Applying the Four-Eyes Principle to Management Decisions in the Manufacturing Sector: Are Large Family Firms One-Eye Blind?

Structured Abstract

Purpose: The present paper explores the application of the four-eyes principle (4EP) to management decisions in large family firms in the manufacturing sector, a heretofore neglected area of business and management research.

Design/methodology/approach: A theoretical analysis was first conducted of the 4EP in general and its application in family firms based on agency and stewardship theories. A qualitative field study of 15 large Austrian firms from the manufacturing sector with various degrees of family involvement was then conducted to explore how the 4EP is applied in these firms.

Findings: From the theoretical analysis, it can be concluded that the 4EP may generally serve as a mechanism to limit agency conflicts. Due to a theoretically lower level of agency conflicts in family firms than in non-family firms, a lower application of the 4EP in family firms can be expected. However, the field study shows that large family firms also regularly adopt the 4EP and that family-managed firms demonstrate a more flexible and opportunistic usage of the 4EP, limiting both its associated downsides and advantages. The present paper further shows that such flexible 4EP usage in family-managed firms may increase their abilities to make quick business decisions and to display high levels of flexibility; however, it may also increase the risk of making suboptimal decisions and experiencing unfavorable managerial behavior as firms grow in size and international activity.

Originality/value: This is the first paper to analyze the application of the 4EP in large family firms. Six propositions and a preliminary model of the 4EP in family firms are developed in the paper, which may lead to further research on the practical applications of the 4EP.

Keywords: Family Firms, Family Businesses, Management Decisions, Four-Eyes Principle (4EP); Manufacturing Firms

Paper type: Research paper

1 Introduction

Although family firms have enjoyed increased recognition in scientific research during recent years, their specific characteristics are still considered as under-researched and requiring further investigation (Wright and Kellermanns, 2011; Kraus *et al.*, 2011; Gedajlovic *et al.*, 2012, Xi *et al.*, 2013). In a considerable number of family firm studies, the idiosyncratic qualities of such firms are researched in comparison to non-family firms. These studies are often motivated by the specific governance characteristics of family firms, most importantly the overlap between management and ownership in family-managed family firms (Songini and Gnan, 2013). According to agency theory, this overlap should reduce classical agency conflicts, which are rooted in the separation of ownership and control and the heterogeneity of the goals of the principal and agent (Ang *et al.*, 2000; Chrisman *et al.*, 2004). Consequently, instead of a corporate culture of control and mistrust, a more trust-based culture should be fostered in family firms, which would limit the need for the intensified usage of management control mechanisms and incentive contracts in family firms (Speckbacher and Wentges, 2012; Hiebl *et al.*, 2012; Mitter *et al.*, 2014; Wessel *et al.*, 2014). Moreover, family involvement in management is also viewed as a vehicle to enable quick decision-making, as lengthy alignment negotiations between ownership and management are not needed (Habbershon and Williams, 1999). However, weak or non-existent control mechanisms in family firms can also lead to unintended outcomes and family firm-specific agency problems. The absence of control may force family members acting as managers into taking ill-considered, irrational and suboptimal decisions, thus threatening the family firm's survival (Schulze *et al.*, 2003; Gómez-Mejía *et al.*, 2007). Therefore, family involvement in family firm management may be regarded as both a specific advantage to maintaining efficient decision-making and an entrepreneurial spirit as well as a specific risk (Kraus *et al.*, 2012; Hiebl, 2013a; Craig *et al.*, 2014).

An instrument often used to reduce the risk of inconsiderate, fraudulent or suboptimal decisions in all types of organizations – and not just in family firms – is the four-eyes principle (4EP) (Sutter, 2007; Feldbauer-Durstmüller *et al.*, 2012; Six *et al.*, 2012; Bátiz-Lazo and Noguchi, 2013)[1]. This principle usually means that crucial decisions (often defined as those affecting a certain minimum amount of capital) may not be made by individual actors alone but must be jointly made by at least two actors. The inclusion of at least two actors also explains why the principle's name includes "four eyes". This approach ensures the rationality of decisions as well as reciprocal control of decisions (Schickora, 2010). This is why Gottschalk (2011, p. 300), based on a study of executives involved in white-collar crime, states that "the 4EP should always be applied" in management decisions. In addition, the 4EP not only mitigates high-risk decision outcomes but also enriches the decision-making process by integrating the views of different individuals (Knoll, 2013).

However, employing the 4EP in family firms may be complicated compared with non-family firms but may also bring specific benefits to family firms. In family firms, decisions are often based on emotions rather than rationality or formal decision-making processes. The family members in charge may not allow non-family members or more junior family members to challenge or question their decisions (García Pérez de Lema and Duréndez, 2007; Hall and Nordqvist, 2008; Filser *et al.*, 2013), which would be required if they rigidly followed the 4EP. Non-family managers may also wish not to displease family managers by critically scrutinizing their decisions in accordance with the 4EP, for fear of losing their jobs. These two factors point to a constrained or reduced usage of the 4EP in family firms. However, family firms may enjoy particular benefits by employing a rigorous 4EP, as such a mechanism could help them overcome the family firm-specific control problems and risks discussed above. In this vein, the 4EP might also help secure the traditional non-financial goal of family firms, namely the longer-term survival of the firm (Cater and Justis, 2010; Laakkonen and Kansikas, 2011; Chrisman *et al.*, 2012).

