the question "who is controlling whom?" The appropriateness of this second question is based on the consideration that depending on the existence of kinship relations between controller and person to be controlled, goal setting and control differ since family relations and related altruistic

agency effects (Schulze, Lubatkin, Dino 2003) might bias goal setting and control. We expect that when kinship relationships between controlling owners and the individual to be controlled are present, goals will be set in a less challenging way. Similarly, we expect that control is exercised in a less strict and authoritarian manner when kinship relations are present. Therefore we propose that researchers take a closer look at who is controlling whom, and not only who is controlling, and extend their considerations integrating goal setting as an integral part of supervisory board activity. Thereby, the cultural context (positive versus negative altruism) in which goal setting and control take place might moderate the relation between antecedents to performance and actual performance outcomes.

c. Family management

In contrast to the equivocal findings concerning family as owners and supervisors, there is increasing evidence that family is good at managing organizations. Sraer and Thesmar (2006) find that heirs pay lower wages, establish more long-term employment and generally make more efficient use of labor. In a similar vein Zellweger (2007a) finds that in contrast to family influence in ownership and on the supervisory board, family influence on the management board is beneficial to the return on equity of a firm. Management teams that are fully dominated by family members outperform mixed family / nonfamily management teams due to the trust based culture within the team (Zellweger 2007a). In contrast to family as owners, investigating when and under what conditions family members are good managers is a research subject ripe for further examination.

In the context of family as managers we propose that scholars continue examining the ways family influence is beneficial to the ongoing daily management of a firm, in contrast for ex-

ample to supervisory activity or the management of extraordinary activities such as mergers and acquisitions.

2. Experience

Beyond bureaucratic control mechanisms (owning, supervising, managing), business families have been found to influence their firms via the experience and knowledge they have acquired over generations (Astrachan, Klein, Smyrnios 2005). In this context, a popular assertion about family firms is that by the third generation the firm is heading for decline (Ward 1987). This question has not been thoroughly investigated despite some preliminary evidence of lower performance of third generation family firms (Zellweger 2006, 152).

Studying the influence of families over generations raises several methodological concerns, most importantly, worries about self-selection or survivorship bias. That is to say that only those firms survive that outperform in the long-run, less successful firms have left the market before. It might be insightful to test whether later generation firms display lower returns as a result of reduced risk propensity in attempts to reduce failure risks (e.g., from running out of cash due to a high a growth rate). This relates to an overall issue of how one should define performance (see comments later in the text). For that, we suggest to research centuries old market leading firms and see how they define their performance (managers and shareholders alike and whether there is any overlap).

The extended time horizon (e.g. Walsh, Seward 1990; James 1999; Anderson, Reeb 2003; Zellweger 2007b) reported for most family firms relates well to the experience dimension, given that experience accumulates over time (Manski 2004). Time horizon is defined as the “amount of time in the organizational future ... (that one’s) most important decisions affect the firm” (Bird 1988).

Most existing research argues that with short-term managerial objectives managers are concerned not only with the firm's long-run value but with the firm's short-run value, due to incentive schemes or the fear of losing control that may lead to underinvestment in long-run projects. The managers underinvest in future projects because increased investment capital affects the current market value less than the increase in net present value. On the margin, this distorts investment below efficient profit maximizing levels (Bebchuk, Stole 1993). In the capital market context this phenomenon has also been coined short-termism (Miles 1993).

In firms with dispersed shareholding structure the investors' information deficit regarding returns of a project might be larger in comparison to firms with a blockholder who because of shares owned and relationships with managers may eventually work in the firm. Cho (1998) finds that ownership structure positively affects investments in research and development. Hence, firms with large blockholders are less susceptible to underinvestment. Blockholders may have greater information due to access or effort to procure information than a disenfranchised shareholder.

