

# **The Changing Role of Management Accounting in the Transition from a Family Business to a Non-Family Business**

## **Abstract**

**Purpose:** The purpose of the present paper is to investigate whether the transition from a family business to a non-family business affects the institutionalisation of management accounting.

**Design/methodology/approach:** This paper is based on an online survey among all large and medium-sized Austrian firms. Univariate and multivariate statistical analyses were used to test the impact of the level of family influence on aspects of the institutionalisation of management accounting. Firm size is included as the main control variable.

**Findings:** A lower level of influence from the controlling family was found to be correlated with the institutionalisation and intensification of management accounting in medium-sized firms. For large firms, such a linear relationship could not be drawn. The level of education of management accountants was inversely correlated with the level of family influence in both large and medium-sized firms.

**Research limitations/implications:** Further research into the reasons, underlying drivers and inter-organisational promoters of management accounting change in family businesses is needed. Furthermore, the organisational impacts of the transition from family businesses to non-family businesses deserve further investigation.

**Originality/value:** A framework for assessing the organisational effects of the transition from family businesses to non-family businesses is provided. The empirical results on the impact of the transition on the institutionalisation of management accounting are presented. The level of family influence was found to act as a significant contextual factor for the organisation of management accounting in medium-sized firms.

**Keywords:** Management Accounting, Family Business, Transition to Non-Family Business, Management Accounting Change, Austria

**Paper type:** Research paper

# 1 Introduction

Family businesses form the majority of firms in most industrialised countries. Depending on the cultural context and the definition of a family business, as much as 60–85% of all firms can be classified as family businesses (Shanker and Astrachan, 1996; Flören, 1998; Klein, 2000; Astrachan and Shanker, 2003; IFERA, 2003; Frey *et al.*, 2004). However, family business research can be regarded as a rather young field because it has only intensified since the early 1990s (Bird *et al.*, 2002; Sharma, 2004; Kraus *et al.*, 2011; Stewart and Miner, 2011). One field that has received limited attention is the specific organisation of management accounting (MA) systems in family businesses (Salvato and Moores, 2010; Hiebl, 2012). However, the importance of issues regarding family business peculiarities with respect to accounting has recently been identified by major academic outlets, which has resulted in several calls for studies of the role of accounting in family businesses (Moores and Salvato, 2009; Prencipe *et al.*, 2010; Gnan *et al.*, 2011). The introduction or intensification of MA is often interpreted as a step towards the professionalisation of family businesses (Amat *et al.*, 1994; Songini, 2006; Giovannoni *et al.*, 2011; Duller *et al.*, 2011).

When family businesses become entirely professionalised, they likely lose most of their family business characteristics and thus resemble a non-family business (Gersick *et al.*, 1997). However, no previous literature has explicitly analysed the transition from a family business to a non-family business and thus family business research has yet to examine the holistic transition process of this movement. To date, scholars have either developed several typologies to define different types of family businesses (e.g., Gersick *et al.*, 1997; Sharma and Nordqvist, 2007; Westhead and Howorth, 2007; Garcia-Castro and Casasola, 2011) or analysed family businesses as targets for management buyouts or buy-ins (Howorth *et al.*, 2004; Winter *et al.*, 2004; Scholes *et al.*, 2007; Scholes *et al.*, 2010). Some insights from research based on single case studies (Amat *et al.*, 1994; Giovannoni *et al.*, 2011) have nurtured the notion that the institutionalisation of MA can support and ease this transition process because informal knowledge can be codified using MA systems.

In order to increase knowledge on the organisational impacts of the transition process from a family business to a non-family business and on the distinctive features of MA in family businesses, the present paper addresses the following fundamental research question:

*How does the transition from a family business to a non-family business affect the institutionalisation of MA?*

Answering this question is relevant for both academia and practice. The findings can shed light on the under-researched field of MA in family businesses and show the effects that can be expected in the possible transition from a family business to a non-family business. Family business owners and managers could thus better foresee which developments regarding MA institutionalisation can be expected as family influence reduces over time. Furthermore, management accountants could estimate which roles they are likely to play in these firms during the different steps in the transition process from a family business to a non-family business.

The remainder of this paper is organised as follows. The next section provides an overview of the literature describing the aspects of the transition from a family business to a non-family business and MA change in family businesses. Section 3 presents the theoretical and methodological framework of this paper. Against this backdrop, five hypotheses are derived. The research methods can be found in Section 4 and the results in Section 5. Finally, Section 6 provides a discussion of the results, conclusions and implications, as well as the limitations of the study.

## **2 Literature Review**

### **2.1 Transition from a family business to a non-family business**

To date, family business scholars have focused on two specific transition processes: business succession and professionalisation. The various success factors and pitfalls of business succession as well as the steps in the succession process have been discussed in depth (e.g., Gersick *et al.*, 1999; Murray, 2003; Neubauer, 2003). The literature on professionalisation has focused on the integration of professional/external managers and directors into the family business (e.g., Dyer, 1989; Klein and Bell, 2007; Chittoor and Das, 2007; Hall and Nordqvist, 2008).

Different approaches have evolved to analyse the lifecycle stages of family businesses, all of which rest on the implied assumption that a family business remains as such and does not develop into a non-family business (e.g., Gersick *et al.*, 1999; Moores and Mula, 2000). Thus, the literature on the lifecycles of family businesses has yet to explicitly deal with the transition from a family business to a non-family business. However, certain aspects of the transition from a family business to a non-family business have been discussed in connection

with management buyouts or buy-ins in family businesses. For instance, Howorth *et al.* (2004) used a case study approach to analyse information asymmetries between sellers and buyers in management buyouts or buy-ins of family businesses. They highlighted potential pitfalls for the buyers of family businesses and stressed the importance of mitigating information asymmetries in order to turn the transaction into a success for the buyer. Focusing on management buyouts and buy-ins using private equity financing, Scholes *et al.* (2010) used cross-European survey data to examine which characteristics of family business takeover targets promise the highest improvement and return potential for buyers. They found that first-generation family businesses as well as family businesses that employed non-family managers and directors before the takeover showed higher potential for efficiency improvements, growth and expansion after the takeover. Another study has also found that first-generation owners of family businesses are more likely to openly share information regarding the family business to potential purchasers in the takeover process (Scholes *et al.*, 2007). To summarise, the existing literature on family businesses that has at least partially examined the transition from a family business to a non-family business has focused on either the professionalisation and family-internal succession of family businesses or the non-family buyers' views of management buyout or buy-in transactions. It has not, however, dealt in depth with organisational changes along the entire transition process.

Despite limited research on the transition process from a family business to a non-family business, there is empirical evidence showing that the share of family businesses among larger companies is significantly smaller than that among small and medium-sized companies (Flören, 1998; Klein, 2000; Frey *et al.*, 2004). Therefore, with a growing firm size, a significant amount of family businesses become non-family businesses. However, not every family business eventually develops into a non-family business. Regardless, if family businesses grow in size, family influence is likely to diminish gradually, and consequently the firm increasingly loses its family business characteristics and resembles a non-family business (Gersick *et al.*, 1997; Kellermanns, 2005).

Succession and professionalisation can support or trigger the transition from a family business to a non-family business. An abrupt transition to a non-family business can occur, for instance, if the controlling family sells its shares in the family business to a team of senior non-family managers of the family business or to a non-family business (Howorth *et al.*, 2004; Winter *et al.*, 2004; Scholes *et al.*, 2007; Scholes *et al.*, 2010). A more successive transition can be observed when a family business gradually integrates non-family managers

or directors in order to professionalise the family business (Amat *et al.*, 1994; Astrachan *et al.*, 2002; Klein and Bell, 2007; Hall and Nordqvist, 2008; Giovannoni *et al.*, 2011) or when family ownership becomes diluted by passing on shares to a growing number of descendants (Gersick *et al.*, 1997). No matter whether the transition takes place abruptly or gradually, the key development is the decrease in the controlling family's influence on the family business. In general, family influence is an family-business-specific resource, which also explains the performance differences between family businesses and non-family businesses (Chrisman *et al.*, 2005; Tokarczyk *et al.*, 2007; Rutherford *et al.*, 2008). Thus, if family influence is minimised or entirely dissolved, the family business eventually turns into a non-family business.

## **2.2 MA change and family businesses**

Influenced by the framework based on institutional theory proposed by Burns and Scapens (2000), MA change has evolved as one main research focus of MA scholars over the past decade (e.g., Hassan, 2005; Burns and Baldvinsdottir, 2005; Jack, 2005; Wagenhofer, 2006; Scapens, 2006; Lukka, 2007; Johansson and Siverbo, 2009; Ma and Tayles, 2009). Among other observations, successful MA change has been found to depend on powerful and trusted promoters of change (Johansson and Baldvinsdottir, 2003; Yazdifar *et al.*, 2008). Regarding the transition from a family business to a non-family business, such powerful promoters of change could clearly be new owners of a family business or non-family managers and directors who lower family influence. Because these parties rarely have tacit knowledge of the firm as family members (Kellermanns, 2005; Tokarczyk *et al.*, 2007; Chirico, 2008; Davis *et al.*, 2010; Cabrera-Suárez *et al.*, 2011), they rely more heavily on formalised information, which should foster MA change, because MA is the main source of formalised managerial information (Amat *et al.*, 1994; Giovannoni *et al.*, 2011).

