The Impact of Financial Slack on Performance in SMEs: The Roles of Family Ownership and CEO Family Status

Abstract

We offer novel insights into the utilization of heterogeneous types of financial slack (unabsorbed, absorbed and potential) by family versus non-family SMEs. We hypothesize that agency problems in family SMEs imply idiosyncratic effects on the ability to leverage the different types of financial slack, with implications for financial performance. Moreover, among family SMEs, having a family CEO can engender additional agency problems, reinforcing the heterogeneous effect of slack resources on performance. A longitudinal analysis of a panel dataset of Italian SMEs generally supports our expectations while revealing some counterintuitive findings regarding the role of unabsorbed financial slack on performance.

Keywords

Family CEO; family ownership; firm performance; financial slack; resource utilization; SMEs

Introduction

Resources are widely acknowledged as key determinants of performance when effectively managed (Bentley & Kehoe, 2020; George, 2005). However, family firms' ability to leverage resources to enhance performance is a contentious issue. Scholars have debated intensively whether family firms, given their long-term orientation, are more efficient and cautious or whether their focus on non-economic drivers introduces unique agency problems (e.g., Le Breton-Miller & Miller, 2018; Madison et al., 2016; Schulze et al., 2003). The resulting conflicting evidence and inconsistencies in the literature underscore the complexity of understanding the relationship between financial resources and financial performance in family firms. For example, some scholars view family owners as deeply committed investors who have strong economic incentives to make use of financial resources to boost the firm's profits in order to safeguard its long-term ability to generate wealth (e.g., Cambrea et al., 2022; Durand & Vargas, 2003; Le Breton-Miller & Miller, 2006), while other scholars highlight the tendency of family owners to leverage their power to redirect firm resources toward non-economic objectives, even if this comes at the cost of profitability (see Bertrand & Schoar, 2006; Burkart et al., 2003; Gedajlovic et al., 2004). In that context, the concept of financial slack, defined as the surplus resources in an organization beyond the minimum needed to produce a given output level (Nohria & Gulati, 1996), has received increasing research attention. It has been recognized

as a valuable strategic asset (Kim & Bettis, 2014), adding a new layer of complexity to the family business debate (De Massis et al., 2018b).

The fragmentation and contradictions of the literature regarding the impact of financial slack on performance in family firms can be attributed to two main shortcomings. First, with few exceptions (Agustí et al., 2021a), the role of slack heterogeneity, specifically differentiating between unabsorbed, absorbed, and potential slack (see Bourgeois, 1981; Iyer & Miller, 2008; Mount et al., 2024), is often overlooked. This is problematic because each type represents different levels of flexibility, risk, and strategic implications for the firm (Mount et al., 2024); these have effects on different strategic uses and family firm-specific behaviors. Therefore, lumping these together masks how family firms might use or value slack differently depending on their goals like preserving control, pursuing non-economic objectives, ensuring continuity, ultimately confounding effects on performance. Second, the nuances of family firm heterogeneity, especially in governance arrangements (e.g., Daspit et al., 2018), have not been thoroughly explored. Governance heterogeneity, encompassing the allocation of resources and conflict resolution among organizational stakeholders, plays a pivotal role in family firms (Daspit et al., 2021; Daspit et al., 2018). As to slack management (and different types of, in particular), this becomes important: different governance structures lead to idiosyncratic resource priorities, conflicts and alignment among stakeholders (Chrisman et al., 2009); ignoring this might lead to inconsistent performance outcomes like those mentioned above. Consequently, the literature lacks comprehensive efforts to combine financial slack types and business governance nuances despite the potential of these factors to predict and better explain family firm behavior and performance outcomes.

Therefore, this paper investigates how unabsorbed, absorbed, and potential financial slack (as manifestations of slack heterogeneity) are distinctively associated with financial performance in family versus non-family small and medium-sized enterprises (SMEs). In

particular, it delves into within-family firm differences by considering as a specific contingency whether the CEO is a family member (as an aspect of family firm heterogeneity; see Miller et al., 2014; Miller et al., 2013). Focusing on SMEs is appropriate because, with their simpler organizational structures and owner-managers making decisions with a certain degree of discretion, they provide a "direct litmus test" for slack-performance arguments (Simsek et al., 2007: 1399). In addition, their ubiquity and significance in the global economy are undisputed (European Commission, 2020). More specifically, drawing on agency theory (Schulze et al., 2001), we hypothesize that the positive relationships between unabsorbed and absorbed (potential) slack resources and performance are weaker (stronger) in family-owned SMEs (henceforth "family SMEs") than in non-family-owned ones due to specific agency problems inherent in family firms (Lubatkin et al., 2005). By focusing on family firms and examining the role of a family CEO, we seek to further illuminate the heterogeneity within family firms.

Our panel dataset comprising 66,652 year-observations of Italian SMEs from 2010 to 2016 provides partial empirical support for our contentions, highlighting the multifaceted nature of realizing profit-based benefits from financial slack in family SMEs.

In the context of SMEs and family firms, our research contributes to the literature in three key aspects. First, we contribute to the ongoing debate whether family firms are more or less likely than non-family firms to use financial resources in a performance-enhancing way (see Cambrea et al., 2022; Gedajlovic et al., 2004; Le Breton-Miller & Miller, 2006). Here, we provide a novel, nuanced, and comprehensive picture because we not only distinguish between three different types of financial slack (see Iyer & Miller, 2008) and provide specific agency theory-based theorizing, but also consider family firm heterogeneity (see Daspit et al., 2021; Neubaum et al., 2019). Our findings indicate that there is no simple "yes or no" answer to the abovementioned debate, but that the particularities of slack types and family business governance imply distinct effects. This enriches the resource-performance debate within the