Family firms are characterized by the presence of large blockholders and are therefore expected to have a natural advantage in investing in long-run projects, due to a lower information asymmetry between managers and investors, as outlined above. Stein (1988, 1989, 1996) shows how the presence of shareholders with relatively long investment horizons (e.g. family firms) can mitigate incentives for short-term investment decisions by managers. James (1999) posits that families have longer investment horizons, leading to greater investment efficiency. Zellweger (2007b) finds that family firms display longer time horizons due to the transgenerational goals, a longer CEO tenure, and the presence of many family firms in cyclical indus-

tries, which can inhibit short-term success. Zellweger (2007b) shows that long-term investment horizons provide family firms the opportunity to invest in projects that are either too risky or not sufficiently profitable for short-term oriented firms.

To extend our knowledge base on the experience-performance relationship, we propose two areas for future research.

Firstly, future research could investigate how knowledge is transferred within business families, including explicit and implicit knowledge (Nonaka 1994; Cabrera-Suárez, De Saá-Pérez, García-Almeida 2001), thereby applying a life-cycle perspective of the business and the business family. To this end sociological and psychological literature could be tapped in order to gain additional insight into how children acquire knowledge, for example from their parents.

Secondly, scholars could further investigate the link between altruism, time-horizon and experience. Non-family managers suffer from a lack of altruism and therefore a finite time horizon problem. Because their tenure with the firm is finite, and the primacy of self-interest as motivation is assumed, having a finite term could lead to decisions that improve performance only during their tenure with the organization when they can benefit from performance. Altruism among family members leads to adoption of strategies that solve the problem of a manager's finite time horizon. This occurs by linking an individual manager's tenure (time horizon) with that of the family's tenure with the firm, and to family's reputation to the reputation of the firm (De Paola, Scoppa 2001). Similarly, it would be rewarding to further investigate how managers and board members could be incentivized to look out for the long-term even without family ties.

3. Culture

Corbetta and Salvato (2004) find that most family firms experience a trust based business culture (for similar findings, see Klein 2005). Trust between family members represents an important source of strategic advantage (Steier 2001), since trust-based relationships serve to reduce complexity (Luhmann 1968) and transaction costs (Steier 2001). A trust based culture might be nurtured by stable employment contracts, which are less sensitive to industry shocks (Sraer, Thesmar 2006). Trust has been considered as a variable that has positive effects on work group process and performance, through higher levels of cooperation and joint efforts (e.g. Golembiewski, McConkie 1988; Mayer et al. 1995; Dirks 1999).

A further foundational element of family business culture is altruism between family members. Altruism refers to decisions that are made selfless reasons to benefit others, rather than decisions made for selfish reasons typically assumed by classical economics literature (Lunati 1997). Altruism within the family could lead to superior employment contracts by reducing the necessity of excessive monitoring and incentives-based pay, and by offering credible threat of sanctions from other family members (Chami, Fullenkamp 2002; De Paola, Scoppa 2001; Randoy, Nielsen 2002). Hence, family members can add value to a firm both by economic incentives due to incentive alignment between owners and managers as well as due to positive altruism toward other owners of the firm.

In a series of articles Schulze, Lubatkin and Dino (2003) stressed a darker side of altruism. These scholars show that altruism provides an incentive to maximize one's own utility while satisfying simultaneously both altruistic and egoistic preferences. As an example, consider the role of parents who treat their children well, in exchange expecting that the children will do what the parents ask them to do. Using Schulze's et al. (2003) definition of altruism the agen-

cy problem resulting from altruism need to be considered in the light of the question, how should one enforce something as altruistic person, if enforcement hurts oneself?

The negative consequence of this dilemma (agency costs due to altruism) are dysfunctional nepotism, e.g. regarding staffing decisions and inconceivable disciplinary measures on family members (penalizing a child might hurt the disciplining parent). In addition, altruism might bias the CEO's perception towards equality and not merit of family members' achievement within the firm. Whereas in the traditional agency situation owners (principals) need to be protected against the inability and the arbitrariness of the managers (agents), in a trust-based altruistic relationship, when managers are owners, one needs to assure responsible behavior of the owners. Consequently, the efficiency of corporate governance mechanisms might depend on the quality of organizational culture, hence whether the firm experiences the positive or negative aspects of altruism. For example, in a well-functioning stewardship context, economic control mechanisms might crowd out trust, thereby destroying value (Frey, Oberholzer-Gee 1997). In this case, the absence of economic incentives or the limited control function of a supervisory board might be well justified. In the case of abusive altruism, agency based control mechanisms might be efficient.