Focusing on the adoption and change of MA systems along the corporate lifecycle, there are two streams of MA literature that touch upon the topic of MA change in the transition from a family business to a non-family business. The first stream of literature investigates lifecycle stages as a contingency variable to explain MA system variation. The results from Moores and Yuen (2001) suggested that MA formality increases in the early lifecycle stages from birth to growth, but declines again in later lifecycle stages because more mature firms are more stable and experienced at finding and focusing on proper MA systems. Cassia *et al.* (2005) also found that MA systems change across lifecycle stages. According to their results,

companies that have well-developed MA systems and relatively simple organisational structures are more likely to be in transitional phases towards more complex structures. They concluded that the complexity of MA systems acts as a predictor of future organisational complexity. In both studies, the potential covariate “level of family influence” was widely neglected. However, Moores’ and Yuen’s (2001) findings should also be relevant for family business research because the majority of sample firms were considered to be family businesses. Moreover, one managing director quoted by Moores and Yuen (2001) indicated that a lower level of MA formalisation in mature firms might be attributed to family influence.

The second stream of literature focuses on the adoption of MA systems in companies in the early stages of the corporate lifecycle, such as start-up or entrepreneurial companies (Davila and Foster, 2009; Davila *et al.*, 2009). Based on survey data from 95 technology-oriented Californian start-up companies, Davila (2005) found that growing firm size, age, the replacement of founding CEOs and the existence of outside investors foster the emergence of MA systems. The study did not explicitly mention family influence, but the replacement of the founding CEO and the dilution of the founders’ equity stake in the firm because of the introduction of outside investors could also infer that family influence in the firm is reduced. Thus, the emergence of MA systems might also be partly attributed to reduced family influence. This line of research was further extended by Davila and Foster (2005), who showed that the adoption of budgets in entrepreneurial firms is positively associated with the presence of venture capital and the number of employees. In another study, they found that growth and management control intensity evolve together and thereby that growth is supported, rather than restrained, by formal control mechanisms (Davila and Foster, 2007).

Investigating young US retail firms, Sandino (2007) reported that when firms introduce MA systems they establish at least a set of “basic management control systems” including budgets, pricing and inventory control. Furthermore, she found that the individual MA tools used rely on the firm’s strategy, and that firms perform better if they choose MA systems that suit their strategies. At this point, we should highlight that although these studies do not refer to family influence or the peculiarities of family businesses, the results are also relevant to the present study because of the significant overlap between start-ups and family businesses. Therefore, the characteristics attributed to family businesses, such as informal control (Amat *et al.*, 1994; Habbershon and Williams, 1999; Rutherford *et al.*, 2008; Zellweger *et al.*, 2010), can also widely apply to young entrepreneurial firms (Moores and Yuen, 2001; Davila and Foster,

2009). However, family businesses tend to maintain these characteristics well beyond the lifecycle stage of “birth” (Tokarczyk *et al.*, 2007; Giovannoni *et al.*, 2011) and therefore demand specific investigation.

In their influential paper on MA change, Burns and Scapens (2000) pointed out that MA change not only results from but also fosters organisational change. This finding has also been found to be true for the special organisational structures of family businesses. In a recent paper based on a single case study approach, Giovannoni *et al.* (2011) analysed MA change during the processes of family business professionalisation and business succession and found that MA practices are not only further developed in these processes, but they also enable crucial knowledge transfer to non-family managers and succeeding family generations. Utilising a similar case study approach describing a Spanish family business’s development towards growth and increased professionalisation, Amat *et al.* (1994) showed that MA change is driven by both internal and external forces. As an example of internal forces, they highlighted how the introduction of non-family management prompted a shift from informal to formalised control systems, which found expression, for example, in how different departments communicated with each other mainly via budget talks. With respect to external factors, they mention increased competition as the main driver for professionalisation and the increased importance of MA.

Aside from these two case studies on the topic of MA change in family businesses, the literature on the role of MA or MA practices in family businesses is generally scarce (Salvato and Moores, 2010; Hiebl, 2012). There exist some studies that have focused on the adoption of specific MA practices in family businesses, such as operational planning, strategic planning and the balanced scorecard (Upton *et al.*, 2001; Moores and Craig, 2006; García Pérez de Lema and Duréndez, 2007; Duller *et al.*, 2011). These studies have indicated that family businesses employ a certain degree of strategic and operational planning (Upton *et al.*, 2001; García Pérez de Lema and Duréndez, 2007; Becker *et al.*, 2011; Duller *et al.*, 2011) and that the implementation of these practices in family businesses requires a consideration of the peculiarities of family businesses (Moores and Craig, 2006; Hiebl, 2012). However, there exists evidence that family businesses generally use MA practices to a lower extent than non-family businesses do (García Pérez de Lema and Duréndez, 2007; Becker *et al.*, 2011). Another study discussed the salience of different types of control depending on the family business’s lifecycle stage (Moores and Mula, 2000). Moores and Mula (2000) found that in the later stages of the company lifecycle, family businesses tend to use more bureaucratic

control practices, which also comprise some components of MA systems such as delegated authority for budgets, computerised accounting systems and the introduction of profit centres. Although the authors stressed the interconnection between control mechanisms and the family business transition processes, they did not broach the issue of potential transitions into non-family businesses.

To summarise, given the importance of family businesses for most industrialised countries and the crucial role MA can play in family businesses (Songini, 2006; Giovannoni *et al.*, 2011; Hiebl, 2012), the field of MA in family businesses can be regarded as under-researched. Consequently, the changing role of MA in the transition from a family business to a non-family business has not yet been analysed. However, existing studies have indicated how the role of MA may change during this transition. Furthermore, for the purposes of the present study, some conclusions can be drawn from these studies on MA adoption and change across different corporate lifecycle stages, especially from birth to growth. All of these indications will be addressed in Section 3.2.

### **3 Theoretical framework and hypotheses**

#### **3.1 Theoretical framework**

Because the transition from a family business to a non-family business is mainly driven by the introduction of new participants in the family business, such as non-family managers, directors and shareholders, we employ the framework by Burns and Scapens (2000), which focuses on intra-organisational MA change. This framework fits our research question because we are examining a transition process. Hence, the changing role of MA should be conceptualised as evolving over time. Our research framework rests on the basic assumption of Burns and Scapens (2000), which is that there are stable MA rules and routines, but that these rules and routines can change. They argue that the institution's members, routines and rules influence MA behaviour and thus drive MA change, but in turn, MA change also influences the institution, routines and rules.

A change in family influence in family businesses usually leads to a change in culture (Habbershon and Williams, 1999; Rutherford *et al.*, 2008; Zellweger *et al.*, 2010). As discussed above, a decrease in family influence may happen abruptly or gradually. For the course of this study, we interpret the change in MA *routines* as an effect of a successive

transition from a family business to a non-family business. For instance, the gradual inclusion of more non-family executives into a family business may gradually diminish the firm's informal and family-centred culture (Davis *et al.*, 2010; Pearson and Marler, 2010), which should also be reflected in a diachronic evolution of management accountants' day-to-day work and actions. In turn, an abrupt decline in family influence (e.g., owing to the sale of the business or retirement of all family managers from operative management) leads to a synchronic change in MA *rules*, just as Burns and Scapens (2000) pointed out that the appointment of an entirely new senior management team may lead to a change in MA rules. However, as Burns and Scapens (2000) acknowledged, rules and routines are not observable *per se*. Only actions are observable and thus, for the remainder of this paper, we do not distinguish between rules and routines. Rather, we treat empirically observable actions as proxies for MA rules and routines, which change in dependency throughout the transition from a family business to a non-family business, which itself constitutes a major change to the institutional realm in the Burns and Scapens (2000) framework.

Although Burns and Scapens (2000) originally intended their framework to be used in interpretive case study research, we argue that this approach is also applicable as a framework for quantitative research examining the interplay between transition processes and MA change, because it shares the goal of describing how and why MA institutionalisation takes place in a transition process. Furthermore, we complement their institutional theory-based framework with agency theory and stewardship theory in order to examine changing MA requirements and needs because of the integration of new corporate members in the transition from a family business to a non-family business. We use quantitative research methods to verify and extend the findings of Amat *et al.* (1994) and Giovannoni *et al.* (2011) on MA change in family businesses, which is called for by both teams of authors.

Agency theory is often used in managerial science to describe the relationship between owners (principals) and managers (agents) of corporations. It rests on the assumption that the agent, who operates with the principal's resources, does not innately act in line with the principal's goals, but rather pursues self-serving goals (Ross, 1973; Jensen and Meckling, 1976). Hence, the principal introduces mechanisms that seek to align the principal's and the agent's interests (Fama and Jensen, 1983). In this connection, a business owner may set up control mechanisms or establish incentive compensation schemes in order to make his or her managers act in line with his or her goals (Eisenhardt, 1989). Actions that align the principal's and agent's goals are referred to as agency costs (Fama and Jensen, 1983). In family

businesses, agency costs should be lower compared with non-family businesses because there is often a personal union of owner and manager (which we refer to as family managers), and thus there is little or no need for goal alignment (Ang *et al.*, 2000; Anderson and Reeb, 2003; Le Breton-Miller and Miller, 2006). Yet, family managers may also produce agency costs if they lack management know-how and therefore create disadvantages for the family business because of suboptimal management (Schulze *et al.*, 2000; Schulze *et al.*, 2003), or if they rather pursue family goals instead of firm goals (Davis *et al.*, 2010). If family business characteristics change during the transition to non-family businesses, it can be theorised that owners have different needs for control and incentivisation mechanisms, which in turn can drive MA change because the MA system can serve as a main component of management control systems (Chenhall, 2003; Songini, 2006).