family business literature significantly; our integrated perspective provides novel insights into the complexities of managing different financial slack types within family SMEs, moving beyond the prevailing focus on unabsorbed slack (Cambrea et al., 2022; De Massis et al., 2018b) and traditional characterizations of family firms (see, for instance, Sirmon & Hitt, 2003). Second, our study significantly contributes to the ongoing debate on family firms' heterogeneity (see Daspit et al., 2021; Neubaum et al., 2019). Focusing on the presence of a family CEO as a governance dimension, we reveal critical variations within family SMEs. This not only deepens our understanding of the factors influencing the relationship between financial slack and performance but also contributes to discussions on the diversity and complexities within family business structures and relevant outcomes (Daspit et al., 2021; Neubaum et al., 2019; Stanley et al., 2019). Finally, our research advances the slack literature by moving beyond the question *whether* slack is good for performance to a more nuanced exploration of *what type of and when* slack might be beneficial for performance (Mount et al., 2024). As such, we focus on internal contingencies, as invoked by Deb et al. (2017), and recognize the significance of governance arrangements as key determinants (Vanacker et al., 2013). This approach aligns with contemporary scholarly discussions, emphasizing that successful resource management in family firms requires a nuanced understanding of the interplay between internal contingencies and firm performance (see Calabrò et al., 2021).

Theory and Hypothesis Development

Types of slack resources and firm performance

Generally, slack resources are not committed to essential expenditures and can thus be used with discretion (George, 2005). Specifically, while there are different types of slack resources, financial slack has recently attracted scholarly attention because of its strategic value (Deb et al., 2017; Kim & Bettis, 2014). In addition, financial slack is both less rare and more easily

accessible than other types of slack; hence, it is a (comparatively) ideal slack to allocate and an optimal testbed for the slack-performance relationship (Voss et al., 2008). Prior literature classifies financial slack into different types, namely, unabsorbed, absorbed, and potential (Bourgeois, 1981; Iyer & Miller, 2008). This distinction is important from a conceptual viewpoint because these types of slack differ concerning the ease with which managers can recover and deploy them (Vanacker et al., 2017), thus being characterized by different availability (degree to which slack can be independently accessed by organizational actors and easy to recover) and fungibility that is the degree to which slack can be applied to multiple ends and potential uses (Mount et al., 2024). Specifically, *unabsorbed slack* is unconstrained, readily available and can easily be diverted to support strategic change (Voss et al., 2008). Examples are cash, retained earnings, and discretionary funds that facilitate resource allocation and deployment. Conversely, *absorbed slack* and *potential slack* are accessibility-constrained types of slack. The former is absorbed in the firm's structure and is thus less accessible for discretionary use (Lin et al., 2009). Examples include overhead expenditures and unused capacity, which are difficult to redeploy in the short term. The latter indicates future resource availability rather than immediate resources available for instantaneous buffering operations (Hambrick & D'Aveni, 1988). Commonly conceived as the equity-to-debt ratio, it represents the ability to secure future resources through debt (Geiger et al., 2019) and it can take the form of bank credit as well as market-traded bonds (Gentry et al., 2016). Potential slack increases with decreasing debt levels, implying lower future payment obligations, reduced influence from outsiders (i.e., creditors), and lower borrowing power for new financial resources in the future (Bourgeois, 1981). Different types of slack can coexist and be deployed simultaneously (Lin et al., 2009).

Given the value creation opportunities enabled by the utilization of slack (George, 2005), numerous arguments support a positive relationship between the different slack types and

performance in SMEs. Specifically, the literature suggests three different underlying value creation mechanisms that are associated with unabsorbed, absorbed, and potential slack. These mechanisms relate to the availability and fungibility of the different types of slack (Bromiley, 1991; Mount et al., 2024), and are: a) supporting decision-making, b) buffering against uncertainty, and c) facilitating exploration and exploitation, respectively. In the following, we explain the slack-performance relationship for each of these slack types, drawing on the literature that emphasizes each of these three opportunities.

A higher level of unabsorbed slack indicates a greater ability to meet immediate resource needs; it thus represents a quick and easy-to-use cushion that allows adapting to internal pressures (Bourgeois, 1981) and the external environment, isolating the firm from exogenous shocks (Bradley et al., 2011a). Accordingly, unabsorbed slack can delay critical decisions in times of crisis (Kim & Bettis, 2014), thus supporting decision-making in that regard. This is particularly true for SMEs since they are resource constrained (De Massis et al., 2018a) and can thus benefit from these highly discretionary excess resources.

Absorbed slack can also enhance firm performance. It is a resource that helps buffer against uncertainty in times of difficulty or institutional transition (Tan & Peng, 2003) and protects against downside risks (Singh, 1986). Indeed, absorbed slack is hardly deployable and cannot be immediately recoverable because it is often embedded in the firm's processes (e.g., stocks, fixed assets, or administrative costs) and is subject to high monitoring, thus discouraging resource squandering (Kim & Bettis, 2014). This is relevant, especially for SMEs, which, unlike larger firms where high levels of absorbed slack might imply inefficiencies in production, logistics, and operations, might be less susceptible to these issues given their simpler and leaner production processes (Munjal et al., 2019).

The positive effects of potential slack on performance are also reported in the literature, despite access to this type of slack can take time and require more effort as it is subject to

external negotiation (Daniel et al., 2004). This type of slack facilitates exploration and exploitation (Geiger & Cashen, 2002), as it reduces short-term anxiety and concerns about market risks (Lin et al., 2009) and experimentation (Geiger et al., 2019). Given its "external" nature, it has an additional advantage, especially in SMEs: being available only potentially and in any case, upon tight scrutiny by external capital providers and board members (Geiger et al., 2019), its misuse is less likely. Managers are expected to devote more time and energy to making decisions involving potential slack (Geiger & Cashen, 2002), which might be the main source of resources for exploring new opportunities and innovating, especially in SMEs (Lefebvre, 2023).