We propose two avenues for future research concerning the link between organizational culture and performance in family firms. First, researchers should overcome the positivistic perspective on altruistic culture in family firms and differentiate between positive and negative altruism. The performance impact of corporate governance practices could be revisited in the context of these two extremes. Beyond a direct impact of performance antecedents (e.g. governance practices, time horizon) on actual performance, it might be promising to consider the moderating effect of corporate culture (positive versus negative altruistic culture) on these antecedent – actual performance relationships.

Second, recent research on corporate social responsibility and reputation of family firms might be useful in further explaining differences in corporate culture in family firms. Using social identity theory (Hogg, Terry, White 1995) and vocational choice theory (Holland 1959), Dyer and Whetten (2006) show that because family entrepreneurs are unable to change groups in the case of negative reputation affecting the family or the firm, and since their firms are often viewed as extensions of self, they face a serious incentive to assure a positive corporate reputation. Next to a desire to assure a positive reputation among a firm's external stakeholders, this reputational concern should result in intensified attempts to satisfy internal stakeholders (e.g. employees) thereby producing an organizational culture that is highly concerned with internal stakeholders' demands. At this stage, it remains unclear as to whether high levels of reputational concern lead to heightened financial performance, for example via a specific organizational culture in which internal stakeholders are more satisfied and motivated than in low identity organizations, or whether excessive identification and reputation concerns might hamper risk taking and subsequently performance in an attempt to avoid any negative impact on personal and family reputation.

Third, there is a line of research that considers family, business, and community cultural overlap as a source of competitive advantage when high and dysfunction when low (Astrachan 1988; Dyer 1988). Cultural overlap may lead to homogeneity of values and language which increases the capacity for collective action in a manner very consistent with the nature of high trust environments outlined above. This is a useful path for research on performance which may also represent a set of variables not yet explored by the contingency approach to strategy school of thought (Hambrick 1983; Hofer 1975).

IV. Conclusion

Along the axis of F-PEC we have discussed the impact of family on performance of firms. Our analysis reveals that researchers have made considerable progress in investigating the link between family ownership and performance. However, results on whether family ownership is beneficial or detrimental to firm performance are equivocal. In an attempt to improve our understanding of the link between family ownership and performance, we propose to further investigate the case of private benefits and costs of control, the costs of equity capital from an ex-ante perspective, the relevance of financial and non-financial outcomes and their interrelations just as the impact of ownership attachment.

The scarce literature on the link between supervisory activity and performance presents controversial results as well. In this context we propose to shift the scope of analysis from the question “who is controlling?” to the question “who is controlling whom?” This proposition is based on the consideration that depending on the existence of kinship relations between controller and person to be controlled, goal setting and control differ since family relations and related altruistic agency effects (Schulze, Lubatkin, Dino 2003) might bias goal setting and control.

There is limited evidence in the literature that family influence in management is beneficial to firm performance (Sraer, Thesmar 2006; Zellweger 2007a). These authors propose that managers in family firms pay lower wages and foster long-term employment. Given the limited evidence on the family management-performance relationship we propose that scholars could further investigate this relation.

With regard to the experience and time dimension, literature provides evidence that long-term orientation can positively affect firm performance. Despite the fact that Astrachan et al.

(2002) proposed that knowledge generally accumulates over time, there is no evidence that ongoing generations would display differing performance outcomes. In an attempt to further examine the relationship between experience and performance we propose that scholars should further investigate how explicit and implicit knowledge (Nonaka 1994) is transferred within the family business and business family context, how altruism fosters learning and finite time horizon problems of managers, and how time span of discretion (Bird 1988) and reporting cycles effect learning and performance.

With regard to the impact of culture on financial performance Corbetta and Salvato (2004) show that altruistic cultures, as found in many family firms, foster collective action oriented towards value creation. Beyond this positive picture of family firm culture we encourage scholars to further investigate altruistic cultures on a continuum from functional to dysfunctional, thereby extending the analysis to the darker side of altruism, i.e. nepotism and agency costs based on altruism. In addition, social identity theory (Hogg, Terry, White 1995) could be applied to explore how an identity overlap between the entrepreneur, the family and the firm provides incentives to satisfy the needs of internal stakeholders (e.g. employees) thereby creating a specific corporate culture.

