

Nuances matter: how alternative family firm definitions shape the observed relationship with financial performance in SMEs

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Abstract

Purpose – This study aims to examine how alternative operational definitions of family firm status shape the observed relationship between family involvement and financial performance in small- and medium-sized enterprises (SMEs).

Design/methodology/approach – Drawing on agency theory, stewardship theory, behavioral agency arguments and the resource-based view, the study applies five operational definitions of family firms to the same sample of 184 Italian SMEs. Using a four-year panel dataset for 2014–2017, ordinary least squares regressions with industry and year fixed effects are estimated, controlling for firm age, size, generational change, sales growth, total assets and leverage.

Findings – Definitional choices materially affect empirical conclusions. Family firm status is positively associated with ROA under definitions based on majority ownership or voting rights, negatively associated under broader or lower-threshold definitions and not significantly associated under an intermediate definition. Thus, family firm definitions should not be treated as interchangeable classification devices.

Research limitations/implications – The study focuses on privately held Italian SMEs in a specific regional context and relies on accounting-based performance measures. Future research should test whether definitional sensitivity also affects non-financial and socioemotional outcomes.

Practical implications – Researchers, policymakers and practitioners should define family firm status transparently to avoid misleading performance comparisons, inappropriate benchmarking and ineffective support measures.

Originality/value – The study shows that definitional thresholds act as a methodological lens shaping family firm–performance evidence within the same SME sample.

Keywords Family firm definition, SMEs, Financial performance, ROA, Ownership, Governance, Italy

Paper type Research paper

1. Introduction

Family firms are a central object of inquiry in entrepreneurship and family business research not only because of their economic relevance but also because their identification remains theoretically and empirically contested.

Despite their economic relevance, what constitutes a “family firm” remains highly debated in the academic literature (Chrisman *et al.*, 2012; Miller *et al.*, 2007). Scholars have



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proposed multiple criteria – such as ownership, control, management involvement, succession intentions and emotional attachment – to delineate the boundaries of this concept (Chua *et al.*, 1999; Hernández-Linares *et al.*, 2018; Daspit *et al.*, 2021). However, the absence of a universally accepted definition has led to substantial fragmentation in theoretical approaches and empirical findings. As a result, firms that are labeled as “family firms” in different studies may reflect markedly different configurations of family involvement.

This definitional ambiguity represents a major obstacle to the accumulation of comparable knowledge and to the development of a coherent research agenda in family business studies. While a large body of research has examined family firm performance – mainly drawing on agency and stewardship theories – empirical evidence remains mixed, particularly regarding the relationship between family involvement and financial performance (Anderson and Reeb, 2003; Dyer, 2006; Villalonga and Amit, 2006; Miller *et al.*, 2007; Kosmidou and Holt, 2022). On the one hand, family involvement may enhance financial performance by reducing agency costs, fostering stewardship behavior, supporting long-term orientation and strengthening firm-specific resources. On the other hand, family involvement may also weaken financial outcomes when it is associated with entrenchment, intrafamily conflict, altruism-driven inefficiencies, limited managerial professionalization or the prioritization of socioemotional wealth (SEW) preservation over short-term profitability. Prior studies have highlighted that divergent operational definitions of family firms may lead to inconsistent or even contradictory results, thereby affecting the comparability of empirical findings and the validity of inferences drawn from them (Astrachan and Zellweger, 2008; Mazzi, 2011; Cano-Rubio *et al.*, 2017).

These challenges are further amplified in the context of small- and medium-sized enterprises (SMEs), where firm size, industry affiliation and contextual factors play a crucial role. Focusing on SMEs is particularly relevant in the context of family firm definitions, as ownership, governance and management structures tend to be more closely intertwined than in large corporations, making definitional thresholds more consequential for firm classification and empirical results. In SMEs, small variations in ownership or governance criteria may substantially alter whether a firm is classified as a family firm, thereby amplifying the performance implications of alternative operational definitions. Consequently, when investigating the influence of family involvement on financial performance in SMEs, caution is required when generalizing results from studies focusing on listed or large firms. Italy, like other Organisation for Economic Co-operation and Development (OECD) countries, is characterized by the numerical dominance of SMEs (CERVED, 2018), making it a particularly relevant setting for examining these issues.

Against this backdrop, recent research on family firms and family-related attributes in SMEs has expanded substantially, yet empirical findings remain markedly inconsistent. A key source of ambiguity lies in how family firms are operationally defined. Different ownership and governance thresholds capture heterogeneous configurations of family involvement, which may reflect distinct strategic orientations and goal hierarchies. Lower thresholds may identify firms where the family exerts influence without full control, potentially prioritizing SEW preservation over short-term financial returns, whereas higher thresholds are more likely to capture firms characterized by stronger control rights, monitoring capacity and closer alignment with financial performance objectives. Financial performance, thus, represents an exemplary outcome through which the consequences of alternative family firm definitions can be observed.

Building on these considerations, this study addresses a critical research gap by examining the following research question: How does the choice of operational definition of

a family firm affect the observed relationship between family firm status and financial performance in SMEs? Responding to earlier calls in the literature (Westhead and Cowling, 1999; Dyer, 2006), the study provides an empirical assessment of how alternative operational definitions of family firms lead to systematically different performance outcomes within the same sample of SMEs. Rather than assuming that family firm definitions are interchangeable, this paper treats definitional choice as a methodological lens that may shape the observed direction and strength of the family firm–performance relationship.

Using a sample of 184 SMEs located in the provinces of Verona and Vicenza in northeast Italy and using panel data on financial performance for the period 2014–2017, the study compares five widely used operational definitions of family firms. The empirical analysis relies on fixed-effects regression models applied to panel data and the results indicate that the influence of family involvement on financial performance varies significantly depending on the definitional criteria adopted, even after controlling for firm growth, size, age and leverage. By applying alternative definitions to the same empirical sample, the study isolates the effect of definitional variation from differences in sample composition, institutional context or estimation strategy.

This study contributes to family business literature by highlighting the methodological implications of definitional choices and by emphasizing the need for greater transparency and consistency in operationalizing family firm status in SME research. Its contribution is not to propose another universal definition of family firm, but to show empirically that definitional thresholds matter for the interpretation of financial performance results. The findings have important implications for scholars, policymakers and practitioners who rely on empirical evidence to assess firm performance, design support policies and make investment decisions. Ultimately, advancing knowledge on family firm performance requires moving beyond definitional ambiguity toward more analytically grounded and purpose-driven classification choices.

2. Literature review and hypotheses

2.1 *Heterogeneity of family firm definitions*

Over the past thirty years, a relevant stream of research has focused on the family business issue with the aim of investigating characteristics, peculiarities, benefits or constraints that the family attribute may represent in firms (Anderson and Reeb, 2003; Ang *et al.*, 2000; Arosa *et al.*, 2010; Cano-Rubio *et al.*, 2017; La Porta *et al.*, 1999). Recent reviews confirm that research on family SMEs remains highly fragmented, particularly with regard to definitional clarity and conceptual evolution (Valenza *et al.*, 2023).

A family firm is commonly defined as an organization controlled and, at times, managed by family members (Miller *et al.*, 2007). Most definitions proposed in the literature empirically focus on elements related to ownership, management or governance. Comprehensive reviews of these definitions are provided by Miller *et al.* (2007), Mazzi (2011) and Ramadani and Hoy (2015).

Despite these contributions, the literature consistently recognizes the difficulty of identifying a single, shared definition of a “family firm” (Astrachan *et al.*, 2002; Daily and Dollinger, 1993; Mazzi, 2011; Miller *et al.*, 2007; Ramadani and Hoy, 2015; Hernández-Linares *et al.*, 2018). Some scholars argue that family influence cannot be fully captured by ownership and control alone, suggesting the inclusion of additional dimensions such as transgenerational intent, shared values and multigenerational involvement (Chua *et al.*, 1999; Shanker and Astrachan, 1996).

Frameworks such as the family influence on power, experience and culture (F-PEC) scale and the family universe bull’s eye model reflect this multidimensional perspective

(Astrachan *et al.*, 2002; Shanker and Astrachan, 1996). However, while these approaches enhance conceptual richness, they also increase measurement complexity and reduce comparability across empirical studies. This trade-off is particularly important for empirical research: richer definitions may better approximate the essence of family influence, but operational definitions based on observable criteria remain necessary when researchers seek to classify firms consistently across large samples.

As a consequence, definitional heterogeneity has emerged as a central methodological challenge in family business research, limiting cumulative knowledge and complicating cross-study comparisons. The problem is not merely terminological. If alternative definitions identify different subsets of firms as “family firms,” then empirical estimates of family firm performance may vary because the underlying group being analyzed changes. Definitional heterogeneity may therefore generate measurement bias and contribute to contradictory findings in the literature.

2.2 Family firm performance and mixed empirical evidence

The governance characteristics associated with family involvement have been extensively discussed in relation to firm performance. Family firms are often expected to benefit from reduced agency costs, stronger stewardship orientation, long-term focus and firm-specific investments (Davis *et al.*, 1997; Cucculelli and Micucci, 2008). Conversely, family involvement may also introduce disadvantages such as the transfer of family conflicts into business decisions, altruism-driven inefficiencies and limited managerial professionalism (Dyer, 1989; Schulze *et al.*, 2001; Lubatkin *et al.*, 2005; Mismetti *et al.*, 2025).

Empirical evidence on the relationship between family involvement and financial performance – typically measured using profitability indicators such as ROA – remains mixed. Some studies report positive effects associated with founder leadership or family CEOs (Lee, 2006; McConaughy *et al.*, 2001; Molly *et al.*, 2015), while others find neutral or negative effects, particularly in later generational stages (Villalonga and Amit, 2006). These inconsistencies persist across both large firms and SMEs. Positive findings are usually explained by the alignment of ownership and control, stronger monitoring incentives, family reputation concerns, patient capital and long-term commitment. In contrast, negative or insignificant findings are commonly attributed to family entrenchment, reluctance to professionalize management, succession-related tensions, risk aversion and the pursuit of noneconomic family-centered goals.

This mixed evidence suggests that the family nature of the firm should not be interpreted as a homogeneous condition. Family involvement may activate different mechanisms depending on who controls the firm, who participates in governance, who manages the business and how strongly the family is able or willing to influence strategic decisions. Accordingly, the same label – “family firm” – may include firms characterized by very different governance structures, decision-making processes and performance priorities.

Importantly, prior research suggests that part of this empirical inconsistency may stem from the use of different operational definitions of family firms. Astrachan and Zellweger (2008) argue that findings across studies are often not comparable precisely because they rely on divergent definitional criteria. Similar concerns are echoed by Rau *et al.* (2018), who emphasize that definitional clarity is essential for both empirical comparability and theoretical advancement. Thus, the mixed evidence on family firm performance may derive not only from genuine differences among family firms, but also from the way researchers operationally distinguish family from nonfamily firms.