Against the backdrop of these opposing considerations, the present paper explores whether, how and why family firms may differ from non-family firms concerning the usage of the 4EP. Due to the scarcity of the literature on the 4EP in general (Schickora, 2010), it does so by first theoretically analyzing the motivations behind 4EP usage in family and non-family firms. Moreover, a qualitative field study of 15 firms that have different degrees of family influence was conducted to gain insights into the practice of the 4EP. Theoretical considerations and empirical field study data are then used to derive propositions and a preliminary model of 4EP usage in family firms, which is intended to motivate further research on this issue.

This paper contributes to the literature in several ways. First, it is among the first to analyze the application of the 4EP in the business and management literature and to apply the 4EP to family business research. It thus enriches the literature by showing that in addition to pre-existing and well-investigated incentive and monitoring mechanisms, the 4EP may be another – albeit less well understood – agency control mechanism. Furthermore, the paper discusses the specific application of the 4EP in family firms and offers six propositions and a preliminary model for further investigation. Hence, it lays the groundwork for an increased understanding of one of the mechanisms frequently used in business organizations that has been rather neglected thus far in scientific research.

The remainder of this paper proceeds as follows. Section 2 presents the theoretical considerations of the 4EP in family firms, which are based on agency and stewardship theory. Section 3 then describes the field study's methodology. The field study's results are then presented in section 4 and propositions are developed. Finally, section 5 concludes with a discussion of the results, an outlook on potential further research avenues and this paper's limitations.

2 Theoretical Considerations of the 4EP in Family Firms

2.1 The 4EP as an agency control mechanism

Both agency and stewardship theory are used as theoretical lenses through which to analyze the application of the 4EP. These theories are concerned with the relationships between principals (in the case of business organizations, firm owners) and agents (managers) (Tosi *et al.*, 2003; Caers *et al.*, 2006). Agency theory relies (amongst others) on two basic assumptions, namely that principals and agents may have different goals and that agents may act in a self-serving way (Jensen and Meckling, 1976; Eisenhardt, 1985; Eisenhardt, 1989a), thus leading to agency problems. To overcome disparate goals and align the agent's actions to the principal's intentions, agency control mechanisms are introduced. Two of these mechanisms are incentive compensation and monitoring (Butler and Newman, 1989; Chua *et al.*, 2009). In this regard, the 4EP as described above may be regarded as a mechanism to monitor and control individual agents' decisions.

When the 4EP is enforced exclusively within the management team, the controlling authority may be another manager rather than the principal. However, even within the management team, the 4EP may limit self-serving or even criminal behavior (e.g., corruption, fraud) because at least two agents would have to agree on unfavorable actions to enable such behavior (Schickora, 2010; Bátiz-Lazo and Noguchi, 2013). Both would subsequently experience the classical prisoner's dilemma of not knowing whether the other would blow the whistle in case of distress (Rapoport and Chammah, 1970).

Moreover, principals such as firm owners or boards of directors may provide the second pair of eyes and thus act as a monitoring body for agents' decisions within a 4EP. This would be the case when critical management decisions also need approval by the board of directors or the firm's owners. Regardless of whether a 4EP is performed within the management team or between management and supervisory bodies, a certain decision-making approach must be established to be effective. For instance, a rule or procedure must be implemented to clarify for which types of decisions a 4EP is necessary and how the (at least) two pairs of eyes have to connect to develop a commonly agreed-upon decision. Therefore, the 4EP involves a certain degree of formality in the decision-making process and adds a layer of control to management decisions, thus serving as an agency control mechanism.

2.2 The 4EP in family firms

The principal–agent relationship displayed above may be different in family firms compared with non-family firms because in the former, firm owners often also serve as managers and thus have a dual role as both principal and agent (Chua *et al.*, 2009; Siebels and zu Knyphausen-Aufseß, 2012). From a purely theoretical perspective, in family firms, the two above-discussed agency problems are thus often absent. Family members may serve as both principals and agents, meaning that divergent goals would not exist. Therefore, self-serving behavior may also be absent as long as the family manager acts in the best interests of the family firm (Corbetta and Salvato, 2004). Consequently, instead of the agency picture of managers, family firm research often refers to the stewardship picture of man. The main tenets of stewardship theory are that the agent serves as a steward to the firm and is willing to subjugate his or her personal interests to secure its longer-term welfare (Wellum, 2007; Hernandez, 2012). Hence, the steward may be described as being intrinsically motivated to do his or her best for the firm without any need for extrinsic motivation, such as incentive payments (Davis *et al.*, 1997). This theory implies that if managers act as stewards to the firm, no or fewer agency control mechanisms are necessary. In other words, if the principal trusts that the steward is acting in the best interests of the firm, the principal does not need to introduce intense monitoring or incentive pay schemes (Eisenhardt, 1985; Songini and Gnan, 2013). It follows that promoting a stewardship-like culture in family firms should result in a lower need to apply the 4EP. Hence, assuming that managers in family firms indeed act as stewards, family firms should show a lower adoption rate of the 4EP.