We have outlined the existing status of research and proposed guidance for future research along the F-PEC dimensions. The completeness of our discussion on performance antecedents is influenced by the appropriateness of F-PEC as a theoretical model. The limitations of this approach are as obvious as the advantages. As family businesses are highly complex organizations, measuring the extent to which a family is able to influence the business through various channels on a relatively comprehensive scale does not capture (1) the influence exercised on various businesses and on different situations and (2) the complexity of the system as a whole. In particular, the second concern relating to a systemic understanding of the family

firm deserves further consideration. It has been proposed that scholars should take a systemic perspective on family businesses, combining the personal, family and business level (Habbershon, Williams 1999; Habbershon, Williams, MacMillan 2003). Based on these concerns future research could develop a performance framework in family firms that strives to satisfy two criteria. First, it should incorporate the dimensions of F-PEC as potential antecedents to performance. Second, it should allow for a systemic perspective by considering the specific goals and preferences of the personal and family stakeholders. This requires that one differentiates between performance goals, which partly depend on the family's and owners' preferences and aspirations in terms of a mix of different performance dimensions (Adams et al. 2004) and actual performance outcomes affected by these performance goals.

In sum, we hope that scholars will examine at least some of the research opportunities we have laid out to improve our understanding of family firms and their performance. An investigation of the outlined questions could provide practitioners and scholars outside the family business arena new insights from a particularly successful and long-living organizational form.

References

- Adams, R.; Almeida, H.; Ferreira, D. (2005): Understanding the relationship between founder-CEOs and firm performance. <http://ssrn.com/abstract=470145>.
- Adams, A. F. III; Manners, G. E.; Astrachan, J. H.; Mazzola, P. (2004): The Importance of Integrated Goal Setting: The Application of Cost-of-Capital Concepts to Private Firms. In: *Family Business Review*, 17(4), 287–302.
- Anderson, R.; Reeb, D. (2003): Founding family ownership and firm performance: evidence from the S&P 500. In: *Journal of Finance*, 58(3), 1308–1328.

- Anderson, R.; Mansi, S.; Reeb, D. (2003): Founding family ownership and the agency cost of debt. In: *Journal of Financial Economics*, 68(2), 263–286.
- Anderson, R.; Reeb, D. (2004): Board Composition: Balancing Family Influence in S & P 500 Firms. In: *Administrative Science Quarterly*, 49, 209–237.
- Astrachan, J. H. (1988): Family firm and community culture. In: *Family Business Review*, 1(2), 165–189.
- Astrachan, J. H.; Klein, S.; Smyrnios, K. (2002): The F-PEC scale of family influence: a proposal for solving the family business definition problem. In: *Family Business Review*, 15(1), 45–57.
- Astrachan, J. H.; Mc Conaughy, D. (2001): Venture Capitalists and Closely Held IPOs: Lessons for Family-Controlled firms. In: *Family Business Review*, 14(4), 295–311.
- Barontini, R.; Caprio, L. (2006): The effect of family control on firm value and performance: Evidence from Continental Europe. In: *European Financial Management*, 12, 689–723.
- Bebchuk, L. A.; Stole, L. A. (1993): Do Short-Term Objectives Lead to Under- or Overinvestment in Long-Term Projects. In: *Journal of Finance*, 48, 719–728.
- Bloom, N.; Van Reenen, J. (2006): *Measuring and explaining management practices across firms and countries*. Discussion Paper. Centre for Economic Performance, London School of Economics and Political Science, London, UK.
- Bennedsen, M.; Nielsen, K. M.; Perez-Gonzalez, F.; Wolfenzon, D. (2006): *Inside the Family Firm: The Role of Families in Succession Decisions and Performance*, Working Paper, Columbia University.
- Bird, B. (1988): Implementing Entrepreneurial Ideas: The case of intention. In: *Academy of Management Review*, 13(3), 442–453.
- Burkart, M.; Panunzi, F.; Shleifer, A. (2003): Family firms. In: *Journal of Finance*, 58, 2167–2210.
- Carlock, R. S.; Ward, J. L. (2001): *Strategic planning for the family business: Parallel planning to unify the family and business*. Houndsmill, NY: Palgrave.
- Chakravarthy, B. (1986): Measuring Strategic Performance. In: *Strategic Management Journal*, 7(5), 437–458.
- Chami, R.; Fullenkamp, C. (2002): Trust and efficiency. In: *Journal of Banking and Finance*, 26, 1785–1810.
- Cho, M. (1998): Ownership structure, investment, and the corporate value: an empirical analysis. In: *Journal of Financial Economics*, 47, 103–121.
- Chrisman, J.; Carroll (1984): Corporate Responsibility – Reconciling Economic and Social Goals. In: *Sloan Management Review*, 25(2), 59.
- Chrisman, J.; Chua, J.; Litz, R. (2004): Comparing the Agency Costs of Family and Nonfamily Firms: Conceptual Issues and Exploratory Evidence. In: *Entrepreneurship Theory and Practice*, 28(4), 335.
- Chua, J.; Chrisman, J.; Steier, L. (2003): Extending the Theoretical Horizons of Family Business Research. In: *Entrepreneurship Theory and Practice*, 27(4), 331–338.
- Claessens, S.; Djankov, S.; Lang, L. H. P. (2000): The separation of ownership and control in East Asian Corporations. In: *Journal of Financial Economics*, 58, 81–112.