2.3 Theoretical perspectives and hypothesis development

Several theoretical perspectives have examined the relationship between family involvement and firm performance, identifying both potential benefits and drawbacks. According to agency theory, family-owned and managed firms may reduce classical agency costs due to a presumed alignment of interests between owners and managers (Jensen and Meckling, 1976; Fama and Jensen, 1983a, 1983b). At the same time, family managers may extract private benefits of control, particularly in contexts characterized by weak external monitoring or concentrated power, which can negatively affect performance (Morck and Yeung, 2004).

Behavioral and stewardship perspectives emphasize alternative mechanisms. Stewardship theory suggests that family managers may act as stewards rather than opportunistic agents, driven by long-term orientation, trust and socioemotional attachment to the firm (Davis *et al.*, 1997; Corbetta and Salvato, 2004). However, behavioral agency arguments highlight that altruism, self-control problems and intrafamily conflicts may generate inefficiencies and offset potential stewardship benefits (Schulze *et al.*, 2001; Lubatkin *et al.*, 2005; Karra *et al.*, 2006). Empirical evidence reflects this tension: while founder-led or family-CEO firms often exhibit superior performance (McConaughy *et al.*, 2001; Lee, 2006; Molly *et al.*, 2015), descendant involvement has frequently been associated with weaker outcomes, except in specific governance roles such as nonexecutive directorships (Villalonga and Amit, 2006; Barontini and Caprio, 2006).

From a resource-based view (RBV), family involvement may constitute a source of idiosyncratic resources and capabilities – commonly referred to as familiness – arising from the interaction between the family system and the firm system (Habbershon and Williams, 1999; Habbershon *et al.*, 2003; Sirmon and Hitt, 2003). These resources may support competitive advantage through tacit knowledge, social capital and patient capital, but they are not uniformly present across family firms, further contributing to heterogeneity in performance outcomes (Klein, 2007; Duh, 2010).

Drawing on agency theory, stewardship theory and the RBV provides a complementary framework for interpreting the family firm–performance relationship, given the multifaceted nature of family involvement. These perspectives highlight that family firms may simultaneously embody contexts of reduced agency costs, stewardship-oriented behavior and distinctive resource endowments. Importantly, which of these mechanisms becomes more salient depends on how family involvement is operationally defined – through ownership, governance or management criteria. In this sense, definitional choices shape the analytical lens through which family firms are interpreted and help explain why empirical findings may differ across studies.

Taken together, these perspectives suggest that family involvement may influence financial performance through multiple and sometimes countervailing mechanisms. Importantly, the activation of these mechanisms depends not only on the presence of family involvement *per se* but also on how such involvement is operationally defined and measured. Depending on whether family firms are identified through ownership, governance or management criteria, empirical analyses may capture firms characterized by reduced agency costs, enhanced stewardship behavior or distinctive resource bundles to varying degrees.

Because the theoretical arguments support both positive and negative effects of family involvement on financial performance, we formulate two competing hypotheses. The first reflects the view that family involvement may enhance performance through interest alignment, stewardship, long-term commitment and family-specific resources. The second reflects the view that family involvement may weaken performance through entrenchment,

altruism-driven inefficiencies, intrafamily conflict, limited professionalization and the prioritization of SEW over short-term profitability:

H1a. Family firm status is positively associated with financial performance in SMEs.

H1b. Family firm status is negatively associated with financial performance in SMEs.

Beyond establishing whether a family–performance relationship exists, a second key issue concerns the role of definitional heterogeneity. Prior research has long acknowledged that empirical findings in family business studies are often difficult to compare because they rely on different operational definitions of family firms (Astrachan and Zellweger, 2008; Mazzi, 2011). Frameworks such as the F-PEC model explicitly recognize that varying degrees of power, experience and culture lead to different expressions of family influence, which may translate into different performance implications (Astrachan *et al.*, 2002). As Rau *et al.* (2018) argue, definitional clarity is essential not only for empirical comparability but also for theoretical advancement.

At a more substantive level, how family firms are operationally identified represents an additional source of variability in empirical results. Different definitional thresholds implicitly select firms characterized by varying degrees of family control, involvement and strategic influence. As a result, empirical analyses based on alternative definitions may capture substantively different subsets of firms, even when applied to the same underlying population.

Among the observable dimensions used in operational definitions, ownership thresholds are particularly relevant because they determine whether a family has sufficient residual claim and control rights to influence strategic decisions. A majority ownership threshold is more likely to capture firms in which the family has effective control, stronger monitoring incentives and greater ability to align strategic choices with ownership objectives. In contrast, lower ownership thresholds may include firms where family influence exists but is weaker, fragmented or insufficient to shape firm-level outcomes. Therefore, variation in ownership thresholds may alter the observed association between family firm status and financial performance. This reasoning leads to the following hypothesis:

H2. The association between family firm status and financial performance varies according to the ownership threshold used to classify a firm as family-owned.

Ownership, however, does not fully capture family influence. Families may also shape firm behavior through governance and management roles, particularly in SMEs where ownership, board participation and managerial responsibility are often closely intertwined (Gnan *et al.*, 2015; Songini and Gnan, 2015). The presence of family members in governance or management may strengthen monitoring, accelerate decision-making and reinforce stewardship behavior; however, it may also generate managerial entrenchment, skill gaps or the transfer of family conflicts into business decisions (Chrisman *et al.*, 2007; Schulze *et al.*, 2001). Therefore, definitions that incorporate governance and/or management involvement may capture different mechanisms from those based on ownership alone. This distinction is important because a firm with family ownership but no active governance involvement may differ substantially from a firm in which family members directly participate in the board or management team. This leads to the following hypothesis:

H3. The association between family firm status and financial performance varies according to whether the operational definition includes family involvement in governance and/or management roles.

Finally, definitional heterogeneity is not expected to affect performance estimates randomly. Broader definitions – based on lower ownership stakes or minimal governance or management involvement – are more likely to include firms in which family influence is weak, fragmented or largely symbolic (Chrisman *et al.*, 2005; Miller *et al.*, 2007). In such cases, the mechanisms commonly associated with superior family firm performance, such as effective monitoring, stewardship behavior or familiness-related resource advantages, may be attenuated or absent. As a result, the inclusion of firms characterized by heterogeneous or weak family influence may dilute the average performance of the family firm group. Moreover, firms captured by broader definitions may place greater emphasis on nonfinancial objectives, such as altruism, family harmony or SEW preservation, potentially at the expense of short-term financial performance (Sharma *et al.*, 1997; Gomez-Mejia *et al.*, 2007; Chua *et al.*, 2015; Berrone *et al.*, 2012; Calabrò *et al.*, 2026; Sanchez-Famoso *et al.*, 2025).

Conversely, stricter definitional thresholds are more likely to identify firms in which families exercise effective control over strategic decisions and governance processes, thereby increasing the salience of performance-related mechanisms. This asymmetry suggests that definitional thresholds not only shape which firms are included in the family firm category but also influence the direction and magnitude of observed performance effects. Accordingly, we expect that lowering definitional thresholds will be associated with weaker observed performance effects for the family firm cluster.

This final expectation does not duplicate Hp2 and Hp3. While Hp2 focuses specifically on the role of ownership thresholds and Hp3 focuses on the inclusion of governance and management criteria, the following hypothesis concerns the overall effect of broader, less restrictive operational definitions. In other words, it addresses whether lower-threshold definitions systematically dilute the observed financial performance attributed to the family firm category:

- H4.* Broader operational definitions based on lower thresholds of family involvement are associated with weaker observed financial performance for the family firm cluster.

In light of the conflicting findings in the literature, definitional choices and the lack of consensus on what constitutes a family firm – combined with varying thresholds for ownership, governance and management – substantially influence the observed relationship between family involvement and financial performance. To address this issue, our study focuses exclusively on operational definitions of family firms that emphasize observable and measurable characteristics of family involvement. This approach enables us to test whether changing the definitional threshold alters the attribution of performance outcomes to the family firm category.

3. Methodology

3.1 Data collection and sample

To address the research question, this study relies on a sample of Italian SMEs active in 2014 and located in the provinces of Verona and Vicenza, in northeast Italy. The empirical setting was selected because these provinces represent a highly entrepreneurial area characterized by a strong presence of privately held SMEs and family-owned businesses. Restricting the analysis to a clearly defined geographical area also allowed us to build a homogeneous empirical setting and to collect survey-based information through established institutional and professional networks. Taken together, firms located in Verona and Vicenza account for approximately 40% of all companies registered in the Veneto region, which in turn represents about 10% of the total population of Italian firms. This makes the selected area a meaningful

and economically relevant context for investigating the relationship between family firm definitions and financial performance (De Massis *et al.*, 2013).

We selected firms with between 10 and 249 employees, thus excluding micro-enterprises with fewer than ten employees and focused exclusively on limited-liability companies, which represent the most prevalent and organizationally structured legal form among Italian SMEs. Companies in special situations that could affect the reliability of financial information, such as insolvency or liquidation, were excluded from the sampling frame. We considered only firms operating in the manufacturing, construction and wholesale and retail trade macro-sectors, corresponding to NACE sections C, F and G. These sectors represent the majority of nonfinancial firms in the selected area.

During 2016 and 2017, firms were directly contacted to collect survey data through a questionnaire addressed to the chairperson, the chief executive officer (CEO) or the chief financial officer (CFO). The questionnaire was administered in both paper-based and web-based formats. It was designed to collect complementary firm-level and governance-related information that could not be reliably obtained from secondary sources. In particular, it gathered firm identification details, industry classification based on the NACE code, year of foundation, number of generational successions, number of family members actively involved in management and any changes in ownership or board composition relative to the 2014 baseline year.

The broader comparable population consisted of 3,051 limited-liability SMEs operating in the selected provinces and sectors, as identified through the Italian Register of Companies and financial data available from AIDA and ORBIS. From this comparable population, firms were contacted through institutional and professional networks during 2016 and 2017. However, it was not possible to contact all firms in the comparable population because an email address was not available for every company and, where available, it was not always possible to verify whether the address was still valid or up to date. Moreover, because the survey was distributed through multiple channels and follow-up contacts, the exact number of firms effectively reached cannot be determined with precision. The final sample consists of 184 firms, corresponding to approximately 6.0% of the broader comparable population. For this reason, the 6.0% figure should be interpreted as the ratio between the final sample and the broader comparable population, rather than as a formal response rate based on the exact number of firms effectively reached.

All firms included in the final sample were unlisted limited-liability companies in regular activity. Before running the empirical analyses, observations with missing financial information or abnormal ratio values were excluded. In addition, firms declaring the absence of a board of directors were excluded, because board composition is required to operationalize some of the family firm definitions used in the study.

We obtained data on companies' financial performance and financial statements for the 2014–2017 period from the AIDA and ORBIS databases provided by Bureau Van Dijk. Combining survey data with archival financial information generated a four-year panel data set including 736 firm-year observations. The family firm classification variables refer to the baseline year, while financial performance and accounting variables are observed over the 2014–2017 period.

