THE IMPACT OF FAMILY INFLUENCE AND SUPERVISORY BOARDS ON THE BASIS OF EXECUTIVE COMPENSATION: EVIDENCE FROM GERMANY

Patrick Ulrich [*], Robert Rieg [**]

* *Corresponding author,* Department of International Business Studies, Aalen University, Germany; University of Bamberg, Germany
Contact details: Aalen University, Beethovenstr. 1, 73430 Aalen, Germany
** Department of International Business Studies, Aalen University, Germany

Abstract

In the international literature, there exists a lively discussion about the fundamentals of different executive compensation models. Executive compensation is relevant not only from the point of view of corporate management but also from the point of view of corporate governance and here potential information asymmetries and corporate misconduct. Internal or external metrics, in particular, are used as the basis for compensation. In family businesses, which per se are less likely to offer variable compensation to their executives, it is assumed that internal rather than external metrics are more likely to be used as the basis for compensation. This paper tests this thesis on the basis of an empirical survey of 113 German companies. The empirical study shows clear differences in the use of internal and external metrics as a basis for executive compensation — a fact that has so far not been addressed in other empirical studies.

Keywords: Compensation, Family Influence, Family Firms, Incentive Mechanisms, Remuneration

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1. INTRODUCTION

In recent years, a lively discussion on the specifics of family businesses (Pearson, Carr, & Shaw, 2008) has developed in the theory and practice of business administration (Chrisman, Chua, & Steier, 2005), including the areas of corporate governance (Carney, 2005), compliance (Behringer, Ulrich, & Unruh, 2019), and management accounting (Hiebl, Duller, Feldbauer-Durstmüller, & Ulrich, 2015). Among other things, the general use of management accounting tools (Senftlechner & Hiebl, 2015), but also performance management (Speckbacher & Wentges, 2012) itself and specific management accounting instruments such as budgeting (Hiebl, 2012) and reporting (Bardhan, Lin, & Wu, 2015; Calabrò, Cameran, Campa, & Pettinicchio, 2020) are being discussed. To date, there has been less discussion of the involvement of management accounting in the formation, evaluation and control of corporate incentive systems (Li, Henry, & Wu, 2019).

In addition, the individual design of compensation systems in corporate practice is always subject to a legal framework that is modified by changes in regulatory requirements. The comments in this paper refer to the requirements for compensation systems in Germany (Haid & Yurtoglu, 2006).

The German Act on Implementing the Second Shareholders' Rights Directive (ARUG II) of December 12, 2019, has given new impetus to the discussion on the optimal structuring of the fixed and variable components of executive board remuneration in German stock corporations (and indirectly also limited liabilities companies, or "GmbH"). Initially, ARUG II and the new draft of the German Corporate Governance Code (GCGC), as adopted by the Government Commission on the German Corporate Governance Code on May 9, 2019, will require a revision of the remuneration models of most German listed companies in the future (Lieder & Wernert, 2019).

Many of the amendments to the GCGC take up the criticism of the remuneration models of German companies and fundamentally reform the remuneration logic of Section 87 (Geißler, 2017) of the German Stock Corporation Act (AktG), which has already been reformed over the last ten years in accordance with other regulations (VorstAG (Fleischer, 2009) and VorstOG (Rapp & Wolff, 2010). In addition to the waiver of change-of-control clauses (Blanchard, 2006), compensation for parental leave and clawback (Chan, Chen, Chen, & Yu, 2015) regulations for freezing or reclaiming variable remuneration (Stefanescu, Wang, Xie, & Yang, 2018), the most significant changes to be expected include the following points:

– The share of long-term variable remuneration should exceed the share of short-term variable remuneration.

– While the short-term variable remuneration is paid in cash, the long-term variable remuneration is to be paid in the future directly in shares of the Company, i.e., not in stock options or similar derivatives.

– The reference figure for the variable remuneration has been adjusted; while the short-term variable remuneration is to be derived from operational corporate planning, the long-term variable remuneration is to be derived from strategic planning.

