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ORIGINAL PAPER

Heterogeneity in family firm finance, accounting and tax policies: dimensions, effects and implications for future research

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Abstract

Family firms, as a unique organizational form, are associated with distinct finance, accounting, and tax behaviors. Prior research indicates that heterogeneity among family firms is linked to significant variation concerning these outcomes. However, the scope of dissimilarities, their empirical operationalization, and the corresponding effects of heterogeneity remain largely unexplored. Therefore, this study maps the dimensions of family firm heterogeneity addressed in extant research based on a systematic review of 91 articles published between 1999 and 2021. Focusing on heterogeneity in corporate governance and wider firm characteristics, the most relevant effects of heterogeneity for family firm finance, accounting, and tax policies are discussed in depth. The results across the 24 identified dimensions of heterogeneity show that heterogeneity is a key factor to be considered by family business scholars. Previous heterogeneity research has specifically focused on heterogeneity rooted in differences concerning the firms' management, ownership structure, board composition, and transgenerational issues. However, this study also finds that additional conceptual and practical challenges emerge at the heterogeneity level of analysis. Several recommendations for advancing the understanding of family firm heterogeneity have been derived. In particular, the results indicate a need to distinguish more clearly between sources of heterogeneity that are strictly specific to family firms and those that extend beyond the family firm level, thereby proposing a refined, more restricted approach toward family business heterogeneity.

Keywords Family firms · Heterogeneity · Finance · Accounting · Tax

JEL Classification G32 · G35 · M41 · M42 · H26

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1 Introduction

The field of family business research has primarily evolved around the perspective of family firms as a unique type of organization, as well as the implied consequences of family involvement for a wide array of firm outcomes (Fang et al. 2019; Gedajlovic et al. 2012; Sharma 2004). Recently, studies on the differences between family firms have become increasingly relevant (Dibrell and Memili 2019; Neubaum et al. 2019). For about a decade, the theme of *family business heterogeneity* has been eliciting continuous research interest and has been widely discussed (Chua et al. 2012; Nordqvist et al. 2014; Rau et al. 2019). Notably, family firms are subject to various sources of heterogeneity, including variations in their ownership structure (Cascino et al. 2010; Chen et al. 2014; Chen et al. 2021; Huang et al. 2012) or management composition (Burgstaller and Wagner 2015; Sciascia et al. 2013; Wu et al. 2007). Other family business-specific sources of variation such as the extent of non-family involvement and its role in family firm conflicts (Rosecká and Machek 2022) or the role of family businesses' transgenerational intention, have also been studied (Suess-Reyes 2017). These differences have been found to affect family firm financing behavior (Schmid 2013; Thiele and Wendt 2017), the way family firms manage and report their earnings (Umans and Corten 2022), and the extent to which family firms engage in tax avoidance (Temouri et al. 2021).

Family firm heterogeneity can be defined as "the range of categorical and/or variational difference(s) between or among family firms at a given time or across time" (Daspit et al. 2021). In addition to the perspective of how family firms stand out vis-á-vis their non-family counterparts, questions about potential dissimilarities among family firms that may explain distinct behaviors or dynamics within specific sub-groups of family firms are being raised. Recent reviews have found that family firm heterogeneity constitutes an important yet under-studied phenomenon in the fields of finance, accounting, and tax (FAT) research (Brune et al. 2021; Michiels and Molly 2017). However, given the broad consensus that the heterogeneity of family firms represents an important phenomenon, several important questions remain unanswered. Heterogeneity is frequently used as an umbrella term for a wide array of differences among family firms. However, the single dimensions, which are collectively referred to as heterogeneity, are rarely explored in further detail, resulting in a lack of understanding concerning the scope and consequences of heterogeneity (Daspit et al. 2021; Dibrell and Memili 2019).

In contrast to prior reviews regarding family firm FAT research (Brune et al. 2021; Michiels and Molly 2017; Molly and Michiels 2021; Prencipe et al. 2014; Salvato and Moores 2010), this study takes a different perspective. While extant reviews have focused on a set of dependent variables, our analysis integrates research findings from a broader range of domains and variables. This study aims to understand the role of heterogeneity across different streams of financial research on family firms rather than review, for instance, family firm capital structure decisions or financial reporting quality per se. Therefore, our review does not compete with prior works thematically but builds on their findings and directly addresses their calls for research (Brune et al. 2021; Michiels and Molly 2017; Molly and Michiels 2021).

The different literature streams on family firm FAT research provide a fertile ground for an inclusive research design to investigate the role of heterogeneity comprehensively. As will be elaborated further, all literature streams are closely interconnected, for instance, with regard to underlying commercial processes and the managerial personnel involved within the family firms (Hiebl 2012). Moreover, our analysis shows that these fields rely on a similar set of methodologies with a strong dominance of empirical quantitative designs, allowing for a systematic review of the effects of heterogeneity across these domains.

This study aims to answer the following three main research questions:

RQ1 Which dimensions of heterogeneity have been studied in family business finance, accounting, and tax research thus far? This question resembles the future research directions proposed by Daspit et al. (2021).

RQ2 Which effects on finance, accounting and tax outcomes are associated with different aspects of family firm heterogeneity within the literature?

RQ3 Which implications can be drawn for further research in this area in terms of existing gaps and promising further avenues for research?

As a first contribution to the ongoing discourse on family firm heterogeneity, this review derives 24 dimensions of family firm heterogeneity from the literature that have been employed in empirical studies to distinguish family firms. The analysis facilitates further research progress by providing scholars with an overview of the scope of dissimilarities among family firms observable in FAT research. As a second contribution, this review particularly emphasizes sources of variations that strongly influence family firm outcomes and provides a synthesis of the empirical literature on heterogeneity across different dimensions of heterogeneity, integrating partially dispersed literature streams.

The article is structured as follows. Section 2 introduces the research framework and discusses in which ways family firm heterogeneity may alter agency conflicts within family firms, and thereby, affect their FAT policies. In addition, the sample selection process is described, and the dimensions of heterogeneity in the literature are introduced. Their respective effects are reviewed in detail in Sect. 3. In Sect. 4, the results are being discussed, leading to a proposed model of heterogeneity applicable to FAT in family firms. Furthermore, recommendations for further research as well as limitations are discussed before the work is concluded in Sect. 5.

2 Research framework and methodology

2.1 Agency theory and the role of family firm heterogeneity in finance, accounting, and tax policies

Before elaborating their specific relationships, we briefly define finance, accounting and tax (FAT). First, in line with Michiels and Molly (2017), *finance* encompasses all matters associated with the provision of financial resources needed to ensure the

viability of the business, including but not limited to debt capital, public/private equity and retained earnings as a source of funding (or contrary, the distribution of funds via dividends).

Second, following Moores (2009), *accounting* is defined as the "body of phenomena associated with the economic performance of individuals or groups responsible for the utilization of economic resources", thereby addressing subject matters such as financial accounting and auditing. Within accounting research among family businesses, especially financial reporting quality is studied frequently and is of central importance for the analysis (Prencipe et al. 2014). Simultaneously, we also consider audit quality as a constituent of financial reporting quality. As such, financial reporting quality is widely regarded as a function of audit quality, since higher quality audits provide greater assurance of high financial reporting quality, indicating an interrelated or even recursive relationship (DeFond and Zhang 2014; Gaynor et al. 2016).

Third, *tax* entails all matters related to corporate taxation, e.g., the active management of tax liabilities in a business environment. Within the family business domain, this predominantly includes research on corporate tax avoidance, tax aggressiveness or tax evasion, rather than, e.g., normative tax issues (Brune et al. 2019a; Chen et al. 2010; Steijvers and Niskanen 2014). These represent distinct yet similar constructs at decreasing levels of legality within the conceptual umbrella of corporate tax planning (Lietz 2013). Given that these terms are often used interchangeably in empirical research, we employ an inclusive definition and refer to a uniform'tax avoidance' term, unless specified otherwise.

Collectively, all three domains of FAT are directly interconnected within the management of a firm's financial resources. Among family firms, this may prove particularly true since these are regularly addressed by a select group of managers, and depending on the firm size, these roles may be closely related or even converge in smaller firms (Hiebl 2012). Furthermore, this interaction is particularly relevant within family firms, given the firms' unique composition of providers of capital, managers, and ultimately, beneficiaries of these corporate policies within and beyond the owning family (Brune et al. 2021).

2.1.1 Heterogeneity as a determinant of agency problems in family firms

Within the literature on FAT, agency theory has been identified as the dominant theoretical perspective (Michiels and Molly 2017; Molly and Michiels 2021; Prencipe et al. 2014). While it is clearly acknowledged that multi-theoretical perspectives are needed to account for both the idiosyncratic behavior of all corporate actors as well as reflect ongoing regulatory changes related to corporate purpose and corporate governance (Velte and Weber 2021), agency theory to date provides the most comprehensive theoretical fundament which is equally applicable to finance, accounting and tax research. More importantly though, agency theory reveals promising angles towards family firm heterogeneity, which warrants further analysis.

Following the framework of Villalonga et al. (2015), several family specific agency conflicts can be distinguished. Generally, the agency theory considers the firm as a bundle of contracts, emphasizing potential conflicts arising from

asymmetric information between utility-maximizing agents who act on behalf of a principal (Jensen and Meckling 1976; Ross 1973). For the specific case of family firms, Villalonga et al. (2015) describe them as "host to a multi-tier, concatenated agency structure in which managers (both family and nonfamily) act as agents for shareholders, including the controlling family shareholders who appoint them". Additionally, the authors establish the family at large as the 'superprincipal' of the controlling family shareholders, thus, on aggregate leading to four distinct agency problems: conflicts of interest between owners and managers (AP I), controlling family shareholders and minority shareholders (AP II), shareholders and creditors (AP III) and between family shareholders and the family at large (AP IV).

The classical agency conflict between owners and managers (AP I) is frequently alleviated in family firms (Chrisman et al. 2004; Prigge and Thiele 2019). The separation between owners and managers is often less clearly delineated, up to the point of identity between family owners and managers (Goel et al. 2012). Even where ownership is separated from management, family owners regularly possess both the ability and incentive to monitor managers efficiently because of significant shareholdings (Anderson and Reeb 2003; Audretsch et al. 2013; Morck et al. 1988). Whether or not these agency advantages materialize may depend on various factors, including firm size and ownership dispersion (Miller et al. 2013).

In turn, this gives rise to principal-principal conflicts between majority and minority shareholders (AP II), in which minority owners are more exposed towards potential opportunistic behavior of powerful majority owners (Morck et al. 2005; Villalonga and Amit 2006). Regarding conflicts of interest between shareholders and creditors (AP III) and the corresponding agency problem of debt, competing arguments exist which indicate either higher or lower use of debt financing (Burgstaller and Wagner 2015; Hansen and Block 2021). Collectively, prior evidence tends to suggest that the incentives of family shareholders are better aligned with those of creditors than for other types of shareholders, giving them better and cheaper access to credit (Villalonga et al. 2015). Finally, conflicts of interest can also arise between family shareholders and the family at large (AP IV), in which the family at large as the superprincipal takes important decisions as part of the firm's governance systems through various types of contracts such as family constitutions, prenuptial agreements or wills (Villalonga et al. 2015).

Overall, the group of family firms is thus collectively associated with similar agency dynamics (Miller and Le Breton-Miller 2006). At the same time, prior research has indicated that family firms differ significantly from one another in terms of their FAT behaviors, proven largely by studies which rely on agency theoretical research designs (Brune et al. 2021; Michiels and Molly 2017).

From an agency theoretical point of view, we therefore consider family business heterogeneity as a constituent that alters the family firms' distinct agency conflicts, ultimately being associated with variation among FAT policies. This reasoning follows prior research which has documented that family firms should be viewed as a heterogeneous group, rooted in firm-level differences in the severity of agency conflicts (Ali et al. 2007; Chen et al. 2021). Similarly, Yoshikawa and Rasheed (2010) elaborate that the agency setting in family firms is more nuanced than the assertion that agency problems disappear in the presence of concentrated ownership or

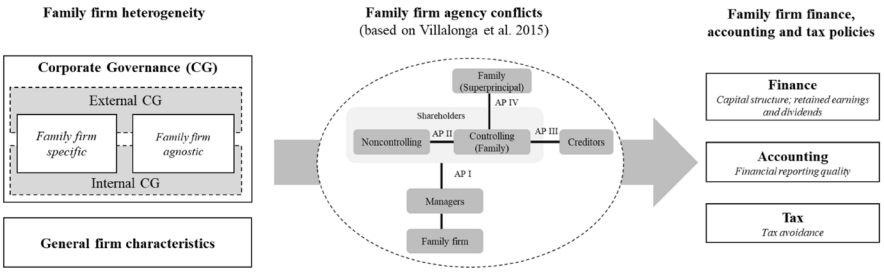

Fig. 1 Research framework

that family owners would naturally be inclined to appropriate the wealth of minority shareholders. Thus, they suggest theorizing based on the understanding of the "*players […] and the context of the interaction*" which essentially describes the idea of heterogeneity.

Based on this notion, Fig. 1 introduces the research framework which guides the further analysis. As main building blocks it considers heterogeneity that originates from differences in corporate governance and other firm characteristics as determinants of the family businesses' agency conflicts, leading to varying outcomes among its FAT policies.

Heterogeneity based on differences in corporate governance is considered among the dominant drivers of family firm heterogeneity overall (Carney 2005; Nordqvist et al. 2014) and many of the heterogeneity variables covered in the literature turn out to be governance variables which are traditionally studied as means to alleviate agency conflicts (Villalonga et al. 2015). There exist several non-homogeneous approaches to define corporate governance (Tricker 2015), including the seminal work of Shleifer and Vishny (1997) who define corporate governance as means for suppliers of finance to assure their return on invest, widely considered as too narrow as of today. Slightly more inclusive, Becht et al. (2003) define corporate governance as "the reconciliation of conflicts of interest between various corporate claimholders". Irrespective of the definition used, researchers often view corporate governance mechanisms as falling into one of two groups: those internal to firms and those external to firms (Gillan 2006). Following Gillan, in Fig. 1 we distinguish between *external* governance mechanisms (e.g., ownership structure and capital markets) as well as *internal* corporate governance mechanisms (e.g., board and management). Based on a more practice-oriented approach towards governance, the OECD (2015) further regards corporate governance as providing "the structure through which the objectives of the company are set, and means of attaining those objectives". We consider this as a particularly important aspect for the case of family firms who are frequently discussed as having a more diverse set of objectives such as financial and nonfinancial goals (Gomez-Mejia et al. 2011; Holt et al. 2017; Zellweger et al. 2013). Throughout the analysis, we will address these aspects as family-specific determinants of corporate purpose and thus, as a component of the firm's governance system. Within the literature, also family firm goals and resources are considered as important sources of heterogeneity (Chua et al. 2012; Michiels and Molly

2017). Yet, they are less prevalent in the literature streams relevant to the review and are therefore not emphasized specifically (see Fig. 1).

Conceptually, we further distinguish between governance heterogeneity which is strictly family firm specific, or which is agnostic of family firms, i.e., which supersedes the family firm level (see Fig. 1). For instance, the CEO being a family member or not, the distribution of shares among family members or the extent of supervision through family board members represent family specific matters of the governance system. At the same time, differences in governance may be equally applicable to non-family firms, e.g., the general effect of dispersed ownership or the existence of other minority blockholders. Overall, these elements of heterogeneity directly affect the existence and magnitude of agency conflicts in family firms (Ali et al. 2007; Chen et al. 2021; Yoshikawa and Rasheed 2010).