Several checks were conducted to assess data reliability and potential response bias. First, we followed up with contacted firms to increase participation and reassured respondents about confidentiality. Second, we compared early and late respondents, using the first and last quartiles of responses, corresponding to 46 firms each. No statistically significant differences were found across the main observable variables, suggesting that late responses did not differ systematically from early responses. Third, we conducted follow-up interviews

with 20 firms to verify the accuracy of the information reported for the 2014 baseline year; only two firms reported changes, both outside the period relevant for the analysis. Finally, using financial data from AIDA and ORBIS, we compared the final sample of 184 firms with the broader comparable population of 3,051 SMEs. The test revealed no statistically significant differences over the four-year period in sales variation, ROA or ROI, supporting the representativeness of the final sample with respect to the comparable population. Overall, these checks suggest that the final sample does not differ materially from the comparable SME population in terms of the main financial variables used in the analysis, thereby reducing concerns related to non-response bias.

Manufacturing companies accounted for 81% of the final sample, construction firms for 7% and wholesale and retail trade firms for 12%. Medium-sized companies accounted for 35% of the sample. All firms included in the analysis were unlisted limited-liability companies in regular activity.

3.2 Variables and operational definitions

The dependent variable is financial performance, measured primarily through return on assets (ROA), calculated as net income divided by total assets. ROA is widely used in family business and SME research as an accounting-based profitability indicator and is particularly appropriate for privately held firms, for which market-based measures such as Tobin's Q are generally unavailable. In addition, [Hamann et al. \(2013\)](#) showed that ROA has a high factor loading within the organizational performance hybrid construct and also loads strongly on the profitability construct, supporting its suitability as a proxy for firm-level financial performance. Prior studies on family firms and SMEs have also used ROA, often together with return on investment (ROI), as a valid accounting-based measure of financial performance ([Upchurch, 1998](#); [Abor and Biekpe, 2007](#); [Arosa et al., 2010](#); [De Massis et al., 2015](#); [O'connell and Cramer, 2010](#); [Sciascia and Mazzola, 2008](#)). To assess the robustness of the results, we therefore use ROI, calculated as earnings before interest and tax (EBIT) divided by total assets, as an alternative performance measure.

The main independent variable is family firm status. To examine whether definitional choices affect the observed relationship between family firm status and financial performance, we operationalize family firm status using five alternative definitions drawn from prior literature. Each definition is coded as a binary variable equal to 1 if the firm satisfies the relevant criteria and 0 otherwise. Testing these definitions separately allows us to assess whether the same empirical sample leads to different performance conclusions depending on the operational definition adopted.

Specifically, the first definition, FAM_ANG, drawn from [Ang et al. \(2000\)](#), considers a firm to be a family firm when the family holds the majority of shares. No additional governance or management requirement is included.

The second definition, FAM_ARO, based on [Arosa et al. \(2010\)](#), combines ownership and management criteria: at least one family member must own more than 20% of shares and at least one family member must be involved in management.

The third definition, FAM_COR, based on [Corbetta \(1995\)](#), identifies family firms as those in which one or more family members from one or more families exercise control over the firm. This definition is particularly relevant in the Italian SME context, where ownership and control structures are often closely intertwined.

The fourth definition, FAM_EU, follows the European Commission's expert group report on family businesses and requires both majority voting rights and the presence of at least one family member in governance. Sole proprietorships are also included under this definition.

Finally, the fifth definition, FAM_5DEF, combines ownership and governance criteria by requiring that a family controls at least 50% of shares or voting rights and that at least one family member participates in governance. This definition reflects an intermediate threshold and is consistent with the operationalization proposed by [Roffia et al. \(2021\)](#).

Family relationships among shareholders, directors and managers were identified using information from the AIDA and ORBIS databases and from the questionnaire. When equity was partially or totally owned by other companies, indirect ownership was reconstructed to identify the percentage of ownership attributable to family members.

The empirical models include several control variables commonly used in prior studies on family firms and SME financial performance. Firm age is measured as the natural logarithm of the number of years since foundation. Firm size is captured in two complementary ways: first, through MED_SIZE, a binary variable equal to 1 for medium-sized firms according to the EU employee-based threshold and 0 otherwise; and second, through total assets, measured as the natural logarithm of total assets. This dual specification allows us to account both for the institutional distinction between SMEs and for continuous differences in firm scale.

Generational change is measured through the number of generational transitions reported by respondents in the questionnaire. Sales variation, calculated as the percentage change in sales, is included as a proxy for firm growth. Leverage is measured as total debt divided by total assets. Finally, industry fixed effects based on two-digit NACE codes and year fixed effects are included to control for sector-specific characteristics and common macroeconomic shocks.

[Table 1](#) summarizes the five operational definitions of family firms used in the analysis.

[Table 2](#) reports the variables included in the empirical models.

3.3 Empirical model

To test the hypotheses, we estimate a series of ordinary least squares regression models using panel data for the period 2014–2017. Each model includes one of the five alternative family firm definitions as the main independent variable. The dependent variable is financial performance, measured through ROA ([Hamann et al., 2013](#); [Upchurch, 1998](#); [Abor and Biekpe, 2007](#); [Arosa et al., 2010](#); [De Massis et al., 2015](#); [O'connell and Cramer, 2010](#); [Sciascia and Mazzola, 2008](#)). The baseline model is specified as follows:

$$\begin{aligned} \text{ROA}_{i,t} = & \beta_0 + \beta_1 \text{FAM_J}_{i,2014} + \beta_2 \text{F_AGE}_{i,2014} + \beta_3 \text{MED_SIZE}_{i,2014} + \beta_4 \text{GEN_CH}_{i,2014} \\ & + \beta_5 \text{TOT_ASS}_{i,t} + \beta_6 \text{S_VAR}_{i,t} + \beta_7 \text{LEVER}_{i,t} + \beta_8 \text{Y2015} + \beta_9 \text{Y2016} \\ & + \beta_{10} \text{Y2017} + \beta_n \text{INDUSTRYdummies} + \varepsilon_{i,t} \end{aligned} \quad (1)$$

where $\text{ROA}_{i,t}$ is the financial performance of firm i in year t and $\text{FAM_J}_{i,2014}$ represents family firm status measured in the baseline year according to each of the five operational definitions. The model includes firm age, medium-size status, generational change, total assets, sales variation, leverage, year fixed effects and industry fixed effects.

The use of industry fixed effects allows us to control for sector-specific characteristics, while year fixed effects account for common macroeconomic shocks during the observation period. Firm fixed effects are not included because family firm status is measured at the baseline year and does not vary over time. Consequently, the coefficients should be interpreted as associations rather than strict causal effects.

Table 1. Operational definitions of family firms

Variable/fam. Firm. Def.	Source	Main ownership criterion	Governance/management criterion	Variable
FAM_ANG	Ang et al. (2000)	Majority family ownership	No additional requirement	Dummy
FAM_ARO	Arosa et al. (2010)	At least One family member owns more than 20% of shares	At least one family member involved in management	Dummy
FAM_COR	Corbetta (1995)	Family control	No additional requirement	Dummy
FAM_EU	European Commission (2009)	Majority voting rights	At least one family member involved in governance	Dummy
FAM_5DEF	Roffia et al. (2021)	At least 50% ownership or voting rights	At least one family member involved in governance	Dummy

Table 2. Description of variables used in the analysis

Variable	Description
ROA	Net income divided by total assets. Main dependent variable
ROI	EBIT divided by total assets. Alternative dependent variable used for robustness checks
FAM_J	Family firm dummy variable based on each of the Five operational definitions: FAM_ANG, FAM_ARO, FAM_COR, FAM_EU and FAM_5DEF
F_AGE	Natural logarithm of firm age, measured as the number of years since foundation
MED_SIZE	Dummy variable equal to 1 if the firm is medium-sized according to the EU employee-based threshold and 0 otherwise
GEN_CH	Number of generational changes reported by the respondent
TOT_ASS	Natural logarithm of total assets
S_VAR	Sales variation, calculated as percentage change in sales
LEVER	Total debt divided by total assets
INDUSTRY	Two-digit NACE industry fixed effects
YEAR	Year fixed effects for 2015, 2016 and 2017, with 2014 as the reference year

To reduce simultaneity concerns, the family firm classification is measured at the baseline year, while financial performance and accounting variables are observed over the 2014–2017 period (Mazzola *et al.*, 2013). This approach assumes that ownership and governance structures remained relatively stable during the observation window. The questionnaire explicitly asked respondents to report relevant ownership or board changes and follow-up checks provided no evidence of material changes affecting family firm classification during the period under analysis.

Variance inflation factor values were consistently below the conventional threshold of 5, indicating that multicollinearity is not a concern. Diagnostic tests were also conducted to assess the distribution of residuals and the stability of the estimates.

3.4 Robustness checks

To assess the stability of the findings, we conduct three sets of robustness checks. First, we re-estimate the models using ROI as an alternative accounting-based measure of financial performance. This robustness check addresses the possibility that results may depend on the specific profitability indicator adopted.

Second, we estimate models without control variables as a diagnostic exercise to verify the baseline association between each family firm definition and financial performance. These models are not interpreted as the main specification but are reported to show whether the direction and significance of the family firm coefficients are sensitive to the inclusion of controls.

Third, we replicate the analysis across firm-size clusters based on the number of employees. This additional test addresses the reviewer’s concern regarding the use of MED_SIZE and allows us to verify whether the results are robust across different SME size groups. The full set of robustness checks is reported in the tables or in the [Appendix](#) section.

4. Empirical results

4.1 Descriptive statistics

[Table 3](#) reports the descriptive statistics of the variables used in our analysis. Most of the SMEs in our sample were family-owned (mean > 70% for all the five family firm definitions considered in our analysis), with an approximate firm age of 30 years. In a previous study in

Table 3. Descriptive statistics of variables

Variables	N	Min.	Max.	Mean	SD
FAM_ANG	736	0	1	0.76	0.448
FAM_ARO	736	0	1	0.78	0.416
FAM_COR	736	0	1	0.78	0.416
FAM_5DEF	736	0	1	0.77	0.423
FAM_EU	736	0	1	0.74	0.436
F_AGE	736	0.693	4.898	3.30	0.684
MED_SIZE	736	0	1	0.35	0.478
GEN_CH	484	0	5	0.95	0.905
TOT_ASS	736	13.291	18.511	15.927	1.173
S_VAR	736	-0.683	0.868	0.050	0.157
LEVER	736	0.063	0.920	0.536	0.189
ROA	736	-0.232	0.187	0.037	0.045
ROI	736	-0.236	0.288	0.056	0.059

Note(s): ROA ratio equals net income to total assets, ROI ratio equals EBIT to total assets

Italy, [Gnan et al. \(2015\)](#) reported 82% family firms among SMEs. About 35% of the companies in our sample were medium-sized, and the great majority of them were close to undergoing or had just undergone a generational change. The average value of the natural logarithm of total assets was equal to 15.93 (corresponding to €15.6m). The percentage variation of sales in our sample was about 5%, while the leverage of SMEs was on average above the threshold value of 0.5, which is typical of the Italian context. In the 2014–2017 period, the financial data revealed positive values for sales-variation trends and profitability for the ROA and ROI ratios.