A different approach to describing the principal–agent relationship – especially in family businesses – is offered by stewardship theory (Davis *et al.*, 1997). The underlying steward model of man depicts the agent not as self-serving, but as intrinsically motivated and applying higher utility in pursuing the firm’s goals over self-serving goals (Corbetta and Salvato, 2004). For instance, family managers may act as stewards when they put aside personal interests for the sake of the family business (Le Breton-Miller and Miller, 2009; Eddleston *et al.*, 2010). Not only family managers but also non-family managers can act as stewards if both owners and managers act according to the steward model of man, exemplifying mutual trust and therefore lowering the need for control or incentive mechanisms (Corbetta and Salvato, 2004; Vallejo, 2009; Davis *et al.*, 2010).

Our research model uses the transition from a family business to a non-family business as the main independent variable (measured via the level of family influence) and aspects of MA institutionalisation as dependent variables. In line with Burns and Scapens’s (2000) call to clarify how and why MA change takes place, we analyse the changing levels of MA institutionalisation in the transition process. As proxies of rules and routines in the Burns and Scapens (2000) framework, we examine the changing usage of MA practices (strategic and operational), the formalisation of MA (written recording of strategic plans), the institutionalisation of MA (in terms of the establishment of discrete MA departments) and the educational level of the heads of MA. Previous studies on the adoption and evolution of MA systems have mostly investigated MA practices and formalisation (e.g., Moores and Yuen, 2001; Davila, 2005; Davila and Foster, 2005; Davila and Foster, 2007). We include these practices in our research model in order to represent the realm of action in the Burns and

Scapens (2000) framework, because practices and the formalisation of strategic plans are not part of the organisational structure but rather form the day-to-day work of management accountants. Moreover, we also include the establishment of discrete MA departments and the educational level of the heads of MA in order to represent the realm of institutionalisation (Burns and Scapens, 2000). We therefore interpret the existence of discrete MA departments and the training of their heads as the organisational incorporation of MA into a firm.

### **3.2 Hypotheses development**

A declining level of family influence is usually reflected in the increased introduction of non-family managers and directors (Klein and Bell, 2007). These new leadership personnel are likely to at least adapt or even radically change the “prevailing institutional principles” (Burns and Scapens, 2000, p. 10) and thus shape new rules, which will eventually also affect MA institutionalisation. Management accountants who have long served the former family managers or owners of the firm may try to resist the institutional changes introduced by new non-family management personnel (Burns and Scapens, 2000). However, given their usually lower standing in the corporate hierarchy compared with board members (Horngren *et al.*, 2010), they are likely to have to either adapt or move out of the firm.

Concerning the aftermath of this declining family influence and subsequent institutional changes, we draw on agency and stewardship theory to hypothesise that lower family influence fosters the establishment of discrete MA departments. Considering family businesses that have a high level of family influence, the personal union of owner and manager should create a lower need for goal alignment and, consequently, a lower need for control mechanisms such as an MA department (Baiman, 1990; Seal, 2006; Songini, 2006; Merchant and van der Stede, 2007; Frezatti *et al.*, 2011; Hiebl, 2012). However, because the ownership and management of the firm are increasingly separated as family influence decreases, increased control mechanisms and incentive compensation are usually introduced (Davila, 2005; Davila and Foster, 2009; Chua *et al.*, 2009). In addition, with respect to incentive compensation, a discrete MA department can provide the necessary financial information (Malmi and Brown, 2008; Gong and Tse, 2009). Thus, it can be argued that agency theory predicts the increasing importance of discrete MA departments in the transition from a family business to a non-family business. Turning to the steward model of man, this assumption receives further support in that mutual trust between owners, managers and employees lowers the need for control mechanisms, which is typical for firms that have high

levels of family influence, but not the same extent for firms that have lower levels of family influence (Corbetta and Salvato, 2004).

Moreover, paternalistic owner-managers, who demand most if not all decision-making power in “their” firms (Kets de Vries, 1993; Gedajlovic *et al.*, 2004; Chrisman *et al.*, 2010) may not welcome the addition of an agent acting as a critical business advisor, which is a role scholars often ascribe to management accountants when describing MA role change (Granlund and Lukka, 1998; Becker and Messner, 2005; Yazdifar and Tsamenyi, 2005; Byrne and Pierce, 2007; Burns and Baldvinsdottir, 2007; Yazdifar *et al.*, 2008). Furthermore, MA practices that aim to support managerial decision making, such as planning and budgeting (e.g., Hansen *et al.*, 2003; Davila and Foster, 2005; Byrne and Pierce, 2007; Sandino, 2007; Malmi and Brown, 2008; Horngren *et al.*, 2010), should offer less value to firms that have high family influence. Family members who are involved in the management of a family business usually have deep firm- and market-specific know-how and thus they show a lower reliance on formalised managerial decision-making support practices (Sirmon and Hitt, 2003; Chirico, 2008; Eddleston *et al.*, 2008; Eddleston *et al.*, 2010; Moog *et al.*, 2011). Hence, family influence and the establishment of discrete MA departments are negatively correlated. Thus:

*H1: In the transition from a family business to a non-family business, more discrete MA departments are established.*

If an MA department is established, the question arises of how to staff the department. In this paper, we examine the education level of the head of the MA department. The academic training of accounting personnel in large corporations that do not have significant family influence is common (Vafeas, 2009). By contrast, family business research has found that family businesses attach less importance to academic training than do non-family businesses (Fiegener *et al.*, 1996; García Pérez de Lema and Duréndez, 2007; Chirico, 2008). Higher family influence may also make academically trained management accountants avoid family businesses because professional growth prospects are limited as most management positions are reserved for family members (Barnett and Kellermanns, 2006). Moreover, the intention of controlling families to preserve family influence usually hinders the introduction of stock option plans, which in turn limits wealth transfer for family business employees (Covin, 1994; Sirmon and Hitt, 2003). Drawing on agency theory, controlling families may also prefer not to hire management accountants that have academic training as they might require more decision power based on their levels of academic expertise (Holland and Boulton, 1984; Klein and

Bell, 2007; Hiebl, 2012), which, again, would interfere with most families' goals of undivided decision-making power (Gedajlovic *et al.*, 2004).

However, if the transition from a family business to a non-family business occurs, and more non-family managers and directors are introduced into the firm, these managers are more likely to assess management accountants' qualifications based on their levels of formal education (Vafeas, 2009). Non-family managers that have university educations may also expect a lower need for goal alignment with academically trained management accountants, because both managers and management accountants would have been socialised in a similar manner during their university studies (Dyer, 1989). As Burns and Scapens (2000) pointed out, MA change not only results from organisational change, but it may also foster organisational change. In line with this notion, Amat *et al.* (1994) and Giovannoni *et al.* (2011) showed that academically trained management accountants play a key role in the introduction of more sophisticated operational and strategic MA tools in family businesses. Thus:

*H2: In the transition from a family business to a non-family business, the heads of MA will more likely be required to hold a university degree.*

One key aspect of MA change in Burns and Scapens's (2000) framework is the changing usage of MA practices. In the case of strategic MA instruments, MA research has shown that corporations use a high number of these instruments such as performance measurement systems, target costing or benchmarking (e.g., Cadez and Guilding, 2007; Cinquini and Tenucci, 2010). However, it has also been shown that family businesses use these techniques to a lesser extent compared with non-family businesses (Cromie *et al.*, 1995; García Pérez de Lema and Duréndez, 2007; Becker *et al.*, 2011). Agency theory, particularly the need for goal alignment, offers a possible explanation for the higher usage of strategic MA practices in firms that have lower family influence: because ownership and management are separated, owners will try to ensure that managers follow their long-term views of the firm and thereby strategic MA practices are introduced in order to monitor managerial progress towards strategic goals (Seal, 2006). Moreover, strategic MA instruments should be more valuable to non-family managers than they are to family managers. The reliance of non-family managers on strategic MA instruments has increased in recent decades as competitive pressures have increased, while it has also become more important to gain information from outside the firm (Cinquini and Tenucci, 2010). Family managers tend to have longer management tenures and to develop a strong understanding of the firm and its external environment (Westhead *et al.*,

2001; Tokarczyk *et al.*, 2007; Chirico, 2008; Davis *et al.*, 2010). As such, they should rely less on strategic MA instruments (Moores and Yuen, 2001). This leads to the assumption that declining family influence is correlated with a higher need for strategic MA practices. This assumption also finds support from an institutional perspective: as non-family managers are introduced to family businesses, they will demand similar instruments that are used by other institutions, which likely include strategic MA practices (Burns and Scapens, 2000; Davila and Foster, 2005). Furthermore, strategic MA instruments may also serve as a means to transfer knowledge to non-family managers or successors, because they highlight in a compressed way the strategic cornerstones the family business has set (Giovannoni *et al.*, 2011). Therefore, MA instruments not only control but also enable organisational change (Mundy, 2010). Thus:

*H3: In the transition from a family business to a non-family business, firms implement strategic MA instruments to a higher extent.*