2.1.2 Instances of heterogeneity, their agency consequences, and effects for FAT policies

Based on the conceptual framework in Fig. 1, the specific relationships are being elaborated below, indicating how instances of heterogeneity affect agency conflicts and ultimately, materialize as changes in FAT policies. When it comes to *finance*, debt capital is widely considered as a mechanism to prevent managerial misbehavior, e.g., due to the disciplining effect of regular interest payments (Jensen 1986). From a heterogeneity perspective, variation in the governance system of the family firm, such as different board structures, have direct consequences for the agency problems linked to debt capital. Consistent with agency theory, González et al. (2013) find that higher family presence in the board implies superior direct monitoring and results in reduced agency costs (AP I) and thereby, lower demand for debt as a means to prevent managerial misbehavior. Regarding the general role of board independence, Hülsbeck et al. (2019) show that the distinction between dependent and independent boards must even be extended to account for different functions performed by the board (value protection and value creation). Generally, prior research concerning boards of directors emphasizes several important pitfalls linked to boards as an endogenously determined institution, which need to be considered within our analysis (Hermalin and Weisbach 2003). Beyond family firms' boards, another source of heterogeneity can be associated with the firm's CEO, who is either a family member or a hired non-family CEO. Amore et al. (2011) document that non-family CEOs are associated with higher owner-manager agency costs (AP I) and in turn, more debt financing is used as a governance mechanism to discipline external managers. But also the differences in the relationship between active and passive family members can exert influence on agency costs in family firms (Michiels et al. 2015). As such, inactive family members may try to mitigate managerial opportunism, leading to a higher demand for debt (Molly et al. 2010), especially in later generations where agency costs tend to increase (Blanco-Mazagatos et al. 2007). Depending on whether all respective family members are involved as owners or not, this setting can be framed either as AP I (owner-manager) or as AP IV (family as superprincipal).

In terms of *accounting* in family firms, other agency problems become relevant which are equally dependent on elements of family firm heterogeneity. Generally,

managerial opportunism can be linked to discretion in accounting choices. For instance, different forms of earnings management give rise to agency costs regarding the potential expropriation of minority shareholders by dominant family owners who may exploit private benefits of control (Salvato and Moores 2010; Thesing and Velte 2021; Umans and Corten 2022). Within the family firm accounting literature, two competing views are widely discussed which have a direct effect for financial reporting quality: the role of an improved alignment of interest between owners and managers (AP I) and the entrenchment of family owners versus minority owners (AP II) (Ali et al. 2007; Chau and Gray 2010; Wang 2006; Yang 2010). In line with the wider governance literature, family firms tend to benefit from the independence of their board and the board chair in particular (Bansal 2021; Prencipe et al. 2011; Prencipe and Bar-Yosef 2011), being associated with higher quality financial reporting. Heterogeneity-wise, beyond board independence especially firms managed by family members exhibit higher financial reporting quality, rooted in lower agency conflicts between owners and managers (Ali et al. 2007; Prencipe et al. 2011; Yang 2010). As another factor contributing to the firm's financial reporting quality, also auditors are subject to the agency implications of family firm heterogeneity. Prior research shows that auditors react to these agency consequences in their assessment of audit risk and effort based on heterogeneity such as ownership characteristics, family relationships and general family firm attributes (Hope et al. 2012; Schierstedt and Corten 2021).

Finally, *tax* issues in family firms are subject to agency problems which depend upon heterogeneity. Generally, avoiding taxes and, thus, increasing the distributable post-tax income, can be regarded as in the best interest of the owners (Chen et al. 2010; Kovermann and Velte 2019). However, excessive tax avoidance (e.g., to boost managerial rewards) entails significant reputational or even litigation risks at the expense of the principal (Kovermann and Wendt 2019). The general notion that agency problems tend to increase across generations (Villalonga and Amit 2006) is observable in tax research specifically. For various research designs and proxies, there is substantial evidence that proximity to the founder as an individual, but also the family firm generation in general, directly affect the firm's tax policies. Family-founder firms tend to avoid taxes to a lesser extent (Bauweraerts et al. 2020; Brune et al. 2019a; Clemente-Almendros et al. 2021). Yet, also other aspects of heterogeneity are found to alter the firm's agency conflicts and materialize in diverging tax strategies, such as higher CEO ownership shares that catalyze tax aggressiveness (Steijvers and Niskanen 2014) or excessively entrenched family owners that are associated with higher tax avoidance (Mafrolla and D'Amico 2016).

After establishing the theoretical framework, several examples of heterogeneity have been introduced from an agency theoretical point of view, exhibiting direct consequences for FAT policies in family firms. In the next section, we discuss the employed method and sample selection process.

2.2 Method and sample selection

We conduct a systematic literature review that represents a well-established method to map, assess, and further develop a body of literature (Tranfield et al. 2003).

Systematic literature reviews rely on a systematic, transparent, and reproducible process for identifying academic literature to answer a clearly defined research question (Fisch and Block 2018). The literature sample selection follows the recent methodologic guidance of Hiebl (2021) as a benchmark for conducting rigorous systematic reviews, which emphasizes structure, comprehensiveness, and transparency as key requirements. A database-driven search approach is employed using the Web of Science and Scopus multipublisher databases. To ensure the comprehensiveness of the literature sample, the keyword search is complemented with additional consideration of all references of widely cited reviews regarding family business FAT research (Brune et al. 2021; Michiels and Molly 2017; Prencipe et al. 2014; Salvato and Moores 2010). Building up on their queries, the employed search terms take the following form[1]:

(*Finance entity* OR *Accounting entity* OR *Tax entity*)
AND *Family firm entity* AND *Heterogeneity entity*.

The full sample selection process is documented in Table 1. Accordingly, a total of 1818 articles have been retrieved from the Web of Science and Scopus databases. The search results of both databases are comprehensive. While the second database (Scopus) has contributed 340 search results, excluding duplicates (207) and applying all further retention criteria described below, only one additional sample-relevant article remained, indicating a saturation in the search results. In addition, 199 potentially relevant articles have been derived from the literature samples of Michiels and Molly (2017), Salvato and Moores (2010), and Prencipe et al. (2014), leading to a search result of 2017 articles in total.

This scope can be substantially reduced by excluding duplicates (451), articles outside the subject area such as medical publications (1016), non-empirical articles (44), articles that are not English peer-reviewed publications (36), or those not related to family business and/or finance, accounting and tax phenomena (195).

Furthermore, additional content-related retention criteria have been applied. Since the analysis focuses on the internal perspective of how heterogeneity affects FAT policies within the respective firms, articles dedicated to performance outcomes (68) are excluded from the review, similar to the approach of Salvato and Moores (2010). In the context of our review, performance outcomes are regarded as a second-order function of internal corporate policies and are beyond the scope of the analysis. Furthermore, given the significant focus on corporate governance variables as drivers of heterogeneity, we further exclude research designs that consider governance as a dependent variable (20) to avoid ambiguity. This step excludes dependent variables, such as executive remuneration, employee stock programs, or ownership structure. Finally, articles associated with the broad literature on risk-taking, investment, and divestment decisions, as well as transaction-related studies that address mergers and acquisitions (M&A) cases are omitted (35). These articles have been excluded from the review because they exhibit both a pronounced focus on

[1] A full overview of the search terms is presented in the Appendix.

Table 1 Sample selection process

		Step	# of articles
Initial search	1	Total results of keyword search in Scopus and Web of Science databases	1818
	2	Additional items based on defined review articles	199
		Total search results	**2017**
Data cleaning	3	Excluding duplicates	(451)
	4	Excluding unrelated articles (e.g., medical research)	(1016)
	5	Excluding articles which are not English peer-reviewed articles	(36)
	6	Excluding articles which do not address family firm finance, accounting or tax phenomena	(195)
		Sub-Total search results after data cleaning	**319**
	7	Excluding non-empirical studies	(44)
Content-related	8	Excluding performance as dependent variable	(68)
	9	Excluding governance as dependent variable	(20)
	10	Excluding investment, risk taking and transaction related research (MBO/MBI, M&A etc.)	(35)
Quality-related	11	Excluding articles which are not ranked VHB JOURQUAL > D or ABDC > C	(7)
		Preliminary sample	**145**
	12	Excluding articles which lack family business heterogeneity data	(54)
		Final sample	**91**

single cases and simultaneously focus on an outside perspective toward family firms (e.g., deal valuations *of* family firms or family firms as portfolio companies), and thus, do not relate to the review purpose that focuses on heterogeneity effects toward internal corporate policies. As a quality-related retention criterion, all articles must be ranked in the VHB JOURQUAL 3 or the ABDC 2019 lists, which represents a relatively inclusive search approach.

To generate the final literature sample, the remaining 145 articles are fully analyzed individually to validate the representation of heterogeneity within the papers. Taking into account the definition of Daspit et al. (2021), categorical and variational differences among family firms at a given time or across time are relevant to our review. Studies that do not consider data regarding such intra-group differentiation of family firms are excluded from the sample after reviewing each paper carefully (54). Therefore, the final sample consists of 91 relevant peer-reviewed journal articles that empirically address heterogeneity within family business FAT research. Table 2 provides an overview of the distribution of sample articles across years of publication (Panel A), journals (Panel B), data sources (Panel C), research sample composition (Panels D and E), country (Panel F), and theories used (Panel G).

Heterogeneity-related research has been growing over time, with a preliminary peak in publications between 2014 and 2015, which is reasonable given the preceding seminal work of Chua et al. (2012) that opened up the topic. Publications increased substantially in 2021, indicating growing research interest. The studies are equally dispersed across accounting and finance journals, business and management journals, and family-firm-specific outlets. While most of the research relies on archival data, the prevailing sample composition among the articles is striking. An equal number of studies address public and private family firms; however, hardly any of the reviewed literature addresses both at once. Similar observations can be made regarding geographical coverage, which mostly relies on single-country designs. In terms of theory, agency theoretical perspectives are predominant, which are complemented by less frequent socioemotional wealth (SEW) considerations.

Three main clusters of research topics have been identified in the search: "T1 Finance", "T2 Accounting (esp. financial reporting quality)", and "T3 Tax (esp. tax avoidance)" as shown in Table 3. These clusters will guide the further analysis process regarding the drivers of heterogeneity within the literature sample.

2.3 Dimensions of heterogeneity

An iterative approach has been employed to answer the first research question (RQ1). First, all variables from the primary studies that met the introduced definition of family firm heterogeneity (i.e., "variational or categorical differences between or among family firms at a given time or across time") have been compiled. These variables have been considered in various ways within the primary studies, either by explicitly incorporating them as explanatory variables in various forms of regression models, by analyzing their effects as moderators or mediators, or based on analyses of distinct subsamples to compare the behaviors of two or more slices of data. Based on a large set of all items, clusters of variables have been identified in

Table 2 Count of cited published papers

Panel A: by publication year		
Total: 91	• 1999	1
	• 2000	2
	• 2001	1
	• 2003	1
	• 2006	2
	• 2007	4
	• 2008	1
	• 2009	4
	• 2010	7
	• 2011	7
	• 2012	6
	• 2013	7
	• 2014	8
	• 2015	9
	• 2016	2
	• 2017	4
	• 2018	3
	• 2019	4
	• 2020	3
	• 2021	15
Panel B: by journal		
Total: 91	**Accounting and Finance Journals**	39
	• Accounting and Business Research	1
	• Accounting Forum	1
	• Accounting Horizons	1
	• Accounting Organizations and Society	1
	• Auditing—A Journal of Practice & Theory	1
	• Corporate Governance—An International Review	5
	• European Accounting Review	3
	• European Journal of Finance	1
	• Family Business Review	1
	• International Journal of Accounting	1
	• International Review of Financial Analysis	1
	• Journal of Accounting & Economics	1
	• Journal of Accounting and Public Policy	1
	• Journal of Accounting Research	1
	• Journal of Accounting, Auditing & Finance	1
	• Journal of Banking & Finance	3
	• Journal of Business Finance & Accounting	2
	• Journal of Contemporary Accounting & Economics	2
	• Journal of Corporate Finance	2

Table 2 (Continued)

	• Journal of Financial Reporting and Accounting	1
	• Journal of Financial Services Research	1
	• Journal of International Accounting, Auditing and Taxation	3
	• Journal of Risk Finance	1
	• Managerial Auditing Journal	1
	• Spanish Accounting Review	1
	• The International Journal of Accounting	1
	Business and Management Journals	**22**
	• Academy of Management Journal	1
	• Asia Pacific Journal of Management	2
	• British Journal of Management	1
	• Canadian Journal of Administrative Sciences	1
	• Economics Letters	1
	• Eurasian Business Review	1
	• International Entrepreneurship and Management Journal	1
	• Japan and the World Economy	
	• Journal of Asia Business Studies	1
	• Journal of Business Research	3
	• Journal of Management & Governance	1
	• Journal of Management Studies	1
	• Management Decision	2
	• Managerial and Decision Economics	1
	• Review of Managerial Science	1
	• Strategic Management Journal	1
	• Sustainability	2
	Family business, SME and Entrepreneurship Journals	**30**
	• Entrepreneurship Theory And Practice	2
	• Family Business Review	12
	• Journal of Business Venturing	3
	• Journal of Family Business Management	1
	• Journal of Family Business Strategy	6
	• Journal of Small Business and Entrepreneurship	1
	• Journal of Small Business Management	2
	• Journal of Small Business Strategy	1
	• Small Business Economics	2
Panel C: by data source		
Total: 91	• Public or commercial databases, annual reports and other publicly available data:	59
	• Direct survey data:	32

Table 2 (Continued)

Panel D: by sample composition (publicly-listed and private firms)		
Total: 91	• Publicly-listed firms:	41
	• Private, non-listed firms:	37
	• Both public and private firms:	6
	• Transition from private to public (IPO):	4
	• Not specified:	3
Panel E: by sample composition (family and non-family firms)		
Total: 91	• Samples only consisting of family firms:	33
	• Samples consisting of both family and non-family firms:	58
Panel F: by country		
Total: 91	• International/cross-country	8
	• Australia	2
	• Austria	1
	• Belgium	7
	• Canada	2
	• China	7
	• Colombia	2
	• Finland	2
	• France	1
	• Germany	10
	• India	3
	• Italy	11
	• Japan	2
	• Malaysia	1
	• Norway	1
	• Portugal	1
	• Spain	10
	• Sweden	1
	• Taiwan	6
	• USA	13
Panel G: by theory		
Total: 91 (count exceeds 91, due to multiple theories used per paper)	• Agency theory	56
	• Legitimacy theory	2
	• Lifecycle theory	2
	• Pecking order theory	6
	• RBV	2
	• SEW	23
	• Stewardship theory	4
	• Theory of planned behavior	2
	• Trade-off theory	2
	• Others	8
	• None	5

Table 3 Clusters of research topics and dependent variables represented in literature sample

Topic	Dependent variables
T1 Finance	
Capital structure, debt and equity	• Debt (level of debt, maturity structure, speed of adjustment to target ratio) • Cost of capital (cost of debt, loan spread, required and actual equity returns) • Behavioral intention to use debt; intention to use debt for succession financing • General use of equity financing • New venture debt financing (relationship with lenders, guarantees, amount of debt financing) • Financing constraints (access to capital) • Financial intermingling (mixing family and business assets) • Use of sophisticated financial products and financial management techniques • IPO (value, underpricing, post-IPO financing behavior)
Retained earnings and dividends	• Dividends (Likelihood, amount and stability over time)
T2 Accounting (esp. financial reporting quality)	• Earnings quality (discretionary accruals, earnings informativeness, persistence of transitory loss components in earnings, predictability of cash flows, earnings persistence, earnings response coefficient, abnormal working capital accruals, real earnings management, income smoothing, conservatism) • Financial report readability (FOG index) • Disclosure quality (based on Taiwanese rating system) • Voluntary disclosure (importance-adjusted relative disclosure index (RDI), early adoption of new disclosure requirements, voluntary KPI disclosure) • External audit (voluntary demand, demand for audit quality, audit fees/effort, auditor resignations)
T3 Tax (esp. tax avoidance)	• Tax avoidance (effective tax rate, cash effective tax rate, reaction in leverage ratio subsequent to legislative changes which reduced tax benefit of debt) • Tax evasion (underreported revenues)

the first iteration. In subsequent iterations, these granular sets of variables have been consolidated toward higher-order clusters until a comprehensive level of aggregation is achieved. In the final iteration, each article's variables have been coded using these clusters to ensure alignment across all sample articles (Hiebl 2021).