In sum, the literature suggests that financial slack is generally used for value creation in SMEs by supporting decision-making, buffering against uncertainty, and facilitating exploration and exploitation. The related theoretical arguments and empirical evidence have led to the common assumption that slack resources positively affect SMEs' performance.[1]

Agency relationships and financial slack allocation in family firms

Prior research emphasizes the role of ownership type as an important and theoretically relevant contingency for slack allocation decisions (Vanacker et al., 2013). For example, it influences whether resources are used for value creation or value appropriation, which is dependent on the governance mechanisms, including different forms of ownership (Deb et al., 2017). Agency theory has been widely used to explain the distinctive behavior of firms with family ownership by focusing on their specific agency problems (Schulze et al., 2001) and to explain the relationship between slack and performance (see Daniel et al., 2004). We follow this research stream and adopt an agency perspective to theorize how family ownership affects the

[1] We note that a curvilinear relationship between financial slack and performance may exist in specific circumstances. For instance, George (2005) found a negative slack-performance relationship in private firms for very high levels of slack. However, the level of slack in SMEs is unlikely to be very high; thus, in line with other works on small firms (e.g., Laffranchini & Braun, 2014), we predict that the relationship is more likely to be positive and linear in this type of firm.

conversion of financial slack types into performance in SMEs. We do so by drawing on the main agency problems that characterize family firms, namely, the self-control problems that are linked to owner-control and owner-management and are triggered by altruism (Schulze et al., 2002), which affect the way firms allocate excess resources and, ultimately, firm performance.

In their conceptual work, Schulze et al. (2002) first challenged the idea that privately held organizations do not suffer from agency problems, and highlighted that they are, instead, subject to moral hazard, holdup, and adverse selection issues. These agency problems derive from (i) ownership concentration, which compromises the effectiveness of external control mechanisms (owner-control agency problems); and (ii) internal conflicts between economic and non-economic interests, which are strongly dependent on resource constraints (owner-management agency problems). Second, they also add that in family firms, altruism—namely, a feeling, instinct, or sentiment that represents "a trait that positively links the welfare (both intrinsic and extrinsic) of an individual to the welfare of others" (p. 252)—characterizes family relations and exacerbates the agency problems associated with owner-control and owner-management.

More specifically, they explain that agency relationships in the household depend on the asymmetric altruism that results in family owners supporting self-interested activities that may benefit family welfare at the expense of the firm (Virk et al., 2024). Lubatkin et al. (2005) discuss how this family-based altruism limits parents' ability to exercise self- control, making them promote entitlement and free-riding. For example, Schulze et al. (2003) find empirical evidence that the interaction between altruism and family members' pay incentives is detrimental to sales growth in privately held family firms. We claim that in family firms, leveraging on agency relationships, triggered by altruism, we can thus unfold how the use of different types of financial slack, which are characterized by different levels of availability and fungibility, affect firm performance (Chrisman et al., 2009).

Financial slack-performance relationship in family vs. non-family SMEs

Building on the literature that examines agency problems due to altruistic motives intertwined with owner-control, we argue that there are differences between family and non-family SMEs concerning the relationship between different types of slack resources and firm performance. First, the high level of ownership concentration in family hands makes family firms disadvantaged in terms of risk-bearing (Carney et al., 2015), thus affecting their strategic decision-making. When family owners invest a substantial portion of their wealth in the business (owner-control agency problem), as it is likely the case for family SMEs, this can lead to a reduction of the portion of slack resources that are allocated to value-creating activities (Xu & Hitt, 2020). Family owners are likely to comparatively favor family-oriented to firm-related strategies. In SMEs, the family firm can be the major source of income for family owners (Becerra et al., 2020).

Hence, on the one hand, they might indulge in a state of complacency and inertia, making family firms downplay value-creating opportunities (Alessandri et al., 2018). On other hand, they might also decide, instead of retaining earnings, to revert part of this excess finances to distribute dividends or pay perquisites to owners (Michiels & Molly, 2017), especially when there are different shareholders involved (González et al., 2014) such as passive family owners (Michiels et al., 2015). This translates into a lower likelihood of leveraging high discretionary resources (unabsorbed slack) to support decision-making. For example, De Blick et al. (2025) indicated that family ownership and unabsorbed slack negatively interact to affect strategic decision making (especially with low human resources).

> ***H1a****: In SMEs, family ownership weakens the positive relationship between unabsorbed slack and firm performance.*

Second, acting altruistically toward their family (Schulze et al., 2003), family owners tend to prioritize the family over the business agenda (Carney et al., 2015), leading to inefficiencies,

waste, and lack of abilities in family firms, especially family SMEs (Chrisman et al., 2004; Herrero, 2011). Despite family firms might have a higher discretion over the allocation of absorbed slack with respect to non-family firms, given the fewer internal bureaucratic constraints, they might be less intentioned to restructure the business to recover this type of slack (Alessandri et al., 2018) and reluctant to retrench the firm's structures where this type of slack is embedded (Agustí et al., 2021b).

Additionally, inefficiencies might emerge even when family SMEs opt for recovering absorbed slack, as they might indulge in unmotivated resource distraction and investments to the benefit of the family's reputation or status (Deephouse & Jaskiewicz, 2013), excessive use of resources to accommodate family needs and exert tight control (Gómez-Mejía et al., 2007), and empire building (Jensen, 1986). In family firms, leveraging absorbed slack may represent a severe source of inefficiency dampening performance.

> ***H1b****: In SMEs, family ownership weakens the positive relationship between absorbed slack and firm performance.*

Third, agency theorists generally distinguish firm owners based on their power to influence firm decisions, particularly resource allocation ones (George, 2005), among competing requests (De Massis et al., 2018b). Potential slack is the one that grants higher discretion in terms of value-creation opportunities, yet its access is subject to external scrutiny, as for example debt providers might increase monitoring and related costs (Chua et al., 2011), while family firms might be reluctant to meet the monitoring needs of credit institutions (Schulze et al., 2002). Yet, when seeking external funding, family firms prefer debt over new equity (Blanco-Mazagatos et al., 2007), which suggests that family SMEs might have higher chances of utilizing potential slack to explore new opportunities. In fact, family SMEs are found to prefer a high leverage (Wu et al., 2007) as they are more reluctant to lose control over the business and unwilling to trade it off with outside cash from non-family shareholders (Levie & Lerner, 2009). This is

consistent with the perspective that family firms are better able to leverage on patient capital to pursue innovative strategies, as they have the freedom to select the opportunities with the most appropriate time horizon (Sirmon & Hitt, 2003). Taken together, these arguments lead us to hypothesize that the positive relationship between potential slack and performance will be stronger in family SME.