By contrast, the ownership and management spheres in non-family firms rarely overlap to a significant degree as they do in family firms. Thus, principals cannot assume that agents will intrinsically act as stewards and only in the best interests of the firm. Therefore, the higher usage of control mechanisms, including the 4EP, can be expected in non-family firms compared with family firms (Hiebl *et al.*, 2012; Songini and Gnan, 2013). From this perspective, it follows that non-family firms should use the 4EP more often than do family firms.

Thus far, we have assumed that family and non-family firms stand in stark contrast to one another and that they can be distinguished by the existence of owner-management in family firms and non-owner-management in non-family firms. However, there exist various ownership and management constellations in between these two extremes. In particular, larger and older family firms often rely on non-family managers because they either cannot supply sufficient management personnel and know-how from the ranks of the family or family members simply choose not to work in the family firm (Klein and Bell, 2007; Sonfield and Lussier, 2009; Stewart and Hitt, 2012). Indeed, the term “family firm” may apply to firms that range from fully family-owned and fully family-managed to those that hold only a certain percentage of family ownership and those now fully managed by non-family members (Rutherford *et al.*, 2008). It follows that in family firms that have introduced non-family managers, the classical agency conflict of the separation of ownership and control may apply.

Based on the foregoing, to understand agency control mechanisms and the 4EP, we must distinguish whether non-family-managed family firms show the control characteristics of (1) non-family firms, (2) family firms or (3) something in between (Songini and Gnan, 2013). Various theoretical arguments and empirical findings support all three views (for an overview, see Klein and Bell, 2007; Bammens *et al.*, 2011). However, the present empirical and theoretical literature offers no standard answer to the question of how integrating non-family managers into family firm management affects the introduction of agency control mechanisms. The appearance of agents without ownership rights (non-family managers) implies that some agency control mechanisms would be necessary, but without deeper insights into the concrete relationship between family members and non-family managers, the optimal number and intensity of agency control mechanisms cannot be predicted. This also applies to the 4EP. Therefore, for family firms that also include non-family management, the optimal application of the 4EP cannot be predicted clearly from theory, which warrants the research effort presented in this paper.

Moreover, family members may not act according to the stewardship view. Research has found that family firms may encounter specific agency problems, which arise from family members acting in the interests of themselves or the family rather than the firm (Siebels and zu Knyphausen-Aufseß, 2012). For instance, family managers may be chosen to lead the future course of the family firm because of their family membership rather than their management capabilities. This might lead to the suboptimal management of the family firm, thus harming its successful development (Schulze *et al.,* 2001; Schulze *et al.*, 2003). Furthermore, family managers might only be self-controlled or controlled by other family members and therefore not take control seriously, such as acting opportunistically and exploiting the family firm for self-interested reasons (Chua *et al.*, 2009). Another aftermath of missing control of family managers' decisions could be that they take high-risk decisions without being challenged by another person. In this regard, Gómez-Mejía *et al.* (2007) have shown that to preserve the socio-emotional wealth associated with ownership of a family firm, family managers may take irrational risks that maintain their status as owners but that ultimately imperil the existence of the family firm.

In summary, the foregoing has shown that uncontrolled decisions by both family and non-family managers may lead to severe consequences for the family firm. Thus, more rigid control mechanisms, potentially including the 4EP, might help limit the problems associated with non-family managers' opportunistic behavior and family managers' self-control (Lubatkin *et al.,* 2007; Siebels and zu Knyphausen-Aufseß, 2012). For instance, newly introduced non-family managers may be controlled by family members by instituting a 4EP. Similarly, if a senior family manager introduces a 4EP to let his or her successors' and junior family managers' decisions be controlled by other (potentially non-family) managers in the family firm, then it might be more difficult for the junior family manager to pursue self-interested goals or high-risk projects in the family firm. However, the question remains whether – once the senior family manager has left the firm or has died – the junior family manager continues to enforce the 4EP or suspends it. Therefore, even though the 4EP might be useful for family managers to allow their own decisions to be scrutinized by others, the question remains how family firm-specific agency problems affect the usage of the 4EP.

To summarize, if a family firm is fully family-managed and family-owned, and if family members act only in the interests of the family firm, there should be less need to introduce the 4EP as an agency control mechanism. Thus, such family firms may be expected to show a lower rate of 4EP adoption relative to non-family firms. However, if non-family managers are involved or family members (also) follow self-interested goals or take on irrational risks, a 4EP may help overcome general and family firm-specific agency problems. To what extent the 4EP is used in firms that have various degrees of family involvement and which contextual factors most influence the usage of the 4EP remain unclear from current theory and empirical findings. Therefore, the field study presented herein aims to shed more light on these issues.