[Table 4](#) shows the correlation matrix of the variables included in the baseline model, with family firm status operationalized according to the definition proposed by [Ang et al. \(2000\)](#). To avoid redundancy, FAM_ANG is reported as the reference family firm definition, while correlation matrixes based on the other four definitions are reported in the [Appendix](#) section. Overall, the correlation coefficients do not indicate multicollinearity concerns, as none of the regressors included in the same model shows a correlation greater than 0.8. This evidence is consistent with the variance inflation factor checks reported in the methodology section. Positive and significant correlations were found between family ownership and firm age (0.185) and between family ownership and generational change (0.195). In addition, firm size was positively correlated with firm age (0.130), while generational change was positively correlated with firm age (0.179).

The level of total assets had a moderately positive association with firm age (0.145) and, as expected, a strong positive relation with the size of the firm (0.680). A relevant correlation was also found for the variation of sales in relation to total assets (0.074). Finally, the leverage of a firm was significantly correlated with both firm age (-0.101) and sales variation (0.105). The associations between firm age, generational change, leverage and ROA were negative and equal to -0.067, -0.103 and -0.305, respectively. Conversely, ROA was positively correlated with medium size (0.190), total assets (0.161) and sales variation (0.196).

4.2 Regression results

Before discussing the regression results, [Table 5](#) summarizes the ownership, governance and management criteria underlying the five operational definitions of family firm status. This

Table 4. Correlation matrix (FAM_ANG)

Variable	1	2	3	4	5	6	7	8	9
FAM_ANG (1)	1								
F AGE (2)	0.185***	1							
MED_SIZE (3)	-0.050	0.130***	1						
GEN_CH (4)	0.195***	0.179***	-0.020	1					
TOT_ASS (5)	0.031	0.145***	0.680***	-0.003	1				
S_VAR (6)	0.031	0.015	-0.001	0.009	0.074**	1			
LEVER (7)	0.027	-0.101***	-0.028	0.006	-0.008	0.105***	1		
ROA (8)	-0.035	-0.067*	0.190***	-0.103**	0.161***	0.196***	-0.305***	1	
ROI (9)	-0.015	-0.069*	0.187***	-0.132**	0.133***	0.230***	-0.234***	0.924***	1

Note(s): Pearson correlation coefficients; two-tailed significance levels. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

Table 5. Family firm definitions and influence on financial performance

Family firm definition	Ang et al. (2000)	Arosa et al. (2010)	Corbetta (1995)	EU (2009)	5th Definition
Ownership requirement for family	50%	One family member at least 20%	Family control	50%	50%
Governance requirement for family	No	One family member	No	One family member	One family member
Minimum family members	2	2	2	1	2
FF influence on ROA	Yes	Yes	Yes	Yes	No
Sign of FF influence	+	–	–	+	?

table clarifies the definitional thresholds that distinguish the five family firm variables and provides the basis for interpreting the regression results in light of Hp2, Hp3 and Hp4.

Table 6 reports the main regression results for the association between family firm status and financial performance. Columns (1)–(5) estimate the baseline ROA models using the five alternative operational definitions of family firm status. Each model includes the same set of control variables – firm age, medium-size status, generational change, total assets, sales variation and leverage – as well as industry and year fixed effects. The selected control variables are consistent with prior studies on family firms, SMEs and firm performance, where firm age, size, growth, leverage, generational change and industry effects have been commonly used to account for alternative explanations of profitability differences (Anderson and Reeb, 2003; McConaughy and Phillips, 1999; Barontini and Caprio, 2006; Sciascia and Mazzola, 2008; Arosa *et al.*, 2010; De Massis *et al.*, 2015; Anyadike-Danes and Hart, 2018; Grazzi and Moschella, 2018; Kotey, 2005). This design allows us to compare how the estimated association between family firm status and financial performance changes when the operational definition of family firm varies, while keeping the sample, dependent variable, controls and estimation strategy constant.

All baseline models include industry and year fixed effects (Coles *et al.*, 2008). Coefficients for these fixed effects are included but not reported for space reasons. Variance inflation factor (VIF) values were consistently below the threshold of 5, indicating no multicollinearity concerns.

Column (1) reports the results obtained using the FAM_ANG definition, which identifies family firms on the basis of majority family ownership. The coefficient of FAM_ANG is positive and weakly significant ($\beta = 0.010$, $p < 0.10$), suggesting that majority family ownership is associated with higher ROA. This result is consistent with Hp1a, according to which family firm status may be positively associated with financial performance when family ownership strengthens monitoring incentives, long-term orientation and alignment between ownership and control.

Column (2) reports the results based on the FAM_ARO definition, which combines a lower ownership threshold with family involvement in management. In this specification, the coefficient of FAM_ARO is negative and statistically significant ($\beta = -0.030$, $p < 0.01$). This finding indicates that firms classified as family firms under this broader definition exhibit lower ROA than nonfamily firms, all else equal. The result is consistent with Hp1b, suggesting that some configurations of family involvement may be associated with weaker financial performance. A more detailed interpretation of the possible mechanisms underlying this association is developed in the Discussion section.

Column (3) reports the results for the FAM_COR definition, which identifies family firms on the basis of family control. The coefficient is negative and significant ($\beta = -0.019$, $p < 0.05$), again supporting the view that family firm status is not uniformly associated with superior financial performance. This result further confirms that the sign and strength of the family firm–performance relationship depend on the operational definition adopted.

Column (4) reports the results for FAM_5DEF, which combines majority ownership or voting rights with family participation in governance. The coefficient is negative but not statistically significant ($\beta = -0.005$), indicating that this intermediate definition does not produce evidence of a significant association between family firm status and ROA. This nonsignificant result is theoretically informative because it shows that adding governance involvement to majority ownership does not necessarily strengthen the performance effect.

Column (5) reports the results for FAM_EU, which requires majority voting rights and family involvement in governance. The coefficient is positive and weakly significant ($\beta = 0.010$, $p < 0.10$), similarly to the FAM_ANG specification. Taken together, Columns

Table 6. Multivariate analysis of family attribute influence on financial performance

Variable	(1) ROA	(2) ROA	(3) ROA	(4) ROA	(5) ROA	(6) ROA	(7) ROA	(8) ROI	(9) ROI
(Constant)	0.102***	0.148***	0.130***	0.114***	0.099***	0.061***	0.068***	0.186***	0.245***
FAM_ANG	0.010*	–	–	–	–	–0.004	–	0.012*	–
FAM_ARO	–	–0.030***	–	–	–	–	–0.012**	–	–0.038***
FAM_COR	–	–	–0.019**	–	–	–	–	–	–
FAM_5DEF	–	–	–	–0.005	–	–	–	–	–
FAM_LEU	–	–	–	–	0.010*	–	–	–	–
F_AGE	–0.006***	–0.003	–0.004	–0.005*	–0.006**	–	–	–0.011***	–0.008**
MED_SIZE	0.014***	0.013**	0.013**	0.014**	0.014**	–	–	0.017**	0.016**
GEN_CH	–0.003*	–0.001	–0.002	–0.003	–0.003*	–	–	–0.005**	–0.003
TOT_ASS	0.000	–0.001	0.001	0.000	0.000	–	–	–0.003	–0.004
S_VAR	0.071***	0.071***	0.071***	0.071***	0.071***	–	–	0.093***	0.094***
LEVER	–0.083***	–0.086***	–0.085***	–0.084***	–0.083***	–	–	–0.080***	–0.084***
N	484	484	484	484	484	736	736	484	484
R-squared	0.404	0.424	0.409	0.401	0.404	0.210	0.210	0.373	0.392
Adj. R-squared	0.358	0.379	0.363	0.354	0.357	0.168	0.177	0.324	0.345
F-statistic	8.69***	9.43***	8.87***	8.57***	8.68***	6.12***	6.45***	7.61***	8.27***

Note(s): *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$; coefficients for NACE CODES and YEAR fixed effects are not reported; Columns (1)–(5) report baseline ROA models with controls; Columns (6)–(7) report diagnostic models without controls. Columns (8)–(9) report ROI robustness models; additional models are reported in the [Appendix](#) section

(1)–(5) show that alternative operational definitions generate different empirical conclusions: majority ownership-based definitions are associated with positive ROA effects, lower-threshold or broader definitions may generate negative effects and intermediate definitions may yield nonsignificant results. Overall, the results provide support for the competing logic underlying Hp1a and Hp1b. Family firm status is positively associated with financial performance under some definitions, particularly those based on majority ownership or voting rights, but negatively associated with financial performance under other definitions, especially those based on broader or lower-threshold criteria. Therefore, the findings do not support a single universal family firm effect; rather, they indicate that the observed relationship between family firm status and ROA depends on the definitional lens adopted.

The results are also consistent with Hp2. The comparison between definitions based on majority ownership and those based on lower or more flexible ownership thresholds shows that ownership criteria materially affect the observed family firm–performance relationship. Majority ownership-based definitions, such as FAM_ANG and FAM_EU, are associated with positive coefficients, whereas definitions based on lower or broader ownership/control criteria, such as FAM_ARO and FAM_COR, are associated with negative coefficients.

The findings are also consistent with Hp3, although in a qualified way. Definitions that incorporate governance or management involvement do not generate uniform results. FAM_ARO, which includes management involvement together with a lower ownership threshold, is negatively associated with ROA; FAM_EU, which combines majority voting rights with governance involvement, is positively associated with ROA; and FAM_5DEF is not statistically significant. This pattern suggests that governance or management involvement cannot be interpreted independently from the ownership threshold with which it is combined.

Finally, the evidence is broadly consistent with Hp4. Broader definitions based on lower thresholds of family involvement tend to be associated with weaker or negative observed financial performance for the family firm cluster. However, the results also show that this effect is not purely mechanical: the specific combination of ownership, governance and management criteria matters. Therefore, Hp4 is supported as a general pattern, but the results call for a nuanced interpretation of how broader definitions affect performance attribution.

4.3 Robustness checks

To assess the stability of the findings, we conducted three sets of robustness checks. First, we estimated reduced specifications of the baseline model without control variables for all five operational definitions. This diagnostic exercise examines the unconditional association between each family firm definition and financial performance before introducing firm-level controls. Table 6 reports these reduced specifications for FAM_ANG and FAM_ARO in Columns (6)–(7), while the full set of reduced ROA models for all five definitions is reported in Appendix Table 6(b), Columns (6)–(10). Adjusted R^2 values are lower than in the baseline models, as these reduced specifications omit theoretically relevant covariates. Nevertheless, the results confirm that the sign and significance of the family firm coefficients vary across definitions. In some cases, coefficients lose statistical significance or move close to 0, which is consistent with the weaker explanatory power of models without controls.