A similar hypothesis can be formulated for the use of operational planning. Instruments such as sales and marketing plans or budgeted profit and loss statements may serve as tools to align owner and managerial interests. However, another driving force for the increased usage of operational planning may be professionalisation, which is often demanded by non-family managers and directors (Songini, 2006). Amat *et al.* (1994) and Giovannoni *et al.* (2011) indicated that the professionalisation of operational planning is the first step of MA change in family businesses and that this is usually driven by professional, non-family managers. In this context, the introduction of more sophisticated operational planning tools may serve as a way for non-family managers or directors to show that their employment is justified as they instil observable professionalisation. As a result, they can also signal to the owners that they are acting as stewards to the firm, working towards the shared goal of professionalisation, which could lower the owner's perceived need to implement rigid control mechanisms. Davila and Foster (2005) have already shown that for small entrepreneurial firms, the presence of outside investors and experienced professionals such as CEOs (which translates to reduced family influence) promotes the adoption of operational planning. Thus, we hypothesise:

*H4: In the transition from a family business to a non-family business, firms use operational planning instruments to a higher extent.*

Another after effect of the introduction of non-family members into the family business is usually a higher level of formalisation (Gedajlovic *et al.*, 2004; Davila, 2005; Davila and

Foster, 2005; Hiebl, 2012). From the standpoint of agency theory, formalisation (e.g., in the form of the written recording of plans) can serve as part of the contract between principal and agent. With respect to incentive compensation, non-family managers' remuneration will partly be assessed using performance metrics (Chua *et al.*, 2009). To determine the concrete level of target achievement, the conditions of incentive compensation are likely to be recorded in a written form and connected to the strategic goals of the firm.

Furthermore, formalised strategic plans become necessary as a tool to transfer knowledge to non-family managers, directors and business successors (Giovannoni *et al.*, 2011). In the transition from a family business to a non-family business, formalisation becomes even more important because average management tenure declines in this transition and the need to transfer knowledge arises more frequently (Tsai *et al.*, 2006). The findings based on stewardship theory further support this notion: in firms that have higher family influence, informal control mechanisms are more common than they are in firms that have lower family influence (Habbershon and Williams, 1999; Tokarczyk *et al.*, 2007; Rutherford *et al.*, 2008; Zellweger *et al.*, 2010). Hence, strategic plans or explicit strategies are less formalised. Thus:

*H5: In the transition from a family business to a non-family business, firms rely more on written strategic plans and explicit strategy statements.*

## **4 Methods**

### **4.1 Independent variable**

Because the level of family influence is a continuum that ranges from no influence to maximum influence, a dichotomous categorisation of family businesses and non-family businesses is not sufficient to depict the transition from a family business to a non-family business. One metric to measure the different degrees of family influence is the F-PEC scale, which assesses the "familiness" of a firm using three subscales: power, experience and culture (Astrachan *et al.*, 2002; Klein *et al.*, 2005). Lindow *et al.* (2010) found that, in particular, the power dimension of the F-PEC scale shows a significant correlation with organisational structure. The power dimension was initially termed "Substantial Family Influence (SFI)" and introduced by Klein (2000) to distinguish between family businesses and non-family businesses. According to Klein's (2000) SFI formula, the latent construct "level of family influence" consists of family ownership, family management and family directorship (Klein,

2000). Because the MA system is part of the organisational set-up of a firm, and given that this set-up in family businesses is most influenced by the level of family influence (Lindow *et al.*, 2010), in this paper we also use the SFI scale in order to operationalise the “level of family influence” and thus the transition from a family business to a non-family business. To clarify this approach, the SFI concept has to be discussed in depth. The SFI formula is presented in Figure 1.

$$\text{If } S_{\text{Fam}} > 0 \Rightarrow \text{SFI} : \frac{S_{\text{Fam}}}{S_{\text{Total}}} + \frac{\text{MoSB}_{\text{Fam}}}{\text{MoSB}_{\text{Total}}} + \frac{\text{MoMB}_{\text{Fam}}}{\text{MoMB}_{\text{Total}}} \geq 1$$


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**S** = Stock  
**SFI** = Substantial Family Influence  
**Fam** = Family Member  
**MoSB** = Members of Supervisory Board  
**MoMB** = Members of Management Board

**Figure 1 - SFI formula (Klein, 2000, p. 158)**

The SFI score of a firm is calculated by the addition of the family’s share in stock, members of the management board and members of the supervisory board. Thus, it ranges from 0 (no family influence) to 3 (maximum family influence). Klein (2000) defined a family business as a firm that has an SFI score of at least 1 and some family ownership in the firm. For the purposes of this paper, we define three steps in the transition from a family business to a non-family business:

1. A firm that has an SFI score between 2 and 3 is referred to as a firm that has a **high** level of family influence.
2. A firm that has an SFI score between 1 and 2 is referred to as a firm that has a **medium** level of family influence.
3. A firm that has an SFI score between 0 and 1 is referred to as a firm that has a **low** level of family influence.

We use example firm constellations in order to exemplify these three steps in the transition from a family business to a non-family business: First step firms typically comprise all firms that are newly founded by individuals or families, because they are both owned and managed by family members. More mature firms may also show a high level of family influence. For

example, if a family holds all shares and directorships in the firm and the management board consists of one family manager and one non-family manager, the result is an SFI score of 2.5.

The employment of non-family managers and directors usually leads to lower family influence and the second step in the transition from a family business to a non-family business (Chua *et al.*, 2003; Blumentritt *et al.*, 2007). Non-family managers in family businesses are often required not only to continue a business, but also to professionalise it (Dyer, 1989; Lutz *et al.*, 2010; Duller *et al.*, 2011). Hence, the family-business-specific culture, which includes stewardship behaviour and the resource of familiness, diminishes. A typical firm that has a medium level of family influence may have an SFI score of 1.5 if a family holds all the shares in a firm and half of the firm's directorships, but is managed entirely by non-family members (Chittoor and Das, 2007; Giovannoni *et al.*, 2011).

Finally, in the third step of the transition from a family business to a non-family business, the firm has lost most of its family-business-specific characteristics. Scholars also refer to this group of firms as non-family businesses (Klein, 2000; Frey *et al.*, 2004; Duller *et al.*, 2011). Usually, these firms have only a small remaining fraction of family ownership and management teams that consist entirely of professionals that own only small shares of the firm's equity.

We divide the entire SFI continuum into three steps, because Klein (2000) initially defined firms that have an SFI score of less than 1 as non-family businesses. We use the same interval width of 1 to distinguish between firms that have a high ( $SFI \geq 2$ ) and those that have a medium ( $1 \geq SFI > 2$ ) level of family influence. We employ the SFI in this study to operationalise the level of family influence for various reasons. Firstly, as mentioned in Section 2.1, their SFI scores show a strong relationship with the organisational structures of firms (Lindow *et al.*, 2010). Because we examine MA rules and routines as a part of the organisational structure of a firm, the SFI score should be expected to influence MA institutionalisation as well. Secondly, other potential measures of family influence such as F-PEC (Astrachan *et al.*, 2002; Klein *et al.*, 2005) require considerably more information from survey participants and would therefore either extend the questionnaire and potentially harm the response rate or shorten the space on the questionnaire for questions dealing with MA institutionalisation. Thirdly, most internationally published quantitative studies on family businesses in the German-speaking area (e.g., Klein, 2000; Frey *et al.*, 2004; Jaskiewicz *et al.*, 2005; Lutz *et al.*, 2010; Duller *et al.*, 2011) have relied on the SFI concept to measure the

level of family influence. Because later comparisons to these studies shall be enabled, we use the SFI as well.

However, using a simplified measure such as the SFI score to assess family influence involves certain shortcomings, which we would like to acknowledge at this point. The SFI measures family influence at one point in time and does not display historical or future family influence. Therefore, the SFI score does not include a family's intention to keep a company within the family via business succession, which is considered to be a relevant aspect of family businesses by other authors (Chua *et al.*, 1999; Astrachan *et al.*, 2002). Furthermore, the SFI score only covers the influence of equity owners in the firm and not that of creditors such as banks or corporate bondholders. Therefore, the level of family influence in highly leveraged firms that have high SFI scores may be overstated because creditors are likely to exercise significant control over the firm. However, after weighing up the advantages and disadvantages of the SFI score, its practicality in quantitative research led us to use it as the measure of family influence in this study.