3 Field Study Methodology

3.1 Multiple Case Study Approach

A multiple case study was conducted to empirically investigate the application of the 4EP in firms that have various degrees of family influence; semi-structured interviews were the main method of data generation (Rubin and Rubin, 2005; Yin, 2009). Compared with a single case study approach, this multiple case study approach was chosen to capture a variety of views from different firms on the application and usage of the 4EP. Moreover, this qualitative research approach enables new ideas and theories to emerge, as there is yet little knowledge on the 4EP in general, especially its application in family firms.

Although views from different firms should be included in the field study, the aim was to secure a certain degree of comparability between cases (Eisenhardt, 1989b; Yin, 2009) to prevent the results from being biased by certain firm, legal or industry characteristics. Therefore, only firms that could be categorized as “manufacturing firms” according to Eurostat’s NACE classification (Eurostat, 2008) were included in the field study. Furthermore, to prevent cultural bias in the results, only firms from a single national economy (Austria) were included in the field study. Moreover, field study firms had to have the legal form of a limited or a private limited company [2] and had to be privately held (i.e., not listed on a stock market). Furthermore, field study firms had to be defined as “large” relative to the European Commission’s definition of small and medium-sized firms (European Commission, 2003), comprising at least 250 employees and at least €50 million in annual sales or total assets of at least €43 million.

3.2 Data generation

Firms that met these criteria were identified using publicly available information, mostly from firm websites. Top management team members as well as the identifiable owners of these firms were then invited by e-mail to participate in the field study. This initial e-mail also provided basic information about the research project.

Using this course of action, 20 interviewees from 15 firms that have various degrees of family influence were recruited. After leading these 20 interviews, information on the topic of interest seemed saturated (Guest *et al.,* 2006), meaning that no significant variability of findings emerged in the last few interviews. Due to the challenges of accessing top managers in large firms, including tight schedules and time constraints (e.g., Welch *et al.,* 2002; Kraus and Lind, 2010; Qu and Dumay, 2011), the total number of interviewees may seem small. However, the number of interviews for the present study is comparable with that of other studies that focus on corporate elites as key informants (e.g., Budding, 2004; Wahlström, 2009; Gendron and Spira, 2010).

=== Insert Table 1 about here ===

Interview preparation manuals were sent to interviewees before the interviews took place. The manuals consisted of structured questions about firm and personal characteristics and open-ended questions regarding each firm's application and design of the 4EP. The characteristics of field study firms and interviewees are presented in Table 1. Of the 20 interviewees, four were CEOs, 13 were other management team members, and three were chairpersons of either the supervisory board or the advisory board. Four interviewees (two CEOs, two chairpersons) were also members of the controlling family and held ownership stakes in their respective firms. Firms were assigned Roman numerals from I to XV to ensure the anonymity of both firms and interviewees. Table 1 also shows that in five firms (I, II, III, IV and XI), two respondents from the same firm were interviewed.

Interviews ranged in length from one hour to three-and-a-half hours, averaging roughly two hours. They were conducted between June and October 2011, mostly on-site at the interviewee's workplace. All interviews were audiotaped (resulting in approximately 37 hours of audio material) and fully transcribed (resulting in over 500 pages of text). The respondents then reviewed the interview transcripts to clarify potential misunderstandings and approve the content. Five interviewees made minor changes to these transcripts, which did not change the material statements or findings. Together with internal documents provided by interviewees (such as organizational charts and presentation slides), these transcripts built the basis for the data analysis.

3.3 Data analysis

Interview transcripts were then coded using MAXQDA 10 software in line with the guidelines of the general inductive approach (Thomas, 2006). This approach was designed for the analysis of textual information in the course of research projects that rely on qualitative methods, and thus it fits the present study well. The approach aims at letting findings emerge purely from the data, without narrowing the focus by applying coding systems derived from theory or by other foregoing considerations. Thus, it is well suited for theory-generating studies such as the present one.

Following this approach, all transcripts were read through carefully several times. When a topic relevant to the study emerged from an interview transcript, the respective phrase was coded and all other transcripts were searched for the same topic. If statements concerning the same topic were also found in other transcripts, these sections were coded accordingly. In total, this procedure resulted in more than 2,600 codings. These codings built the main basis for the results presented in section 4.

4 Field Study Results and Proposition Development

4.1 Existence and design of the 4EP

Table 2 provides an overview of those field study firms with a formal 4EP. This overview shows that all but one firm (firm II) have implemented a 4EP. However, firm II's CEO admits that he already considers the absence of a 4EP as an organizational weakness:

> *"As the only member of the management board of the overall firm, I am authorized to represent the firm on my own. This is a topic we are currently working on. In addition, the general manager of one of our three divisions is authorized to represent the division on his own. In all other managerial layers, we have not yet introduced the 4EP on a*

compulsory basis. This is neither consistent nor good, but so far, there has not arisen a concrete need to immediately change this."