Second, we replicated the main regression models using ROI, calculated as EBIT divided by total assets, as an alternative measure of financial performance. Table 6 reports the ROI-based models for FAM_ANG and FAM_ARO in Columns (8) and (9), while Appendix Table 6(b), Columns (1)–(5), reports the ROI robustness models for all five family firm definitions. The results are broadly consistent with the ROA-based models: the signs of the family firm coefficients remain substantially stable and the pattern of definitional sensitivity

persists. This suggests that the main findings are not driven exclusively by the use of ROA as the dependent variable.

Third, we estimated the models separately across firm-size groups based on the number of employees: small firms with 10–19 employees, medium-small firms with 20–49 employees and medium-sized firms with 50–249 employees. These models address the concern that the MED_SIZE dummy may not fully capture size heterogeneity within the SME population. The size-cluster analyses are reported in the [Appendix](#) section. In particular, [Appendix Table 6\(c\)](#), Columns (1)–(5), reports the models estimated on the medium-sized firm subsample. Overall, the size-cluster analyses broadly confirm the baseline results, although some coefficients lose statistical significance because of reduced subsample sizes.

Overall, the robustness checks support the main conclusion that alternative operational definitions of family firms generate different estimates of the relationship between family firm status and financial performance. The full set of robustness checks is reported in the [Appendix](#) section.

5. Discussion

As highlighted in the introduction, this study aims to deepen our understanding of the relationship between family involvement and firm performance by illustrating how this relationship is significantly shaped by the operational definition of what constitutes a ‘family firm.’ By applying five distinct definitions to a common sample of Italian SMEs, we found that some definitions consistently yield a positive, significant relationship with financial performance, whereas others yield negative or inconsistent results. This evidence confirms that the mixed findings reported in prior studies should not be interpreted only as the consequence of contextual, theoretical or methodological differences across samples, but also as the possible outcome of how researchers operationally classify firms as family or nonfamily firms. This pattern suggests that stricter ownership and governance thresholds are more likely to capture firms in which families exercise effective control over strategic decisions and monitoring processes, whereas broader definitions may include firms where family influence is more symbolic or indirect, resulting in weaker performance effects.

These findings contribute to several key theoretical debates. First, they reinforce the relevance of agency theory and stewardship theory as competing yet complementary frameworks in family business literature ([Jensen and Meckling, 1976](#); [Davis et al., 1997](#)). The positive association between family ownership/management and financial performance aligns with the stewardship perspective, suggesting that when family members are directly engaged in ownership and control, they often act as long-term-oriented custodians of the firm. This outcome challenges pure agency-based assumptions of self-interest and supports the idea that familial commitment can mitigate opportunistic behavior and agency costs ([Chrisman et al., 2005](#); [Eddleston and Kellermanns, 2007](#)). At the same time, the negative coefficients observed under broader or lower-threshold definitions are consistent with agency and behavioral agency arguments, according to which family involvement may also generate entrenchment, altruism-driven inefficiencies, managerial skill gaps or conflicts between family and business goals. Therefore, our results do not privilege one theoretical perspective over another; rather, they show that different theories may become empirically visible depending on the definition used to identify family firms.

Second, our results reflect the complex heterogeneity of family firms, a theme emphasized in recent research ([Daspit et al., 2021](#); [Valenza et al., 2023](#)). Different dimensions of “familiness” – including ownership, management, succession intentions and self-identification – capture varying forms and intensities of family involvement. Accordingly, family firms should not be regarded as a monolithic category but rather as a set

of overlapping configurations characterized by distinct behavioral logics and performance trajectories (Schmid *et al.*, 2015). In this sense, the study shows that heterogeneity is not only an intrinsic characteristic of family firms, but also a measurement issue. When different operational thresholds are used, the composition of the family firm group changes and so does the estimated relationship with financial performance. This finding helps explain why prior studies have produced inconsistent results even when investigating apparently similar family firm–performance relationships.

Third, the observed definitional sensitivity has implications for the field’s methodological foundations. Scholars have long criticized the lack of definitional standardization (Astrachan *et al.*, 2002; Chua *et al.*, 1999; Daspit *et al.*, 2021) and our study offers empirical confirmation of those concerns. The same firm may be classified differently across studies depending on the definition adopted, leading to inconsistent or even contradictory results. This finding calls for greater transparency in the operationalization of family firm status and for caution when making cross-study comparisons or drawing generalizable conclusions from heterogeneous samples. Our results therefore suggest that family firm definitions should not be treated as interchangeable technical choices. Rather, they should be selected and justified *ex ante* according to the theoretical mechanism under investigation. Studies focused on ownership control, for example, may require different definitional thresholds from studies focused on managerial involvement, governance participation, succession or socioemotional goals.

Fourth, the findings also have implications for understanding which operational capabilities may be affected by definitional differences in SME contexts. Definitions based on majority ownership are more likely to capture firms where families have the authority to shape governance structures, monitoring practices and strategic decision-making routines. In such firms, family control may support tighter oversight, faster decision-making and stronger alignment between ownership objectives and managerial action. Conversely, broader definitions based on lower ownership or partial management involvement may include firms where family influence is insufficient to shape formal governance systems, financial reporting practices or managerial professionalization. This is particularly relevant in SMEs, where formalized governance mechanisms and financial reporting systems are often less developed than in larger firms and where the role of owners and managers is more closely intertwined. Thus, definitional thresholds may affect not only statistical classification, but also the type of organizational and governance capabilities implicitly captured by the family firm label.

Fifth, our study offers insight into the role of socioemotional dynamics in family firms. While our analysis focuses on financial indicators, the variation in results across definitions can be interpreted in light of the logic of SEW (Gomez-Mejia *et al.*, 2007; Chua *et al.*, 2015). Firms identified through broader ownership or governance thresholds are more likely to capture organizational configurations in which legacy, identity or family harmony play a relatively more prominent role than short-term profitability, as documented in the SEW literature. Accordingly, our findings are consistent with the existence of a potential trade-off between SEW preservation and financial performance, depending on the specific configuration and intensity of family involvement, without implying a direct measurement of noneconomic goals in this study. This interpretation should be considered cautiously, because our empirical design does not directly measure SEW preferences. However, the results suggest that broader definitions may include firms whose objectives are less exclusively oriented toward accounting profitability, thereby contributing to weaker observed ROA effects.

Finally, the study sheds light on definitional effects from a research design perspective. The fact that the same firms, evaluated under different definitional lenses, yield different statistical associations with performance reveals that definition is not merely a classification issue but a source of systematic variance. This reinforces the call for researchers to be explicit not only in their choice of definition but also in the theoretical rationale behind it. A more coherent and theoretically grounded approach to defining family firms is therefore critical for the accumulation of robust and comparable knowledge in family business research (Rau *et al.*, 2018). Rather than advocating a single universal definition for all research purposes, our findings support the development of transparent, purpose-driven classificatory frameworks that make explicit which dimension of family involvement – ownership, governance, management, control or socioemotional orientation – is expected to matter for the outcome under study.

In conclusion, our findings confirm that how scholars define “family firm” matters profoundly – not only for conceptual precision but also for the validity of empirical results and the direction of theoretical development. Definitional awareness and justification should become standard practice in future studies. Accordingly, researchers should explicitly justify definitional choices *ex ante*, rather than treating family firm definitions as interchangeable classification devices. Based on our findings, we propose that the choice of family firm definition should be aligned with the specific research objective. Studies focusing on financial performance and governance efficiency may benefit from stricter ownership-based definitions, whereas research interested in strategic orientation or non-financial goals may require broader definitions that capture partial family influence. In this sense, definitional thresholds should be treated not as interchangeable labels, but as analytical tools whose selection directly shapes empirical outcomes.

6. Conclusions, implications and limitations

6.1 Conclusion

In this study, we examined the association between family firm attributes and financial performance over time in a sample of Italian SMEs. Specifically, we tested whether the choice of operational definition for family firms impacts the results. To do so, we used multiple definitions from the literature, including those proposed by Ang *et al.* (2000), Arosa *et al.* (2010), Corbetta (1995), the European Commission (2009) and a combined definition from Roffia *et al.* (2021).

The findings show that definitional choices materially affect empirical conclusions. Family firm status is positively associated with ROA under some definitions, negatively associated under others and not significantly associated under an intermediate definition. This evidence supports the view that the family firm–performance relationship cannot be interpreted independently from the criteria used to classify firms as family or nonfamily firms. In particular, definitions based on majority ownership or voting rights tend to produce positive associations with financial performance, whereas broader or lower-threshold definitions tend to produce weaker or negative associations.

6.2 Theoretical implications

The study contributes to the family business literature in three main ways. First, it provides empirical evidence that definitional heterogeneity is not merely a conceptual or terminological issue, but a source of systematic variation in empirical results. By applying alternative definitions to the same sample, the study isolates the effect of definitional choices from differences in country, period, sample composition or estimation strategy.

Second, the findings help reconcile competing theoretical explanations of family firm performance. Agency theory, stewardship theory, behavioral agency arguments and the resource-based view may all explain specific configurations of family involvement. However, which mechanism becomes visible depends on whether family firms are identified through ownership, governance, management or broader involvement criteria. In this sense, the study supports a more contingent interpretation of family firm performance, where the theoretical meaning of “family firm status” depends on how it is operationalized.

Third, the study advances the debate on family firm heterogeneity in SMEs. SMEs are particularly relevant because ownership, governance and management roles are often closely intertwined, yet not always aligned. Small changes in definitional thresholds may therefore substantially alter the group of firms classified as family firms. This suggests that future research should avoid treating family firms as a homogeneous category and should instead make explicit which dimension of family involvement is expected to matter for the outcome under investigation.

6.3 Practical and policy implications

The findings also have relevant implications for policymakers, practitioners, investors and family business owners. For policymakers, the results suggest that support measures targeted at family firms – such as succession planning incentives, innovation funding, tax benefits or SME support programs – may be ineffective or misdirected if the category of “family firm” is not defined transparently. Inconsistent definitions may exclude firms that genuinely reflect family ownership and governance, while including firms where family influence is limited or only nominal. Clearer classification criteria would therefore improve the design and evaluation of policy measures aimed at family businesses.

For practitioners and investors, the study highlights that the family firm label should not be interpreted as a uniform signal of superior or inferior financial performance. A firm with majority family ownership and active governance involvement may differ substantially from a firm with only limited family ownership or symbolic family participation. Distinguishing among these configurations can support more accurate assessments of governance quality, continuity risk, professionalization and strategic orientation.

For family business owners and managers, the results indicate that ownership and governance structures influence not only internal decision-making but also external recognition. Whether a firm qualifies as a family business may affect access to family business networks, public support programs, reputation benefits and investor perceptions. Family firms should therefore communicate their ownership and governance structures transparently, especially when seeking institutional support, financial resources or recognition as family-controlled enterprises.

More broadly, the study suggests that the goal should not necessarily be to impose a single universal definition of family firm for all purposes. Instead, scholars, policymakers and practitioners may benefit from transparent and purpose-driven classificatory frameworks that specify whether the relevant dimension is ownership control, governance participation, management involvement, generational continuity or socioemotional orientation.