The last two aspects, in particular, represent a departure from standard practice in Germany and present companies with major challenges.

However, ARUG II and the accompanying discussion largely exclude the question of what data the variable remuneration is actually based on in the context of determining the remuneration of the management board. For example, laws, draft laws, and commentaries always assume that companies have operational and strategic corporate planning in place. Although this is certainly the case in most companies for reasons of exculpation and risk hedging as a result of Section 92 (1) AktG, this says little about the material quality of the data basis and thus also of the planning.

In addition, especially for German companies that prepare their individual financial statements in parallel in accordance with IFRS consolidated accounting and the German Commercial Code (HGB), the problem of the existence of several profits, as well as profit and liquidity ratios has always existed.

Starting from the problem outlined above, this paper addresses the question of what influence the existence of a supervisory board as well as the ownership structure (family or non-family business) has on the choice of external (figures from external accounting) or internal key figures (figures from internal accounting) as a reference basis for determining the variable components of the remuneration of board members and managing directors. This question has been identified as particularly problematic for medium-sized companies, since several problem areas of accounting, cost accounting, and usually lacking capital market orientation come together here in the face of high growth and high internationality (Lavia López & Hiebl, 2015).

The literature shows here that family enterprises per se offer less variable remuneration and that the forms of compensation models in family enterprises differ greatly from those in non-family enterprises (Ulrich, 2011b). The paper is based on the following research question:

RQ: How do family influence and the existence of a supervisory board affect the base of executive compensation?

The remainder of the paper is structured as follows. Section 2 shows a literature review and the hypotheses. Section 3 deals with the research methodology and the variables. Section 4 depicts the empirical results, while Section 5 contains a discussion and Section 6 a conclusion.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1. Compensation base in company practice

The variable remuneration of managers is often based on financial ratios (Gerhart & Milkovich, 1990). Which indicators are taken as a concrete basis should depend on whether they can be used to measure managers' performance well and whether managers can influence the respective indicator through their performance (Faulkender, Kadyrzhanova, Prabhala, & Senbet, 2010; Peng & Roell, 2008). Since managers have an information advantage over supervisory bodies and owners (Jungmann, 2006), which cannot be reduced easily and free of charge, the choice of metrics as the basis of executive compensation is very important to ensure an objective remuneration basis for owners and supervisory bodies from the outset (Axelson & Baliga, 2008).

On the one hand, firms can choose the information that is determined on the basis of externally reported and thus, for example, audited metrics. On the other hand, companies can use internal metrics from the internal income statement or other variables for manager remuneration. The latter is of course much more discretionary and can be influenced by management itself (Crocker & Slemrod, 2007).

At this point, it already becomes clear that there is a tension of norms between the ability of management to influence metrics in terms of the cause-and-effect relationship of management performance and the risk of manipulation by management (Jongjaroenkamol & Laux, 2017). Although figures and data from external accounting are more objective and easier to verify for external

stakeholders, they can also be manipulated by the management itself due to accounting options. In addition, there are some effects in external accounting (e.g., changes in accounting rules by standard setters that the IASB has issued) that may change certain metrics without materially changing the substance of the company in practice.

Data and metrics in internal accounting are in principle more decision-orientated (Mintz & Currim, 2013), but may also contain imputed components that are not intended to be completely transparent to outsiders. In most cases, however, they reflect management performance more directly and therefore more objectively.

In accordance with Section 87 of the AktG, the supervisory board should ensure that the fixed and variable remuneration of the management board is measured horizontally and vertically in a way that is fair, customary in the industry, and based on performance. From the perspective of principal-agent theory, internal indicators would be preferable to external indicators in this context in order to reduce information asymmetries. In practice, however, especially in capital market-oriented companies, external indicators are almost exclusively used to measure the variable remuneration components.