- Claessens, S.; Djankov, S.; Fan, J. P. H.; Lang, L. H. P. (2002): Disentangling the incentive and entrenchment effects of large shareholdings. In: *Journal of Finance*, 57, 2741–2772.
- Corbetta G.; Salvato C. (2004): Self-serving or self-actualizing? Models of man and agency costs in different types of family firms: A commentary on “Comparing the agency costs of family and non-family firms: Conceptual issues and exploratory evidence.” In: *Entrepreneurship Theory and Practice*, 28, 355–362.
- Demsetz, H.; Lehn, K. (1985): The Structure of Corporate Ownership: Causes and Consequences. In: *Journal of Political Economics*, 93, 1155–1177.
- De Paola, M.; Scoppa, V. (2001): The role of family ties in the labour market: An interpretation based on efficiency wage theory. In: *Review of Labour Economics and Industrial Relations*, 15, 603–624.
- De Visscher, F. M.; Aronoff, C. E.; Ward, J. L. (1995): *Financing Transitions: Managing Capital and Liquidity in the Family Business*. Family Business Leadership Series Nr. 7, Marietta, GA: Family Enterprise Publishers.
- Diether, K. B.; Malloy, C. J.; Scherbina, A. (2002): Differences of Opinion and the Cross Section of Stock Returns. In: *Journal of Finance*, 57(5), 2113–2414.
- Dirks, K. T. (1999): The Effect of Interpersonal Trust on Work Group Performance. In: *Journal of Applied Psychology*, 84, 445–455
- Duhaime, I. M.; Grant, J. H. (1984): Factors Influencing Decision-Making: Evidence from a Field Study. In: *Strategic Management Journal*, 5, 301–318.
- Dunn, B. (1995): Success themes in Scottish family enterprises: Philosophies and practices through the generations. In: *Family Business Review*, 8(1), 17–28.
- Dyck, A.; Zingales, L. (2004): Private Benefits of Control: An International Comparison. In: *Journal of Finance*, 59(2), 537–600.
- Dyer, G. (1988): Culture and Continuity in Family Firms. In: *Family Business Review*, 1 (1), 37–50.
- Dyer, G.; Whetten, D. A. (2006): Family Firms and Social Responsibility: Preliminary Evidence from the SP 500. In: *Entrepreneurship Theory and Practice*, September, 785–802.
- Faccio, M.; Lang, L. H. P. (2002): The ultimate ownership of Western European corporations. In: *Journal of Financial Economics*, 65, 365–395.
- Fahlenbrach, R. (2006): *Founder-CEOs and stock market performance*. Dice Center Working Paper No. 2004-20. Available at SSRN: <http://ssrn.com/abstract=606527>.
- Frey, B. S.; Oberholzer-Gee, F. (1997): The Cost of Price Incentives: An Empirical Analysis of Motivation Crowding Out. In: *American Economic Review*, 746–755.
- Fuente, J. M.; Quevedo, E.; Blanco, V.; Delgado, J. (2005): A theoretical justification of a contractual view of the family firm. EIASM workshop on family firm management research, Jonkoping, Sweden.
- Gimeno, J.; Folta, T.; Cooper, A.; Woo, C. (1997): Survival of the Fittest? Entrepreneurial Human Capital and the Persistence of Underperforming Firms. In: *Administrative Science Quarterly*, 42(4), 750–783.