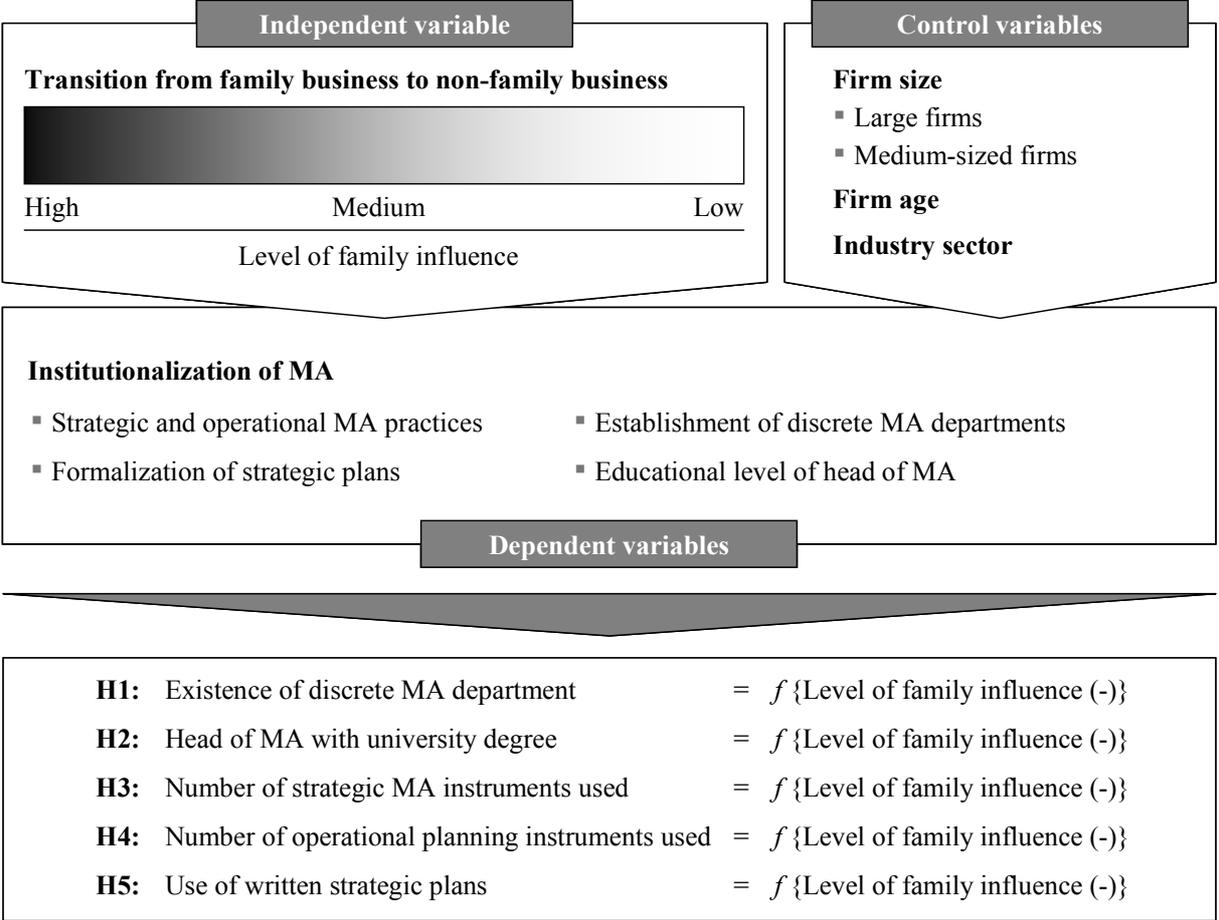
## **4.2 Dependent variables**

In our study, five aspects of MA institutionalisation serve as dependent variables. To operationalise the establishment of a discrete MA department, we generate a dichotomous variable by asking survey participants whether their employer firms established such a department. The same procedure is used to operationalise the head of MA's educational level, by asking whether the respective firm's head of MA obtained a university degree. With regard to the focus country of this paper's empirical investigation (Austria), an important clarification has to be made in advance concerning the institutionalisation of MA: in German-speaking countries, the institutional separation of managerial and financial accounting is common in business organisations (Becker and Messner, 2005; Ewert and Wagenhofer, 2007; Messner *et al.*, 2008). This often results in the existence of both a discrete MA department and a discrete financial accounting department.

To measure the usage of strategic MA and operational planning instruments, survey participants were presented with 20 strategic MA instruments and 11 operational planning instruments and asked to state whether they used any of them. The strategic and operational instruments surveyed in this study were compiled using previous (empirical) studies of the utilisation of strategic MA instruments (Chenhall and Langfield-Smith, 1998; Guilding *et al.*, 2000; Hoque, 2003; Waweru *et al.*, 2005; Cadez and Guilding, 2007; Cadez and Guilding,

2008; Cinquini and Tenucci, 2010) and operational planning instruments (Camillus and Grant, 1980; Matthews and Scott, 1995; Chenhall and Langfield-Smith, 1998; Wijewardena and de Zoysa, 1999; Abdel-Kader and Luther, 2008). This list was complemented by instruments selected by the authors. Because of the rather high number of instruments included in the questionnaire, we refrained from additionally asking about the intensity of the usage of them. Although this limits the informative value of our results regarding their usage, the number of instruments used in a firm may still act as an indication of the level of MA institutionalisation. Lastly, to operationalise the formalisation of strategic plans, we asked survey participants to declare to what extent their strategic plans and statements were recorded in written form, offering a four-point scale ranging from “Fully recorded” to “Not recorded.”

**4.3 Empirical model**



**Figure 2 – Empirical research model**

In summary, our empirical research model and the hypothesised relationships between the dependent and independent variables are depicted in Figure 2. Firm size is also included in the model as the main control variable because both MA research (e.g., Hoque and James, 2000;

Chenhall, 2003; Davila, 2005; Cassia *et al.*, 2005; Davila and Foster, 2007; Chenhall, 2007) and family business research (e.g., Flören, 1998; Klein, 2000; Frey *et al.*, 2004) have shown that size acts as a strong predictor of MA institutionalisation and firm type (family business vs. non-family business). Moreover, firm age and industry sector are also included as control variables for the multivariate analyses.

#### **4.4 Sample**

To test our hypotheses throughout the course of a larger research project [1], we contacted all medium-sized and large Austrian firms that have at least 50 employees. Firms that have 50–249 employees were classified as “medium-sized” and firms that have more than 249 employees were regarded as “large” (European Commission, 2003). Our questionnaire was pilot-tested for intelligibility by 10 corporate executives. We also included two pilot test participants from small companies to ensure that all the terms used were also understood properly by participants from smaller businesses, which usually tend to use less sophisticated MA practices (Perren and Grant, 2000; Davila, 2005; Becker *et al.*, 2011).

Invitations and a link to an online survey were sent by e-mail to the CEOs of 5,406 firms in July 2009. After sending follow-up e-mails to non-respondents, we received 726 responses, which represented a gross response rate of 13.4%. We had to eliminate 215 survey responses due to missing information and 32 responses due to insufficient numbers of employees. For 47 other responses, we were not able to assess the level of family influence using the SFI formula because of incomplete data, and these were also excluded from the analysis. The remaining 432 survey responses served as the basis of this study. We compared early respondents (first third) with late respondents (last third) in order to control for non-response bias (Leslie, 1972). There was no indication of non-response bias, as no significant differences could be detected between late and early respondents (Creswell, 2009; Fowler, 2009).

## **5 Results**

Table 1 summarises the descriptive statistics of the institutionalisation of MA for the three levels of family influence examined in this paper. One interpretation that can be drawn from the descriptive statistics is that there exists a decline in the share of companies that have high or medium levels of family influence among larger firms in Austria, which reconfirms

previous findings from Germany (Klein, 2000), the Netherlands (Flören, 1998) and Switzerland (Frey *et al.*, 2004). Furthermore, the descriptive statistics also show what mainly drives the level of family influence: companies classified as having a high level of family influence show an average share of stock and management board positions held by family members to be near 100%. All these firms also show at least some participation of the controlling family in the operational management of the firm, which is regarded as a distinct sign of a high level of family influence (McConaughy, 2000; Anderson and Reeb, 2003). By contrast, the average management boards of firms that have medium levels of family influence are only composed of 40% family members, which underpins the increased importance of non-family management in these firms. Firms that have low levels of family influence show an average family share of less than 10% in all three components (stock, management board and supervisory board), which shows that family influence in these companies has disappeared in the majority of cases.

Variable	Level of family influence (SFI)														
	High (SFI $\geq$ 2)					Medium (2>SFI $\geq$ 1)					Low (1>SFI)				
	N	Median	Mean	SD	Actual range	N	Median	Mean	SD	Actual range	N	Median	Mean	SD	Actual range
Firm size (1=large / $\geq$ 250 employees; 0=medium-sized / 50-249 employees)	94	0.00	0.17	0.38	0-1	105	0.00	0.37	0.49	0-1	233	0.00	0.43	0.50	0-1
Firm age	90	52.0	75.5	98.0	12-741	90	50.5	60.6	48.1	4-315	192	35.5	58.8	61.3	3-446
Industry sector (1=industrial; 0=non-industrial)	92	0.00	0.25	0.44	0-1	104	0.00	0.44	0.50	0-1	233	0.00	0.34	0.47	0-1
Level of family influence (accurate SFI score)	94	2.00	2.07	0.20	2.00-3.00	105	1.33	1.33	0.29	1.00-1.99	233	0.00	0.08	0.22	0.00-0.99
Share of stock owned by family members	94	1.00	1.00	0.00	1.00-1.00	96	1.00	0.91	0.21	0.00-1.00	133	0.00	0.09	0.23	0.00-0.97
Share of family members in management board	94	1.00	0.96	0.14	0.25-1.00	103	0.40	0.39	0.35	0.00-1.00	228	0.00	0.02	0.09	0.00-0.67
Share of family members in supervisory board	21	0.42	0.48	0.35	0.00-1.00	43	0.20	0.26	0.25	0.00-0.94	121	0.00	0.01	0.06	0.00-0.43
Firms with discrete MA departments (1=MA department existent; 0=MA department nonexistent)	92	0.00	0.27	0.45	0-1	99	1.00	0.54	0.50	0-1	212	1.00	0.67	0.47	0-1
Heads of MA with university training (1=head of MA with university training; 0=head of MA w/o university training)	24	0.00	0.42	0.50	0-1	51	1.00	0.67	0.48	0-1	125	1.00	0.76	0.43	0-1
Number of strategic MA instruments used	89	3.00	3.55	2.50	0-10	97	4.00	4.73	2.93	0-15	199	5.00	5.37	3.57	0-20
Number of operational planning instruments used	85	4.00	4.78	2.71	0-12	89	6.00	5.83	2.83	0-11	186	6.00	6.03	2.87	0-12
Formalization of strategic plans and strategy statements (1=fully or majority recorded; 0=minority or not recorded)	84	1.00	0.74	0.44	0-1	88	1.00	0.88	0.33	0-1	182	1.00	0.91	0.28	0-1

**Table 1 – Descriptive statistics**

Table 2 reports a matrix of correlations between the independent variable (level of family influence), control variables (firm size, firm age, industry sector) and the five aspects of MA institutionalisation serving as dependent variables in this study. Owing to the variables'

differing scale levels, different correlation measures were used. Firm size shows significant relationships with all variables except firm age, and the level of family influence shows a significant correlation with all other variables. Although we observed various significant relationships between variables, there was no evidence of multicollinearity, because none of the correlations was near the critical level of  $\pm 0.7$  (Tabachnik and Fidell, 2007). To test our hypotheses, we employed both univariate and multivariate analyses.