Family influence is an additional factor that is likely to play a role in such a decision on the basis of remuneration since families have different information needs and access to information than anonymous shareholders of a large stock exchange company who can only rely on external reporting (Hradský, 2020; Jaafar, Wahab, & James, 2012; Jong & Ho, 2018, 2019). However, family influence has not yet been sufficiently empirically investigated in this context (see next sub-section). In this paper, the assumption is formulated that a higher family influence in the dimensions of ownership, management, and the supervisory board should lead to greater use of internal data as a basis for the variable compensation of board members and managing directors.

2.2. Compensation in family firms

The state of research on executive remuneration in family businesses can be characterized as fragmentary. Different perceptions on the concept of a family business, differing labor law regulations international comparisons, as well as the different focus of research make it difficult to compare the theoretical and empirical theoretical and empirical findings.

Hornsby and Kuratko (2003), for example, examined only companies with up to 150 employees, while Cowling (2001) covers companies with up to 499 employees. Qualitative criteria are mentioned in none of those studies. Other studies focused on the use of variable compensation components in different countries and cover the use of a variable in family businesses only in passing.

Further studies have a limited geographical geographic focus, but cover the compensation system in detail. Behrends (2007) points out that medium-sized (family) companies do not provide more intangible incentives than large companies. Another design dimension of incentive systems is

the group of addressees (Becker & Brandt, 2016). It can be seen that variable compensation components that are based on group or company performance tend to be applied more frequently in larger companies.

In summary, it can be stated that clear statements about the implementation of incentive systems in family businesses are not available. Some indications suggest that large non-family businesses tend to provide tangible incentives more often, while intangible incentives are more important for medium-sized companies and family businesses. Empirical findings also give reason to believe that larger companies in Germany are more likely to introduce variable compensation components (Ulrich, 2011a). In other countries, this statement can only be made with regard to the group- or company-related incentives.

2.3. Derivation of hypotheses

As discussed, firms have generally a choice between internal and external indicators as the basis for compensation for managers. AktG argued, that family influence is an important contingency variable (Garengo & Bititci, 2007; Le Breton-Miller & Miller, 2016) for this research topic.

Family businesses are characterized by their special stakeholder network (Gómez-Mejía, Haynes, Núñez-Nickel, Jacobson, & Moyano-Fuentes, 2007). In the area of management accounting, they frequently only have internal metrics (for what?) and develop fewer key figures for external purposes such as reporting to investors and analysts. For this reason, the following hypotheses are derived:

H1 (Hypothesis 1): Family influence impacts the use of internal financial and non-financial data for managerial compensation.

H1a: Family-dominated management boards use more internal financial and non-financial data for managerial compensation.

H1b: Family-dominated supervisory boards use less internal financial and non-financial data for managerial compensation.

H2 (Hypothesis 2): Family influence impacts use of internal financial and non-financial data for managerial compensation.

H2a: Family-dominated management boards use less external financial and non-financial data for managerial compensation.

H2b: Family-dominated supervisory boards use more external financial and non-financial data for managerial compensation.

3. RESEARCH METHODOLOGY — DATA AND VARIABLES

3.1. Study design, sample, and statistical inference

The paper draws from a larger study aimed at understanding the accounting decisions of family firms compared to non-family firms. Based on theoretical considerations, a questionnaire was developed, pre-tested, and sent in November and December 2018 to 10.391 possible respondents, selected by random from the Bisnode database in Germany. The final sample size was n = 113.

The study was explicitly addressed to owners as well as members of the board of directors, the management, or the supervisory board.

The industry distribution of the study was as follows: 32 percent industrial, 27 percent services, 10 percent retail, 9 percent information and communications, 7 percent healthcare, 5 percent logistics and transportation, 10 percent other.

Given the nature of the research question and measured variables, the study employs ordinal logistic regression which estimates the probability of getting a certain answer. Based on the recent discussion of the widespread null hypothesis significance testing (NHST) (Fanelli & Ioannidis, 2013; Ioannidis, 2005; Wasserstein, Schirm, & Lazar, 2019; Wasserstein & Lazar, 2016), we employ a Bayesian approach for statistical inference (Kruschke & Liddell, 2018). This approach estimates the posterior probability of the hypothesis given the data and a prior probability. For the prior probability, one can either use previous knowledge, which is not existing here to the best of our knowledge, or a weakly informative prior distribution (Gelman, Jakulin, Pittau, & Su, 2008; Gelman, 2008).