The results of this process are presented in Table 4. It is a standard practice to distinguish drivers of heterogeneity by differences in governance, goals, and resources (Chua et al. 2012; Michiels and Molly 2017). The review of the specific sample of articles from the fields of FAT has shown that differences in the corporate governance of family firms take precedence over other sources of variations. Therefore, as a modification of Michiels and Molly (2017), Table 4 introduces all dimensions of heterogeneity identified in the literature, broken down by corporate governance and general firm characteristics. Furthermore, corporate governance is disaggregated in line with the research framework based on internal vs. external corporate governance parameters according to Gillan (2006), while also considering family-specific

Table 4 Dimensions of heterogeneity

Clusters of heterogeneity	ID	Source of heterogeneity	Scope of variables
Corporate Governance			
Ownership (External CG)	HD1	Ownership structure[a]	% Ownership by family members (direct/indirect), strong vs. weak ownership position, which family members as owners (founder vs. descendant), Ownership stake of non-CEO family members, Owner characteristics (e.g., Billionaire owners, gender of owner), Process of obtaining ownership (acquired vs. non-acquired), involvement of non-family ownership, # of shareholders, Non-family shareholders (Institutional ownership, bank ownership, foreign ownership, family foundations, PE and business angels as owners)
	HD2	Ownership concentration (dispersion) and other blockholders[1]	Ownership concentration (e.g., % Ownership of dominant shareholder) ownership dispersion (balance of voting power), presence of other blockholders (e.g., 5/10%), % ownership of blockholders (individual, cumulative), affiliates of other blockholders in board, type of blockholder (other family, non-family)
	HD3	Control enhancing mechanisms and excess control rights	Control-ownership wedge, excess control rights (ratio, total sum, dummy), access to control enhancing mechanisms (dummy), deviation of voting from cash flow rights, use of control enhancing mechanisms (pyramid structure, dual class shares)
	HD4	Affiliation with business groups	Affiliation with business groups, i.e., crossholdings of equity or similar arrangements
	HD5	Public vs. private	Public (stock-listed) family firms vs. private family firms
	HD6	Corporate opacity	Corporate opacity (measured based on trading characteristics of equity shares)
Board and Management (Internal CG)	HD7	Family vs. non-family management	Family involvement in management (various operationalizations, incl. CEO position, % family managers), involvement of non-family managers (dummy, %), Active vs. passive family members, existence of intra-family agency conflicts, involvement of family members on employee level

Table 4 (continued)

Clusters of heterogeneity	ID	Source of heterogeneity	Scope of variables
	HD8	Board	Family presence in board (any representation, multiple family members, % family members), family dominated board, chair of the board (independent), outside board members, board size, board independence, founder on board, affiliates of blockholder on board, # of affiliates main blockholder on board, shares held by board members, family board member ownership to total family ownership, outside director ownership, % board members of CEO's family, frequency of board meetings, existence of board, 'disproportionate' board representation, existence of (voluntary) audit committee, board gender diversity
	HD9	CEO and founder	Family vs. non-family CEO, CEO duality, interaction between descendant/hired CEO and founder (via ownership or board seat), CEO interaction effect with family dominated board, financial knowledge of owner manager, % CEO shareholding, founder vs. descendant management (focus: CEO role), presence of founder (regardless of position), blockholder position of founder (> 25%) without management responsibility, board presence of founder, CEO gender
	HD10	CFO, financial managers and accountants	Family CFO vs. External CFO, presence of external CFO (dummy), non-family manager responsible for finance and accounting
	HD11	Generation and succession	Generation, founder vs. later-generation (dummy), generation as discrete variable, generation proxied via firm age, involvement of multiple generations in management, transgenerational succession intention, succession related personal factors (need for family control, succession planning), succession between 1st and second generation vs. successions in later generations
	HD12	Collective differences in family involvement, control and influence	All studies addressing various elements of family firm governance simultaneously at a higher level of aggregation, e.g., F-PEC scale (and sub-dimensions) and various collective differences in ownership/management/control

Table 4 (continued)

Clusters of heterogeneity	ID	Source of heterogeneity	Scope of variables
	HD13	Family governance practices (FGP)	Existence of family governance practices (family forum or family charter)
	HD14	Network ties, relational strength and political connections	Firm-level and individual-level political connections, relational strength in clusters, political connection of CEO or chair of the board
	HD15	Auditors, advisors and consultants	Auditor size, Big 4 auditor (or for earlier studies Big 5), Auditor size, lead manager in IPO (internationality, reputation)
Family-specific determinants of corporate purpose	HD16	Family goals and preferences	General personal factors (attitude towards debt, risk propensity), economic goal orientation, family goals
	HD17	Socio-emotional wealth (SEW)	SEW importance (SEWi scale), levels of SEW (high vs. low, based on sample median), SEW (proxied via generation, management and CEO), differences in SEW and construct subdimensions (FIBER scale)
	HD18	Family firm culture, values and ethics	Perceived family norms towards financing sources, owner-manager's attitude towards financing sources (behavioral control), perceived behavioral control, family values (identification, altruism, collectivism, commitment, perpetuation, obligation), family culture and ethics, imprints of founders and next generation, Family commitment (based on F-PEC culture dimension)
	HD19	Family firm identity	Family firm identity score, overlap between business and family name (family name as a brand)
General firm characteristics	HD20	Size	Size of family firm
	HD21	Industry	Industry characteristics (cyclicity, capital intensity), industry growth
	HD22	Age and firm lifecycle	Firm age (continuous, old vs. young), lifecycle stages (maturity, growth, revival)
	HD23	Current and historic financial situation	Prior experience with debt suppliers, current level of indebtedness, owner committing personal line of credit, business and household demographics, cash situation, available borrowing capacities

Table 4 (continued)

Clusters of heterogeneity	ID	Source of heterogeneity	Scope of variables
	HD24	Firm- and industry-level performance environment	Current financial performance, firm performance hazard (return on assets compared to industry median, indicating relative performance), perceived financial performance (high vs. low), overall economic environment (growth vs. crisis), firm performance (high vs. low)

[a]HD1 addresses all specificities of the family business ownership structure, e.g., who is involved as owner. In contrast, HD2 addresses more general aspects of ownership concentration as a standalone variable, thereby reflecting the overall balance of power among all owners

determinants of the corporate purpose which are not directly addressed in the classical governance literature. The concrete instances of variables represented in the literature are presented for each dimension of heterogeneity (abbreviated HD for heterogeneity dimension).

A total of 24 relevant dimensions (HD1 to HD24) have been retrieved from the review, which will be discussed in the next section. The presented items and clusters of heterogeneity are the result of the work-intensive manual process described above that extends beyond the final sample of articles. Publications without sufficient representation of heterogeneity effects have been omitted only after carefully reviewing each research design and confirming the absence of heterogeneity data (see Sect. 2.2). The results of this process allow for a detailed discussion of the manifold impacts of elements of heterogeneity on family firm FAT outcomes in the next section.

3 Analysis: effects of heterogeneity for FAT policies

To contextualize the effects of heterogeneity, key results at the family vs. non-family level are briefly introduced in each section below. The analysis then focuses on the differential effects of variation among family firms, particularly on connecting similar findings and highlighting conflicting evidence. The analysis follows the structure of Table 4 (especially internal vs. external corporate governance). Yet, dimensions of heterogeneity and their effects are not discussed in direct chronological order but based on their overall significance as well as according to mutual connections among variables. These are either based on directly connected sets of heterogeneity variables (e.g., family firm generation and age) or because they exhibit interactions within the reviewed primary studies (e.g., CEO/founder as individuals and wider considerations of family management).

3.1 Finance

3.1.1 Capital structure, debt, and equity

Family firm financing decisions have been widely discussed in the literature, especially in the context of family-specific objectives to retain family control and aversion toward risk, namely, avoiding the dilution of control rights via equity financing while also avoiding excessive risks implied in leveraged capital structures (Croci et al. 2011; Mishra and McConaughy 1999). Given this trade-off, Burgstaller and Wagner (2015) note that prior research has unsurprisingly yielded diverging results. In their comprehensive meta-analysis of 613 primary studies, Hansen and Block (2021) recently document a slightly negative significant relationship between family firm status and firm leverage, supporting the argument of risk-averse family firms.

Heterogeneity from internal corporate governance

Generation and succession (HD11). Our analysis of the drivers of heterogeneity in family firm capital structure decisions shows that family firm generation (and

correspondingly, firm age) as well as succession events are among the most studied heterogeneity perspectives. In terms of generations, our review has yielded conflicting evidence that later-generation family firms tend to use more debt financing (Blanco-Mazagatos et al. 2007; González et al. 2013; Hansen and Block 2021), less debt financing (Bjuggren et al. 2012; Comino-Jurado et al. 2021b) or that founder- and descendant-controlled firms do not differ in terms of their capital structure (Burgstaller and Wagner 2015). Several generational effects may explain these peculiarities. Molly et al. (2012) show that debt levels decrease after a company transfer from the first to the second generation, while debt levels increase for transfers among later generations. This finding is consistent with that of González et al. (2013), who document a non-linear relationship between firm age and debt levels (i.e., debt levels initially decrease with firm age but start to increase again over time). Furthermore, increases in debt subsequent to professional successions toward non-family CEOs are more common among young family firms (Amore et al. 2011). The impact of the main owner's stake on leverage is also stronger for young firms (Keasey et al. 2015).

However, controlling for interactions with firm growth, Molly et al. (2012) find that the family firm generation has no direct effect on debt financing but interacts only indirectly via firm growth, which may explain why findings on the basis of generations diverge. Further effects of family firm generations on capital structures include lower sensitivity of debt levels toward fluctuations in the cash flow in first-generation family firms (Pindado et al. 2015), and observations that later-generation family firms adjust faster to their target debt ratio (Sardo et al. 2022). This supports the notion that debt financing decisions may exhibit a certain inertia in early generations. A potential explanation for this result may be that young family firms are also found to manage cash levels more aggressively (Lozano and Durán 2017). In conjunction, these arguments suggest that more deliberate cash management policies in earlier generations lead to lower demand (and speed) to acquire debt capital.

CEO (HD9). Various differential effects related to the family firm CEO are discussed in the literature. Both family CEOs and founder-CEOs (as a subset of family CEOs) are associated with higher degrees of discretion in capital structure decisions, expressed through the ability to react faster toward deviations from their target debt ratio (Burgstaller and Wagner 2015) and their ability to extend debt maturity structures after going public (Jain and Shao 2015). Similar observations have been made regarding active family management, especially in early generations, as a precondition for flexibility and discretion in family firm funding decisions (Pindado et al. 2015; Schmid 2013). Regarding the *level of debt*, family CEOs are associated with lower leverage (González et al. 2013), while also CEO duality exhibits a negative relationship toward short-term debt (Shyu and Lee 2009). In line with these findings, the appointment of external (non-family) CEOs is associated with significant increases in debt levels and short-term maturities in particular (Amore et al. 2011). Furthermore, CEO generation and CEO gender are found to moderate the negative relationship between higher SEW importance and debt levels (Baixauli-Soler et al. 2021). Finally, the *cost of debt* is also affected by heterogeneity. Ebihara et al. (2014) find that family CEOs have a trust-enhancing effect, observable based on a significantly lower cost of debt. Likewise, Yen et al. (2015) document favorable loan

conditions among founding family firms, albeit the favor tends to decrease when family members act as the CEO, which is contrary to prior results.

Heterogeneity from external corporate governance

Ownership concentration and other blockholders (HD2). The second group of heterogeneity variables frequently addressed regarding capital structure decisions includes ownership concentration or dispersion and the specific role of blockholder owners. In their seminal article, Schulze et al. (2003) find that debt among private family firms has a curvilinear (u-shaped) relationship with the dispersion of ownership among voting members of the board; this has been confirmed by Bjuggren et al. (2012). This effect is more pronounced in periods of market expansion, indicating a moderating role of industry growth, similar to the interaction of firm growth with leverage decisions (Molly et al. 2012) discussed above. Our review finds support that more concentrated ownership is associated with higher leverage (Keasey et al. 2015; King and Santor 2008) to maintain a dominant equity position. This finding is also in line with results regarding the role of blockholder owners, which may contest respective controlling ownership positions. Accordingly, blockholding is associated with lower short-term debt (Shyu and Lee 2009) and lower overall debt ratios (Schmid 2013). It also leads to more pronounced pecking-order behavior (Pindado et al. 2015). However, leverage increases in the presence of multiple controlling shareholders with comparable voting rights (Santos et al. 2014).

Considerations of heterogeneity and their effect on *equity financing* are significantly underrepresented within the sample. Regarding the general preference to use equity financing, Wu et al. (2007) find that family ownership and management have little direct effect on equity financing individually. However, the interaction of family ownership with family management is associated with a stronger unwillingness for public equity financing. In terms of equity financing, the reviewed literature particularly emphasizes family firm initial public offerings (IPOs) and especially IPO underpricing. Cirillo et al. (2015) find that family firm IPO valuations increase with higher levels of family involvement in the management, board, and staff, while intergenerational control decreases this positive effect. Generally, higher IPO underpricing is observed for family firms (Keasey et al. 2015; Leitterstorf and Rau 2014). Board size and international lead managers, as strong quality signals, significantly affect IPO underpricing, while board independence and variation in family control have less effects. Based on the number of family members involved across generations, Leitterstorf and Rau (2014) further argue that IPO underpricing is consistent across all tested configurations; thus, family firm heterogeneity may be neglected. Furthermore, post-IPO financing behavior is influenced by the nature of family involvement, such that controlling ownership of families is associated with a stronger reluctance to raise capital after the IPO. However, despite observable variation, post-IPO capital-raising behavior is consistent across all the tested groups of family firms compared with non-family firms, indicating that heterogeneity does not impair the main relationship of family firms being more leveraged and less likely to raise external capital after the IPO (Jain and Shao 2015).

Across all reviewed studies concerning family firm capital structures, especially transgenerational differences have been emphasized. As such, several competing

effects regarding family firm generations and capital structure decisions have been discussed. Other important drivers of heterogeneity include the role of family CEOs, which are associated with higher financial discretion, lower debt levels, and a trust-enhancing perception among lenders. Moreover, variation in family firm ownership structures suggest that more concentrated ownership is linked with higher leverage, following a U-shaped trajectory once ownership becomes more dispersed.

3.1.2 Retained earnings and dividends

Aside from external financing via debt or equity, the pecking-order theory states that retained earnings as internal sources of capital represent the most favorable financing option that minimizes information asymmetries (Myers and Majluf 1984). Retaining financial resources within the firm is directly at odds with the distribution of dividends among shareholders. In our literature sample, evidence suggests that family firms are more inclined to distribute dividends compared with non-family firms (Pindado et al. 2015; Setia-Atmaja et al. 2009; Yoshikawa and Rasheed 2010). We refer to Molly and Michiels (2021) for a more detailed general discussion and hereafter focus on the relative determinants of variation in dividend behavior from a heterogeneity perspective.

Heterogeneity from internal corporate governance

CEO (HD9). Among heterogeneity that originates from the internal corporate governance system, differences in the staffing of the CEO position affect dividend behavior. Vandemaele and Vancauteren (2015) find that family CEOs and founder CEOs are associated with lower dividend payouts. Although González et al. (2014) do not find any significant relationship between family CEOs and dividends, this represents no contradiction. Testing for interaction effects between family CEOs and family board dominance, Vandemaele and Vancauteren (2015) specify that family CEOs only have a significant negative effect on dividend payouts in the presence of family board majorities. This effect is especially attributed to the interplay between CEOs and boards in later generations, where firm governance may become less reliant on the family firm CEO only.

Active vs. passive family members (HD7). Aside from family CEOs, the share of family members who actively engage in the firm vis-á-vis passive family shareholders poses risks of intra-family principal-principal conflicts. The presence of passive family shareholders is, therefore, associated with a higher propensity to pay dividends (Michiels et al. 2015). This relationship is further strengthened in families that employ family governance practices, indicating that family governance practices help alleviate principal-principal agency conflicts.

Board (HD8). Regarding the effect of board composition, González et al. (2014) find that disproportionately high family representation on the board is associated with both higher levels and likelihood of dividends. By contrast, Vandemaele and Vancauteren (2015) find that dividend payout is low in the presence of family-dominated boards.

Heterogeneity from external corporate governance

Ownership structure (HD1). Huang et al. (2012) find a non-monotonic relationship between the level of controlling families' cash flow rights and dividends. At low levels of cash flow rights, the risk of losing their weak majority position induces higher dividend claims from the controlling families, while the entrenchment effect becomes more prominent at moderate levels, leading to reduced dividends. At high levels of cash flow rights, excessive firm-specific risks increase the need for diversification, implying higher dividends. Among non-family owners, foreign ownership is found to interact with family control to reduce dividend payouts, while bank ownership is positively related to dividend levels (Yoshikawa and Rasheed 2010).