Variables	1	2	3	4	5	6	7	8	9
<b>1. Firm size</b>	1.000								
<b>2. Firm age</b>	-0.002 <sup>2</sup>	1.000							
<b>3. Industry sector</b>	0.188 <sup>1</sup> ***	0.040 <sup>1</sup>	1.000						
<b>4. Level of family influence (accurate SFI score)</b>	-0.194 <sup>2</sup> ***	0.171 <sup>2</sup> ***	0.138 <sup>1</sup> **	1.000					
<b>5. Number of strategic MA instruments used</b>	0.266 <sup>2</sup> ***	-0.044 <sup>3</sup>	0.109 <sup>1</sup> **	-0.201 <sup>2</sup> ***	1.000				
<b>6. Number of operational planning instruments used</b>	0.179 <sup>2</sup> ***	-0.086 <sup>3</sup>	0.406 <sup>1</sup> ***	-0.170 <sup>2</sup> ***	0.542 <sup>3</sup> ***	1.000			
<b>7. Firm with discrete MA department</b>	0.400 <sup>1</sup> ***	0.061 <sup>1</sup>	0.274 <sup>1</sup> ***	0.315 <sup>1</sup> ***	0.277 <sup>1</sup> ***	0.331 <sup>1</sup> ***	1.000		
<b>8. Head of MA with university training</b>	0.134 <sup>1</sup> *	0.024 <sup>1</sup>	0.040 <sup>1</sup>	0.239 <sup>1</sup> ***	0.103 <sup>1</sup>	0.067 <sup>1</sup>	n.c. <sup>4</sup>	1.000	
<b>9. Written recording of strategic plans and strategy statements</b>	0.106 <sup>2</sup> **	-0.093 <sup>2</sup> *	0.031 <sup>1</sup>	-0.274 <sup>2</sup> ***	0.257 <sup>2</sup> ***	0.225 <sup>2</sup> ***	0.235 <sup>1</sup> ***	0.140 <sup>1</sup>	1.000

Level of significance: \*  $p < 0.10$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$

<sup>1</sup> Cramers V (ranges from 0 to 1; no direction of correlation indicated)

<sup>2</sup> Spearman's rho

<sup>3</sup> Bravais-Pearson's correlation coefficient

<sup>4</sup> Not computable (no head of MA without discrete MA department)

**Table 2 – Correlation matrix**

The univariate tests on H1–H4 are presented in Table 3. Firm size was included as a control variable, and accordingly all tests were performed independently for both large and medium-sized firms. H1 suggested a lower endowment of firms that have higher levels of family influence with discrete MA departments. Our data only provide support for the hypothesis in medium-sized firms. For this group of firms, there is a clear pattern that lower family influence is associated with the increased establishment of discrete MA departments. Similarly, in the group of medium-sized firms we also found support for H3 and H4, which suggested that higher family influence is negatively correlated with the number of strategic MA instruments and operational planning instruments implemented. Thus, based on these univariate analyses, H1, H3 and H4 can be regarded as confirmed for medium-sized firms (each at  $p < 0.01$ ).

For large firms, the level of family influence did not turn out to be a significant predictor of the establishment of MA departments and the usage of strategic MA and operational planning instruments. However, we observed a U-shaped dissemination of MA institutionalisation depending on the level of family influence: large firms that have medium levels of family influence show a lower establishment of MA departments and a lower number of strategic MA and operational planning instruments in use than do firms that have high or low levels of family influence.

Hypothesis	Measure	Firm size	Level of family influence (SFI)			p value
			High (SFI $\geq$ 2)	Medium (2>SFI $\geq$ 1)	Low (1>SFI)	
<b>H1</b>	Share	Large	93.3%	77.8%	83.0%	0.406 <sup>1</sup>
		Medium-sized	14.3%	39.7%	54.8%	0.0001***
<b>H2</b>	Share	Large	42.9%	75.0%	82.8%	0.0071***
		Medium-sized	40.0%	56.5%	68.9%	0.168 <sup>1</sup>
<b>H3</b>	Mean	Large	6.13	5.17	6.21	0.376 <sup>2</sup>
		Medium-sized	3.02	4.48	4.80	0.0012***
<b>H4</b>	Mean	Large	7.00	6.06	6.42	0.986 <sup>2</sup>
		Medium-sized	4.30	5.69	5.77	0.0002***

Level of significance: \* p < 0.10; \*\* p < 0.05; \*\*\* p < 0.01

<sup>1</sup> Pearson's chi-square test

<sup>2</sup> Jonckheere-Terpstra test

**Table 3 - Univariate hypothesis tests**

The result for H2, which suggested a lower education level for the heads of MA in firms that have higher levels of family influence, produces a different conclusion. Our data show significant results for large firms only (at p < 0.01). Thus, we can only fully confirm H2 for the transition from large family businesses to large non-family businesses. Although the results for medium-sized firms are not significant, a tendency towards support for H2 is also apparent in the descriptive statistics, because the share of the heads of MA that have university training increases with lower family influence. Hence, H2 can be regarded as mostly confirmed based on this analysis.

To gain a deeper insight into the strategic MA and operational planning instruments used in the dependency of the level of family influence, Table 4 presents the use of several strategic MA instruments, and Table 5 shows the utilisation rates of several operational planning instruments.

Strategic MA instrument	Measure	Large firms				Medium-sized firms			
		Level of family influence (SFI)				Level of family influence (SFI)			
		High (SFI $\geq$ 2)	Medium (2>SFI $\geq$ 1)	Low (1>SFI)	p value <sup>1</sup>	High (SFI $\geq$ 2)	Medium (2>SFI $\geq$ 1)	Low (1>SFI)	p value <sup>1</sup>
<b>Performance Measurement System</b>	Share	100.0%	97.2%	93.8%	0.480	93.2%	86.9%	91.5%	0.420
<b>Benchmarking</b>	Share	60.0%	47.2%	65.4%	0.179	25.7%	42.6%	56.8%	0.000***
<b>Capital Budgeting Technique</b>	Share	60.0%	58.3%	64.2%	0.820	23.0%	44.3%	44.1%	0.007***
<b>SWOT Analysis</b>	Share	66.7%	44.4%	54.3%	0.326	40.5%	44.3%	47.5%	0.642
<b>Competitor Analysis</b>	Share	53.3%	50.0%	50.6%	0.976	27.0%	37.7%	36.4%	0.318
<b>ABC Analysis</b>	Share	66.7%	50.0%	39.5%	0.124	17.6%	47.5%	27.1%	0.001***
<b>Balanced Scorecard</b>	Share	33.3%	27.8%	30.9%	0.911	13.5%	29.5%	25.4%	0.060*
<b>Scenario Technique</b>	Share	13.3%	22.2%	32.1%	0.237	4.1%	13.1%	21.2%	0.004***
<b>Industry Structure Analysis</b>	Share	33.3%	5.6%	21.0%	0.037**	20.3%	14.8%	23.7%	0.370
<b>Portfolio Analysis</b>	Share	33.3%	16.7%	25.9%	0.382	4.1%	13.1%	14.4%	0.071*
<b>Sensitivity Analysis</b>	Share	0.0%	8.3%	25.9%	0.011**	1.4%	4.9%	13.6%	0.006***
<b>Target Costing</b>	Share	13.3%	25.0%	29.6%	0.410	6.8%	13.1%	9.3%	0.454
<b>Gap Analysis</b>	Share	0.0%	13.9%	13.6%	0.311	2.7%	3.3%	16.1%	0.001***
<b>Product Life Cycle Analysis</b>	Share	33.3%	16.7%	14.8%	0.219	9.5%	11.5%	11.0%	0.918
<b>Experience Curve Analysis</b>	Share	20.0%	8.3%	8.6%	0.374	8.1%	18.0%	14.4%	0.222
<b>Shareholder Value Analysis</b>	Share	6.7%	2.8%	22.2%	0.016**	1.4%	3.3%	5.1%	0.393
<b>Cost-Benefit Analysis</b>	Share	6.7%	2.8%	11.1%	0.312	1.4%	8.2%	11.9%	0.032**
<b>Value Chain Analysis</b>	Share	6.7%	19.4%	11.1%	0.346	2.7%	8.2%	7.6%	0.311
<b>PIMS</b>	Share	6.7%	0.0%	3.7%	0.382	0.0%	0.0%	1.7%	0.316
<b>Real Options Models</b>	Share	0.0%	0.0%	2.5%	0.528	0.0%	3.3%	0.8%	0.194

Level of significance: \* p < 0.10; \*\* p < 0.05; \*\*\* p < 0.01

<sup>1</sup> Pearson's chi-square test

**Table 4 – Use of several strategic MA instruments**

Again, the most significant differences based on the level of family influence could be found within the medium-sized firms group. We could observe a significant difference in the use of only four operational planning instruments in medium-sized firms. Among those, all forecasts related to the P&L, the balance sheet and liquidity showed a significant relationship to the SFI score of medium-sized firms. Thus, the interpretation can be drawn that medium-sized firms that have higher levels of family influence focus less on the planning of P&L statements, balance sheets and liquidity. Overall, the results on several operational and strategic instruments reconfirm our findings described above, namely that significant differences in the use of MA practices based on the level of family influence can rather be detected in medium-sized firms than in large firms.