> ***H1c****: In SMEs, family ownership strengthens the positive relationship between potential slack and firm performance.*

The role of family vs. non-family CEOs in family SMEs

It is deemed necessary to move beyond family ownership and consider other key factors to better understand the slack-performance relationship (see Chrisman et al., 2009; De Massis et al., 2018b). Therefore, to further validate our agency theory arguments and delve deeper into family firm heterogeneity (see Miller & Le Breton-Miller, 2021), we explore how altruism related to owner-management causes differences among family SMEs concerning the slack-performance relationship. Indeed, whether owner-management in family firms is good or bad is still an open debate (Schulze & Zellweger, 2021). To explore this type of agency problem, we consider that in family firms, having a member of the owning family as a CEO might increase the costs associated with owner-management agency problems due to altruism. Hence, when a family member also serves as CEO, the family has even more power and managerial discretion to determine how to allocate resources (Miller et al., 2014) and this might have heterogeneous effects on performance, in light of the different levels of availability and fungibility of the types of financial slack.

Especially in family SMEs, there are specific owner-management agency problems such as holdup and moral hazard because managers aim to pursue economic and non-economic interests (Schulze et al., 2002). Schulze and colleagues, for example, argue for the importance of considering when managers in SMEs prioritize their well-being and nurture a misalignment

between individual and firm interests, noting that altruism can act as a further complicating factor that makes a family CEO in a family SME disadvantageous in terms of agency problems.

First, family CEOs might entail self-control agency problems (Lubatkin et al., 2005), namely, agency problems with one's self (Thaler & Shefrin, 1981), or the ability and authority to use the firm's resources "as they see fit" (Lubatkin et al., 2005: 314). As a result, family CEOs may be tempted to advance altruistic motives to benefit their personal and familial well-being (owner-management agency problem) at the expense of other stakeholders (O'Donoghue & Rabin, 2000). For instance, they may use the business to serve personal interests (Schulze et al., 2001) by diverting firm resources for personal use (Miller et al., 2013) or making decisions that jeopardize the business but secure family control (Martin et al., 2017).

In this context, unabsorbed slack might be used for unmotivated investments by family CEOs to benefit the family's interests (Schulze et al., 2002) due to the lack of internal bureaucratic constraints and the swift access to such type of slack. This means that these easily available excess resources will be used to support decision-making to a lesser extent, when a family CEO is at the helm. Instead, non-family CEOs will need to balance the family owners' interests with the business needs, thus leveraging on their managerial discretion on these unconstrained resources in order to invest in value-creating activities (Miller et al., 2014), thus improving the unabsorbed slack-performance relationship.

H2a. *In family SMEs, the positive relationship between unabsorbed slack and firm performance is weaker (i.e., less positive) when the CEO is a family member than when he/she is not.*

Second, (self-control) agency problems, further spurred by altruism (Lubatkin et al., 2005), can harm the alignment of interests between family priorities and firm performance (Schulze et al., 2001). Under this contingency, family CEOs might be entrenched in their position (Morck & Yeung, 2003), which can be particularly likely in SMEs where usually ownership is highly concentrated (Bauweraerts & Colot, 2015). Therefore, while owners are risk averse, especially

in family SMEs (where the closely-held nature of ownership make them more averse to lose their patrimony) (Chatterjee et al., 1999), non-family CEOs would be much less sheltered from business risk, while family CEOs would keep their power, if they invest in risky investments (Gomez-Mejia et al., 2001). When managing absorbed slack, which takes more time and effort to be recovered and whose allocation is more difficult to effectively monitor thus giving the CEO greater discretion (Gentry et al., 2016; Mount et al., 2024), family CEOs are more inclined than non-family ones to use these resources to pursue opportunities to benefit the family SME in the long run. According to literature, absorbed slack, thanks to its longer-term nature, makes firms more willing to take risks, as for example in R&D expenditures (Greve, 2003). In sum, family CEOs, leveraging on greater discretion over such a type of slack, would thus opt for value-creating investments, helping the firm buffer against uncertainty and, in turn, enhance performance.

H2b. *In family SMEs, the positive relationship between absorbed slack and firm performance is stronger (i.e., more positive) when the CEO is a family member than when he/she is not.*

Third, when family SMEs are led by a family CEO, it is generally possible that this CEO is potentially qualified and motivated, with in-depth knowledge of the business (Miller & Le Breton-Miller, 2005). However, the literature regards it as likely that he or she has been chosen from the rather small pool of relatives for reasons of kinship rather than talent (Miller et al., 2014). As a result, the effectiveness of family CEOs is expected to be lower vis-à-vis the non-family ones, due to the owner-management agency problems engendered by altruism.

Family SMEs with family CEOs should hence be more likely to experience situations in which a lack of managerial talent and homogenous thinking (Morck & Yeung, 2003) de-emphasize experimental approaches, such as those related to potential slack. Conversely, non-family CEOs might make an effective use of external financial capital to pursue new and

innovative opportunities, by leveraging on their experience and willingness to contribute to balance family and business interests (Blumentritt et al., 2007).

> ***H2c**. In family SMEs, the positive relationship between potential slack and firm performance is weaker (i.e., less positive) when the CEO is a family member than when he/she is not.*

Method

Sample and coarsened exact matching

To test our hypotheses, we relied on secondary data from the Amadeus database managed by Bureau Van Dijk, a pan-European database of financial information on approximately 19 million companies across Europe. We considered only independent, privately held SMEs that operate in manufacturing industries (NACE-rev2 sectors 10 to 33; see Terziovski, 2010) with 10 to 250 employees, which is in line with the SME definition of the European Commission (2020). We selected firms that met these criteria and operated in Italy for several reasons. One is that there many SMEs and family-owned firms in this country (e.g., Cucculelli & Peruzzi, 2020). In 2022, SMEs represent 20,7% of total firms (78,9% are micro enterprises and 0,4% are large firms with more than 250 employees); on average, 80,9% of all firms are family-owned (74,5% among small firms and 58,8% among medium-sized firms, see ISTAT, 2023). Furthermore, the use of Italian data from Bureau Van Dijk is particularly appropriate because it enables accessing relevant corporate governance information (De Massis et al., 2018b). Such data have been used in multiple studies (e.g., Miller et al., 2014; Miller et al., 2013). In addition, the focus on a single country implies that there is no variance in terms of regulations and taxation policies regarding available resources and access to debt, which might potentially affect the utilization of unabsorbed, absorbed, and potential slack among the sampled firms. Moreover, it is unlikely for Italian family firms to transfer ownership outside the firm, also because of a much less liquid private and public markets (Corbetta & Montemerlo, 1999), which

makes Italian SMEs an appropriate empirical context to test the role of family ownership and CEO family status on the slack-performance relationship (Laffranchini & Braun, 2014).