3.2. Measurement of variables

3.2.1. Dependent variables

The survey asked respondents on the extent to which they used internal ratios for managerial compensation (*INT_BASE*) and external ratios for managerial compensation (*EXT_BASE*). Both variables are measured on a scale from 1 = agree fully to 7 = disagree.

3.2.2. Independent variables

As hypothesized, family influence could impact the choice of compensation base. The survey asked for the composition of supervisory boards, management boards, and ownership. For supervisory boards, the respondents had to name the number of members (Clarysse, Knockaert, & Lockett, 2007) and how many of them were family members (Corbetta & Salvato, 2004). From that, we calculate the ratio of family influence (*FAM_SB*) which is similar to the substantial family influence (SFI) (Astrachan, Klein, & Smyrnios, 2002; Chrisman, Chua, Pearson, &

Barnett, 2012). Similar questions were used for the composition and family influence of the management board (*FAM_MGMT*). For measuring family ownership (Villalonga & Amit, 2006) (*FAM_OWNERSHIP*), we asked to name the three most important owner groups and their percentages of ownership. Based on this information. A percentage of family ownership is calculated. Thus, we subsume the type of ownership and the share of ownership under the umbrella term ownership.

3.2.3. Control variables

As is typical in contingency studies on management accounting (Gerdin & Greve, 2004; Hayes, 1977; Otley, 1980; Waterhouse & Tiessen, 1978), we use a set of control variables that might influence the choice of performance measures, namely firm age (LiPuma, Newbert, & Doh, 2013), accounting standards applied (Mnif & Gafsi, 2020), perceived environmental uncertainty (Buchko, 1994; Duncan, 1972) and group affiliation. Since several studies indicate that firm age is an influencing factor on management control systems (Moores & Mula, 2000; Speckbacher & Wentges, 2012), it seems reasonable to include firm age as a control variable. Moreover, uncertainty in the environment has been found to significantly impact the accounting systems (Chenhall, 2003; Moores & Mula, 2000) as well as the choice of management practices in general (Bloom, Genakos, Sadun, & Van Reenen, 2012). The last control variable is group affiliation, which determines the accounting standards, accounting choices (Carney, Gedajlovic, Heugens, van Essen, & van Oosterhout, 2011), and management practices in general (Bloom et al., 2012).

4. EMPIRICAL RESULTS

4.1. Descriptive statistics

While all respondents answered a question on their compensation base, compensation of supervisory boards are not answered by all respondents. We assume a significant part of firms does not have a supervisory board given that this is not required for all types and sizes of firms. Table 1 shows the descriptive statistics of the survey.

Table 1. Descriptive statistics

		INT_BASE	*EXT_BASE*	*FAM_OWNERSHIP*	*FAM_MGMT*	*FAM_SB*
N	Valid	113	113	107	113	60
	Missing	0	0	6	0	53
Mean		4.009	3.947	0.643	0.275	0.204
Median		4	4	1	0	0
Std. Deviation		2.389	2.367	0.452	0.391	0.351
Minimum		1	1	0	0	0
Maximum		7	7	1	1	1

Table 2 shows the correlations within the sample. There is a positive correlation between family ownership, family management, and the family's involvement in the supervisory board.