Other blockholders (HD2). Other non-family blockholders capable of monitoring the controlling owners more efficiently are associated with higher dividend payments. However, this holds true only if the second blockholder is not a family shareholder (Pindado et al. 2012).

Control enhancing mechanisms (HD3). Pyramid schemes, as a control-enhancing mechanism that may favor expropriation of minority shareholders, are found to reduce dividend payout (González et al. 2014). Simultaneously, Pindado et al. (2012) find that higher dividend payments are observable for family firms where voting and cash flow rights are aligned (i.e., control-enhancing mechanisms are absent).

Heterogeneity from family-specific determinants of corporate purpose

SEW (HD17). Although the agency theory represents the dominant theoretical paradigm within dividend research in family firms, socioemotional perspectives have also informed prior research concerning dividends. Based on the socioemotional wealth importance scale (Debicki et al. 2016; Belda-Ruiz et al. 2021) find that higher SEW preservation is negatively associated with the likelihood and amount of dividends paid. Moreover, this relationship is relatively stronger when a family CEO or family members are included in the top management, in early generational stages and when the firm faces greater performance hazards.

Across all reviewed studies concerning family firm dividend policies, from a heterogeneity perspective the most frequently studied determinants evolve around board composition, the use of control enhancing mechanisms, firm ownership structure, and family firm management. Although conflicting evidence has been documented regarding several nuances of heterogeneity, one consistent finding has been that agency prescriptions suggesting potential expropriation of minority owners (e.g., in the case of control-enhancing mechanisms or passive family owners) may not necessarily materialize in the analyzed firms.

3.2 Accounting (especially financial reporting quality)

After elaborating the effects of heterogeneity in finance research, this section focuses on effects of heterogeneity for family business accounting policies, with particular attention to financial reporting quality. The high-level results of this review support

that family firms provide financial reporting of better overall quality compared with non-family firms. Family firms are associated with higher earnings quality (Ali et al. 2007; Cascino et al. 2010; Wang 2006). In addition, family firms are more transparent in their reporting (Wan-Hussin 2009), manipulate accounting information to a lesser extent (Borralho et al. 2020), and pursue less income smoothing (Prencipe et al. 2011). Furthermore, family firms are less likely to engage in earnings management (Bansal 2021) and particularly less in real earnings management, albeit to a greater extent in accrual-based earnings management (Achleitner et al. 2014). Among the drivers of heterogeneity affecting these high-level results, family firm boards and their specific role as monitors are most frequently discussed.

Heterogeneity from internal corporate governance

Board, board chair and audit committee (HD8). Several articles have addressed the role of board independence and the extent of family representation on the board of directors. On aggregate, the results support that board independence is associated with higher financial reporting quality in family firms. Accordingly, higher board independence is associated with a reduced likelihood of income smoothing (Prencipe et al. 2011) and higher accrual quality (Cascino et al. 2010). Family firms with more independent boards also engage less in earnings management (Prencipe and Bar-Yosef 2011), whereas this relationship is weaker in first-generation family firms (Bansal 2021). Other studies have not found significant evidence that board independence is associated with better financial reporting (Ho and Wong 2001; Wan-Hussin 2009). In terms of heterogeneity, one noteworthy finding lies in a relationship potentially subject to reverse causality or even simultaneity. Although Bansal (2021) documents a positive moderating effect of independent directors on the relationship between family control and earnings management, Jaggi et al. (2009) find that family control moderates the negative relationship between board independence and earnings management.

The chair of the board is found to be of particular relevance. Prencipe et al. (2011) document that income smoothing is less likely to occur in firms whose board has a chair of the controlling family. By contrast, Chau and Gray (2010) find that firms with an independent board chair are associated with higher voluntary disclosure. More importantly, the role of the chair restricts the effect of other independent non-executive directors and the influence of family ownership on disclosure as a moderator. This finding constitutes an interesting observation in terms of heterogeneity in the sense that particularly exposed corporate protagonists, such as the board chair, may affect family firm behavior to be more alike or more heterogeneous. This finding is further reinforced when considering the presence of CEO duality, which is associated with a higher likelihood of earnings manipulation (Bansal 2021), less earnings management (Prencipe and Bar-Yosef 2011), and reduced overall quality of financial information (Borralho et al. 2020).

In line with these findings, the representation of family members (i.e., non-independent board members) yields largely negative effects on financial reporting quality. Increased family board representation is associated with reduced voluntary disclosure (Boujelben and Boujelben 2020; Ho and Wong 2001) and increased conservatism (Chen et al. 2014). More importantly, family-dominated boards negatively affect firm governance. Family board presence negatively affects the monitoring

effectiveness of the board (Jaggi et al. 2009) and reduces the effectiveness of audit committees (Jaggi and Leung 2007). On the contrary, the existence of (voluntary) audit committees is generally associated with higher financial reporting quality in family firms (Ho and Wong 2001; Jaggi and Leung 2007).

In relation to board composition, the demand for external auditing is positively correlated with the proportion of non-family directors (Carey et al. 2000). In terms of audit effort and corresponding fees, family supervisory board representation is associated with lower audit fees (Schierstedt and Corten 2021), and audit effort decreases in proportion to board members attributed to the largest family owner (Hope et al. 2012). Surprisingly, this relationship is reversed (i.e., audit effort increases) in the proportion of board members affiliated with the CEO.

Family vs. non-family management (HD7) and CEO and founder (HD9). Aside from the monitoring task performed by family firm boards, differences in management constellations are studied. Family firms are found to be more conservative when managed by family members (Raithatha and Shaw 2019), especially in founder CEO firms (Chen et al. 2014). Despite greater conservatism, results indicate that family management and family CEOs are associated with higher overall financial reporting quality. Firms with CEOs from controlling families engage less in income smoothing, exhibit relatively better disclosure practices, and manipulate earnings to a lesser extent (Ali et al. 2007; Prencipe et al. 2011; Yang 2010). However, other evidence suggests the absence of significant differences across family firm CEO configurations and their effect on earnings quality (Stockmans et al. 2010; Wang 2006).

Regarding audit demand, Carey et al. (2000) find that demand for external auditing is correlated with the level of non-family management, while demand for internal auditing is not affected. Higher family involvement in management correlates with lower audit fees (Schierstedt and Corten 2021). Despite using different proxies for family involvement in management, this finding is in conflict with Hope et al. (2012), who observe that auditors increase their effort when the CEO is a member of the owning family. Khalil et al. (2011) document variations in the likelihood and consequences of auditor resignations, depending on the family firm CEO and founder positions. While auditor resignations are less likely to occur in founder or hired CEO firms, they are more likely to occur in descendant CEO firms. Following resignations, family firms managed by a non-family CEO face less negative investor reactions, while the CEO's generation (founder or descendant) does not affect this relationship.

Generation (HD11). Although the impact of the family firm generation on financial reporting quality has been addressed in several studies, the results remain ambiguous. First-generation firms are more likely to engage in earnings management, especially when confronted with bad earnings performance (Ali et al. 2007; Bansal 2021; Stockmans et al. 2010). At the same time, family firms in later generations have been associated with reduced voluntary disclosure and reduced annual report readability (Boujelben and Boujelben 2020; Drago et al. 2018).

Collective differences in family influence (HD12). One particularly notable finding regarding family firm heterogeneity can be derived from two studies employing the F-PEC scale (Astrachan et al. 2002; Klein et al. 2005) in relation to financial reporting quality. Duréndez and Madrid-Guijarro (2018) find various impacts across the F-PEC dimensions, among which the F-PEC power dimension is associated with lower quality of financial reporting. By contrast, Drago et al. (2018) show that higher levels of family power, as per the F-PEC scale, are associated with better annual report readability. Acknowledging that both studies use different proxies, there is an abstract lesson for studying heterogeneity in family firm financial reporting. The use of direct survey information provides more granular heterogeneity data (e.g., F-PEC power dimension) but does not directly result in an improved understanding of the family dynamics at play, as observable for these two diverging findings.

Heterogeneity from external corporate governance

Ownership structure (HD1) and ownership concentration (HD2). Differences in family firm ownership are widely considered in the context of the alignment and entrenchment effects. Chau and Gray (2010) find that the extent of voluntary disclosure is relatively low for low levels of family ownership, which can be attributed to the dominance of the alignment effect. The entrenchment effect becomes more pronounced at high levels of family ownership, observable through a greater extent of voluntary disclosure. This finding is in line with Yang (2010), who associates higher insider ownership in family-controlled firms with an increase in discretionary accruals, supporting the entrenchment hypothesis. Moreover, Chen et al. (2014) find that conservatism increases with increasing equity holdings within the family.

Increasing family ownership is also associated with a decrease in the likelihood of Big 4 audits, indicating that higher dispersion of ownership is linked with an increased need for high-quality audits (Niskanen et al. 2010). Higher family ownership is also associated with higher audit fees (Schierstedt and Corten 2021). These findings are at odds with Hope et al. (2012), who find that greater ownership concentration in family firms leads to easier monitoring of managers, translating into lesser efforts by external auditors. Moreover, shares held by the CEO are associated with lower audit fees and a reduction in the likelihood of obtaining a Big 4 audit. Similar to CEO ownership, the presence of strong second blockholders has a significant negative effect on audit fees (Hope et al. 2012; Niskanen et al. 2010).

Pazzaglia et al. (2013) state that earnings quality among family firms is not only affected by the level of ownership but also the process by which ownership is obtained. They show that firms acquired through market transactions display lower earnings quality compared with firms owned by the founding families due to lower identification of the family owners with the firm. Arguably, this perspective offers interesting insights because the majority of research conceptualizes family firms as organizations arising from organic transgenerational growth rather than acquisitions. Regarding further ownership heterogeneity, relatively little is known about the role of institutional shareholders. The presence of institutional owners is associated with lower accrual quality (Cascino et al. 2010) but does not affect overall corporate transparency (Wan-Hussin 2009).

Affiliation with business groups (HD4). The affiliation with business groups is also found to affect financial reporting in family firms (Raithatha and Shaw 2019). Given that family firms form the core of many business groups, they are more reluctant to provide financial information to protect their complex cross-holdings and maintain control of the group. This finding resembles the results of Ali et al. (2007), showing that family firms report higher-quality earnings but make fewer disclosures about their corporate governance practices.

Overall, with regard to financial reporting quality as a whole, it can be concluded that the most important drivers of heterogeneity evolve around the management of the family firm and its board of directors. While the chair of the board is particularly exposed, board independence or the absence of independence (i.e., family board dominance) affects financial reporting quality. This suggests that family firms benefit from family management paired with independent boards, being associated with higher financial reporting quality and reduced earnings management. With regard to auditing, it can be concluded that auditors perceive family businesses as a diverse group of firms, and audit fees as a proxy for effort vary depending on a number of firm-level characteristics related to ownership and family structures. Thus, auditors are likely to react to the agency consequences of the underlying family firm characteristics, indicating a clear need to consider family firm heterogeneity in audit research (Schierstedt and Corten 2021).

3.3 Tax (especially tax avoidance)

The reviewed articles document partially inconclusive results in terms of tax behaviors. Family firms are found to be less tax aggressive compared with non-family firms (Kuo 2022; Lee and Bose 2021; Mafrolla and D'Amico 2016; Steijvers and Niskanen 2014) and less likely to use tax-haven locations (Temouri et al. 2021). Opposing evidence suggests that family firms avoid more taxes (Gaaya et al. 2017; Kovermann and Wendt 2019), or that family and non-family firms do not differ regarding tax avoidance altogether (Brune et al. 2019b). These diverging results lend support to the perspective that family firm heterogeneity may be an important driver of variation across research results.

Heterogeneity from internal corporate governance

Family vs. non-family management (HD7) and CFO (HD10). The involvement of non-family managers is found to affect family firm tax avoidance. Brune et al. (2019b) show that an increase in the number of non-family top management team members is associated with higher tax avoidance. Specifically, family firms with non-family CFOs tend to be more tax aggressive (Bauweraerts et al. 2020). Challenging this notion of family involvement being beneficial in terms of responsible tax behavior, Mafrolla and D'Amico (2016) find that excessive family involvement is associated with higher tax avoidance compared with non-family firms, depicting a moderating non-linear effect of family involvement on tax aggressiveness.

Founder (HD9), generation (HD11), and firm age (HD22). The reviewed literature suggests a broad consensus regarding the role of the founder and the implied generational stages for family firm tax avoidance. The presence of the founder is linked to lower tax aggressiveness, whereas tax aggressiveness tends to increase across generations (Bauweraerts et al. 2020; Brune et al. 2019a; Clemente-Almendros et al. 2021; Temouri et al. 2021). One notable exception lies in the higher prevalence of tax haven usage among early-generation family firms (Temouri et al. 2021). However, founder presence, even in this context, is linked to fewer tax haven locations. Clemente-Almendros et al. (2021) further specify that first- and second-generation firms follow similar conservative approaches to tax avoidance, which become more aggressive across third- and fourth-generation firms. The most relevant observation from a heterogeneity perspective is that founders may affect the level of tax avoidance not only through direct influence (e.g., serving as CEO) but also indirectly through substantial ownership or board positions (Brune et al. 2019a). This conclusion is based on the finding that founder-led family firms avoid less taxes than descendant or hired CEO family firms. However, this difference does not persist if the founder holds substantial shares or a board seat. Conceptually, this finding shows that there may be more covert factors that are not addressed by the standard set of variables currently used to capture family firm heterogeneity, even when accounting for differences in the demographic governance profile of family firms (e.g., founder vs. descendant CEO).

Heterogeneity from external corporate governance

Ownership structure (HD1). Bauweraerts et al. (2020) find that strong family ownership positions are associated with lower tax avoidance, whereas Kovermann and Wendt (2019) show that tax avoidance increases with the percentage of family ownership. Aside from the overall percentage of ownership, they find that tax is a function of the number of shareholders, arguing that larger numbers of family shareholders are associated with higher tax avoidance, which is rooted in an increasing demand for dividends. Further results indicate that family firms with lower CEO ownership are relatively more tax-aggressive (Steijvers and Niskanen 2014). This direct effect of CEO ownership on tax aggressiveness is moderated by the presence of outside directors, while board size and CEO duality do not affect the association between CEO ownership and tax aggressiveness (Steijvers and Niskanen 2014).

Public vs. private firms (HD5). In terms of publicly listed vs. private family firms, Brune et al. (2019b) find that private family firms avoid less taxes compared with public family firms. Moreover, they show that public non-family firms engage in tax avoidance to the largest extent, indicating that stock listing and the corresponding capital market pressures have more explanatory power for tax avoidance than the family firm status itself.

Heterogeneity from family-specific determinants of corporate purpose

Family firm identity (HD19). Based on a mixed gamble approach, Eddleston and Mulki (2021) study the effect of family firm identity as measured by five items for family members' identification with the business based on Berrone et al. (2012).

They find that a strong family identity is negatively associated with tax evasion when perceived performance is high. On the contrary, family firm identity is associated with increased tax evasion when perceived performance is low, indicating that family-specific rationale may motivate tax evasion for the sake of the family when facing financial pressures.

Overall, in terms of heterogeneity in family firm tax avoidance, especially variation in management composition leads to converging observations. Management through family members is associated with lower tax avoidance. This relationship especially holds in the case of direct or indirect founder involvement and in earlier generations. Conflicting findings prevail regarding family firm tax avoidance in terms of heterogeneity among ownership variables.

4 Discussion and recommendations for future research

4.1 Preliminary results

The preliminary results are briefly summarized before elaborating how the findings contribute toward an overall model of heterogeneity applicable to FAT research among family firms. Previously, the observable effects of different dimensions of heterogeneity have been discussed (RQ2). The results indicate that the most influential drivers of heterogeneity evolve around family firm management, variations in ownership structure and board composition, and transgenerational issues. Similar sets of heterogeneity variables have been utilized within the different literature streams. However, distinct focal points can be identified for each of these streams.

Transgenerational differences have been especially emphasized across the reviewed studies concerning family firm *capital structures*. As such, several competing effects regarding family firm generations and capital structure decisions have been discussed. Other important drivers of heterogeneity include the role of family CEOs, which are associated with higher financial discretion, lower debt levels, and a trust-enhancing perception among lenders. Variations in family firm ownership structures suggest that more concentrated ownership is linked with higher leverage, following a U-shaped trajectory once the ownership becomes more dispersed. The most frequently studied determinants of family firm *dividend policies* from a heterogeneity perspective have addressed board composition, the use of control-enhancing mechanisms, firm ownership structure, and family firm management. Although conflicting evidence has been documented regarding some of these dimensions of heterogeneity, one consistent finding has been that agency prescriptions suggesting the potential expropriation of minority owners (e.g., in the case of control-enhancing mechanisms or other passive family owners) may not necessarily materialize in the analyzed firms.