Our initial sample consisted of more than 20,000 Italian SMEs with complete information for 2010–2016. Starting from this dataset, we used coarsened exact matching (CEM) to improve the covariate balance of the "treated" (family firms) and "control" (non-family firms) groups (Blackwell et al., 2009). We defined family firms as SMEs with the majority of the firm's equity controlled by a family (see Steijvers & Voordeckers, 2009; Wu et al., 2007). We pruned the observations from the CEM solution within each stratum with a "k2k" matching technique until the solution contained the same number of treated and control units in all strata. The matching procedure led to a final sample of 66,652 year-observations (33,326 year-observations for family SMEs and 33,326 year-observations for non-family SMEs). Following Neckebrouck et al. (2018), we matched firm-years on firm age (categorical variable with a median split on five levels), firm size (in terms of number of employees; categorical variable between small (<50 employees) and medium enterprises (>49 employees)), firm capital intensity (categorical variable with a median split on five levels), the industry in which the firm operates (12 industries), and the location in which the firm is located (4 macro-regions). Table 1 provides a matrix comparing family and non-family firms before and after the matching process.

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Measures

Dependent variable. Return on assets (ROA) indicates the extent of firm profitability relative to its total assets and is one of the most commonly used and well-regarded measures of *performance* (Deephouse & Carter, 2005). The utilization of resources aims to give the company a competitive advantage (Barney, 1991), and ROA yields the most direct information about the results of the chosen allocation of those resources (Hull & Rothenberg, 2008). Accordingly, we measured the firm ROA, which is calculated as annual operating revenues

before interest, depreciation, and taxes by total assets (multiplied by 100). This measure has been widely used in the management literature on slack resources and firm performance (e.g., Su et al., 2009) and in SMEs (Tognazzo et al., 2016). The dependent variable is lagged by one year.

Independent variables. Following previous studies, we calculated slack resources as three different types of financial slack (Bourgeois, 1981): *unabsorbed slack* is the current ratio (i.e., current assets divided by current liabilities), a measure indicating the ability to pay short-term obligations with quickly deployable resources; *absorbed slack* is the ratio of selling, general, and administrative expenses (SGA) to sales, representing resources hardly deployable in the short term; and *potential slack* is the debt-to-equity ratio, an inverse indicator reflecting a lack of potential slack (see Gomez-Mejia et al., 2018). A firm with a high debt-to-equity ratio has a relatively low ability to obtain additional funds through debt and thus has little potential slack (Bromiley, 1991).

Moderating variables. We use a binary variable that indicates whether an SME is a family firm or not. Specifically, we label it as *family ownership* and coded as 1 when the majority of the firm's equity (i.e., more than 50% of shares) is controlled by the family and 0 otherwise (see Steijvers & Voordeckers, 2009). In the subsample of family SMEs, the average share of family equity is 90 percent (with a standard deviation of 0.14). The Amadeus database allowed us to track both the direct and indirect ownership structures of SMEs with family ownership by calculating the voting rights of different block holders in the pyramidal ownership structure (Deephouse & Jaskiewicz, 2013). The firm's family nature was determined by their surname affinity with that of the controlling family (see, for instance, Miller et al., 2013). Moreover, as a robustness test, we also used a continuous measure of *family ownership* based on the percentage of ownership held by the family. We also coded the presence of a *family CEO* as a business leader (coded 1) or not (coded 0). In line with the findings of previous studies, the

family nature of the CEO has been determined by surname affinity with respect to that of the controlling family (Miller et al., 2013).

Control variables. In addition to matching family and non-family firm observations on firm age, firm size, capital intensity, industry classification, region, and year, we controlled for these variables in the analysis following prior literature (e.g., Neckebrouck et al., 2018). Moreover, we added the number of patents, environmental munificence, industry complexity, and industry profitability as additional control variables. More specifically, we controlled for *firm age* by measuring the years the firm has existed since slack is time-dependent in both its accumulation and related outcomes (George, 2005). Then, because performance may also be influenced by *firm size* (Wiklund & Shepherd, 2003), we controlled for the number of employees. We also controlled for *capital intensity*, measured as the ratio of the firm's fixed assets to the number of employees, since capital intensity may affect investment and risk tolerance (Neckebrouck et al., 2018). Industry controls are needed when examining the potential slack-performance relationship (Daniel et al., 2004). Thus, we included dummy variables for the *industry* categories corresponding to the two-digit NACE-rev2 code (Eurostat, 2008). Similarly, to control for differences between the four main Italian geographic *macro-regions*, we controlled for the northwest, northeast, central, and southern regions (see also Neckebrouck et al., 2018). We also controlled for time dependency by incorporating the *year* in the analyses. We also controlled for the fixed effects of *year, region,* and *industry*, computing the related dummy variables. Furthermore, we controlled for the total *number of patents* granted to the firm since its establishment, as past innovation output may affect its current performance (Rosenbusch et al., 2011). We also controlled for environmental characteristics influencing firm performance (Bradley et al., 2011a). In particular, we included *environmental munificence*, that is, the abundance of resources in the environment. Following prior literature (Keats & Hitt, 1988), we regressed the natural sales log in each industry (four-digit NACE-rev2 code) in the previous

five years and then measured munificence using the antilog of the regression slope coefficient. Then, we controlled for *industry complexity* as the inverse of the Herfindahl index. This measure accounts for the concentration of sales in an industry by summing the square of the market shares (expressed as a percentage of sales) of all companies in a given four-digit NACE-rev2 sector (Li & Simerly, 1998). This measure is particularly relevant when studying the competitive environment of SMEs, as high values indicate monopoly-like conditions in which the available strategic options for smaller firms are affected by the sales and distribution control exercised by larger firms (Keats & Hitt, 1988). We also controlled for *industry profitability*, operationalized as the logarithm of average profitability for firms within the same four-digit NACE-rev2 code, as it might favor opportunities to generate slack (Bradley et al., 2011b).