6.4 Limitations and future research

This study has several limitations that open avenues for future research. First, the empirical analysis is based on Italian SMEs located in the provinces of Verona and Vicenza. Although this area represents an economically relevant and highly entrepreneurial context, the findings may reflect specific institutional, cultural and regional characteristics. Italian SMEs often operate in a context characterized by concentrated ownership, strong family involvement,

specific succession norms and legal and fiscal frameworks that may differ from those of other countries. Future research should replicate the analysis in other national and institutional contexts to assess whether definitional sensitivity produces similar effects across different business systems.

Second, the study relies on accounting-based measures of financial performance, primarily ROA, with ROI used as a robustness check. While these indicators are appropriate for privately held SMEs, they capture only specific dimensions of performance. They do not reflect market valuation, innovation capacity, survival, resilience, stakeholder satisfaction or non-financial objectives. This limitation is particularly relevant in family business research, where SEW, continuity, reputation and family control may shape strategic decisions independently from short-term profitability. Future studies could therefore examine whether alternative definitions of family firms also affect non-financial and multidimensional performance outcomes.

Third, the analysis covers the 2014–2017 period. Although the panel structure allows us to observe financial performance over multiple years, a longer time horizon would provide stronger evidence on the dynamic relationship between family involvement, definitional thresholds and performance. Longitudinal studies could examine whether the influence of family firm definitions changes across generational transitions, ownership restructuring, succession events or periods of crisis.

Fourth, this study focuses on five operational definitions based on observable ownership, governance and management criteria. Although these definitions capture widely used approaches in the literature, they do not exhaust the full range of possible family firm definitions and do not directly measure the “essence” of family business, such as family values, identity, transgenerational intentions, emotional attachment or SEW priorities. Accordingly, although this study examines the statistical implications of definitional thresholds, it does not evaluate which definition most accurately captures the essence of a family firm. Varying cut-off points, such as 20% versus 50% ownership, may generate significantly different empirical results; however, statistical classification does not necessarily align with actual governance behavior, value orientation, decision-making autonomy or strategic preferences. For instance, a firm with limited family ownership may not operate like a traditional family business in terms of long-term orientation, family identity or effective control over strategic choices. Future research could therefore combine operational definitions with survey-based, qualitative or mixed-methods measures of family influence to assess whether statistically defined family firms also behave as family firms in terms of decision-making, values, governance behavior and strategic orientation.

Fifth, although the study compares different definitional groups, it treats each group as internally homogeneous. This represents a simplification, as firms classified under the same operational definition may still differ in terms of generational stage, founder versus descendant control, governance structure, managerial professionalization, ownership dispersion, industry context and family governance mechanisms. Future studies could adopt a more fine-grained or multi-layered design to examine how these dimensions moderate the relationship between family involvement and financial performance. Such approaches would be particularly useful for understanding why specific definitional thresholds alter strategic behavior, governance practices and the preservation of SEW in SMEs.

Finally, although we conducted checks for representativeness and non-response bias, the exact number of firms effectively reached during the survey process cannot be determined with precision because the survey was distributed through multiple channels and not all

email contacts were available, valid or up to date. Future studies could rely on survey designs with fully traceable contact procedures and larger samples to further strengthen external validity.

In conclusion, the study shows that definitional diversity should not be treated as a secondary methodological issue. The question is not only whether family firms perform better or worse than nonfamily firms, but also which firms are included in the family firm category when such comparisons are made. Future research can build on this insight by using definitional diversity more rigorously and productively, aligning classification choices with theory, research objectives and the specific mechanisms under investigation.

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References

- Abor, J. and Biekpe, N. (2007), "Corporate governance, ownership structure and performance of SMEs in Ghana: implications for financing opportunities", *Corporate Governance: The International Journal of Business in Society*, Vol. 7 No. 3, pp. 288-300.
- Anderson, R.C. and Reeb, D.M. (2003), "Founding-family ownership and firm performance: evidence from the S&P 500", *The Journal of Finance*, Vol. 58 No. 3, pp. 1301-1328.
- Ang, J.S., Cole, R.A. and Lin, J.W. (2000), "Agency costs and ownership structure", *The Journal of Finance*, Vol. 55 No. 1, pp. 81-106.
- Anyadike-Danes, M. and Hart, M. (2018), "All grown up? The fate after 15 years of a quarter of a million UK firms born in 1998", *Journal of Evolutionary Economics*, Vol. 28 No. 1, pp. 45-76.
- Arosa, B., Iturralde, T. and Maseda, A. (2010), "Ownership structure and firm performance in non-listed firms: evidence from Spain", *Journal of Family Business Strategy*, Vol. 1 No. 2, pp. 88-96.
- Astrachan, J.H., Klein, S.B. and Smyrnios, K.X. (2002), "The F-PEC scale of family influence: a proposal for solving the family business definition problem", *Family Business Review*, Vol. 15 No. 1, pp. 45-58.
- Astrachan, J.H. and Zellweger, T.M. (2008), "Performance of family firms: a literature review and guidance for future research", *Zeitschrift Für KMU Und Entrepreneurship*, Vol. 56 Nos 1-2.
- Barontini, R. and Caprio, L. (2006), "The effect of family control on firm value and performance. Evidence from continental Europe", *European Financial Management*, Vol. 12 No. 5, pp. 689-723.
- Berrone, P., Cruz, C. and Gomez-Mejia, L.R. (2012), "Socioemotional wealth in family firms: theoretical dimensions, assessment approaches, and agenda for future research", *Family Business Review*, Vol. 25 No. 3, pp. 258-279.
- Calabrò, A., Torchia, M., Gomez-Mejia, L.R., Pongelli, C. and Lohe, F.-W. (2026), "What are family firms all about? Advancing family business research through socioemotional wealth theory", *Journal of Management Studies*, Vol. 63 No. 3.
- Cano-Rubio, M., Fuentes-Lombardo, G. and Vallejo-Martos, M.C. (2017), "Influence of the lack of a standard definition of 'family business' on research into their international strategies", *European Research on Management and Business Economics*, Vol. 23 No. 3, pp. 132-146.
- CERVED (2018), "Rapporto CERVED PMI", available at: <https://know.cerved.com/wp-content/uploads/2018/11/PMI-2018-intero.pdf> (accessed 6 March 2019).
- Chrisman, J.J., Chua, J.H. and Sharma, P. (2005), "Trends and directions in the development of a strategic management theory of the family firm", *Entrepreneurship Theory and Practice*, Vol. 29 No. 5, pp. 555-575.

- Chrisman, J.J., Chua, J.H., Kellermanns, F.W. and Chang, E.P.C. (2007), "Are family managers agents or stewards? An exploratory study in privately held family firms", *Journal of Business Research*, Vol. 60 No. 10, pp. 1030-1038.
- Chrisman, J.J., Chua, J.H., Pearson, A.W. and Barnett, T. (2012), "Family involvement, family influence, and family-centered non-economic goals in small firms", *Entrepreneurship Theory and Practice*, Vol. 36 No. 2, pp. 267-293.
- Chua, J.H., Chrisman, J.J. and De Massis, A. (2015), "A closer look at SEW: its flows, stocks, and prospects for moving forward", *Entrepreneurship Theory and Practice*, Vol. 39 No. 2, pp. 173-182.
- Chua, J.H., Chrisman, J.J. and Sharma, P. (1999), "Defining the family business by behavior", *Entrepreneurship Theory and Practice*, Vol. 23 No. 4, pp. 19-39.
- Coles, J.L., Daniel, N.D. and Naveen, L. (2008), "Boards: does one size fit all?", *Journal of Financial Economics*, Vol. 87 No. 2, pp. 329-356.
- Corbetta, G. (1995), *Le Imprese Familiari. Caratteri Originali, Varietà e Condizioni Di Sviluppo*, EGEA, Milano.
- Corbetta, G. and Salvato, C. (2004), "Self-serving or self-actualizing? Models of man and agency costs in different types of family firms: a commentary on "comparing the agency costs of family and non-family firms: conceptual issues and exploratory evidence"", *Entrepreneurship Theory and Practice*, Vol. 28 No. 4, pp. 355-362.
- Cucculelli, M. and Micucci, G. (2008), "Family succession and firm performance: evidence from Italian family firms", *Journal of Corporate Finance*, Vol. 14 No. 1, pp. 17-31.
- Daily, C.M. and Dollinger, M.J. (1993), "Alternative methodologies for identifying family- versus nonfamily-managed businesses", *Journal of Small Business Management*, Vol. 31 No. 2, pp. 79-90.
- Daspit, J.J., Chrisman, J.J., Ashton, T. and Evangelopoulos, N. (2021), "Family firm heterogeneity: a definition, common themes, scholarly progress, and directions forward", *Family Business Review*, Vol. 34 No. 3, pp. 296-322.
- Davis, J.H., Schoorman, F.D. and Donaldson, L. (1997), "Toward a stewardship theory of management", *The Academy of Management Review*, Vol. 22 No. 1, pp. 20-47.
- De Massis, A., Kotlar, J., Campopiano, G. and Cassia, L. (2015), "The impact of family involvement on SMEs' performance: theory and evidence", *Journal of Small Business Management*, Vol. 53 No. 4, pp. 924-948.
- De Massis, A., Kotlar, J., Campopiano, G. and Cassia, L. (2013), "Dispersion of family ownership and the performance of small-to-medium size private family firms", *Journal of Family Business Strategy*, Vol. 4 No. 3, pp. 166-175.
- Duh, M. (2010), "Applying agency theory and the resource-based view in explaining performance differences between family and non-family businesses", available at: www.dlib.si/stream/URN:NBN:SI:DOC-7WK4GXCN/5d5e39bb-3e80-442b-a4f3-59b0201d7160/PDF (accessed 17 January 2019).
- Dyer, W.G. (1989), "Integrating professional management into a family owned business", *Family Business Review*, Vol. 2 No. 3, pp. 221-235.
- Dyer, W.G. (2006), "Examining the 'family effect' on firm performance", *Family Business Review*, Vol. 19 No. 4, pp. 253-273.
- Eddleston, K.A. and Kellermanns, F.W. (2007), "Destructive and productive family relationships: a stewardship theory perspective", *Journal of Business Venturing*, Vol. 22 No. 4, pp. 545-565.
- European Commission (2009), "Final report of the expert group overview of family-business-relevant issues: research, networks, policy measures and existing studies", available at: <https://webgate.ec.europa.eu/circabc-ewpp/rest/download/b93a59c5-1961-4a01-9fea-bb25def5aa91>
- Fama, E. and Jensen, M.C. (1983a), "Agency problems and residual claims", *The Journal of Law and Economics*, Vol. 26 No. 2, pp. 327-349.