Operational planning instrument	Measure	Large firms				Medium-sized firms			
		Level of family influence (SFI)				Level of family influence (SFI)			
		High (SFI $\geq$ 2)	Medium (2>SFI $\geq$ 1)	Low (1>SFI)	p value <sup>1</sup>	High (SFI $\geq$ 2)	Medium (2>SFI $\geq$ 1)	Low (1>SFI)	p value <sup>1</sup>
<b>Sales/Marketing Plan</b>	Share	100.0%	88.6%	83.8%	0.222	77.1%	88.9%	86.6%	0.134
<b>Product Program Plan</b>	Share	60.0%	54.3%	44.6%	0.430	17.1%	29.6%	23.2%	0.258
<b>Procurement/Purchasing Plan</b>	Share	53.3%	51.4%	45.9%	0.797	32.9%	44.4%	40.2%	0.397
<b>P&amp;L Forecast and Fiscal Plan based on Balance Sheet</b>	Share	60.0%	54.3%	62.2%	0.736	45.7%	68.5%	64.3%	0.015**
<b>Calculative Profit and Loss Forecast</b>	Share	33.3%	31.4%	45.9%	0.297	33.3%	31.4%	45.9%	0.058*
<b>Budgeted Balance Sheet</b>	Share	53.3%	54.3%	70.3%	0.181	31.4%	55.6%	73.2%	0.000***
<b>Liquidity Forecast</b>	Share	80.0%	77.1%	75.7%	0.933	65.7%	77.8%	79.5%	0.099*
<b>Production Plan</b>	Share	60.0%	42.9%	45.9%	0.525	34.3%	37.0%	25.0%	0.206
<b>Warehouse/Stock Plan</b>	Share	53.3%	42.9%	36.5%	0.449	24.3%	37.0%	25.9%	0.233
<b>Staffing Plans</b>	Share	73.3%	68.6%	75.7%	0.736	52.9%	59.3%	75.0%	0.006***
<b>R&amp;D Plans</b>	Share	46.7%	31.4%	33.8%	0.565	11.4%	18.5%	19.6%	0.335

Level of significance: \* p < 0.10; \*\* p < 0.05; \*\*\* p < 0.01

<sup>1</sup> Pearson's chi-square test

**Table 5 - Use of several operational planning instruments**

Turning to H5, which proposed a lower level of formalisation of strategic plans in firms that have higher family influence, the univariate results for both large and medium-sized firms can be obtained from Table 6. Again, the level of family influence only significantly impacted medium-sized firms. For the group of large firms, the descriptive statistics show only a weak tendency towards the support of H5. Thus, based on the univariate results, H5 can also only be confirmed for medium-sized firms.

Firm size	Written recording of strategic plans and explicit strategy statements (share) <sup>1</sup>	Level of family influence (SFI)			p value <sup>2</sup>
		High (SFI $\geq$ 2)	Medium (2>SFI $\geq$ 1)	Low (1>SFI)	
Large	Fully recorded or majority recorded	86.7%	88.6%	90.4%	0.895
	Minority recorded or not recorded	13.3%	11.4%	9.6%	
Medium-sized	Fully recorded or majority recorded	71.0%	86.8%	91.7%	0.001***
	Minority recorded or not recorded	29.0%	13.2%	8.3%	

Level of significance: \* p < 0.10; \*\* p < 0.05; \*\*\* p < 0.01

<sup>1</sup> Due to limited cell size, categories "Fully"/"Majority" and "Minority"/"Not" had to be combined to meet requirements of Pearson's chi-square test

<sup>2</sup> Pearson's chi-square test; due to limited cell size, categories "Medium" and "High" level of family influence were combined to meet test requirements for hypothesis testing using Pearson's chi-square test

**Table 6 - Written recording of strategic plans and strategy statements (univariate tests)**

For each of the five aspects of MA institutionalisation examined in this study, we performed a multivariate regression analysis. Firm size, firm age, level of family influence and industry

sector were included as potential covariates. Based on the scale level of the dependent variable, we performed either a logistic (for dichotomous dependent variables) or a linear regression (for metric dependent variables). The regression results and final regression models can be found in Table 7.

Final logistic regression models								
Hypothesis	Dependent variable / event	Included covariates	Reference class	Regression coefficients			Cox & Snell Pseudo-R <sup>2</sup>	Nagelkerkes Pseudo-R <sup>2</sup>
				$\beta$	exp( $\beta$ )	p value		
<b>H1</b>	<b>Firm with discrete MA department</b>	Firm size	Medium-sized	1.679	5.358	0.000	0.229	0.306
		Level of family influence (Low vs. high)	High (SFI $\geq$ 2)	1.376	3.959	0.000		
		Level of family influence (Medium vs. high)	High (SFI $\geq$ 2)	0.847	2.334	0.016		
		Industry sector	Non-industrial	0.952	2.590	0.000		
		<i>Absolute term</i>		-1.566	0.209	0.000		
<b>H2</b>	<b>Head of MA with university training</b>	Level of family influence (Low vs. high)	High (SFI $\geq$ 2)	1.601	4.960	0.001	0.087	0.122
		Level of family influence (Medium vs. high)	High (SFI $\geq$ 2)	1.106	3.021	0.037		
		Firm size	Medium-sized	0.852	2.345	0.013		
		<i>Absolute term</i>		-0.850	0.427	0.073		
<b>H5</b>	<b>Written recording of strategic plans and explicit strategy statements</b>	Level of family influence (Low vs. high)	High (SFI $\geq$ 2)	1.269	3.556	0.000	0.040	0.071
		Level of family influence (Medium vs. high)	High (SFI $\geq$ 2)	1.067	2.908	0.014		
		<i>Absolute term</i>		0.969	2.636	0.000		
Final linear regression models								
Hypothesis	Dependent variable	Included covariates	Dummy coding	Regression coefficients		R <sup>2</sup>	Adjusted R <sup>2</sup>	
				$\beta$	p value			
<b>H3</b>	<b>Number of strategic MA instruments used</b>	Firm size		1.441	0.000	0.075	0.070	
		Level of family influence (High/medium vs. low)	High/medium = 0	0.989	0.004			
		<i>Absolute term</i>		3.801	0.000			
<b>H4</b>	<b>Number of operational planning instruments used</b>	Industry sector	Non-industrial = 0	2.455	0.000	0.175	0.170	
		Level of family influence (High/medium vs. low)	High/medium = 0	0.808	0.005			
		<i>Absolute term</i>		4.466	0.000			

**Table 7 – Regression results**

In all five regressions, the level of family influence was included in the final model, which highlights the importance of this covariate and confirms our findings based on the univariate analyses. Besides the level of family influence, firm size was also included as a predictor of the establishment of discrete MA departments, heads of MA that have university training and the number of strategic MA instruments used. Moreover, firm size acts as the strongest predictor of the establishment of discrete MA departments and the number of strategic MA instruments used. Surprisingly, industry sector was included as the most important predictor of the number of operational planning instruments used, which can be interpreted as industrial firms using significantly more operational planning instruments than do non-industrial firms.

As a limitation, it should be stated that only the regression results for H1 and H4 produced regression models of sufficient reliability. The remaining three models showed R-squared measures of <0.1.