Results

We took several steps to ensure the appropriateness of our data for these analyses. First, examining the variance inflation factors (VIFs) showed that multicollinearity is not a concern. All the VIFs are less than 5 (see Tables 2 and 3) (Kutner et al., 2004). The descriptive statistics and correlations of our variables are presented in Table 2.

--- Insert Table 2 about here ---

First stage: controlling for endogeneity

Endogeneity is a concern in any study. However, our data are longitudinal, and our dependent variable is lagged by one year (Daniel et al., 2004), which improves the ability to draw causal inferences. Additionally, the matching procedure adopted helps mitigate some endogeneity concerns by lowering the influence of unobserved heterogeneity, that is, lowering the chances of Type 1 errors and providing more conservative estimates (see Neckebrouck et al., 2018). However, endogeneity problems cannot be entirely ruled out, so we ran important corrections

to mitigate potential endogeneity biases. Due to space constraints, we report these comprehensive tests in the Appendix.

Second stage: hypothesis testing

We used panel data analysis with a random effect specification to test the effect of unabsorbed, absorbed, and potential slack on firm performance (ROA) as well as the moderating effects of family ownership (Table 3) and family CEO (Table 4). As shown in Table 3 (Model 2), we find support for the positive effects of slack resources on firm performance, as suggested by the literature. The effect of unabsorbed slack is positive and statistically significant (coef.=0.403; p=0.000). The effect of absorbed slack is also positive and statistically significant (coef.=1.717; p=0.000). Finally, the effect of potential slack, measured as an *inverse indicator*, is negative and statistically significant (coef.=-0.034; p=0.000), thus suggesting that potential slack favors greater financial performance.

--- Insert Tables 3 and 4 about here ---

Hypotheses 1a, 1b, and 1c suggest that family ownership affects the positive relationships between unabsorbed, absorbed, and potential slack, respectively, and firm performance. The results presented in Table 3 (Model 4) are mixed. The moderation effect of family ownership on the relationship between unabsorbed slack and performance is positive and statistically significant (coef.=0.354; p=0.000), contradicting H1a. In contrast, the moderating effect of family ownership on the relationship between absorbed slack and performance is negative and statistically significant (coef.=-2.437; p=0.000), supporting H1b. Finally, the interaction term of family ownership and potential slack is negative and statistically significant (coef.=-0.019; p=0.000). Given that potential slack is an inverse indicator, this would support H1c. However, the margin plot indicates that the CIs of the two slopes largely overlap (Figure 1c); thus, H1c is not supported.

The post-estimated predictive margins indicate that a positive variation in unabsorbed slack (+1 s.d.) positively affects the ROA of family SMEs, generating a value of 5.03% (p=0.000), with a variation that is 0.71 points above the average value of ROA for the firms in the sample (Figure 1a). Conversely, a positive variation in absorbed slack (+1 s.d.) weakens the ROA of family SMEs, generating a value of 4.61% (p=0.000), with a variation that is 0.29 points below the average effect of absorbed slack on ROA for the firms in the sample and 0.81 points below the average effect of absorbed slack on ROA for non-family firms in the sample (Figure 1b).

--- Insert Figures 1a, 1b, and 1c here ---

Hypotheses 2a, 2b, and 2c suggest that in family SMEs, the positive relationships between financial performance and unabsorbed, absorbed, and potential slack are affected when the CEO is a family member or not. We tested these hypotheses on a subsample of the population that included only family SMEs. The results presented in Table 4 (Model 6) partially support our hypotheses. The moderation effect of having a family CEO on the relationship between unabsorbed slack and performance is positive and statistically significant (coef.=0.552; p=0.000); we thus find the opposite, as predicted in H2a. The same moderation effect is also observed for the relationship between absorbed slack and performance, a positive and statistically significant effect (coef.=5.209; p=0.000), therefore supporting H2b.

The moderation effect of having a family CEO on the potential slack-performance relationship is positive and statistically significant (coef.=0.044; p=0.000); however, as the potential slack measure is an *inverse indicator*, this implies that having a family CEO weakens the positive relationship between potential slack and financial performance, supporting H2c. Looking at the post-estimated predictive margins, a positive variation in unabsorbed slack (+1 s.d.) positively affects the ROA of family SMEs led by a family CEO, generating a value of 5.42% (p=0.000), with a variation that is 1.17 points below the average value of ROA of the family SMEs in the sample (Figure 2a). Similarly, a positive variation in absorbed slack (+1

s.d.) positively affects the ROA of family SMEs led by a family CEO, generating a value of 6.11% (p=0.000), with a variation that is 1.84 points below the average value of ROA for family SMEs in the sample (Figure 2b). However, we see that a positive variation in potential slack (+1 s.d.) negatively affects the ROA of family SMEs led by a family CEO, generating a value of 3.98% (p=0.000), with a variation that is 0.24 points above the average value of ROA for family SMEs in the sample (Figure 2c). Inverting the results of potential slack for interpreting purposes supports the weakening effect of having a family CEO on the relationship between potential slack and financial performance.