In contrast to firm II, which shows high levels of family involvement (in ownership, management and supervision, see Table 2), all other sample firms that display similar levels of family involvement have implemented a 4EP. Therefore, the data do not support the relationship theorized in section 2 that family-managed family firms would adopt the 4EP at a lower rate than non-family firms. A reason for this finding might lie in the sample itself, which included only large firms to maximize comparability across firms. These large firms, however, might have already reached a level of complexity that necessitates the introduction of formal procedures such as the 4EP.

=== Insert Table 2 about here ===

In the interviews with CEOs and chairpersons, the notion was also apparent (although not explicitly vocalized) that large firms would have implemented a 4EP as one of their professional management procedures. This also applies to family firms. Therefore, even in large family-managed family firms, which might not experience the same level of agency conflicts as their non-family counterparts (see section 2.2), agency control mechanisms such as a formal 4EP were implemented to show professionalism. However, as described below, such an application of the 4EP in some cases was only at the formal level, and it was not fully internalized. This finding corresponds well with the argument brought forward by Stewart and Hitt (2012) that family firms moving from an entrepreneurial culture to a more professionalized culture sometimes introduce formal procedures to signal their professionalism, but may not use them properly. As Young *et al.* (2008, p. 198) stated: "In essence, these firms attempt to appear as having 'crossed the threshold' from founder control to professional management. But the founding family often retains control through other (often informal) means." This notion receives further support from the finding that even when a 4EP is introduced, in family firms that have very high levels of family involvement (firms I, VII and VIII) the family retains a kind of "veto power", as no final management decision pertaining to the 4EP can be made without the approval of a family member (see Table 2). These findings inform the following propositions:

P1a: *No significant differences concerning the formal application of the 4EP exist between large firms that have high family influence and large firms that have low or no family influence (non-family firms).*

P1b: *A main driver for the formal application of a 4EP in family firms is the family's perceived need to apply professional management procedures.*

Table 2 also contains information on how the 4EP was organized in the field study firms. In the majority of cases, the need to make decisions according to the 4EP was linked either to authority limits or to defined topics. Applying authority limits is rooted in the implication that not every (small) management decision requires the 4EP, which demands the participation of more than one manager and thus is more time-consuming than single-manager decisions. Therefore, only decisions that involve larger amounts of capital require a 4EP decision when applying authority limits. In this way, managers retain their sole decision-making power for smaller decisions and the more time-consuming 4EP is reserved for major decisions. Other field study firms defined certain topics for which a decision had to made using the 4EP, such as capital investment decisions, capital structure decisions (e.g., taking on debt) and key staff decisions (e.g., recruiting new management team members).

An effect of linking the adoption of the 4EP to certain amounts of capital or to certain topics is that every time a decision exceeds the threshold amount of capital or concerns a certain topic, management automatically must adopt the 4EP. Therefore, the adoption of the 4EP is no longer at the discretion of the respective managers. In this sense, the necessity of adopting the 4EP for certain decisions can be regarded as a measure to enforce its use as an agency control mechanism. Without such objective criteria, managers could adopt the 4EP at their discretion and leave critical decisions unmonitored. In such cases, the 4EP would not serve as an effective tool to avoid suboptimal actions by single managers.

No relevant differences pertaining to family influence over the application of these two key types of 4EP organization could be identified in the interviews. Therefore, the following proposition applies to the 4EP organization in large firms in general:

P2: *The application of the 4EP to management decisions in large firms is mainly linked either to authority limits or to predefined topics. This linkage aims to ensure that the 4EP cannot be adopted at the discretion of managers/agents. Thus, the linkage serves as an instrument to enforce the 4EP as an agency control mechanism.*

4.2 The 4EP in practice

Interestingly, in one firm (firm I) the application of the 4EP was not linked to either authority limits or defined topics, but solely to the discretion of the owners, namely the controlling family. The interviewed chairperson (a member of the controlling family) describes her reasoning for this specific application of the 4EP:

> *"I have an agreement with our CFO that we both stay in touch with our banks, insurance firms or with the public authorities. And in difficult situations, we then use the 4EP. For instance, during negotiations the CFO can say that he is not allowed to make the decision on his own but has to obtain my approval before we can agree. In other situations, I can say so. Thus, we have created a kind of additional escalation level, which can be very useful in negotiations."*

Hence, although interviewees from firm I stated that they have implemented a formal 4EP, they use it as a negotiation tactic rather than a means of monitoring management decisions. Moreover, they use the 4EP only when the owners consider it to be useful. Therefore, the 4EP's previously described linkage to certain authority limits or defined topics is circumvented, which in turn enables the firm's owners and managers to avoid using the 4EP when they anticipate a colleague's lack of support for an intended decision.