- Goergen, M.; Renneboog, L. (2003): Why Are the Levels of Control (So) Different in German and U.K. Companies? Evidence from Initial Public Offerings. In: *The Journal of Law, Economics, and Organization*, 19(1), 141–175.
- Golembiewski, R.; Mc Conkie, M. (1988): The centrality of interpersonal trust in group process. In: C. L. Cooper (Ed.): *Theories of group process*. New York: Wiley.
- Grossman, S.; Hart, O. (1980): Takeover bids, the free rider problem, and the theory of the corporation. In: *Bell Journal of Economics*, 11, 42–69.
- Habbershon, T. G.; Williams, M., (1999): A Resource-Based Framework for Assessing the Strategic Advantages of Family Firms. In: *Family Business Review*, 12 (1), 1–25
- Habbershon, T. G.; Williams, M.; MacMillan, I. C. (2003): A unified system perspective of family firm performance. In: *Journal of Business Venturing*, 18, 451–465.
- Hambrick, D. C. (1983): High Profit Strategies in Mature Capital Goods Industries: A Contingency Approach. In: *The Academy of Management Journal*, 26 (4), 687–707.
- Hillier, D. J.; McColgan, P. M. L. (2004): Firm performance, entrenchment and managerial succession in family firms. <http://ssrn.com/abstract=650161>.
- Hofer, C. W. (1975): Toward a Contingency Theory of Business Strategy. In: *The Academy of Management Journal*, 18 (4), 784–810.
- Hogg, M. A.; Terry, D. J.; White, K. M (1995): A Tale of Two Theories: A Critical Comparison of Identity Theory with Social Identity Theory. In: *Social Psychology Quarterly*, 58(4), 255–269.
- Holland, J. L. (1959): A theory of vocational choice. In: *Journal of Counselling Psychology*, 1959.
- Holtz-Eakin, D.; Joulfaian, D.; Rosen, H.S. (1993): The Carnegie conjecture: Some empirical evidence. In: *Quarterly Journal of Economics*, 108, 413–435.
- Hull, J. (2003): *Options, Futures and Other Derivatives*, 5th edition, Upper Saddle River: Prentice Hall.
- James, H. S. (1999): Owner as manager, extended horizons, and family firm. In: *International Journal of the Economics of Business*, 6, 41–56.
- Jaques, E. (1976): *A general Theory of Bureaucracy*. London: Heinemann.
- Jensen, M. C.; Meckling, W. (1976): Theory of the firm: Managerial behavior, agency costs and ownership structure. In: *Journal of Financial Economics*, 3, 305–360.
- Johnson, T. C. (2004): Forecast Dispersion and the Cross Section of Expected Returns. In: *Journal of Finance*, 59(5), 1957–1978.
- Klein, S.; Astrachan, J. H.; Smyrnios, K. (2005): The F-PEC scale of family influence: a proposal for solving the family business definition problem. In: *Entrepreneurship Theory and Practice*, 29(3), 321–339
- Klein, S. (2005): Beiräte in Familienunternehmen – zwischen Beratung und Kontrolle. In: *ZfKE; Zeitschrift für KMU und Entrepreneurship*. 53(3), 185–207.
- Lafuente, A.; Salas, V. (1989): Types of Entrepreneurs and Firms: The Case of New Spanish Firms. In: *Strategic Management Journal*, 10(1), 17–30.