--- Insert Figures 2a, 2b, and 2c here ---

Robustness checks

First, we tested all the hypotheses on the full dataset before conducting the matching procedure. The direction of the signs and their significance supported the validity of our results. Second, we tested H1a, H1b, and H1c, considering a continuous measure of family ownership. Additionally, in this case, the direction of the signs and their significance confirmed the validity of our results. Third, we adopted alternative measures of firm performance, such as ROA calculated on net income (instead of operating revenues before interest, depreciation, and taxes), profit margin, and Altman's Z-score. The direction of the signs and their significance are confirmed for all hypotheses when using one of these three alternatives. Fourth, we tested unabsorbed, absorbed, and potential slack for non-linear effects (George, 2005), introducing the squared term for each measure. The squared terms of unabsorbed and absorbed slack are significant (p<0.05); however, the corresponding plots indicate a quasi-linear relationship. In addition, when looking at our proposed moderation effects, we consistently found no evidence of a curvilinear effect for any of the three types of slack (their respective squared terms are not significant). Fifth, we calculated potential slack as equity-to-debt. The direction of the signs and their significance confirm the validity of our results; however, an excessive correlation of

equity-to-debt with unabsorbed slack in our sample validates our choice of using the inverse indicator of potential slack as debt-to-equity (see also Daniel et al., 2004). Finally, to further validate the strength of our results, we conducted simple slope difference tests for each interaction following the procedure that Dawson (2014) suggested. The tests indicate that our results are robust.[2]

Discussion

On a general level, our study suggests that the effect of financial slack on performance in the SME context is more complex and nuanced than previously thought. Specifically, whereas we support the general notion that all three types of slack positively affect firm performance, we demonstrate that the moderation effect of family ownership is significant but with mixed and partly surprising. While the findings support the prediction related to absorbed slack, unabsorbed slack is more positively related to firm performance for family firms than for their non-family counterparts.

For a possible explanation of this unexpected finding, we need to consider that unabsorbed slack is the most easily deployable type of slack whose allocation is subject to daily social interactions and exchanges among firm managers and external stakeholders. In the context of family SMEs, instead of being an easy-to-borrow resource for family-related interests, unabsorbed slack might be considered one of the currencies of social exchange, together with reciprocity, commitment, and love. Thus, family firms likely perceive stronger monitoring when using unabsorbed slack, allocating it more purposefully to value creation activities. This is the case, for example, of private family firms, where there is a high overlap between family and firm wealth (De Massis et al., 2018b), representing a case where family principals are particularly incentivized to use slack for strategic decision-making. In addition, our hypothesis

[2] Detailed results of all these tests are available from the authors upon request.

related to potential slack does not find full support due to the overlapping confidence intervals (Figure 1c). Obviously, our conceptual arguments did not capture the full reality; therefore, additional research delving into greater depth is necessary. For instance, we expect that entrepreneurial orientation (EO) could be a helpful additional variable to investigate (see Stanley et al., 2019) as it might better cover the value-creating role of potential slack specifically, in terms of exploration of new opportunities. As such, our non-finding could be due to EO being a mediating factor between potential slack and performance.

Furthermore, we reveal that heterogeneity among family SMEs and across types of slack plays an important role. In fact, as expected, having a family CEO implies that absorbed slack affects performance in a more positive way and potential slack in a more negative way than when having a non-family CEO. In contrast to our expectations, having a family CEO strengthens (and not weakens) the relationship between unabsorbed slack and performance. A potential explanation could still be framed in agency theory terms, namely by recognizing that—even in the case of SMEs—principal-agent costs, opportunism, and need for monitoring might eventually decrease with a family CEO, in line with De Massis et al. (2018b). On the one hand, this would suggest that instead of personal self-interested goals, family CEOs are more eager to leverage unabsorbed slack resources to make strategic decisions. In particular, family CEOs might use their power and discretion to align family and firm interests, thus allocating such slack in the most effective way to balance economic and non-economic interests (see, for instance, Holt et al., 2017). Conversely, non-family CEOs of family SMEs might struggle to find an optimum between the firm interests they aim to pursue and the family goals of the owning family, thus misallocating unabsorbed slack for supporting decision-making (see Visintin et al., 2017).

Contributions

Are family firms better off than non-family firms when it comes to using financial slack for enhancing performance? We advance this ongoing and partly controversial debate (see Bertrand & Schoar, 2006; Cambrea et al., 2022; Durand & Vargas, 2003; Gedajlovic et al., 2004; Le Breton-Miller & Miller, 2006) by considering slack heterogeneity (Bourgeois, 1981), family ownership, and family firm heterogeneity in terms of having a family CEO as a governance aspect relevant in the SME context (Daspit et al., 2018). In particular, we show that an answer to the above question differs depending on the aspect considered. On the one hand, family ownership in an SME can be detrimental in the context of absorbed slack; hence, our results suggest that family SMEs suffer from owner-control agency problems engendered by altruism which mainly affects the allocation of low discretionary resources (i.e., absorbed slack), dampening the effect of such excess resources on firm performance. This supports our arguments on the misuse of absorbed resources for the family agenda (Alessandri et al., 2018) to strengthen family reputation and status (Deephouse & Jaskiewicz, 2013). On the other hand, when considering unabsorbed slack, we find that family firms outperform non-family firms. This would suggest that the agency issues related to owner-control because of the distractions that family owners might induce due to altruism are not salient, and, instead, that family firms are more able to deploy high discretionary slack for supporting strategic decision-making than non-family firms. Taken together, we did not find a uniform contingency effect of family ownership; this indicates that when seeking to understand the impact of family ownership, investigating three types of slack separately (and not only one type; see De Massis et al., 2018b) is theoretically and empirically valuable. This is an important and novel extension of the existing body of literature, as it addresses and challenges the implicit assumption that the effect of family ownership on resource allocation is invariant concerning the type of resource allocated (e.g., Kotlar et al., 2020).