With regard to *financial reporting quality* in family firms, it can be concluded that the most important drivers of heterogeneity evolve around the management of the family firm and its board of directors. While the chair of the board is particularly exposed, especially board independence or the absence of independence (i.e., family board dominance) affect the financial reporting quality. This suggests that family

firms benefit from family management paired with independent boards, which is associated with higher financial reporting quality and reduced earnings management. With regard to auditing, it can be concluded that auditors perceive family businesses as a diverse group of firms, and audit fees as a proxy for effort vary depending on a number of firm-level characteristics related to ownership and family structures. Therefore, auditors are likely to react to the agency consequences of the underlying family firm characteristics, indicating a clear need to consider family firm heterogeneity in audit research. In terms of heterogeneity regarding family firm *tax avoidance*, especially variation in management composition leads to converging observations. The involvement of family managers is associated with reduced tax avoidance. This finding especially holds in the case of direct or indirect founder involvement and in earlier generations. In terms of heterogeneity among ownership variables, conflicting findings prevail regarding family firm tax avoidance.

Overall, it can be concluded that heterogeneity significantly affects research outcomes. This re-affirms existing calls to address heterogeneity within family firm research (Brune et al. 2021; Chua et al. 2012; Michiels and Molly 2017). However, going beyond prior analyses, the review systematically documents in which ways drivers of variation among family firms have been studied, indicating both the scope of dissimilarities and their consequences. The abundance of heterogeneity-related findings suggests that it is an important factor for family business researchers within the fields of FAT. This holds true across all reviewed domains, including the role of family firm heterogeneity for capital structure decisions (Comino-Jurado et al. 2021b; González et al. 2013; Jain and Shao 2015; Molly et al. 2012), family firm dividend policies (González et al. 2014; Michiels et al. 2015; Vandemaele and Vancauteren 2015), financial reporting quality (Borralho et al. 2020; Chen et al. 2021; Drago et al. 2018; Wan-Hussin 2009), and tax (Bauweraerts et al. 2020; Brune et al. 2019a; Clemente-Almendros et al. 2021).

Beyond the fact that the heterogeneity of family firms matters, the analysis results provide a basis to reflect on the prevailing understanding of heterogeneity. One finding is that heterogeneity per se collectively addresses a large variety of effects and should be regarded as multi-dimensional. As a consequence, the impact of heterogeneity is not directly reconcilable in a particular way but represents various groups of effects. It has further become evident that the term 'heterogeneity' is partially being used interchangeably for various underlying phenomena, causing certain challenges. For instance, researchers may address very different underlying variables but still generalize findings toward a broader heterogeneity umbrella term. A very concrete example of this observation can be derived from Cirillo et al. (2015) in comparison to Leitterstorf and Rau (2014), whose studies both address family firm IPOs. Based on a narrow definition of heterogeneity (multiple family members involved across generations), Leitterstorf and Rau (2014) find that heterogeneity does not matter for family firm IPO underpricing. Based on a more nuanced representation of heterogeneity (involvement of family members in the board, top management team, or on employee level and respective generation), Cirillo et al. (2015) point out various relevant heterogeneity effects, such as family involvement's value-enhancing role for IPOs or the diminishing value in case of transgenerational control.

Despite these challenges, considerations of heterogeneity have been found to contextualize or resolve inconsistent findings and, thus, reduce ambiguity. For instance, the relationship between family firm status and firm leverage has been frequently investigated, and different results prevail (Burgstaller and Wagner 2015). As one dimension of heterogeneity, this review has discussed the multifaceted impact of generational forces that affect the financing choices in family firms (Bjuggren et al. 2012; Blanco-Mazagatos et al. 2007; Burgstaller and Wagner 2015; Comino-Jurado et al. 2021b; González et al. 2013; Hansen and Block 2021; Molly et al. 2012).

Although heterogeneity helps describe family firm behavior in a more granular way, it does not resolve inconsistencies and ambiguity across research findings by default. Conflicting results also prevail at the heterogeneity level of analysis. This review has shown that several drivers of heterogeneity may affect FAT outcomes in a distinct, non-trivial fashion. Sticking to the previous example of how family firm generations affect indebtedness, several researchers have found significant direct effects of family firm generation toward debt. Meanwhile, Molly et al. (2012) document only an indirect effect in the interaction with firm growth.

Therefore, it must be noted that an increased emphasis towards heterogeneity also leads to a complex and multi-faceted grid of dissimilarities among family firms. On the one hand, the findings show that incorporating aspects of family firm heterogeneity in study designs is certainly needed and can explain ambiguous findings at the family vs. non-family firm level. On the other hand, differentiating family firms along several dimensions results in various hierarchically nested categories of family. This becomes clear in the results of Pazzaglia et al. (2013), who investigate the relative advantages of family- vs. non-family CEOs in terms of financial reporting quality, contingent on how ownership of a company has been obtained (acquired vs. non-acquired). This single example creates a grid of 8 (2^3) distinct categories based on family firm status, CEO identity, and the process of obtaining ownership.

The multi-layered fashion of how heterogeneity is being addressed in extant research leads to substantial challenges in comparing its outcomes. This is especially true given that categories of heterogeneity are seldomly constructed in a consistent fashion across research designs. Therefore, advancing heterogeneity research must also be understood as an effort to 'separate signal from noise'. Future research is required to navigate the trade-off between the robustness of findings and sufficient consideration of heterogeneity effects. This analysis has taken an initial step toward this objective by providing an overview of all dimensions along which family firms are observed to differ in FAT research (see Sect. 2.3) and how these differences affect their FAT policies (see Sect. 3). Given these identified challenges, in the section below we propose a model to incorporate heterogeneity in FAT research.

4.2 (Re)conceptualizing family business heterogeneity: family firm specific and agnostic sources of variation

Researchers increasingly emphasize the need for review-centric works to go beyond a mere review perspective by making a distinct contribution to theory (Hoon and Baluch 2020; Post et al. 2020). Thereby, attention is being drawn from reproducing

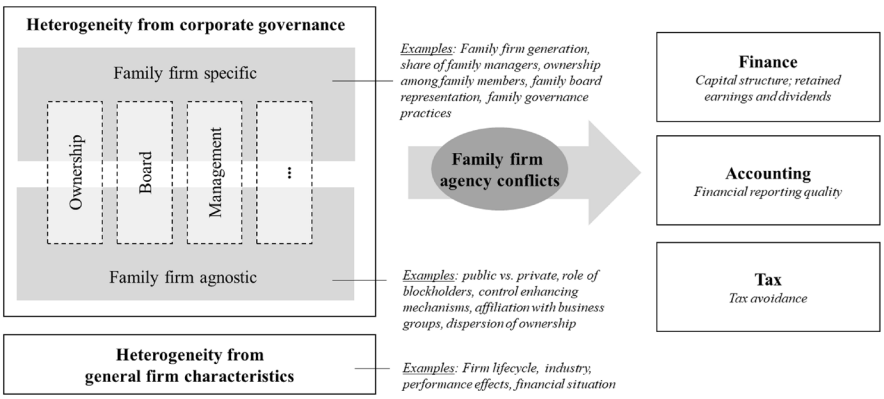

Fig. 2 Model: Family business heterogeneity and finance, accounting and tax policies

prior findings to deriving novel insights based on the reviewed body of literature. While these can take different forms, for the scope of our review especially the consolidative vs. disruptive elaboration of empirical evidence (Hoon and Baluch 2020) and contributing to an improved construct clarity (Post et al. 2020) have been relevant aspects throughout the analysis, informing the model introduced below.

The general notion underlying our review has been that heterogeneity alters family firm specific agency conflicts. Focusing specifically on heterogeneity among firm-level corporate governance variables, this has been associated with distinct FAT policies. Within the theoretical framework, a differentiation between family firm specific heterogeneity and family firm agnostic heterogeneity has been anticipated.

The review results strongly confirm this perspective. We therefore propose a model that considers family firm heterogeneity as the sum of family firm specific and family firm agnostic differences in corporate governance, complemented by heterogeneity among other general firm characteristics. The subsequent effects of heterogeneity, i.e., differences in FAT policies, should primarily be regarded as a function of these governance variations and their respective agency implications (see Fig. 2). Within the review, it has become evident that a corporate governance perspective towards family business heterogeneity is dominant within the literature on FAT. Other perspectives that focus for instance on differences among family firm goals or resources (Chua et al. 2012; Heider et al. 2022; Michiels and Molly 2017), which are more common in other literature streams such as entrepreneurship, have proven less prevalent and applicable to the FAT domains.

In line with the model presented in Fig. 2, in a first step heterogeneity from corporate governance is conceptually divided into differences specific to or agnostic of family firms. In a second step, it has been observed that clusters of heterogeneity variables (e.g., heterogeneity among ownership variables) can permeate or overlap both categories at once (i.e., specific and agnostic). In other words, referring the example of ownership heterogeneity, heterogeneity can be thought of as taking place along a continuum from family firm specific to family firm agnostic.

Establishing this additional layer and thereby, refining the prevailing heterogeneity umbrella term, catalyzes several important conceptual advancements that are needed to enhance research on family firm heterogeneity. First, it has become apparent that categories of heterogeneity initially thought to refine relationships at the family firm level may actually be associated with stronger effects than the family firm status itself. Therefore, isolating sources of heterogeneity not specific to family firms would allow these effects to rise above the family firm level. For instance, Brune et al. (2019b) show that the stock listing of family firms has more relative explanatory power for tax avoidance than the family firm status itself. This shows that categories of heterogeneity (private vs. public family firms) should not only be addressed at the level of family firms. Second, rather than simply 'slicing the cake' in a different way, separating family firm specific and agnostic differences allows family business scholars to reconcile the heterogeneity debate with the wider corporate governance literature. Many of the heterogeneity variables being studied in FAT research have turned out to be governance variables that are widely studied also outside the field of family businesses, albeit with a different connotation.

While on the one hand this facilitates better integration of both literature streams, we also believe that looking at heterogeneity through the lens of family firm specific or agnostic differences brings researchers closer to the *essence of family business heterogeneity*. In fact, we suggest that the core of family firm heterogeneity as an overall concept relates exclusively to family firm specific differences. Therefore, to get closer to this presumed core of family business heterogeneity, we deem it necessary to further narrow down the current broad understanding of heterogeneity. As a reflection of our findings, we propose a revision (amendment) of the definition of family business heterogeneity provided of Daspit et al. (2021) who establish heterogeneity as 'the range of categorical and/or variational difference(s) between or among family firms at a given time or across time'. While this definition has proven useful throughout the analysis, we consider it as too inclusive, leading to a unclear understanding of the concept that may cover virtually any variation among family firms. We therefore suggest to re-focus the definition to reflect only strictly family firm specific heterogeneity, thereby excluding other differences that exceed the family firm level per se.

In order to further demonstrate the merit of these conceptual thoughts accompanying our model, the application of this notion for the case of heterogeneity among ownership variables is elaborated below. According to the review, heterogeneity among ownership variables can take many different forms and has been operationalized in several different ways in empirical research. Disentangling these differences by separating strictly family specific variation from variation agnostic of the family firm allows scholars to appreciate more clearly the actual underlying drivers of family business heterogeneity. Among items that are directly *specific to the family firm*, examples include the cumulative/individual ownership of family members (Chau and Gray 2010; Chua et al. 2011; Mafrolla and D'Amico 2016; Schierstedt and Corten 2021), the specific family members who are involved as owners (Brune et al. 2019a; Shyu and Lee 2009; Yang 2010) or inactive family owners (Chen et al. 2014; Schmid 2013). At the intersection towards family firm agnostic items, the existence of other non-family shareholders and their respective stake (Di Giuli et al. 2011) or the existence of other family blockholders besides the controlling family (Pindado et al. 2012) have been identified. Finally, as ownership

heterogeneity *agnostic of the family firm*, the review has documented effects that originate from the general dispersion of ownership (Hope et al. 2012), the general existence of other blockholders (Pindado et al. 2015), the involvement of other shareholder types such as institutional or bank owners (Hearn 2011; Yen et al. 2015) or the process by which ownership has been obtained (Pazzaglia et al. 2013). While these indeed affect FAT policies, they are in principle not specific to the family business context and should thus not be incorporated in a more stringent definition of family business heterogeneity.

Even for this short example, it is obvious that heterogeneity among family firms represents the sum of a large variety of differences. We believe that thinking of heterogeneity along the introduced continuum from family firm specific to agnostic differences enables researchers to reflect critically on the true origin of heterogeneity. As a whole, this helps to expose those specific relationships that make family firms distinct from other types of organizations, yet unique among the group of their family firm peers.

Finally, some additional aspects need to be considered when applying our model toward the understanding of heterogeneity in FAT. While the idea of dissimilarity is at the very core of the heterogeneity literature in general, researchers may counterintuitively find persistent roots in the assumption of uniformity among family firms. In other words, while heterogeneity research directly emphasizes differences between family firms, many of the reviewed studies tend to implicitly assume that incorporating an additional layer of heterogeneity will inevitably result in a coherent grid of merely minor deviations among family firms, while still largely considering them as a joint group that is otherwise very much similar. Based on our review results, this implicit expectation may not materialize, and researchers should not fall victim to this belief in order for heterogeneity research to live up to its potential in advancing the understanding of family firms.

Furthermore, we have identified corporate governance variations as pivotal for family business heterogeneity, this review has also documented that heterogeneity extends beyond the overt demographic governance profile of the firm. It is a common practice in the literature to consider key heterogeneity variables, such as firm generation, family or non-family management, and the involvement of the founder as CEO. Brune et al. (2019a) show that the founder exerts an influence on tax behavior also indirectly through substantial ownership or a board position, even when not directly involved as the CEO. Currently, founder-related heterogeneity is largely operationalized as a dummy variable based on the founder also being the CEO (Achleitner et al. 2014; Chen et al. 2014; Ma et al. 2017). This shows that heterogeneity considerations in the literature may not yet capture the full extent of heterogeneity effects. Therefore, it is strongly encouraged to look beyond the overt demographic governance profile of the firm when addressing heterogeneity in practical research. Our review also shows that heterogeneity is predominantly studied based on the components of involvement perspective of family firms. The components of involvement approach captures the overall presence of the family in the firm but does not necessarily consider its distinct behaviors which lead to family-firm-specific organizational dynamics (Zellweger et al. 2010). For the reviewed sample, this result may be due to the fact that the components of involvement concept exhibits significant overlaps with firm-level governance variables, which are well-established in FAT research. Although this finding is intuitive in the sense that the components of involvement variables can be measured more efficiently, it leads to heterogeneity

being considered mostly as a stationary, demographic phenomenon and does not consider family firm behaviors from an essence perspective.

4.3 Recommendations for further research

Based on our review, several promising avenues for further research can be identified that concentrate on heterogeneity from corporate governance as the focal point of the review. Additionally, further conceptual recommendations are being derived which can advance the understanding of family firm heterogeneity in FAT research in the future. These are presented in Table 5 and will be elaborated further below.

RQ1. This review has shown that substantial heterogeneity originates from the *protagonists of the corporate governance systems*, especially the founder (Brune et al. 2019a; Chen et al. 2014; Temouri et al. 2021), the CEO (Amore et al. 2011; Borralho et al. 2020; Pazzaglia et al. 2013), and the board chair (Bansal 2021; Chau and Gray 2010; Prencipe et al. 2011). As such, e.g., the founder has been found to exert strong influence also through non-executive positions. Similarly, the board chair has been found to directly affect voluntary disclosure while restricting the role of other governance mechanisms, such as non-executive directors. Overall, the findings indicate that these roles are of particular relevance in understanding family firm heterogeneity because they may frequently dominate other effects, which warrants further inquiry, e.g., focusing specifically on sources of heterogeneity at the individual-level.