Such flexible usage of the 4EP was also observed in other firms that have family involvement in management, even in the presence of a formally implemented 4EP linked it to authority limits and/or defined topics. Firm IV's CEO (a member of the controlling family) describes their practice of applying the 4EP:

> *"In principle, we have a universal 4EP. (…) This is the formal sphere. Of course, in day-to-day routines, and we know that, decisions are often made by single managers. For instance, they then let their subordinates also sign off the decision. That is how it goes."*

Therefore, despite knowing that the 4EP is not always followed as defined, the CEO of firm IV is not alarmed by the situation and identifies the need to prevent managers from letting their subordinates serve as the second pair of eyes within the 4EP and thus circumvent a critical check on decision-making. A management team member of firm IX ascribes this flexible usage of the 4EP to the general trust-based culture in family firms:

> *"The 4EP only plays a minor role in our family firm. To be accurate, every single day, we overstep the rights that we as single managers have according to the articles of*

> *incorporation or our proxy. The system very much functions based on trust. This means that everyone oversteps his or her rights for the sake of the firm. This also includes high levels of direct responsibility. If every time I needed the approval of someone else, I obtained this approval, no one would have time to do his or her work. In turn, I rarely take the trouble to sign off all the things that I formally have to. We have signing rules based on authority limits, but despite frequent violations they are not enforced."*

However, such flexible usage or deliberate disregard of the 4EP was not observed in all field study firms, only in firms in which the controlling family was active in the management of the family firm. By contrast, in investigated non-family firms and non-family-managed family firms, interviewees reported a relatively rigid adoption of the 4EP. For example, a manager in firm V (a non-family firm) reports:

> *"The 4EP is unambiguously defined and internalized. When surpassing certain clearly defined authority limits, every decision, every document, every permission needs a second signature."*

Therefore, the present field study's results suggest that the involvement of the controlling family should lead to more flexible usage of the 4EP compared with non-family-managed firms. On one hand, this finding corresponds with extant work on family firm-specific agency problems such as (missing) self-control (Schulze *et al.*, 2003; Lubatkin *et al.*, 2007). Because the 4EP may be regarded as an agency control mechanism, it may also be perceived by family managers as unnecessarily limiting their managerial power and entrepreneurial freedom. Thus, as in firm I described above, family managers tend to only adopt the 4EP when it makes intuitive sense to them or when they find it supports achieving economic advantages for the firm. On the other hand, the findings also point to a stewardship-like culture in family firms. As a management team member of firm IX describes, there is less need for a 4EP in trust-based family firms if everyone is working towards the well-being of the firm. Thus, as prescribed by stewardship theory and by reduced agency conflicts (Songini and Gnan, 2013), there seems to be less need for (a rigid application of) the 4EP in trust-based family-managed firms. The comparably more rigid 4EP application in non-family-managed firms observed in the field study enables the formulation of the following proposition:

P3: *Among firms with a formally implemented 4EP, large family-managed firms show a more flexible and opportunistic usage of the 4EP compared with large non-family-managed family firms and non-family firms.*

4.3 Advantages and disadvantages of the flexible usage of the 4EP

The field study also showed some advantages and disadvantages or limitations of flexible 4EP usage. One advantage of flexible adoption is as a negotiation tactic (see the statement by the chairperson of firm I). Another advantage in line with the general peculiarities of family firms (Habbershon and Williams, 1999; Sirmon and Hitt, 2003) was a higher degree of flexibility and quicker decision-making. A management team member of firm IX (a non-family manager in a family firm) supports this view but also highlights a potential downside of such a policy:

> *"Our more flexible or individual usage of the 4EP enables us to make quicker decisions and not be hindered by the 4EP. This means that if I believe that a decision is right, then I can make and implement it very quickly. However, I think that this is also connected with some risks, especially regarding internationalization. Owing to such a policy, we also make ourselves vulnerable to unfavorable behavior and mistakes."*

This statement indicates that at a certain level of firm size or international activity, flexible 4EP usage entails the risk of agents being insufficiently controlled, just as in a firm lacking a 4EP. Management team member IX further explains that the need to adopt a more rigid 4EP policy may also be linked to cultural issues:

> *"In addition, such a flexible application of the 4EP does not work with the mentalities in other countries. For instance, if I hire an English person and do not provide him or her with clear mandates, then he or she will do precisely nothing."*

From these statements, it can be theorized that as a firm's size, complexity and international activity expand, a flexible or non-existent 4EP is increasingly risky to the business, as agents would experience only situational or non-existent control by the 4EP. Although larger family-managed firms may still apply a 4EP more flexibly than comparable non-family-managed firms, it can be theorized that a firm's growing size, complexity and international activity would necessitate applying a more rigid 4EP policy. Thus:

P4a: *Flexible 4EP usage in family-managed firms is moderated by firm size and international activity, such that larger firm size and higher international activity are associated negatively with a more flexible usage of the 4EP.*

P4b: *Among smaller family-managed firms, flexible 4EP usage leads to quicker decision-making compared with firms that have more rigid 4EP usage.*

5 Discussion and conclusions

5.1 Towards a model of the 4EP in large family firms

The present paper analyzed the adoption and usage of the 4EP in large family firms in the manufacturing sector. The theoretical analysis based on agency and stewardship theories suggested (1) that the 4EP can generally (in both family and non-family firms) be viewed as an agency control mechanism and (2) that purely family-managed firms may show a lower rate of 4EP adoption compared with other types of firms due to reduced agency problems. Field study data informed an analysis of how these theoretically developed notions can also be observed in practice. With the help of field study evidence, six propositions were derived and can be summarized in a preliminary model of the application of the 4EP in family firms. A graphical sketch of this model appears as Figure 1.