Table 2. Correlations between variables

| *Correlation coefficients (Kendall's tau)*		*INT_BASE*	*EXT_BASE*	*FAM_OWNERSHIP*	*FAM_MGMT*	*FAM_SB*
INT_BASE	Coefficient	1	-0.01	0.016	0.011	-0.053
	p (2-tailed)	.	0.897	0.841	0.888	0.632
	N	113	113	107	113	60
EXT_BASE	Coefficient	-0.01	1	-0.088	-0.069	0.124
	p (2-tailed)	0.897	.	0.279	0.376	0.259
	N	113	113	107	113	60
FAM_OWNERSHIP	Coefficient	0.016	-0.088	1	**0.491**	**0.472**
	p (2-tailed)	0.841	0.279	.	0	0
	N	107	107	107	107	56
FAM_MGMT	Coefficient	0.011	-0.069	0.491	1	**0.568**
	p (2-tailed)	0.888	0.376	0	.	0
	N	113	113	107	113	60
FAM_SB	Coefficient	-0.053	0.124	0.472	0.568	1
	p (2-tailed)	0.632	0.259	0	0	.
	N	60	60	56	60	60

4.2. Hypothesis 1

The first hypothesis postulates an impact of family influence on the use of internal financial and non-financial data for managerial compensation. Specifically, we distinguish between a positive effect of family-dominated management boards on the use of internal data as a compensation base (*H1a*) and a negative effect of family-dominated supervisory boards on the use of internal data for compensation (*H1b*). The results of the ordinal regression are shown in Table 3 and histograms for all variables are depicted in Figure 1. We find evidence supporting both hypotheses, yet the credible intervals include positive and negative values which indicates a large dispersion of the estimates.

Table 3. Regression results for *H1*

	n_eff	*Rhat*	*Mean*	*MCSE*	*SD*	*2.50%*	*97.50%*
FAMILY_MGMT	4210	1	**0.456**	0.008	0.502	-0.527	1.429
FAMILY_SB	4621	0.999	**-0.306**	0.007	0.497	-1.277	0.654
FAM_OWNERSHIP	5634	1	0.002	0.004	0.296	-0.587	0.562
zSize	3635	0.999	0.078	0.001	0.073	-0.064	0.223
zAGE	4479	1	-0.002	0.001	0.094	-0.187	0.179
zPEU	4291	0.999	-0.09	0.002	0.128	-0.343	0.152
GROUP	3810	1	**-0.267**	0.004	0.271	-0.794	0.274
1|2	5276	1	-1.043	0.004	0.281	-1.601	-0.5
2|3	5206	1.001	-0.658	0.004	0.271	-1.204	-0.142
3|4	5442	1.001	-0.56	0.004	0.272	-1.097	-0.037
4|5	5306	1.001	0.178	0.004	0.266	-0.338	0.692
5|6	5375	1.001	0.264	0.004	0.264	-0.246	0.776
6|7	5352	1.001	0.695	0.004	0.27	0.17	1.214