RQ2. The *family firm generation* stands out among the dimensions of heterogeneity most frequently addressed. In particular, the effect towards debt capital has been discussed extensively. However, despite the relevance attributed to this topic, the actual impact of the generational effect on family firm capital structures remains partially inconclusive (Hansen and Block 2021). This is especially true considering that several significant direct generational effects have been found (Blanco-Mazagatos et al. 2007; Comino-Jurado et al. 2021b; González et al. 2013), while Molly et al. (2012) reject a direct relationship between generation and capital structure, indicating that the effect is contingent on firm growth. Aside from the level of debt, generational effects have been found to influence the speed of adjustments of the debt ratio and its sensitivity toward adjustments in the cash flow (Pindado et al. 2015; Sardo et al. 2022). The general notion of inertia in earlier generations, or conservative behavior more generally, is also observable in accounting and tax policies. Early-generation family firms have been found to be less tax-aggressive as well as more conservative in their financial reporting, amongst others. Collectively, this may suggest inertia (conservatism) in early-generation family firms' FAT policies, which constitutes a promising avenue for further research. Future studies in this area may benefit from the timely reflections on the central role of generations for family firm research provided by Magrelli et al. (2022).

RQ3. One significant gap in the literature sample is the absence of analyses of the differential effects of *private vs. publicly listed* family firms. There are frequent analyses of samples of either private or public firms (Hansen and Block 2021; Kovermann and Wendt 2019; Steijvers and Niskanen 2014), as well as several studies that address the process of going public (Cirillo et al. 2015; Hearn 2011; Leitterstorf and Rau 2014) or family firm behavior subsequent to going public (Jain and Shao

Table 5 Recommendations for future research

Heterogeneity from corporate governance	
RQ1	In which way do corporate protagonists (e.g., founder, CEO, board chair) determine specifically whether family firms behave more alike or more heterogeneously?
RQ2	Do early-generation family firms systematically exhibit conservatism (or inertia) in their FAT policies?
RQ3	In which ways do private and public family firms differ, and how does this affect their FAT policies?
RQ4	How does the interaction of family ownership with other ownership variables (especially institutional and state ownership) affect their FAT policies? How does ownership via a (family) foundation affect FAT policies?
RQ5	Which dimensions of heterogeneity may supersede the family firm level? How can differentiating family-firm-specific and family-firm-agnostic sources of heterogeneity help disentangle these effects?
RQ6	Can significant differences be observed between the effects of 'classical' governance research findings among non-family firms and the respective family firm specific connotation of the same variables?
RQ7	How do performance effects interact with heterogeneity variables to cause family firms to be more alike or heterogeneous? Do performance effects supersede other heterogeneity effects (e.g., originating from governance variations) with regard to their explanatory power?
Additional conceptual aspects	
RQ8	How can heterogeneity be captured as a more global phenomenon by employing either larger or more diverse datasets that blend heterogeneous groups of family firms to a greater extent?
RQ9	How does heterogeneity materialize in family firms over time? Which new insights can be generated from looking at heterogeneity as a phenomenon changing over time?
RQ10	How can additional dimensions of heterogeneity be adequately incorporated, going beyond the prevailing components of involvement perspective?

2015). However, comparative evidence between private and public family firms is significantly lacking which is particularly striking given that the differences between private and public firms are substantial.

RQ4. In terms of *heterogeneity among ownership variables*, this review has shown that the strong focus on family owners is associated with infrequent considerations of the other shareholder constellations. In particular, the interaction of family ownership with other ownership variables, such as institutional ownership or state ownership, has not been widely explored. Acknowledging that the group of institutional owners includes very different investor types itself, only two studies within the sample have analyzed interactions between family ownership and other ownership variables, such as institutional ownership (Cascino et al. 2010) or bank and foreign ownership (Yoshikawa and Rasheed 2010). Secondly, regarding ownership configurations, the role of (family) foundations has not been addressed previously in terms of their effect on FAT policies. Foundations have significantly affected family firm decisions in other areas of research (Fehre and Weber 2019) and have a direct impact on the corporate structure as well as the management of financial resources within the business and beyond.

RQ5. Methodologically, the concept of heterogeneity implies a group of subjects, i.e., family firms, which are regarded as similar in the first place. Heterogeneity subsequently refers to variation within this set of similar subjects. However, this analysis has shown that some categories thought to describe or refine relationships at the family firm level may extend beyond it. For instance, Brune et al. (2019b) find that stock-listed family and non-family firms behave more alike in terms of tax avoidance, indicating that capital market pressure outweighs the family firm status. Therefore, from a heterogeneity point of view, it appears necessary to test which dimensions of heterogeneity supersede the family firm level. To achieve this objective, reconceptualizing heterogeneity as both family firm specific and family firm agnostic (see Sect. 4.2) constitutes a necessary intermediate step.

RQ6. The review has documented that family business heterogeneity is largely overlapping with variables from the classical corporate governance literature. At the same time, many relationships studied in family business heterogeneity research can be understood as a slight variation of the classical corporate governance variables. This raises the question to what extent prior research findings are transferrable across both fields. In other words, to what extent does, e.g., the family firm connotation of board independence (i.e., family board representation) coincide with the general findings regarding board independence in the wider governance literature? Or how do gender effects, including board gender diversity, CEO gender or similar characteristics compare to the respective findings outside the family firm research field, taking into account that these matters have different ramifications when the pool of family talent to draw from is much smaller.

RQ7. Heterogeneity from corporate governance has been frequently found to interact with performance and growth variables (Eddleston and Mulki 2021; Molly et al. 2012; Schulze et al. 2003; Stockmans et al. 2010), having direct consequences for the understanding of heterogeneity and its impact on FAT policies. Overall, this raises the question whether these indicators of performance may serve as more reliable predictors of heterogeneous behavior of family firms than differences in firm governance itself. In other words, considering the performance of family firms (e.g., high vs. low performance, specific crisis events etc.) not only as a consequence of doing business but also as a determinant of firm behavior in subsequent periods may allow for additional perspectives in explaining heterogeneity. At least though, the results indicate that growth and performance need to be controlled for in any analysis of heterogeneity effects.

RQ8. In terms of heterogeneity, study designs tend to gravitate toward two extremes: large publicly listed firms combined with archival sources or smaller private firms combined with survey-based research designs. The latter are predominantly addressed based on regional samples with strong local frames of reference, most frequently within single-country designs. While this is in line with the findings of prior studies (Michiels and Molly 2017), it has particular implications for capturing heterogeneity. It implies that certain pairs of attributes or categories of heterogeneity may not be sufficiently studied together (e.g., see the prior example showing that public vs. private firms are seldomly studied in combination). However, there is significant unexploited potential in overcoming this bias regarding sample composition, thereby addressing heterogeneity as a more global phenomenon.

RQ9. According to the heterogeneity definition of Daspit et al. (2021), *variation across time* is an important constituent of family firm heterogeneity. However, this

perspective of heterogeneity over time is not well explored within the reviewed literature. Rare examples include specific formative corporate events, such as IPOs (Jain and Shao 2015) or succession (Amore et al. 2011; Molly et al. 2010). While family firm IPOs are researched relatively well, the longitudinal effects before, at and after IPO have not been sufficiently explored. Therefore, existing studies that currently focus on the process and short-term effects of going public could extend their focus to utilize the optimal experimental setting of the IPO, directly comparing its behavior before and after IPO without the need to apply matching techniques between private and public firms. Generally, the various ways by which event studies may capture the heterogeneity of family firms over time are largely unexploited. For instance, events that induce changes in several governance variables, such as board composition or ownership structure (e.g., the entrance of new shareholders or shifts in the distribution of shares), allow for novel insights.

RQ10. A vast majority of research dedicated to heterogeneity in FAT studies originates from differences in family firm governance. As shown in this study, these governance variables mostly fall under the realm of the *components of involvement* perspective toward family firms. Therefore, further research on heterogeneity should extend this focus, for instance, by addressing family-specific behaviors more in-depth. This notion is further supported by the fact that research increasingly recognizes family firm heterogeneity as a phenomenon beyond the firm and family level, extending toward individuals (Fang et al. 2019). Methodologically, going beyond the components of involvement perspective also implies the use of a more diverse set of research methods to better understand family firm heterogeneity. For instance, no qualitative methods have been represented in the literature sample. Similarly, focusing to a larger extent on the behavior of family firms also requires exploiting data beyond archival sources. Specifically, survey-based research is encouraged to investigate nuances of heterogeneity.

Given the recommendations for further research introduced above, it should be noted that these are associated with several distinct challenges. Family firm research is widely plagued by problems of data availability (Michiels and Molly 2017; Neubaum 2018). When analyzing effects of family firm heterogeneity, these challenges are further aggravated because of more granular data requirements. Hence, heterogeneity research is inherently linked to challenges of feasibility. Therefore, researchers need to navigate the trade-off between the fundamental availability of data, the cost of collecting the data and the benefits of increased explanatory power by developing superior models that incorporate heterogeneity. Regarding this trade-off, two conclusions can be drawn. First, our results show that the added value of including heterogeneity in research designs is substantial. Second, considering the practical limitations regarding availability and cost of obtaining data, researchers need to establish priorities among heterogeneity variables of interest, as well as optimize the cost–benefit ratio of incorporating these variables in their studies. For both of the latter issues, i.e., prioritizing variables and optimizing research efficiency, the review provides useful guidelines. On the one hand, the research recommendations serve as indicators for promising avenues for future heterogeneity research, helping researchers prioritize. On the other hand, the review may serve as an inventory for heterogeneity-related findings but also more generally, practical approaches towards heterogeneity, which can inform future research and therefore, increase efficiency.

4.4 Limitations

Our study is subject to a number of limitations. First, the review has been designed to reflect on the prevailing understanding of heterogeneity, including its main drivers and operationalizations in empirical research. In this regard, the sample selection actively considers heterogeneity in the query search terms and in further retention criteria (heterogeneity-relevant dataset). As a consequence, the review is not able to answer questions about the general prevalence of heterogeneity considerations across the population of all articles regarding family firm FAT research. Given that this review is explicitly designed to discuss heterogeneity among family firms, it is likely that the articles that support the perspective of family firms being a heterogeneous group stand out. However, this risk is not rooted in the study design itself because the sample selection does not exclude heterogeneity-related non-findings. Rather, it must be considered that publication bias (Rothstein et al. 2005) may imply that heterogeneity-related non-findings are less probable to be reported. Methodologically, the systematic review approach is further related to limitations such as selection bias or the inadequate processing of statistical information (Owens 2021; Yuan and Hunt 2009). Considering the predominance of quantitative empirical studies within the reviewed literature, meta-analytic methods can further support the understanding of family firm heterogeneity beyond the scope of this review (Hansen and Block 2021; Hulland and Houston 2020).

As another limitation, a significant share of the reviewed analyses represents single-country studies with regional samples. As such, cross-country effects are frequently not addressed. Therefore, these factors can only be assessed to a limited extent, leading to a distinct focus on sources of heterogeneity originating from family firms' corporate governance systems. Finally, the dominance of the agency theory in the literature sample must be reflected critically. Based on the wide prevalence of agency theoretical arguments among the primary studies, our review also strongly relies on agency theoretical considerations. However, it is now widely accepted that agency theory as an economic theory alone is not able to entirely capture and explain family firm dynamics (Le Breton-Miller et al. 2011). Rather, a pluralistic approach towards theory is necessary (Prencipe et al. 2014; Velte and Weber 2021). Aside from the significant uptake of theories based on behavioral arguments such as the behavioral agency model and the SEW theory (Gomez-Mejia et al. 2011; Wiseman and Gomez-Mejia 1998), more recently scholars have suggested integrating family science perspectives into management research (Jaskiewicz et al. 2017; Michiels et al. 2022). However, these family science perspectives are not reflected in the reviewed primary studies to date.

5 Conclusion

Family firm policies in the area of FAT are closely interconnected (Brune et al. 2021). These can be regarded as of particular relevance in family firms due to their unique composition of providers of capital, managers and ultimately, beneficiaries of these corporate policies within and beyond the owning families. Prior research

has shown that family firms exhibit several differences in their FAT policies, pointing toward the heterogeneity of family firms to explain such variation (Bauweraerts et al. 2020; Michiels and Molly 2017; Molly and Michiels 2021).

Theoretically, heterogeneity has been discussed as altering the distinct family business agency conflicts, subsequently materializing as changes in the firms' FAT policies. The analysis of the empirical heterogeneity literature lends support to this perspective, indicating that variations in family firm agency conflicts can explain dissimilarities in family firm FAT policies and thus, family firm heterogeneity (Ali et al. 2007; Chen et al. 2021; Yoshikawa and Rasheed 2010).

To identify relevant drivers of heterogeneity, a systematic review of 91 peer-reviewed articles has been conducted. In total, 24 dimensions of family firm heterogeneity have been identified, predominantly associated with the firms' corporate governance and, to a lesser extent, wider firm characteristics. The corresponding heterogeneity effects across these dimensions have subsequently been discussed in depth. The results clearly support the perspective of family firms being a heterogeneous group, as hypothesized in prior research. On a high level, the results indicate that the most influential drivers of heterogeneity evolve around family firm management, variations in ownership structure and board composition as well as transgenerational issues.

Among the most prominent findings, transgenerational differences and their effect on family firm capital structures have been discussed. Several competing effects regarding family firm generations and capital structure decisions have been elaborated (González et al. 2013; Hansen and Block 2021; Molly et al. 2012). Aside from generational differences, especially the role of family CEOs has been found to affect family firm financing, observable through higher financial discretion, lower debt levels, and a trust-enhancing perception among lenders (Burgstaller and Wagner 2015; Jain and Shao 2015; Schmid 2013). Regarding family firm dividend policies, our review has shown that agency prescriptions suggesting the potential expropriation of minority owners (e.g., in the case of control-enhancing mechanisms or other passive family owners) do not necessarily materialize in the analyzed firms. In terms of financial reporting quality, especially heterogeneity regarding management and board composition is associated with converging outcomes. Our results suggest that family firms benefit from family management paired with independent boards, which is associated with higher financial reporting quality and reduced earnings management (Ali et al. 2007; Bansal 2021; Cascino et al. 2010; Prencipe et al. 2011). Finally, tax avoidance behavior has been particularly associated with heterogeneity in management composition. The involvement of family managers is associated with reduced tax avoidance, especially if the founder is involved directly or indirectly (Bauweraerts et al. 2020; Brune et al. 2019a, b; Temouri et al. 2021).

Consequently, heterogeneity has been found to capture different groups of effects. Although differentiating family firms along several dimensions of heterogeneity has resolved conflicting results at the level of family vs. non-family firms, inconsistencies also prevail at the heterogeneity level. From a practical perspective, it has been discussed how heterogeneity considerations establish multiple hierarchically nested categories of family firms, reducing the robustness and comparability of research results across studies.

Therefore, among other recommendations, the analysis results suggest distinguishing conceptually between heterogeneity that is family firm specific or family firm agnostic. This is expected to catalyze several conceptual advancements regarding the understanding of family business heterogeneity. Namely, it increases focus and consolidates heterogeneity as a meaningful concept with a more defined scope. Furthermore, it allows for more consistent research designs in which drivers of variation that are not specific to family firms rise above the family firm level. Following this thinking, we propose a more focused approach to family business heterogeneity. This will help develop a clearer picture of family firm heterogeneity as a complex phenomenon while increasing the permeability toward non-family-firm-related research, especially from the realm of corporate governance research.

Overall, this review contributes to the ongoing scholarly debate regarding family firm heterogeneity. In particular, the analysis integrates findings from separate literature streams dispersed across finance and accounting journals and outlets dedicated to family firm research. Therefore, providing a comprehensive overview of the ways in which family firms are found to differ offers valuable insights for researchers at the intersection of these domains. Aside from adding to the ongoing academic discourse, the documented heterogeneity of family firms has direct implications for practitioners alike. The heterogeneous behaviors of family firms, observable in their financing practices, the quality of their financial reporting, and their tax behaviors, provide a basis for family firm (financial) managers to reflect on the environments they are exposed to. More importantly, external stakeholders, including providers of capital, auditors, recipients of the firms' financial reporting, and tax authorities, are encouraged to consider family firms, not as one uniform aggregate of organizations, but appreciate the specific peculiarities of these firms as documented in this review.