## **6 Discussion and conclusion**

Our results indicate that medium-sized firms that have higher levels of family influence establish fewer MA departments, use fewer strategic MA instruments and operational planning instruments and show lower levels of MA formalisation. Hence, our study shows that the level of family influence in medium-sized firms affects the organisation of MA systems. Our results therefore partly validate the current qualitative research on MA change in family businesses (Amat *et al.*, 1994; Giovannoni *et al.*, 2011), which suggested similar relationships. Therefore, if a medium-sized firm develops from a family business to a non-family business, both the (formerly) controlling family and non-family managers, directors and shareholders can expect that the professionalisation and intensification of MA will be one issue that must be faced during the transition. This finding can be interpreted against the backdrop of agency and stewardship theory. In line with stewardship theory, firms that have higher levels of family influence, mutual trust and tacit firm and market knowledge, as well as high value commitment, lower the demand for mechanisms to control, coordinate, plan and budget (Corbetta and Salvato, 2004; Tokarczyk *et al.*, 2007; Vallejo, 2009; Davis *et al.*, 1997; Cabrera-Suárez *et al.*, 2011; Duller *et al.*, 2011). However, if a transition from a family business to a non-family business occurs, non-family members such as managers are more integrated in the firm and stewardship culture subsequently diminishes (Davis *et al.*, 2010; Pearson and Marler, 2010). Accordingly, more mechanisms in line with agency theory are introduced to align the goals of the family, non-family shareholders and managers/directors (Chua *et al.*, 2003; Songini, 2006). In this connection, institutionalised MA obviously serves as one vehicle of reciprocal control over participating parties (Baiman, 1990; Seal, 2006; Duller *et al.*, 2011). Given the fact that the level of family influence turned out to be a predictor of MA institutionalisation in medium-sized firms, we draw the conclusion that stewardship theory is more applicable for medium-sized firms that have high levels of family influence than it is for large firms that have high levels of family influence.

In line with previous findings on the implementation of MA systems (Chenhall, 2003; Cassia *et al.*, 2005; Chenhall, 2007), our results also indicate that larger firms show higher levels of

MA institutionalisation. All the aspects of MA institutionalisation examined in this study support this notion: large firms establish more MA departments, use more strategic MA and operational planning instruments, show higher levels of MA formalisation and employ more academically trained heads of MA than do medium-sized firms. Furthermore, our regression models show that firm size is the strongest predictor of the establishment of discrete MA departments and the number of strategic MA instruments used. However, from our data on large firms, there is no negative linear correlation between the level of family influence and MA institutionalisation. These results reconfirm the findings from German-speaking countries that large family businesses do not greatly differ from large non-family businesses regarding the usage of strategic and operational MA practices (Schachner *et al.*, 2006; Feldbauer-Durstmüller *et al.*, 2007).

In our data on large firms, we observed a U-shaped dissemination of MA institutionalisation that depended on the level of family influence. Although large firms that have high levels of family influence show high implementation rates of discrete MA departments, strategic MA and operational planning practices and MA formalisation, large firms that have medium levels of family influence show lower MA institutionalisation. However, in large firms that have low levels of family influence, MA institutionalisation increases again. Using agency theory, this unexpected U-shaped dissemination can be interpreted as follows: as a family business matures and grows, more generations are involved in the business, and the number of family shareholders in the business usually increases (Gersick *et al.*, 1997). Hence, it can be assumed that in large firms that have high levels of family influence, a higher number of family members will be actively involved compared with large firms that have medium levels of family influence, in which operational management may have already been assigned to non-family managers. The clearly lower level of family management in firms that have medium levels of family influence, which can be obtained from Table 1, supports this notion. Thus, because more family members are involved, there might also be a higher resultant need for goal alignment and coordination between different interests. Therefore, a higher need for institutionalised MA may occur compared with a firm that has medium levels of family influence, which may *only* have to align the interests of one main family shareholder and non-family management members. Eventually, in firms that have low levels of family influence, both ownership and management are in non-family hands, which usually increases again the need for goal alignment, monitoring and management incentive compensation, which institutionalised MA can support (Seal, 2006).

Only one hypothesis tested in our study could be mostly confirmed for both medium-sized and large firms: a higher level of family influence seems to hinder the employment of academically trained management accountants. Our logistic regression results indicate that firms that have low levels of family influence are roughly five times more likely to employ a head of MA that has academic training than are firms that have high levels of family influence. This finding reconfirms the notion that both medium-sized and large family businesses attach less importance to formal education, such as university education (Fiegener *et al.*, 1996; García Pérez de Lema and Duréndez, 2007; Chirico, 2008).

Reconsidering our findings that family influence shows a negative correlation with MA institutionalisation only in medium-sized firms, we find only partial support for the idea that academically trained management accountants foster the professionalisation of MA systems (Amat *et al.*, 1994; Giovannoni *et al.*, 2011). Whereas in medium-sized firms, both the institutionalisation of MA and the employment of heads of MA that have university degrees increase with lower family influence, this relationship could not be found in large firms. Hence, we conclude that academically trained management accountants can actively influence and professionalise MA systems, especially in medium-sized family businesses.

Our findings build upon the existent family business and MA literature in several ways. Firstly, our study adds to the limited knowledge on the specific set-up of MA systems in family-controlled firms. We have also introduced and empirically tested a framework to assess the impact of changing levels of family influence on organisational structure. We show that MA systems in medium-sized firms become especially professionalised and intensified during the transition from a family business to a non-family business, which generates implications for both practice and theory. Non-family managers who consider working for family businesses can use the level of family involvement in order to predict what steps towards professionalisation he or she might face. Furthermore, members of controlling families can systematically drive MA professionalisation in order to ease business succession or the transition to a non-family business. Therefore, family business owners can use MA systems to codify informal knowledge and thus mitigate information asymmetries for family-internal or external successors and buyers of the firm (Howorth *et al.*, 2004; Scholes *et al.*, 2007; Scholes *et al.*, 2010; Giovannoni *et al.*, 2011). Our findings indicate that the level of family influence is more of a predictor of MA institutionalisation in medium-sized firms than it is in large firms. Independent of family influence, higher levels of MA institutionalisation in large firms were observed. We argue that the reason for these observations is a stewardship-

like culture in medium-sized firms that have high levels of family influence. This special culture diminishes both with growing firm size and with decreasing level of family influence. Hence, we conclude that stewardship theory should be applicable to smaller and medium-sized family businesses rather than to large family businesses. By contrast, for larger firms it seems that a growing need for coordination and the increasing separation of ownership and management create a more agency-like culture and thus this requires a higher penetration of MA systems.

Secondly, we contribute to the MA literature by introducing a significant context factor for MA change in medium-sized firms that has not yet been examined: the level of family influence. This additional context factor could also be included in the growing literature on MA adoption and change across different lifecycle stages and may shed further light on the underlying drivers of MA adoption. Because we found that, particularly in medium-sized firms, the level of family influence is associated with the level of MA institutionalisation, research on early-stage/start-up companies could be enriched by also investigating family influence, because existing studies in this field mostly examine small and medium-sized firms (Davila, 2005; Davila and Foster, 2005; Davila and Foster, 2007). We also add to the growing literature on MA change. We not only introduce an additional driving factor of MA change (the transition from a family business to a non-family business), but are also among the first to apply the Burns and Scapens (2000) framework to a quantitative research setting. In our view, we therefore show that the driving factors of MA change and its organisational outcomes can be analysed in line with the Burns and Scapens (2000) framework despite us not using qualitative research methods. Furthermore, we provide empirical evidence of the implementation of strategic and operational MA practices in a German-speaking country. We also show that university-educated management accountants should have the largest opportunity to actively drive MA change in medium-sized firms that have high levels of family influence.

At the intersection of MA and family businesses, there remains a broad array of research opportunities. Scholars may further investigate the reasons, underlying drivers and inter-organisational promoters of MA change in family businesses. For instance, research could shed further light on the impact of single events on MA institutionalisation in firms that have high or medium levels of family influence, such as the first-time employment of a non-family CEO, CFO or head of MA, or the introduction of outside investors. Analysing to what degree

MA institutionalisation is dependent on the education levels of the family members involved in the operational management of the firm may also be of value.

Furthermore, it might be rewarding to determine whether stewardship-like culture is indeed dependent on firm size and which conditions are needed for larger firms to maintain cultures of mutual trust that have lower needs for control mechanisms. Another interesting research avenue would be the validation of the U-shaped dissemination of MA institutionalisation in large firms depending on the level of family influence discussed in this paper. Eventually, intensified research is needed to better understand the transition process from a family business to a non-family business as well as its impact on organisational structures other than MA systems. Such research would be of interest to scholars as well as family business owners who intend to reduce family influence and potential buyers of family-controlled firms.

The present study has some limitations that we would like to acknowledge and briefly discuss. Firstly, we show MA change during the transition from a family business to a non-family business not based on longitudinal data, but on survey data that were generated via a one-time enquiry. Of course, a validation based on longitudinal survey data would be useful and would extend case study-based insights into MA change in family businesses (Amat *et al.*, 1994; Giovannoni *et al.*, 2011). However, as the transition from a family business to a non-family business is only one possible option for how a family business may further develop, we argue that the cross-sectional comparison of firms at different stages of this transition also generates valid insights into the effect of MA change (for similar research approaches, see also Moores and Yuen, 2001; Cassia *et al.*, 2005). Secondly, our dataset is representative of the economy in Austria, but our results cannot be directly applied in other cultural and regulatory contexts. Hence, an expansion to a cross-cultural study would offer another valuable research option. Thirdly, we had to focus on a selected set of aspects of MA institutionalisation as proxies for rules and routines in the Burns and Scapens (2000) framework, which in our view offers sufficient insight, but cannot be regarded as exhaustive and could be extended by future research. Lastly, Burns and Scapens's (2000) framework to assess MA change was initially designed for qualitative research. As described in Section 3.1, we do not consider qualitative research to be the only option to examine MA change. Our quantitative study should be regarded as a logical expansion of previous qualitative studies on MA change in family businesses (Amat *et al.*, 1994; Giovannoni *et al.*, 2011).

## Notes

[1] The survey data used in this study have already been used for other publications with different research focuses (Duller *et al.*, 2011; Hiebl *et al.*, forthcoming).

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