- La Porta, R.; Lopez-de-Silanes, F.; Shleifer, A.; Vishny, R.W. (1999): Corporate ownership around the world. In: *Journal of Finance*, 54, 471–517.
- La Porta, R.; Lopez-de-Silanes, F.; Shleifer, A.; Shleifer, A. (2000): Agency Problems and Dividend Policies around the World, In: *Journal of Finance*, 55(1), 1–33.
- Lawrence, P. R.; Lorsch, J. W. (1969): *Organization and environment*. Homewood IL: Irwin.
- Lee, M.; Rogoff, E. G. (1996): Comparison of small businesses with family participation versus small businesses without family participation: An investigation of differences in goals, attitudes, and family/business conflict. In: *Family Business Review*, 9, 423–437.
- Luhmann, N. (1968): *Vertrauen – Ein Mechanismus der Reduktion sozialer Komplexität*. Stuttgart.
- Lunati, M. T. (1997): *Ethical issues in economics: From altruism to cooperation to equity*. London: MacMillan Press.
- Manski, C. F. (2004): Social Learning from Private Experiences: The Dynamics of the Selection Problem. In: *Review of Economic Studies* 71 (2), 443–458.
- Mahérault, L. (2000): The Influence of Going Public on Investment Policy: An empirical study of French family-owned businesses. In: *Family Business Review*, 13(1), 71–79.
- Mayer, R. C.; Davis, J. H.; Schoorman, F. D. (1995): An integrative model of organizational trust. In: *Academy of Management Review*, 20, 709–734.
- McConaughy, D. (1999): Is the Cost of Capital Different for Family Firms? In: *Family Business Review*, 12(4), 353–359.
- McConaughy, D.; Matthews, C.; Fialko, A. (2001): Founding Family Controlled Firms: Performance, Risk, and Value. In: *Journal of Small Business Management*, 39(1), 31–49.
- McConaughy, D.; Walker, M.; Henderson, G.; Mishra, C. (1998): Founding family controlled firms: Efficiency and value. In: *Review of Financial Economics*, 7, 1–19.
- McConnell, J.; Servaes, H. (1990): Additional evidence on Equity Ownership and Corporate Values. In: *Journal of Financial Economics*, 27(2), 595–612.
- McMahon, R. G. P.; Stanger, A. M. J. (1995): Understanding the Small Enterprise Financial Objective Function. In: *Entrepreneurship Theory and Practice*, Vol. 19, Issue 4, 21–39.
- McNulty, J. J.; Yeh, T. D.; Schulze, W. S.; Lubatkin, M. S. (2002): What's your real cost of capital? In: *Harvard Business Review*, 80(10), 114–121.
- Morck, R.; Shleifer, A.; Vishny, R. (1988): Management Ownership and Market Valuation: An empirical analysis. In: *Journal of Financial Economics*, 20(1), 293–315.
- Miller, D.; Le-Breton-Miller, I. (2005): *Managing for the long run: Lessons in competitive advantage from great family businesses*. Boston, MA: Harvard Business School Press.
- Miller, D.; Le-Breton-Miller, I.; Scholnick, B. (2008): Stewardship vs. Stagnation: An Empirical Comparison of Small Family and Non-Family Businesses, In: *Journal of Management Studies*, 45/1, 51–78.
- Mintzberg, H. (1994): *The Rise and Fall of Strategic Planning*. New York: Prentice Hall.