Appendices

Appendix A: List of abbreviations (sorted alphabetically)

Abbreviation	Definition
AP (I-IV)	Agency problem (I-IV)
ETR	Effective Tax Rate
FAT	Finance, Accounting and Tax
IPO	Initial Public Offering
PE	Private Equity
RBV	Resource-Based View
SEW	Socioemotional Wealth
SMEs	Small and Medium-Sized Enterprises

Appendix B: Search terms and sample selection process

(*Finance entity* OR *Accounting entity* OR *Tax entity*) AND *Family firm entity* AND *Heterogeneity entity.*

Finance entity

((financ*) OR (debt) OR (equity) OR (stock) OR (capital) OR (leverag*) OR (IPO) OR (bank*) OR (investor*) OR (dividend*) OR (borrow*) OR (lend*) OR (loan*) OR (credit) OR (collateral)

Accounting entity

(accounting OR accrual* OR audit* OR disclosure OR earnings OR "financial reporting" OR reporting OR "management control")

Tax entity

(tax* OR "tax avoidance" OR "tax aggressiveness" OR "tax evasion")

Family firm entity

(("family firm*") OR ("family business*") OR ("family enterprise*") OR ("family influenc*") OR ("family control*") OR ("family owner*") OR ("family manag*") OR (family govern*) OR ("founding family"))

Heterogeneity entity

heterogen*

The keywords used to describe the heterogeneity entity have been limited to the term heterogen* in order to cover 'heterogeneity' as well as 'heterogeneous'. Other synonyms such as 'differen*', 'variation' or 'divers*' have been found to inflate the search results substantially without adding value and have thus been omitted. This observation can be attributed to the fact that the term heterogeneity is well-established as the dominant terminology in the family business research space.

Appendix C: Overview of literature sample

Overview of short code definitions for dimensions of heterogeneity

HD1 Ownership structure; HD2 Ownership concentration (dispersion) and other blockholders; HD3 Control enhancing mechanisms and excess control rights; HD4 Affiliation with business groups; HD5 Public vs. private; HD6 Corporate opacity; HD7 Family vs. non-family management; HD8 Board; HD9 CEO and founder; HD10 CFO, financial managers and accountants; HD11 Generation and succession; HD12 Collective differences in family involvement, control and influence; HD13 Family governance practices (FGP); HD14 Network ties, relational strength and political connections; HD15 Auditors, advisors and consultants; HD16 Family goals and preferences; HD17 Socio-emotional wealth (SEW); HD18 Family firm culture, values and ethics; HD19 Family firm identity; HD20 Size; HD21 Industry; HD22

Age and firm lifecycle; HD23 Current and historic financial situation; HD24 Firm- and industry-level performance environment

Year	Author(s)	Journal	Regime Time frame Sample size Model	Theoretical fundament	Heterogeneity dimensions (HD)	Dependent variable	Effect of heterogeneity variables towards dependent variable (+/−/o)[a]
Panel A: Capital structure, debt and equity (n = 40)							
2011	Amore et al.	Journal of Corporate Finance	Italy 2000–2009 2484 firms; 186 succession events Difference-in-difference	Agency theory	HD8: Family dominated board HD9: Family/non-family CEO HD22: Firm age HD23: Cash and spare borrowing capacities	Debt (level, maturity structure)	HD8: + HD9: + HD22: + HD23: +
2021	Baixauli-Soler et al.	Journal of Business Research	Spain 2016 420 firms OLS	SEW	HD9: Family/non-family CEO, CEO gender HD11: Generation HD17: SEW importance (SEWi)	Debt level	HD9: +/+ HD11: + HD17: –
2012	Bjuggren et al.	Journal of Small Business and Entrepreneurship	Sweden 2008 177 firms OLS	Agency theory	HD2: Ownership dispersion HD22: Firm age	Debt level	HD2: + (non-linear) HD22: –
2007	Blanco-Mazagatos et al.	Family Business Review	Spain 2000 654 firms Binomial logit regression	RBV Agency theory	HD11: Generation	Debt level	HD11: +
2015	Burgstaller and Wagner	Journal of Risk Finance	Austria 2005–2010 470 firms Dynamic panel data model	Agency theory Pecking order theory	HD9: Founder/descendant CEO HD11: Generation	Capital structure (leverage, speed of adjustment to target debt ratio)	HD9: + HD11: o
2012	Chan et al.	Economics Letters	China 2005–2007 1347 firms OLS; fixed effects; IV	None	HD14: Politically connected CEO or board chair	Financing constraints (access to capital)	HD14: –

Year	Author(s)	Journal	Regime Time frame Sample size Model	Theoretical fundament	Heterogeneity dimensions (HD)	Dependent variable	Effect of heterogeneity variables towards dependent variable (+/−/o)[a]
2011	Chua et al.	Journal of Business Venturing	USA 2002 1267 firms OLS; Logit; Heckman-two-stage procedure	Agency theory Social capital	HD1: Family ownership HD7: Family management HD8: Family board members HD11: Transgenerational succession intention	New venture debt financing (relationship with lenders, guarantees, amount of debt financing)	HD1: +/o HD7: o HD8: + HD7*HD8: +/o HD11: +/o
2015	Cirillo et al.	Management Decision	Italy 2000–2011 113 firms and IPOs OLS	Stewardship theory	HD11: Generation HD12: Collective differences in family involvement	IPO value (premium over book value)	HD11: o HD12: + HD11*HD12: –
2021a	Comino-Jurado et al.	Journal of Business Research	Spain 2015–2017 81574 PLS-SEM	SEW	HD8: Family members in board HD11: Generation	Debt level (debt-to-total asset ratio)	HD8: + HD11: –
2021b	Comino-Jurado et al.	Management Decision	Spain, 2015–2017 9266 firms PLS-SEM	Agency theory SEW	HD8: Family members in board HD12: Collective differences in family involvement	Debt level	HD8: + HD12: +
2011	Di Giuli et al.	Journal of Banking & Finance	Italy 2000–2003 187 firms OLS, tobit	None	HD1: Existence of non-family shareholder HD10: Non-family CFO HD11: Generation HD20: Firm size	Financial sophistication (use of sophisticated financial products)	HD1: + HD10: + HD11: + HD20: +
2014	Ebihara et al.	Japan and The World Economy	Japan 2007–2009 2664 firm-years Cross-sectional regression	Agency theory	HD9: Family/non-family CEO	Cost of capital	HD9:– (debt); o (equity)

Year	Author(s)	Journal	Regime Time frame Sample size Model	Theoretical fundament	Heterogeneity dimensions (HD)	Dependent variable	Effect of heterogeneity variables towards dependent variable (+/−/o)[a]
2000	Filbeck and Lee	Family Business Review	USA 2000 61 firms OLS	None	HD11: Generation HD8: Non-family board members HD10: Non-family CFO HD20: Firm size	Use of financial management techniques (capital budgeting, risk adjustment, working capital management)	HD11: o HD8: + HD10: + HD20: +
2013	González et al.	Journal of Business Research	Colombia 1996–2006 523 firms Random-effects panel; IV; lagged variables	Agency theory	HD1: Family ownership HD8: Family managers in board HD9: Family/non-family CEO HD11: Generation HD22: Firm age	Debt level	HD1*HD9: + HD8: – HD9: – HD11: + HD22: u-shaped
2021	Hansen and Block	Corporate Governance—An International Review	International n/a, depending on primary studies 436,886 from 613 primary studies HOMA, MRA	Agency theory SEW	HD11: Generation	Leverage ratio	HD11: +/o
1999	Haynes et al.	Family Business Review	USA 1997 673 business-owning households Logit	None	HD20: Firm size HD22: Firm age HD23: Household net worth, borrower status	Intermingling	HD20: o HD22: o HD23: o/+
2011	Hearn	International Review of Financial Analysis	North Africa 2000–2009 63 firms and IPOs OLS; logit	Agency theory	HD1: Private equity and business angel investors HD8: Board size, board independence, board member ownership HD15: Foreign IPO lead manager	IPO underpricing	HD1: + HD8: +/o/o HD15: +

Year	Author(s)	Journal	Regime Time frame Sample size Model	Theoretical fundament	Heterogeneity dimensions (HD)	Dependent variable	Effect of heterogeneity variables towards dependent variable (+/−/o)[a]
2015	Jain and Shao	Corporate Governance—An International Review	USA 1997–2008 1,782 firms and IPOs Two-stage regression; propensity matching	Agency theory SEW	HD3: Excess control HD9: Family/non-family CEO HD11: Multiple generations involved	Post IPO financing behavior (debt level and maturity structure)	HD3: − HD9: + HD11: −
2015	Keasey et al.	Journal of Corporate Finance	Europe 2000–2009 1050 firms Panel regression; system GMM; IV	Pecking order theory, signaling theory, life-cycle theory	HD2: Main owner's shareholdings HD22: Firm age/life-cycle	Debt level	HD2: + HD22: +
2008	King and Santor	Journal of Banking & Finance	Canada 1998–2005 613 firms Random-effects panel regression	Pecking order theory	HD2: Ownership concentration HD3: Excess control (dual class, pyramid, size of wedge)	Capital structure (debt to total assets)	HD2: + HD3: − (dual class, pyramid); o (size of wedge)
2013	King and Peng	Journal of Family Business Strategy	USA 1950–1965 211 firms Logit and hazard models	Pecking order theory	HD11: Generation HD21: Industry characteristics	Capital structure	HD11: + HD21: +
2013a	Koropp et al.	Small Business Economics	Germany 2008 187 firms Binary logit regression	Pecking order theory	HD9: CEO financial knowledge HD16: Desire for family control, owner-manager risk propensity, Attitude towards debt HD23: Prior experience with debt suppliers; prior succession experience	Intention to use debt (for succession financing)	HD9: + HD16: o/o/+ HD23: o/+

Year	Author(s)	Journal	Regime Time frame Sample size Model	Theoretical fundament	Heterogeneity dimensions (HD)	Dependent variable	Effect of heterogeneity variables towards dependent variable (+/−/o)[a]
2013b	Koropp et al.	Journal of Small Business Management	Germany 2007 280 OLS; 2SLS; logistic regression	Theory of planned behavior	HD9: CEO financial knowledge HD16: Economic goal orientation HD18: Family commitment (F-PEC culture subscale) HD23: Prior experience with debt suppliers	Owner-manager's attitude toward debt financing	HD9: + HD16: – HD18: o HD23*HD18: +
2014	Koropp et al.	Family Business Review	Germany 2008–2009 118 firms SEM	Theory of planned behavior	HD18: Perceived family norms, Owner-manager attitude towards debt, perceived behavioral control, intention to use debt	Capital structure (behavioral intention to use debt/equity and actual decision to use debt/equity)	HD18: +/+/o/+
2014	Leitterstorf and Rau	Strategic Management Journal	Germany 2004–2011 153 firms and IPOs Hierarchical regressions	SEW	HD11: Generation HD12: Collective differences in family involvement	IPO underpricing	HD11: o HD12: o
2017	Lozano and Durán	European Journal of Finance	Europe 2000–2009 1,569 firms Panel regression, GMM	Trade-off theory	HD22: Firm age HD24: Financial constraints	Level and adjustment of cash holdings	HD22: + HD24: +
2017	Ma et al.	European Accounting Review	China 2004–2010 705 firms OLS, firm-fixed effects, IV	Agency theory	HD3: Control-ownership wedge HD6: Corporate opacity HD9: Founder-CEO HD14: Political connection	Cost of debt	HD6: + HD6*HD9: + HD6*HD3: + HD6*HD14: +

Year	Author(s)	Journal	Regime Time frame Sample size Model	Theoretical fundament	Heterogeneity dimensions (HD)	Dependent variable	Effect of heterogeneity variables towards dependent variable (+/−/o)[a]
2012	Molly et al.	Entrepreneurship Theory and Practice	Belgium 2001–2005 425 firms 2SLS regression	Pecking order theory	HD11: Generation HD24: Firm growth	Capital structure (debt to total assets)	HD11: o HD11*HD24: +
2010	Molly et al.	Family Business Review	Belgium 1991–2006 152 firms Fixed-effects panel regression	Agency theory	HD11: Generation	Debt	HD11: + (non-linear)
2015	Pindado et al.	Journal of Business Finance & Accounting	Europe 1996–2006 645 firms Panel regression, system GMM	Agency theory	HD2: Existence of second blockholder HD3: Control-enhancing mechanisms HD7: Active family management HD11: Generation	Capital structure and speed of adjustment to target debt ratio	HD2: + HD3: – HD7: – HD11: –
2018	Rojo Ramírez and Martínez Romero	Review of Managerial Science	Spain 2002–2013 719 firms Hierarchical regressions	SEW	HD12: Collective differences in family involvement HD24: Economic environment (upturn/downturn)	Required and actual equity returns	HD12: + HD24: +/o
2014	Santos et al.	Journal of Management & Governance	Europe 2002–2006 694 firms OLS	Agency theory	HD2: Ownership concentration, existence of other blockholders (and balanced voting rights among them)	Debt level	HD2: +/+
2021	Sardo et al.	Eurasian Business Review	Portugal 2010–2017 7135 firms System GMM	Trade-off theory	HD1: Gender of owner HD11: Generation	Debt (speed of adjustment to target debt level)	HD1: – HD11: + HD11*HD1: stronger effects

Year	Author(s)	Journal	Regime Time frame Sample size Model	Theoretical fundament	Heterogeneity dimensions (HD)	Dependent variable	Effect of heterogeneity variables towards dependent variable (+/−/o)[a]
2013	Schmid	Journal of Banking & Finance	Germany/International 1995–2009/1996–2003 5638 firm-years/26,516 firm-years Pooled OLS	Agency theory	HD2: Outside blockholders HD7: Active management role of family	Capital structure (leverage ratio)	HD2: − HD7: +
2003	Schulze et al.	Academy of Management Journal	USA 1995 1464 firms Moderated hierarchical polynomial regression	Agency theory Behavioral agency theory	HD2: Ownership dispersion HD21: Industry growth	Debt level	HD2: u-shaped HD21: +
2009	Shyu and Lee	Corporate Governance—An International Review	Taiwan 2002–2006 611 firms Panel regression; system GMM	Agency theory	HD1: CEO shareholding HD2: Ownership concentration HD3: Excess control rights HD8: Family/non-family board membership HD9: CEO duality	Debt (maturity structure)	HD1: − HD1*HD9: + HD2: − HD9: − HD8: + HD3: −
2013	Song and Wang	Asia Pacific Journal of Management	China not specified 132 firms Seemingly unrelated regression (SUR) model	Information asymmetry and embeddedness theory	HD14: Relational strength	Financing performance	HD14: +
2007	Wu et al.	Journal of Business Venturing	Canada 1998–2000 2116 firms OLS; Heckman-two-stage procedure	Agency theory	HD12: Collective differences in family involvement (family ownership and management)	Use of equity financing	HD12: −

Year	Author(s)	Journal	Regime Time frame Sample size Model	Theoretical fundament	Heterogeneity dimensions (HD)	Dependent variable	Effect of heterogeneity variables towards dependent variable (+/−/o)[a]
2015	Yen et al.	Journal of Financial Services Research	Taiwan 2000–2010 66,019 individual bank loan contracts 2SLS regression	Agency theory	HD3: Voting rights exceed cash-flow rights HD9: Founder/descendant CEO, Family/non-family CEO	Bank loan contracts (costs, loan spread)	HD3: − HD9: +/−
2006	Yilmazer and Schrank	Journal of Business Venturing	USA 1989–2001 4146 households managing small businesses Probit regression	None	HD23: Household net worth	Financial intermingling	HD23: +
Panel B: Retained earnings and dividends (n = 8)							
2021	Belda-Ruiz et al.	International Entrepreneurship and Management Journal	Spain 2013–2015 482 firms Logit/tobit	SEW	HD7: Family/non-family management HD9: Family/non-family CEO HD11: Generation HD17: SEW preservation HD24: Performance hazard	Dividends (Likelihood and amount)	HD7: −/o HD9: − HD11: − HD17: − HD24: −
2014	González et al.	Family Business Review	Colombia 1996–2006 458 firms Tobit/probit	Agency theory	HD1: Family ownership (largest shareholding) HD3: Pyramid schemes HD8: Disproportionate board representation HD9: Family/non-family CEO	Dividends (amount and likelihood)	HD1: – HD3: – HD9: o HD8: +