- Fama, E.F. and Jensen, M.C. (1983b), "Separation of ownership and control", *The Journal of Law and Economics*, Vol. 26 No. 2, pp. 301-325.
- Gnan, L., Montemerlo, D. and Huse, M. (2015), "Governance systems in family SMEs: the substitution effects between family councils and corporate governance mechanisms", *Journal of Small Business Management*, Vol. 53 No. 2, pp. 355-381.
- Gomez-Mejia, L.R., Takács Haynes, K., Núñez-Nickel, M., Jacobson, K.J.L. and Moyano-Fuentes, J. (2007), "Socioemotional wealth and business risks in family-controlled firms: evidence from Spanish olive oil mills", *Administrative Science Quarterly*, Vol. 52 No. 1, pp. 106-137.
- Grazzi, M. and Moschella, D. (2018), "Small, young, and exporters: new evidence on the determinants of firm growth", *Journal of Evolutionary Economics*, Vol. 28 No. 1, pp. 125-152.
- Habbershon, T.G. and Williams, M.L. (1999), "A resource-based framework for assessing the strategic advantages of family firms", *Family Business Review*, Vol. 12 No. 1, pp. 1-25.
- Habbershon, T.G., Williams, M. and MacMillan, I.C. (2003), "A unified systems perspective of family firm performance", *Journal of Business Venturing*, Vol. 18 No. 4, pp. 451-465.
- Hamann, P.M., Schiemann, F., Bellora, L. and Guenther, T.W. (2013), "Exploring the dimensions of organizational performance: a construct validity study", *Organizational Research Methods*, Vol. 16 No. 1, pp. 67-87.
- Hernández-Linares, R., Sarkar, S. and Cobo, M.J. (2018), "Inspecting the achilles heel: a quantitative analysis of 50 years of family business definitions", *Scientometrics*, Vol. 115 No. 2, pp. 929-951.
- Jensen, M.C. and Meckling, W.H. (1976), "Theory of the firm: managerial behaviour, agency costs and ownership structure", *Journal of Financial Economics*, Vol. 3 No. 4, pp. 305-360.
- Karra, N., Tracey, P. and Phillips, N. (2006), "Altruism and agency in the family firm: exploring the role of family, kinship, and ethnicity", *Entrepreneurship Theory and Practice*, Vol. 30 No. 6, pp. 861-877.
- Klein, S.B. (2007), "Family influence on value creation: a resource-based analysis of the value creation process in family firms", *International Journal of Entrepreneurship and Small Business*, Vol. 4 No. 2, pp. 110-121.
- Kosmidou, V. and Holt, D. (2022), "The relationship between family management and performance: a configurational approach in exploring the role of socioemotional wealth and generational stage", *Journal of Family Business Strategy*, Vol. 13 No. 4, p. 100500.
- Kotey, B. (2005), "Are performance differences between family and non-family SMEs uniform across all firm sizes?", *International Journal of Entrepreneurial Behavior and Research*, Vol. 11 No. 6, pp. 394-421.
- La Porta, R., Lopez-de-Silanes, F. and Shleifer, A. (1999), "Corporate ownership around the world", *The Journal of Finance*, Vol. 54 No. 2, pp. 471-517.
- Lee, J. (2006), "Family firm performance: further evidence", *Family Business Review*, Vol. 19 No. 2, pp. 103-114.
- Lubatkin, M.H., Schulze, W.S., Ling, Y. and Dino, R.N. (2005), "The effects of parental altruism on the governance of family-managed firms", *Journal of Organizational Behavior*, Vol. 26 No. 3, pp. 313-330.
- McConaughy, D.L. and Phillips, G.M. (1999), "Founders versus descendants: the profitability, efficiency, growth characteristics and financing in large, public, founding-family-controlled firms", *Family Business Review*, Vol. 12 No. 2, pp. 123-132.
- McConaughy, D.L., Matthews, C.H. and Fialko, A.S. (2001), "Founding family controlled firms: performance, risk, and value", *Journal of Small Business Management*, Vol. 39 No. 1, pp. 31-49.
- Mazzi, C. (2011), "Family business and financial performance: current state of knowledge and future research challenges", *Journal of Family Business Strategy*, Vol. 2 No. 3, pp. 166-181.

-
- Mazzola, P., Sciascia, S. and Kellermanns, F.W. (2013), "Non-linear effects of family sources of power on performance", *Journal of Business Research*, Vol. 66 No. 4, pp. 568-574.
- Miller, D., Le Breton-Miller, I., Lester, R.H. and Cannella Jr, A.A. (2007), "Are family firms really superior performers?", *Journal of Corporate Finance*, Vol. 13 No. 5, pp. 829-858.
- Mismetti, M., Del Bosco, B., Bettinelli, C. and De Massis, A. (2025), "The anatomy of family business conflict", *Journal of Family Business Strategy*, Vol. 16 No. 2, p. 100660.
- Molly, V., Arijs, D. and Lambrecht, J. (2015), "A family CEO running the family business: which competencies really matter?", *International Journal of Entrepreneurship and Small Business*, Vol. 25 No. 1, pp. 55-79.
- Morck, R. and Yeung, B. (2004), "Special issues relating to corporate governance and family control", *World Bank Policy Research Working Paper 3406*, pp. 1-19.
- O'connell, V. and Cramer, N. (2010), "The relationship between firm performance and board characteristics in Ireland", *European Management Journal*, Vol. 28 No. 5, pp. 387-399.
- Ramadani, V. and Hoy, F. (2015), "Context and uniqueness of family businesses", in Dana, L-P. and Ramadani, V. (Eds), *Family Businesses in Transition Economies*, Springer International Publishing, Cham, pp. 9-37.
- Rau, S.B., Astrachan, J.H. and Smyrnios, K.X. (2018), "The F-PEC revisited: from the family business definition dilemma to foundation of theory", *Family Business Review*, Vol. 31 No. 2, pp. 200-213.
- Roffia, P., Moracchiato, S., Liguori, E. and Kraus, S. (2021), "Operationally defining family SMEs: a critical review", *Journal of Small Business and Enterprise Development*, Vol. 28 No. 2, pp. 229-260.
- Sanchez-Famoso, V., Cruz, C., Batterjee, M.M., Mejia-Morelos, J.H., Cisneros, L. and Le, N.T. (2025), "Socioemotional wealth (SEW) across borders: integrating national context into SEW research", *Journal of Family Business Strategy*, Vol. 16 No. 1, p. 100647.
- Schmid, T., Ampenberger, M., Kaserer, C. and Achleitner, A.K. (2015), "Family firm heterogeneity and corporate policy: evidence from diversification decisions", *Corporate Governance: An International Review*, Vol. 23 No. 3, pp. 285-302.
- Schulze, W.S., Lubatkin, M.H., Dino, R.N. and Buchholz, A.K. (2001), "Agency relationships in family firms: theory and evidence", *Organization Science*, Vol. 12 No. 2, pp. 99-116.
- Sciascia, S. and Mazzola, P. (2008), "Family involvement in ownership and management: exploring nonlinear effects on performance", *Family Business Review*, Vol. 21 No. 4, pp. 331-345.
- Shanker, M.C. and Astrachan, J.H. (1996), "Myths and realities: family businesses' contribution to the US economy – a framework for assessing family business statistics", *Family Business Review*, Vol. 9 No. 2, pp. 107-123.
- Sharma, P., Chrisman, J.J. and Chua, J.H. (1997), "Strategic management of the family business: past research and future challenges", *Family Business Review*, Vol. 10 No. 1, pp. 1-35.
- Sirmon, D.G. and Hitt, M.A. (2003), "Managing resources: linking unique resources, management, and wealth creation in family firms", *Entrepreneurship Theory and Practice*, Vol. 27 No. 4, pp. 339-358.
- Songini, L. and Gnan, L. (2015), "Family involvement and agency cost control mechanisms in family small and medium-sized enterprises", *Journal of Small Business Management*, Vol. 53 No. 3, pp. 748-779.
- Upchurch, A. (1998), *Management Accounting: principles and Practice*, Prentice Hall.
- Valenza, G., Caputo, A. and Calabrò, A. (2023), "Is small and medium-sized beautiful? The structure and evolution of family SMEs research", *Journal of Family Business Management*, Vol. 13 No. 2, pp. 453-485.
-

- Villalonga, B. and Amit, R. (2006), "How do family ownership, control and management affect firm value?", *Journal of Financial Economics*, Vol. 80 No. 2, pp. 385-417.
- Westhead, P. and Cowling, M. (1999), "Family firm research: the need for a methodological rethink", *Entrepreneurship Theory and Practice*, Vol. 23 No. 1, pp. 31-56.

Further reading

- Al-Dubai, S.A.A., Ismail, K.N.I.K. and Amran, N.A. (2014), "Family business definition: a matter of concern or a matter of convenience?", *Corporate Ownership and Control*, Vol. 11 No. 2, pp. 274-280.
- Bennedsen, M., Nielsen, K.M., Perez-Gonzalez, F. and Wolfenzon, D. (2007), "Inside the family firm: the role of families in succession decisions and performance", *The Quarterly Journal of Economics*, Vol. 122 No. 2, pp. 647-691.
- Calabrò, A., Frank, H., Minichilli, A. and Suess-Reyes, J. (2021), "Business families in times of crises: the backbone of family firm resilience and continuity", *Journal of Family Business Strategy*, Vol. 12 No. 2, p. 100442.
- Certo, S.T., Busenbark, J.R., Kalm, M. and LePine, J.A. (2020), "Divided we fall: how ratios undermine research in strategic management", *Organizational Research Methods*, Vol. 23 No. 2, pp. 211-237.
- Chua, J.H., Chrisman, J.J. and Sharma, P. (2003), "Succession and nonsuccession concerns of family firms and agency relationship with nonfamily managers", *Family Business Review*, Vol. 16 No. 2, pp. 89-108.
- Chua, J.H., Chrisman, J.J. and Chang, E.P.C. (2004), "Are family firms born or made? An exploratory investigation", *Family Business Review*, Vol. 17 No. 1, pp. 37-54.
- Corbetta, G. and Tomaselli, S. (1996), "Boards of directors in Italian family businesses", *Family Business Review*, Vol. 9 No. 4, pp. 403-421.
- Cucculelli, M. (2018), "Firm age and the probability of product innovation. Do CEO tenure and product tenure matter?", *Journal of Evolutionary Economics*, Vol. 28 No. 1, pp. 153-179.
- Duong, P.A.N., Voordeckers, W., Huybrechts, J., Lambrechts, F. and Van Gils, A. (2024), "Ecoinnovations in family SMEs: understanding the role of financial performance satisfaction", *Journal of Small Business Management*, Vol. 63 No. 4, pp. 1-29.
- Dyer, W.G. (2018), "Are family firms really better? 'reexamining' 'examining the 'family effect' on firm performance", *Family Business Review*, Vol. 31 No. 2, pp. 240-248.
- Franks, J., Mayer, C., Volpin, P. and Wagner, H.F. (2012), "The life cycle of family ownership: international evidence", *Review of Financial Studies*, Vol. 25 No. 6, pp. 1675-1712.
- Gallucci, C., Santulli, R. and Colombo, A. (2016), "How do 'family affairs' affect firm's stock price? An application on an exploratory case study", *International Journal of Managerial and Financial Accounting*, Vol. 8 Nos 3-4, pp. 319-333.
- Gallucci, C., Santulli, R. and Calabrò, A. (2015), "Does family involvement foster or hinder firm performance? The missing role of family-based branding strategies", *Journal of Family Business Strategy*, Vol. 6 No. 3, pp. 155-165.
- Garcia-Castro, R. and Aguilera, R.V. (2014), "Family involvement in business and financial performance: a set-theoretic cross-national inquiry", *Journal of Family Business Strategy*, Vol. 5 No. 1, pp. 85-96.
- González, M., Guzmán, A., Pombo, C. and Trujillo, M.A. (2013), "Family firms and debt: risk aversion versus risk of losing control", *Journal of Business Research*, Vol. 66 No. 11, pp. 2308-2320.
- González-Cruz, T.F. and Cruz-Ros, S. (2016), "When does family involvement produce superior performance in SME family business?", *Journal of Business Research*, Vol. 69 No. 4, pp. 452-457.