Figure 1. Histograms for *H1*
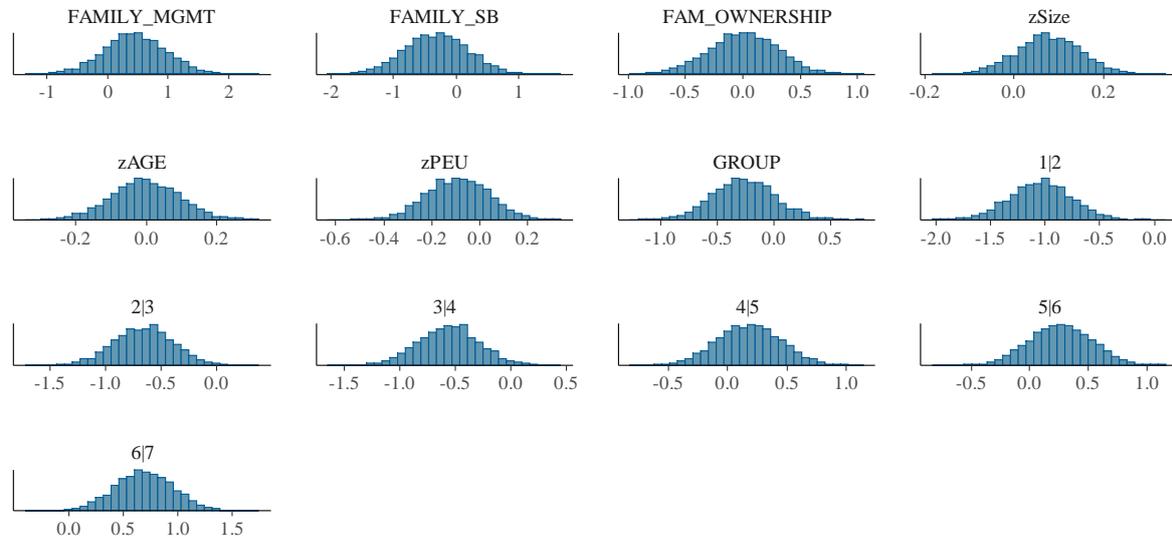
An interesting result concerning our controls is the negative effect of group affiliation on the use of internal data for compensation.
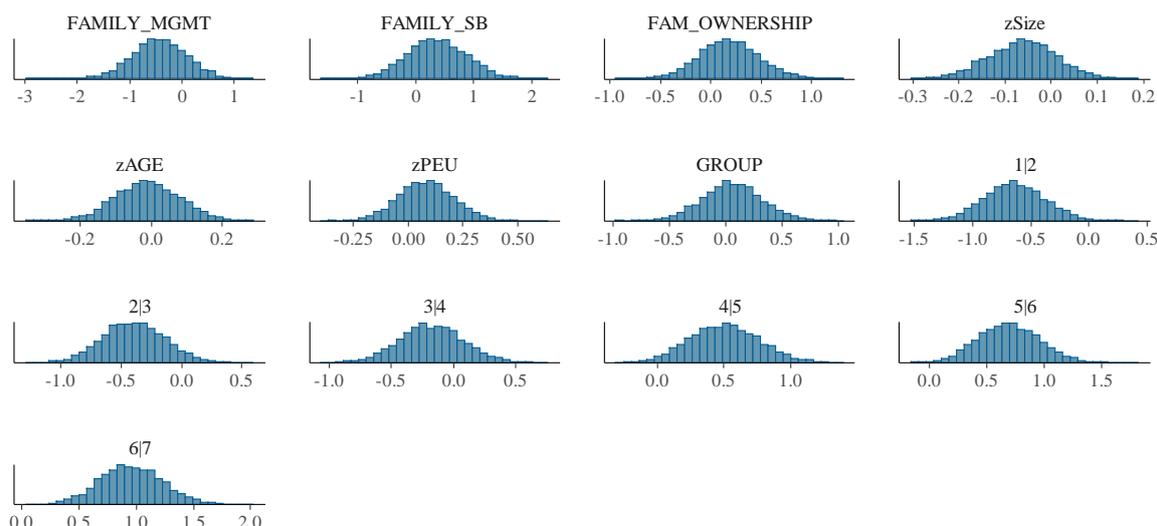
4.3. Hypothesis 2

The second hypothesis postulates the effects of family on the use of external data as a compensation base. Again, we distinguish between management and supervisory boards. Here, we postulate a negative effect of family-dominated management boards on the use of external data for compensation (*H2a*) and a positive effect of family-dominated supervisory boards on the use of external data for compensation (*H2b*). Table 4 and Figure 2 document the regression results. We find also support for our hypotheses, but again with broad credible intervals indicating a large dispersion of the estimates. Control variables do not exert a significant impact on the use of external data for compensation.