=== Insert Figure 1 about here ===

The model contains the following relationships: Having reached a certain level of firm size, family-managed firms tend to formally adopt a 4EP, indicating that among large firms, family influence (or the distinction between family and non-family firms) does not serve as a significant predictor for the formal adoption of the 4EP (Proposition P1a). The 4EP is frequently linked to authority limits or predefined topics (P2). Further analysis showed that family firms also adopt the 4EP due to a perceived need to implement professional management procedures (P1b).

When looking beyond the formal adoption of the 4EP, the present field study's findings suggest that family-managed firms specifically, rather than family firms in general, show flexible 4EP usage (P3). Such flexible usage is characterized by circumventing the rules of the 4EP opportunistically and adopting the 4EP for reasons that promise business advantages (such as the negotiating example in firm I) or quicker decision-making (P4b). However, growing size, complexity and internationalization might also encourage family-managed firms to more rigorously adopt a 4EP (P4a). To summarize, when responding to this paper's subtitle "Are large family firms one-eye blind?" when applying the 4EP, the answer should be

"No, but family-managed firms are, at least until having reached a certain level of size, international activity and thus complexity". By contrast, non-family-managed firms (even when owned by a controlling family) demonstrate a rather rigid adoption of the 4EP.

5.2 Implications

Against the backdrop of agency theory, this paper's central findings described above could be interpreted in the following way. When family members are active in family firm management, they believe that they can oversee management decisions themselves and thus ensure that non-family staff act in the interests of the family. Therefore, in family-managed firms fewer control mechanisms, or more precisely the less rigid application of control mechanisms such as the 4EP, seem to prevail. However, when the family firm is entirely managed by non-family managers, the controlling family loses this link and thus insight into management practice and thus enforces a more rigid application of agency control mechanisms such as the 4EP. Thus, in the case of non-family managed family firms, the 4EP may be used by the family primarily to control non-family managers, which underscores the 4EP's character as an agency-control mechanism.

However, in the case that the family firm is wholly or mainly managed by family members, a rigid application of the 4EP would yield benefits – for instance, individual family managers' decisions would have to be scrutinized by at least one other person. This may help to avoid high-risk decisions that may put the survival of the family firm in jeopardy. Thus, a more rigid application of the 4EP may help to avoid potentially devastating decisions by individual family managers, a problem well described in the literature (e.g., Gómez-Mejía *et al.*, 2007). The present field study delivered evidence that interviewed non-family managers recognize this benefit of the 4EP, especially when the business has grown too large or too international to be easily monitored by family managers. In such situations, a more rigid application of the 4EP could help family-managed firms to avoid significant risk-taking and unfavorable behavior by family and non-family staff. Conversely, the field study also suggests that at present, family managers may not be fully aware of the benefits of a rigid application of the 4EP or they deliberately apply a more flexible usage to maintain certain benefits such as quick decision-making. Thus, in terms of implications for practice, the paper indicates a need to better communicate the benefits of a rigid application of the 4EP to family managers (e.g., by advisors or academia) and/or to develop ways and methods to implement the 4EP without sacrificing the benefits of its flexible usage such as quick decision-making, which emerged as very important for family managers from the present field study.

To the best of the author’s knowledge, this paper is among the first to address the application of the 4EP as an agency control mechanism in the business and management literature, especially concerning the application of the 4EP in family firms. Therefore, the main contribution of the paper lies in having developed a basic understanding of (1) how the 4EP may serve as an agency control mechanism in large firms in general and (2) how family influence affects 4EP usage in practice. The six propositions and the preliminary model developed in this paper should motivate further research to analyze the antecedents, designs and outcomes of the adoption of the 4EP in greater depth. Moreover, the findings also complement the literature on agency control mechanisms applied in family firms (Hiebl *et al.* 2012; Songini and Gnan, 2013) by showing that the 4EP may also be regarded as such a mechanism and that its practical usage seems to pertain to family firm peculiarities.

5.3 Future research and limitations

This paper’s findings, propositions and proposed model need further corroboration because of its underlying research design and exploratory nature. An obvious first step would be to test the propositions empirically, potentially using quantitative research methods. It would also be valuable to investigate whether and how the application of the 4EP affects business performance. However, further (qualitative) investigation is also needed to create a better general understanding of the 4EP. Because the 4EP is frequently used in large firms, it seems surprising that extant scientific research on this topic is so scarce. We therefore need more studies that investigate the usage of the 4EP across different firm sizes, industries and cultural environments. This is necessary, as the present study suggests that the manner in which the 4EP is adopted substantially influences the flexibility of management decisions as well as their levels of risk. Reconsidering this paper’s subtitle, such increased understanding should prevent future academics from remaining “one-eye blind” with regard to the adoption of the 4EP.