- Miles, D. (1993): Testing for short termism in the UK stock market. In: *The Economic Journal*, 103, 1379–1396.
- Nonaka, I. (1994): A Dynamic Theory of Organizational Knowledge Creation. In: *Organization Science*, 5(1), 14–37.
- Pérez-González, F. (2006): Inherited control and firm performance. In: *American Economic Review*, 96, 1559–1588.
- Pierce, J. L.; Kostova, T.; Dirks, K. T. (2001): Toward a Theory of Psychological Ownership in Organizations. In: *Academy of Management Review*, 26(2), 298–310.
- Randøy, T.; Nielsen, J. (2002): Company Performance, corporate governance, and CEO compensation in Norway and Sweden. In: *Journal of Management and Governance*, 6, 57–81.
- Schultz-Kleine, S.; Kleine, R. E.; Allen, C. T. (1995): How is a Possession “Me” or “Not Me”? Characterizing Types and an Antecedent of Material Possession Attachment. In: *Journal of Consumer Research*, 22, 327–343.
- Schulze, W. S., Lubatkin, M. H., Dino, R. M. (2003): Exploring the agency consequences of ownership dispersion among the directors of private family firms. In: *Academy of Management Journal*, 46(2), 179–194.
- Sharma, P. (2004): An Overview of the Field of Family Business Studies: Current Status and Directions for the Future. In: *Family Business Review*, 17(1), 1–30.
- Sharma, P.; Manikutty, S. (2005): Strategic Divestments in Family Firms: Role of Family Structure and Community Culture. In: *Entrepreneurship Theory and Practice*, 29(3), 293–312.
- Sirmon, D.; Hitt, M. (2003): Managing Resources: Linking Unique Resources, Management, and Wealth Creation in Family Firms. In: *Entrepreneurship Theory and Practice*, 27(4), 339–358.
- Smith, B. F.; Amoako-Adu, B. (1999): Management succession on financial performance of family controlled firms. In: *Journal of Corporate Finance*, 5, 341–368.
- Smith, N.; Miner, J. (1983): Type of Entrepreneur, Type of Firm, and Managerial Motivation: Implications for Organizational Life Cycle Theory. In: *Strategic Management Journal*, 4(4), 325–340.
- Sorenson, R. L. (1999): Conflict strategies used by successful family businesses. In: *Family Business Review*, 12(4), 325–339.
- Sraer, D.; Thesmar, D. (2006): Performance and Behavior of Family Firms: Evidence from the French Stock Market, Paper presented at the Conference on Corporate governance in Family / Unlisted Firms, University of Berne.
- Steier, L. (2001): Family Firms, Plural Forms of Governance, and the Evolving Role of Trust. In: *Family Business Review*, 14(4), 353–368.
- Stein, J. (1988): Takeover threats and managerial myopia. In: *Journal of Political Economy*, 96, 61–80.
- Stein, J. (1989): Efficient capital markets, inefficient firms: A model of myopic behaviour. In: *Quarterly Journal of Economics*, 103, 655–669.

- Stein, J. (1996): Rational Capital Budgeting in an Irrational World. In: *Journal of Business*, 69, 429–455.
- Stulz, R. M. (1988): On takeover resistance, managerial discretion, and shareholder wealth. In: *Journal of Financial Economics*, 20, 25–54.
- Tagiuri, R.; Davis, J. (1996): Bivalent Attributes of the Family Firm. In: *Family Business Review*, 9(2), 199–208.
- Villalonga, B.; Amit, R. (2006): How do family ownership, control and management affect firm value? In: *Journal of Financial Economics*, 80, 385–417.
- Walsh, J. P.; Seward, J. K. (1990): On the Efficiency of Internal and External Corporate Control Mechanisms. In: *Academy of Management Review*, 15, 421–458.
- Ward, J. (1987): *Keeping the family business healthy: How to plan for continuing growth profitability and family leadership*. San Francisco: Jossey-Bass.
- Westhead, P.; Cowling, M. (1997): Performance contrasts between family and nonfamily unquoted companies in the UK. In: *International Journal of Entrepreneurial Behaviour & Research*, 30–52.
- Zellweger, T. (2006): *Risk, Return and Value in the Family Firm*. Dissertation at the University of St. Gallen.
- Zellweger, T. (2007a): Familieneinfluss und Performance privat gehaltener Unternehmen. In: *ZfKE, Zeitschrift für KMU und Entrepreneurship*, 55(II).
- Zellweger, T. (2007b): Time horizon, costs of equity capital and generic investment strategies of firms. In: *Family Business Review*, 20(1), 11–15.
- Zellweger, T.; Fueglistaller, U.; Meister, R. (2007c): The outperformance of family firms: the role of variance in earnings per share and analyst forecast dispersion on the Swiss market. In: *Financial Markets and Portfolio Management*, 21(2), 203–220.