Year	Author(s)	Journal	Regime Time frame Sample size Model	Theoretical fundament	Heterogeneity dimensions (HD)	Dependent variable	Effect of heterogeneity variables towards dependent variable (+/−/o)[a]
2012	Huang et al.	Asia Pacific Journal of Management	Taiwan 1996–2008 2781 firm-years Piecewise OLS/tobit	Agency theory Lifecycle theory of dividends	HD1: Family ownership (low, moderate, high) HD22: Firm lifecycle (early, mature)	Dividends	HD1: +/−/+ (non-monotonic) HD22: +
2015	Michiels et al.	Small Business Economics	Belgium 2002–2003 244 firms Binary logit regression	Agency theory	HD7: Active/passive family shareholders HD13: Existence of family governance practices (FGP)	Dividends (likelihood)	HD7: + HD13: +
2012	Pindado et al.	Corporate Governance—An International Review	Europe 1996–2006 645 firms Panel regression; system GMM	Agency theory	HD2: Other blockholders (non-family, family blockholders) HD3: Deviation cash-flow from voting rights	Dividends (amount, stability of dividends)	HD2: +/− HD3: −
2009	Setia-Atmaja et al.	Journal of Business Finance & Accounting	Australia 2000–2005 316 firms 3SLS regression	Agency theory	HD2: Presence of other blockholders	Dividends (ratio), debt level	HD2: o
2015	Vandemaele and Vancauteren	Journal of Small Business Management	Belgium 1999–2003 501 firms Maximum likelihood regression	SEW	HD8: Family board dominance HD9: Family/non-family CEO HD11: Generation	Dividends (amount)	HD8: − HD9: − HD9*HD8: − HD11: −
2010	Yoshikawa and Rasheed	Journal of Management Studies	Japan 1998–2002 210 firms Cross-sectional time series feasible generalized least squares (FGLS) regression model	Agency theory	HD1: Family members in board HD8: Foreign ownership, bank ownership	Dividends (ratio, dividends to net profit)	HD1*HD8: −/+

Panel C: Financial reporting quality (n = 31)

Year	Author(s)	Journal	Regime Time frame Sample size Model	Theoretical fundament	Heterogeneity dimensions (HD)	Dependent variable	Effect of heterogeneity variables towards dependent variable (+/−/o)[a]
2014	Achleitner et al.	European Accounting Review	Germany 1998–2008 838 firms OLS	SEW	HD9: Founder/descendant/external CEO	Earnings management (accrual-based, real)	HD9: +
2007	Ali et al.	Journal of Accounting & Economics	USA 1998–2002 500 firms OLS	Agency theory	HD3: Dual class shares HD9: Founder/descendant CEO	Earnings quality (discretionary accruals, predictability of cash flows, earnings persistence, earnings response coefficient)	HD3: − HD9: +
2021	Bansal	Journal of Asia Business Studies	India 2007–2019 26,962 firm-years Panel regression	Agency theory Stewardship theory Managerial hegemony theory	HD8: Board independence HD9: CEO duality HD11: Generation	Earnings management (discretionary accruals)	HD8: + HD9: + HD11: − HD8*HD11: weaker
2020	Borralho et al.	Spanish Accounting Review	Spain 2011–2016 3887 observations OLS	Agency theory SEW	HD8: Board size, board gender diversity HD9: CEO duality HD15: Big 4/non-Big 4 auditor	Financial reporting quality (discretionary accruals)	HD8: o/+ HD9: + HD15: +
2020	Boujelben and Boujelben	Journal of Financial Reporting and Accounting	France 2015 87 firms OLS	SEW	HD8: Family board representation HD11: Generation HD17: SEW	Voluntary KPI disclosure	HD8: − HD11: − HD17: −
2000	Carey et al.	Auditing—A Journal of Practice & Theory	Australia 1997 186 firms Logistic regression	Agency theory	HD7: Family/non-family management HD8: Proportion of non-family board members HD20: Firm size HD23: Level of indebtedness	Voluntary demand for internal & external auditing	External: HD7: + HD8: + HD20: o HD23: + Internal: HD7, HD8, HD20, HD23: o

Year	Author(s)	Journal	Regime Time frame Sample size Model	Theoretical fundament	Heterogeneity dimensions (HD)	Dependent variable	Effect of heterogeneity variables towards dependent variable (+/−/o)[a]
2010	Cascino et al.	Family Business Review	Italy 1998–2004 778 firms Pooled OLS; fixed effects OLS	Agency theory	HD1: Institutional ownership HD8: Board independence HD15: Big 4/non-Big 4 auditor	Earnings quality (accrual quality, persistence, predictability, smoothness)	HD1: − HD8: + HD15: +
2010	Chau and Gray	Journal of International Accounting, Auditing and Taxation	China 2002 273 firms OLS; 2SLS regression	Agency theory	HD1: Family ownership (low, high) HD8: Board independence and independent chair	Voluntary disclosure (based on index which relies on actual versus maximum possible disclosure)	HD1: + HD1*HD8: weaker HD8: +
2021	Chen et al.	Family Business Review	Taiwan 2005–2014 277 firms Panel regression	Agency theory	HD3: Control-ownership divergence HD15: Big 4/non-Big 4 auditor	Disclosure quality (based on official Taiwanese rating system), credit ratings	HD3: − HD3*HD15: +
2014	Chen et al.	European Accounting Review	USA 1996–2005 8264 firm-years Panel regression	Agency theory	HD1: Family ownership, non-family CEO ownership HD8: Family board representation HD9: Founder/non-founder CEO	Conservatism (based on non-operating accruals)	HD1: +/+ HD8: + HD9: −
2015	Corten et al.	Accounting and Business Research	USA 2003 482 firms Multinomial logit; ordered logit	Agency theory	HD11: Generation	Audit demand	HD11: +
2017	Corten et al.	Journal of Family Business Strategy	Belgium 2015 125 firms Logit	Agency theory	HD8: Board monitoring effectiveness	Audit demand	HD8: −
2018	Drago et al.	Journal of Family Business Strategy	Italy 2008–2013 288 firms OLS	SEW	HD11: Generation HD12: Family power HD19: Family name as brand	Financial report readability (FOG index)	HD11: − HD12: + HD19: +

Year	Author(s)	Journal	Regime Time frame Sample size Model	Theoretical fundament	Heterogeneity dimensions (HD)	Dependent variable	Effect of heterogeneity variables towards dependent variable (+/−/o)[a]
2018	Duréndez and Madrid-Guijarro	Journal of Family Business Strategy	Spain 2011 251 firms OLS	Agency theory	HD12: F-PEC power and experience dimension	Financial reporting quality (discretionary accruals, real earnings management, earnings persistence, conservatism)	HD12: +/−
2017	Gavana et al.	Sustainability	Italy 2004–2013 230 firms Panel regression	Legitimacy theory Stakeholder theory SEW	HD1: Family ownership HD8: Multiple family board members HD9: Founder as board member or family CEO HD19: Family name as brand HD21: Environmentally sensitive industries	Sustainability disclosure	HD1: − HD8: o HD9: + HD19: o HD21: −
2001	Ho and Wong	Journal of International Accounting, Auditing and Taxation	China 1997 98 firms OLS	Agency theory Information theory	HD8: Family members on board, board independence, existence of audit committee	Voluntary disclosure (importance-adjusted relative disclosure index (RDI))	HD8: -/o/+
2012	Hope et al.	Accounting Organizations and Society	Norway 2000–2007 185,109 firm-years OLS; logit	Agency theory	HD1: CEO Ownership HD2: Ownership concentration, second blockholder HD8: Board members related to controlling family, board members related to CEO HD9: Family/non-family CEO	Audit fees (proxy for audit effort)	HD1: + HD2: −/− HD8: +/− HD9: +

Year	Author(s)	Journal	Regime Time frame Sample size Model	Theoretical fundament	Heterogeneity dimensions (HD)	Dependent variable	Effect of heterogeneity variables towards dependent variable (+/−/o)[a]
2009	Jaggi et al.	Journal of Accounting and Public Policy	China 1998–2000 770 and 309 firm-years 2SLS regression; IV	Agency theory Stewardship theory	HD8: Family board members	Earnings management (discretionary accruals)	HD8: +
2007	Jaggi and Leung	Journal of International Accounting, Auditing and Taxation	China 1999–2000 523 firms OLS, 2SLS, 3SLS regression	Agency theory	HD8: Existence of audit committee, family board members	Earnings management (discretionary accruals)	HD8: +/−
2011	Khalil et al.	Accounting Horizons	USA 2004–2008 153 auditor resignations OLS; Logit	Agency theory	HD9: Founder/descendant CEO, family/non-family CEO	Auditor resignation (likelihood, subsequent capital market reaction)	HD9: −/+ (likelihood) HD9: +/o (market reaction)
2010	Niskanen et al.	Family Business Review	Finland 2000–2006 476 firms Logit (pooled, multinomial)	Agency theory	HD1: Family ownership, CEO ownership HD12: Collective differences in family involvement HD20: Firm size HD22: Firm age HD23: Leverage	Demand for audit quality (measured by auditor size)	HD1: −/− HD12: + HD20: + HD22: − HD23: +
2021	Palma et al.	Accounting Forum	Europe 2019 360 firms Logistic regression	SEW Legitimacy theory	HD1: Family ownership, billionaire shareholders HD9: Family/non-family CEO	Web-based sustainability reporting (representation of sustainability reporting on website)	HD1: +/+ HD9: +
2013	Pazzaglia et al.	Family Business Review	Italy 1995–2008 1254 firms Fixed-effects panel regression	SEW	HD1: Acquired/non-acquired ownership HD9: Family/non-family CEO	Earnings quality (discretionary accruals)	HD1: − HD1*HD9: +/−

Year	Author(s)	Journal	Regime Time frame Sample size Model	Theoretical fundament	Heterogeneity dimensions (HD)	Dependent variable	Effect of heterogeneity variables towards dependent variable (+/−/o)[a]
2011	Prencipe et al.	Corporate Governance—An International Review	Italy 2001–2004 135 firms Logit	Agency theory Stewardship theory	HD1: Institutional ownership HD8: Board independence, family member as board chair HD9: Family/non-family CEO, CEO duality	Income smoothing (likelihood, based on variation in income compared to sales)	HD1: o HD8: −/− HD9:—(family CEO); o (duality)
2011	Prencipe and Bar-Yosef	Journal of Accounting, Auditing & Finance	Italy 2003–2004 127 firms OLS, tobit	Agency theory	HD8: Board independence HD9: CEO duality	Earnings management (abnormal working capital accruals (AWCA))	HD9: + HD8: −
2019	Raithatha and Shaw	International Journal of Accounting	India 2006–2015 2534 firms Cross-sectional regression, IV	Agency theory	HD4: Affiliation with business groups HD7: Family management	Conservatism (based on stock returns, accruals and non-operating accruals)	HD4: + HD7: +
2021	Schierstedt and Corten	Managerial Auditing Journal	Germany 2010–2016 204 firms Panel regression	Agency theory	HD1: Family ownership HD7: Family management HD8: Family members in supervisory board HD19: Family name as brand	Audit fees	HD1: + HD7: − HD7*HD19: weaker HD8: −
2010	Stockmans et al.	Family Business Review	Belgium 2001 132 firms OLS	SEW	HD9: Founder/descendant/external CEO HD11: Generation	Earnings management	HD9: o HD11: -
2006	Wang	Journal of Accounting Research	USA 1994–2002 500 firms OLS	Agency theory	HD9: Founder/descendant/external CEO	Earnings quality (abnormal accruals, earnings informativeness, and persistence of transitory loss components in earnings)	HD9: o

Year	Author(s)	Journal	Regime Time frame Sample size Model	Theoretical fundament	Heterogeneity dimensions (HD)	Dependent variable	Effect of heterogeneity variables towards dependent variable (+/−/o)[a]
2009	Wan-Hussin	The International Journal of Accounting	Malaysia 2001 64 firms Logistic regression (binary, multinomial)	Agency theory	HD1: Institutional ownership HD8: Family members (or affiliates) on board	Corporate transparency (based on full/partial early adoption of FRS 114 segment disclosure rules)	HD1: o HD8: +
2010	Yang	Family Business Review	Taiwan 2001–2008 3914 firm-years OLS	Agency theory	HD1: Insider ownership HD9: Family/non-family CEO	Earnings management (discretionary accruals)	HD1: + HD9: +
Panel D: Tax, esp. tax avoidance (n = 12)							
2020	Bauwer-aerts et al.	Canadian Journal of Administrative Sciences	Belgium 2012–2014 242 firms Panel regression	SEW	HD1: Family ownership (weak, strong position) HD10: Family/non-family CFO HD11: Generation HD19: Family name as brand	Tax aggressiveness (ETR and cash ETR)	HD1: − HD10: + HD11: + HD19: −
2019	Brune et al.	Family Business Review	Germany 2009–2014 814 firms OLS	SEW	HD8: Founder as board member HD9: Founder/descendant/external CEO, substantial ownership position of founder HD12: Collective differences in family involvement (ownership and management)	Tax avoidance (GAAP ETR)	HD9: − HD9*HD9: o HD9*HD8: o HD12: −

Year	Author(s)	Journal	Regime Time frame Sample size Model	Theoretical fundament	Heterogeneity dimensions (HD)	Dependent variable	Effect of heterogeneity variables towards dependent variable (+/−/o)[a]
2019	Brune et al.	Managerial and Decision Economics	Germany 2011–2016 4141 firms OLS; panel; tobit	SEW	HD1: Number of non-family owners HD5: Public/private firm HD7: Family/non-family shareholders	Tax avoidance (GAAP ETR)	HD1: + HD5: + HD7: +
2021	Clemente-Almendros et al.	Journal of Small Business Strategy	Spain 2009–2016 401 firms Quasi-experiment; diff-in-diff models	Agency theory	HD11: Generation	Tax avoidance (based on leverage ratio subsequent to legislative change which reduced tax benefit of financial debt)	HD11: +
2020	Eddleston and Mulki	Entrepreneurship Theory and Practice	India not specified 206 firms OLS	Organizational identity theory SEW	HD19: Family firm identity HD24: Firm performance	Tax evasion (underreported revenues)	HD19*HD24: +/−
2021	Flamini et al.	Sustainability	Italy 2013–2014 227 firm-year observations OLS	Agency theory SEW	HD2: Ownership concentration HD8: Board independence HD9: Family/non-family CEO	Tax avoidance (ETR, cash ETR and net cash ETR)	HD2: + HD8: + HD9: −
2019	Kovermann and Wendt	Journal of Contemporary Accounting & Economics	Germany 2010–2014 678 firms Pooled OLS; random-effects panel regression	Agency theory	HD1: Family ownership, number of family owners	Tax avoidance (ETR)	HD1: +/+
2021	Lee and Bose	Journal of Contemporary Accounting & Economics	Taiwan 1998–2014 9360 firm-year observations PSM; Heckman-2-stage; SEM	Agency theory	HD6: Corporate opacity	Tax avoidance (ETR, current ETR, book tax difference, discretionary book tax difference)	HD6: −

Year	Author(s)	Journal	Regime Time frame Sample size Model	Theoretical fundament	Heterogeneity dimensions (HD)	Dependent variable	Effect of heterogeneity variables towards dependent variable (+/−/o)[a]
2016	Mafrolla and D'Amico	Journal of Family Business Strategy	Italy 2006–2011 183 firms Tobit	Agency theory	HD12: Collective differences in family involvement (ownership, management, CEO duality, board independence)	Tax avoidance (GAAP ETR)	HD12: +
2021	Sánchez-Marín et al.	Journal of Family Business Management	Spain 2011 282 firms SEM	RBV	HD12: F-PEC scale and subdimensions	Tax aggressiveness (ETR, book tax gap)	HD12 (P): + HD12 (E): − HD12 (C): o
2014	Steijvers and Niskanen	Journal of Family Business Strategy	Finland 2000–2005 621 firms OLS	Agency theory	HD1: CEO ownership HD8: Outside board members	Tax avoidance (ETR)	HD1: - HD1*HD8: weaker
2021	Temouri et al.	British Journal of Management	USA 2010–2018 1024 firms Probit and poisson models	SEW	HD9: Founder involvement HD11: Generation HD15: Big 4/non-big 4 auditor	Internationalization to tax havens (likelihood and no. of locations)	HD9: − HD11: − HD15: +

[a]The findings presented regarding the effects of each heterogeneity variable represent significant findings at different levels of significance (e.g., 1% or 5% level) for positive (+) and negative effects (−), while also non-significant findings are indicated (o).

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