Of course, the present study also has some limitations. The field study’s results are tentative, as they have been generated based on a rather small sample of firms that share certain characteristics (see section 3.1). While these shared characteristics enabled a higher likelihood of drawing valid comparisons among field study firms, other firm characteristics may lead to different results. For instance, the empirical investigation presented in this paper only included large firms. However, most family firms worldwide can be regarded as small or medium sized (IFERA, 2003). Therefore, the present paper's findings on large family firms cannot be readily generalized to all family firms because smaller family firms tend to rely less on management practices deemed to be "professional," such as certain planning and accounting practices, in comparison with larger family firms (Speckbacher and Wentges, 2012; Hiebl, 2013b), which might also point to a generally lower usage of the 4EP in smaller family firms. Moreover, the study was conducted in one sector (manufacturing) and in one national economy (Austria) with a high reliance on family firms (Eggers *et al.,* 2013). Therefore, the effect on this study's results of factors relating to industry sector, cultural context, and the legal environment cannot be ruled out. In summary, these limitations indicate that the field study's findings need to be interpreted with care and corroborated as noted above.

Notes

[1] As Bátiz-Lazo and Noguchi (2013) note, the 4EP can be considered an often-used instrument in businesses at least in German-speaking countries.

[2] The field study was conducted in Austria, and thus the concrete legal forms of sampled firms had to be either *Gesellschaft mit beschränkter Haftung* (GmbH) or *Aktiengesellschaft* (AG). According to Austrian corporate law, in firms that have the legal form of a GmbH or an AG, if there is more than one executive team member, these executives may only transact external business together. Therefore, this basic regulation prescribes following a 4EP. However, in company agreements, individual executive members may also be granted the right to transact external business alone and without approval from other executive team members. Thus, implementing a 4EP when externally representing the firm is not necessarily prescribed by Austrian corporate law (Karollus *et al.,* 2012).

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Tables and Figures

Table 1. Field study firms and interviewees

	Firms				Interviewees			
Firm	Employees	Annual revenue (Euro millions)	Year of foundation	Owner actively involved in management	Position in firm	Being firm owner	Age (years)	Working experience (years)
I	>1,000	>300	1900-1950	Yes	Management team member	No	40-55	<15
					Chairman of the supervisory board	Yes	40-55	15-30
II	501-1,000	101-300	Before 1900	Yes	Management team member	No	>55	>30
					CEO	Yes	40-55	15-30
III	250-500	50-100	Before 1900	Yes	Chairman of the supervisory board	Yes	40-55	15-30
					CEO	No	>55	>30
IV	250-500	50-100	1900-1950	Yes	Management team member	No	40-55	15-30
					CEO	Yes	>55	15-30
V	>1,000	>300	1900-1950	No	Management team member	No	40-55	15-30
VI	501-1,000	50-100	After 1950	No	Management team member	No	40-55	>30
VII	>1,000	101-300	Before 1900	Yes	Management team member	No	<40	<15
VIII	250-500	50-100	1900-1950	Yes	Management team member	No	40-55	15-30
IX	501-1,000	101-300	After 1950	Yes	Management team member	No	<40	<15
X	>1,000	>300	Before 1900	No	Management team member	No	40-55	15-30
XI	250-500	50-100	After 1950	No	Management team member	No	>55	>30
					Chairman of the advisory board	No	>55	>30
XII	>1,000	>300	1900-1950	No	Management team member	No	40-55	<15
XIII	250-500	50-100	1900-1950	Yes	Management team member	No	40-55	15-30
XIV	>1,000	101-300	1900-1950	No	Management team member	No	40-55	15-30
XV	501-1,000	101-300	1900-1950	No	CEO	No	40-55	15-30

Table 2. Formal application of the 4EP in field study firms

	Family involvement			**4EP exists**		**Approval of every management decisions by family member necessary**		**Types of formalized rules for application of 4EP**				
Firm	Ownership	Management	Supervision	Yes	No	Yes	No	Authority limits	Defined topics	4EP adopted for every management decision	At discretion of owners	Not specified
I	✓	✓	✓	✓		✓					✓	
II	✓	✓	✓		✓	✓		(✓)				✓
III	✓		✓	✓			✓		✓			
IV	✓	✓	✓	✓			✓			✓		
V				✓			✓	✓				
VI	✓		✓	✓			✓		✓			
VII	✓	✓	✓	✓		✓		✓	✓			
VIII	✓	✓	✓	✓		✓			✓			
IX	✓	✓	✓	✓			✓	✓				
X	✓		✓	✓			✓		✓			
XI				✓			✓		✓			
XII				✓			✓		✓			
XIII	✓		✓	✓			✓		✓			
XIV	✓		✓	✓			✓		✓			
XV				✓			✓			✓		

Figure 1. Proposed model of the application of the 4EP in large family firms