Table 4. Regression results for *H2*

	n_eff	*Rhat*	*Mean*	*MCSE*	*SD*	*2.50%*	*97.50%*
FAMILY_MGMT	4427	1	**-0.425**	0.008	0.512	-1.447	0.537
FAMILY_SB	4132	0.999	**0.370**	0.008	0.514	-0.609	1.358
FAM_OWNERSHIP	4846	1	0.18	0.004	0.299	-0.396	0.784
zSize	4188	1	-0.062	0.001	0.073	-0.208	0.081
zAGE	5020	1.001	-0.011	0.001	0.092	-0.196	0.167
zPEU	4561	0.999	0.085	0.002	0.126	-0.155	0.337
GROUP	4370	0.999	0.058	0.004	0.268	-0.462	0.604
1|2	5339	1	-0.643	0.004	0.26	-1.147	-0.132
2|3	5348	1	-0.395	0.003	0.255	-0.879	0.107
3|4	5271	1	-0.174	0.004	0.256	-0.663	0.337
4|5	5099	1	0.503	0.004	0.262	0.001	1.023
5|6	5236	1	0.688	0.004	0.267	0.181	1.223
6|7	5297	0.999	0.954	0.004	0.273	0.427	1.497

Figure 2. Histograms for *H2*

5. DISCUSSION

The starting point of this study was the hypothesized impact of family influence and supervisory board composition on the use of different quantitative bases for executive compensation.

To answer this question, we use sample data from a study of family firms, SMEs, and accounting structure. We distinguish between two different compensation bases: internal ratios, which are mostly derived from managerial accounting figures, and external ratios, which are derived from financial accounting data and are mainly intended for external investors and the capital market.

The evidence on the determinants of the use of internal metrics as a basis for compensation is a little different than expected: the more family and owner involvement in management, the more they use internal metrics, but the opposite is true for family-dominated boards. This could be due to the different roles of the boards in the German corporate governance system. If the family is integrated into the decisions of the management board, it naturally also participates via compensation in the effects created by the internal ratios that can be influenced. The situation is different if the family is only represented on the supervisory board: in the German corporate governance system, the supervisory board oversees the management and, together with the shareholders' meeting, also determines the management's compensation components. In addition, the supervisory board can be held liable if it has not checked whether the compensation of the management board is appropriate. It could therefore be that supervisory boards typically trust externally audited and verifiable accounting data more than internal information provided by managers, which might be

subject to manipulations. The supervisory board might suspect that managers have an incentive to provide data in their favor.

The evidence on the determinants of the use of external metrics as a basis for compensation is consistent with our hypothesis (*H2a*): family-dominated boards rely less on external data. We hypothesize that they are better involved in the business and have deeper insights, so they do not need to rely on some external financial accounting data to understand their company's current situation and prospects. This makes particular sense in the German two-circle system of accounting, in which a distinction is made between an internal circle relevant for corporate management and the accounting circle intended for external reporting and tax assessment (Leuz & Wüstemann, 2003).

One issue that we did not sufficiently discuss in the theoretical and empirical sections due to the lack of a literature base is the evidence that group membership has a negative impact on the use of internal metrics as a basis for compensation. At first glance, one might think that within a group, after all, internal figures are available and one would not need to rely on external figures to be reported to the capital market and other groups. However, this view ignores potential principal-agent conflicts within the Group. It could be that, particularly within a group, there are conflicts between the overall management board, the divisional management boards, and management accounting, which lead to the divisional management board being reluctant to pass on internal figures in the group to

headquarters. On the other hand, it could be that the divisional board distrusts the internally reported figures of the decentralized units since the divisional boards would be incentivized on the basis of figures that they themselves have reported. In this respect, the external key figure would also be the safer alternative from the perspective of headquarters. However, a more in-depth research is still needed here.

6. CONCLUSION

This study has thrown up some interesting findings, including the involvement of the business family in various subsystems of the business (ownership, management, oversight). Unfortunately, from our study design, we could not elicit qualitative reasons why the family in a particular constellation of ownership, management, and oversight tends to prefer the internal or external metrics as the basis for management compensation. In addition to the rather small sample, the focus on the geographic region of Germany with a very specific corporate governance system, and the wide credible intervals of the empirical investigation, can be seen as limitations of the paper that might be addressed in qualitative follow-up studies. In addition, socioemotional wealth (Gómez-Mejía et al., 2007), stakeholder theory (Freeman, 2010), and stewardship theory (Davis, Schoorman, & Donaldson, 1997) could provide further theoretical insights into management compensation in family firms.

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