-
- Hillier, D. and McColgan, P. (2009), "Firm performance and managerial succession in family managed firms", *Journal of Business Finance and Accounting*, Vol. 36 Nos 3-4, pp. 461-484.
- Kimhi, A. (1997), "Intergenerational succession in small family businesses: borrowing constraints and optimal timing of succession", *Small Business Economics*, Vol. 9 No. 4, pp. 309-318.
- Lik-Jing Ung, L.L., Brahmana, R. and Puah, C., (2018), "Firm performance, retrenchment strategy and different ownership structure: evidence from public listed companies in Malaysia", *International Journal of Business Science and Applied Management*, Vol. 13 No. 1, pp. 42-57.
- Lohe, F.W., Calabrò, A. and Torchia, M. (2021), "Disentangling the drivers of family firms internationalization through the lens of socioemotional wealth", *Journal of International Entrepreneurship*, Vol. 19 No. 4, pp. 479-509.
- Maury, B. (2006), "Family ownership and firm performance: empirical evidence from Western European corporations", *Journal of Corporate Finance*, Vol. 12 No. 2, pp. 321-341.
- Miller, D., Le Breton-Miller, I. and Scholnick, B. (2008), "Stewardship vs. stagnation: an empirical comparison of small family and non-family businesses", *Journal of Management Studies*, Vol. 45 No. 1, pp. 51-78.
- Molina, M.A.V. and Rutterford, J. (2010), "Towards a theory of the family firm: approach to an operational definition and a framework for family businesses", In *Global Financial and Business Networks and Information Management Systems. Academia Europea De Dirección y Economía De la Empresa*, AEDEM, p. 97.
- Poutziouris, P., Savva, C.S. and Hadjielias, E. (2015), "Family involvement and firm performance: evidence from UK listed firms", *Journal of Family Business Strategy*, Vol. 6 No. 1, pp. 14-32.
- Sanchez-Famoso, V., Pittino, D., Chirico, F., Maseda, A. and Iturralde, T. (2019), "Social capital and innovation in family firms: the moderating roles of family control and generational involvement", *Scandinavian Journal of Management*, Vol. 35 No. 3, p. 101043.
- Schulze, W.S., Lubatkin, M.H. and Dino, R.N. (2003), "Toward a theory of agency and altruism in family firms", *Journal of Business Venturing*, Vol. 18 No. 4, pp. 473-490.
- Vallejo Martos, M.C. (2007), "What is a family business? A discussion of an integrative and operational definition", *International Journal of Entrepreneurship and Small Business*, Vol. 4 No. 4, pp. 473-488.
- Wagner, D., Block, J.H., Miller, D., Schwens, C. and Xi, G. (2015), "A meta-analysis of the financial performance of family firms: another attempt", *Journal of Family Business Strategy*, Vol. 6 No. 1, pp. 3-13.
-

Table A1. Correlation matrix (FAM_AROSA)

Variable	1	2	3	4	5	6	7	8	9
FAM_AROSA (1)	1								
F_AGE (2)	0.185***	1							
MED_SIZE (3)	-0.096***	0.130***	1						
GEN_CH (4)	0.225***	0.179***	-0.020	1					
TOT_ASS (5)	-0.026	0.145***	0.680***	-0.003	1				
S_VAR (6)	0.007	0.015	0.001	-0.009	0.074**	1			
LEVER (7)	-0.061*	-0.101***	-0.028	-0.006	-0.008	0.105***	1		
ROA (8)	-0.102***	-0.067*	0.190***	-0.103**	0.161***	0.196***	-0.305***	1	
ROI (9)	-0.073**	-0.069*	0.187***	-0.132***	0.133***	0.230***	-0.234***	0.924***	1

Note(s): Pearson correlation coefficients; two-tailed significance levels; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

Table A2. Correlation matrix (FAM_CORBETTA)

Variable	1	2	3	4	5	6	7	8	9
FAM_CORBETTA (1)	1								
F_AGE (2)	0.193***	1							
MED_SIZE (3)	-0.096***	0.130***	1						
GEN_CH (4)	0.236***	0.179***	-0.020	1					
TOT_ASS (5)	-0.021	0.145***	0.680***	-0.003	1				
S_VAR (6)	0.012	0.015	0.001	-0.009	0.074**	1			
LEVER (7)	-0.077**	-0.101***	-0.028	-0.006	-0.008	0.105***	1		
ROA (8)	-0.107***	-0.067*	0.190***	-0.103**	0.161***	0.196***	-0.305***	1	
ROI (9)	-0.079**	-0.069*	0.187***	-0.132***	0.133***	0.230***	-0.234***	0.924***	1

Note(s): Pearson correlation coefficients; two-tailed significance levels; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

Table A3. Correlation matrix (FAM_5DEF)

Variable	1	2	3	4	5	6	7	8	9
FAM_5DEF (1)	1								
F_AGE (2)	0.188***	1							
MED_SIZE (3)	-0.102***	0.130***	1						
GEN_CH (4)	0.225***	0.179***	-0.020	1					
TOT_ASS (5)	-0.022	0.145***	0.680***	-0.003	1				
S_VAR (6)	0.015	0.015	0.001	-0.009	0.074**	1			
LEVER (7)	-0.059	-0.101***	-0.028	-0.006	-0.008	0.105***	1		
ROA (8)	-0.089**	-0.067	0.190***	-0.103**	0.161***	0.196***	-0.305***	1	
ROI (9)	-0.060	-0.069*	0.187***	-0.132***	0.133***	0.230***	-0.234***	0.924***	1

Note(s): Pearson correlation coefficients; two-tailed significance levels; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

Table A4. Correlation matrix (FAM_EU)

Variable	1	2	3	4	5	6	7	8	9
FAM_EU (1)	1								
F_AGE (2)	0.185***	1							
MED_SIZE (3)	-0.089**	0.130***	1						
GEN_CH (4)	0.170***	0.179***	-0.0205	1					
TOT_ASS (5)	-0.022	0.145***	0.680***	-0.003	1				
S_VAR (6)	0.050	0.015	0.001	-0.009	0.074**	1			
LEVER (7)	0.009	-0.101***	-0.028	-0.006	-0.008	0.105***	1		
ROA (8)	-0.032	-0.067*	0.190***	-0.103**	0.161***	0.196***	-0.305***	1	
ROI (9)	-0.010	-0.069	0.187***	-0.132***	0.133***	0.230***	-0.234***	0.924***	1

Note(s): Pearson correlation coefficients; two-tailed significance levels; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

Table A5. Multivariate analysis of family attribute influence on financial performance

Variable	(1) ROI	(2) ROI	(3) ROI	(4) ROI	(5) ROI	(6) ROA	(7) ROA	(8) ROA	(9) ROA	(10) ROA
(Constant)	0.186***	0.245***	0.221***	0.199***	0.181***	0.061***	0.068***	0.068***	0.066***	0.061***
FAM_ANG	0.012*	—	—	—	—	−0.004	—	—	—	—
FAM_ARO	—	−0.038***	—	—	—	—	−0.012***	—	—	—
FAM_COR	—	—	−0.023**	—	—	—	—	−0.013***	—	—
FAM_5DEF	—	—	—	−0.005	—	—	—	—	−0.009**	—
FAM_EU	—	—	—	—	0.013*	—	—	—	—	−0.004
F_AGE	−0.011***	−0.008**	−0.009**	−0.010**	−0.011***	—	—	—	—	—
MED_SIZE	0.017**	0.016**	0.016**	0.017**	0.017**	—	—	—	—	—
GEN_CH	−0.005**	−0.003	−0.004	−0.005*	−0.005*	—	—	—	—	—
TOT_ASS	−0.003	−0.004	−0.003	−0.003	−0.02	—	—	—	—	—
S_VAR	0.093***	0.094***	0.094***	0.094***	0.093***	—	—	—	—	—
LEVER	−0.080***	−0.084***	−0.083***	−0.081***	−0.080***	—	—	—	—	—
N	484	484	484	736	484	736	736	736	736	736
R-squared	0.373	0.392	0.337	0.370	0.373	0.201	0.211	0.211	0.206	0.201
Adj. R-Squared	0.324	0.345	0.328	0.320	0.324	0.168	0.177	0.179	0.173	0.168
F-statistic	7.61***	8.27***	7.75***	7.50***	7.61***	6.12***	6.45***	6.5***	6.17***	6.11***

Note(s): *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$; coefficients for NACE industry and year fixed effects are included but not reported; Columns (1)–(5) report ROI robustness models with controls; Columns (6)–(10) report reduced ROA models without controls

Table A6. Multivariate analysis of family attribute influence on financial performance

Variable	(1) ROA_M	(2) ROA_M	(3) ROA_M	(4) ROA_M	(5) ROA_M
(Constant)	−0.148*	0.001	−0.121	−0.146*	−0.160*
FAM_ANG	0.047	—	—	—	—
FAM_ARO	—	−0.020*	—	—	—
FAM_COR	—	—	0.016	—	—
FAM_5DEF	—	—	—	0.043***	—
FAM_EU	—	—	—	—	0.032***
F_AGE	−0.008*	0.000	−0.004	—	−0.006
MED_SIZE	—	—	—	—	—
GEN_CH	−0.002	−0.001	−0.001	0.001	−0.002
TOT_ASS	0.014***	0.008	0.013***	0.013***	0.015***
S_VAR	0.060**	0.073***	0.068***	0.061***	0.065***
LEVER	−0.112	−0.120***	−0.111***	−0.100***	−0.115***
N	180	180	180	180	180
R-squared	0.509	0.436	0.431	0.473	0.457
Adj. R-Squared	0.429	0.344	0.339	0.387	0.369
F-statistic	6.38***	4.76***	4.67***	5.52***	5.19***

Note(s): *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$; coefficients for NACE industry and year fixed effects are included but not reported; models are estimated on the medium-sized firm subsample

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