As a second main contribution, we move beyond whether family ownership is good or bad for the slack-performance relationship by delving deeper into a key driver of heterogeneity among family SMEs (De Massis et al., 2018b), namely, the family vs. non-family status of the CEO (Neubaum et al., 2019). This adds to the vivid debate how family firm heterogeneity and the associated taxonomies and typologies affect relevant outcomes (see Neubaum et al., 2019; Rau et al., 2019; Stanley et al., 2019). In fact, family involvement in management is a key aspect of family firm heterogeneity (see also Nordqvist et al., 2014), and we illuminate how it affects how family firms deal with slack resources. This adds to the knowledge on management-related aspects of family firm heterogeneity (Pittino et al., 2018) and complements previous insights about how having a family CEO and consequential family firm typologies affect performance (see Stanley et al., 2019). Also here, we are able to draw a nuanced picture as the effect of having a family CEO on the financial slack-performance relationship is not uniform. We find support for our predictions regarding a positive moderation for absorbed slack and a negative moderation for potential slack; regarding the latter, we note that when family CEOs have the potential to borrow money from credit institutions, they indeed seem to suffer from owner-management agency problems engendered by altruism related to a lack of managerial talent and homogeneous thinking (Morck & Yeung, 2003). As discussed above, our findings regarding unabsorbed slack are in the opposite direction than expected. Relatedly, by theorizing how agency problems vary across family SMEs, thus considering agency problems as another aspect of family firm heterogeneity that affects performance outcomes (Dyer, 2006), our study offers further evidence of the presence and specific manifestations of agency problems in family SMEs (see Herrero, 2011) and how these problems lead to idiosyncratic behavior concerning resource allocation (De Massis et al., 2014).

Third, our study advances the existing body of research on slack resources and their relationship with performance. Generally, our study helps pushing the boundaries of slack

research, as it follows George's (George, 2005: 672) call for "a reframing of the theoretical question for future research from the simple question of *whether* slack is good for performance to a more complex set of questions: *How much of what form* of slack is good for performance? and *When* is slack good for performance?" This constitutes a fundamental paradigm change in slack research. Relatedly, we contribute to the vivid discussion of whether the relationship between slack resources and performance is curvilinear or positive in the SME context (e.g., George, 2005). By considering different slack types (Mount et al., 2024), we leverage nuanced theoretical arguments that support a positive and monotonic relationship and introduce internal contingencies to reconcile the benefits and costs of slack. More specifically, we reveal that excess resource allocation differs depending on ownership- and management-related dimensions, which make the specific altruism-enhanced agency problems typical of family firms (Schulze et al., 2002) more or less salient in predicting SME performance. As such, our theorizing and findings expand the growing body of knowledge on the slack-performance relationship both in the SME context (De Massis et al., 2018a; Simsek et al., 2007) and in general (e.g., Daniel et al., 2004; Vanacker et al., 2017).

Practical implications

Our insights also offer clear, practical guidance to family SME owners and leaders about the conversion of financial slack into performance. For instance, owners of family SMEs should be aware that their firms face challenges when converting absorbed slack into performance as compared to non-family firms; at the same time, they are in an advantaged position to convert unabsorbed slack into performance. Furthermore, these owners need to be aware that appointing a family CEO might help in converting both absorbed and unabsorbed slack into performance, but that it impedes the transformation of potential slack. As such, owners and managers should be aware that both family ownership and the CEO's family membership have distinct effects

on the allocation of different types of financial slack, ultimately affecting financial performance. Here, our study suggests that corresponding decisions should be made consciously and strategically, avoiding lax decision-making or indulging in preferences that lead to self-interested behaviors that neglect the sake of the business. In particular, a key recommendation for family leaders is that they should be very cautious with the allocation of slack to non-value-creating activities, such as dividend policies in favor of family members. This is because doing so would divert slack resources from value-generating strategies, which could ultimately affect financial performance in a negative way.

Limitations and future research directions

Our study serves as a springboard for future research on the slack-performance relationship in numerous ways, potentially resolving some limitations of our work. First, we strongly encourage scholars to consider family ownership as a contingency variable when investigating other effects of slack resources (see Daniel et al., 2004) because incorporating family ownership in theoretical models allows a deeper and more unbiased view of the actual outcomes of slack. Relatedly, considering non-financial outcomes of financial slack allocation, for example innovation (Liu et al., 2017) and internationalization (e.g., Lapeira et al., 2024), or behavioral postures such as resilience (Conz et al., 2023), could be promising, and would contribute to the broad debate on entrepreneurial and strategic decision-making in family firms. However, as our findings indicate, it is necessary to go beyond family ownership, as there might be situations where family ownership supports the slack-performance conversion. When and why this is the case clearly deserve further attention.

Similarly, future research could consider family firm heterogeneity even more deeply. There might be additional aspects that further explain why family-owned businesses differ from non-family firms and/or illuminate heterogeneity among family firms. For example, recent literature

emphasizes that family dynamics (Jaskiewicz et al., 2017) and family development (Minola et al., 2016) might explain why firms might behave differently at a given level of family ownership. Furthermore, building on our empirical findings that oppose our theorizing on the role of having a family CEO in SMEs (for unabsorbed and absorbed slack), investigating in greater detail which type of agency problems may be more relevant than others (e.g., principal-agent vs. altruism-related issues), and under what conditions, is another area ripe for future research.

Second, the use of a single country imposes a cultural constraint on the findings (Hofstede, 2001). Similarly, regulations, industry characteristics, the rule of law, and the role of (family) norms might differ across countries. While we consider Italy an appropriate and valid context for our study, we recognize the opportunity for cross-country studies that explicitly introduce corresponding contextual variables to reinforce research on common patterns and differences (Vanacker et al., 2017). In this regard, scholars have pointed out the relevance of context for the slack-performance relationship (e.g., Deb et al., 2017; Su et al., 2009); promising contextual variables could include, for instance, the industrial sector in which the firm is active, such as the high-tech industry sector (De Massis et al., 2018c), or the institutional environment in emerging economies (Banalieva et al., 2015).

Third, we do not directly measure the mechanisms underlying the slack-performance conversion. Therefore, we encourage future scholars to measure and test such mechanisms, for instance, by employing direct measures of the agency issues occurring in family SMEs (e.g., degree of altruism). Relatedly, we invite scholars to complement or combine our agency theory perspective with other theories that are promising in the slack-performance context, such as the three-circle model (Tagiuri & Davis, 1992) or the behavioral theory applied to family firms (Gómez-Mejía et al., 2007). Especially if governance-related internal contingencies are intertwined with additional internal contingencies, such as the composition of dominant

coalitions or boards, these can contribute to the effect of allocating resources (see Deb et al., 2017).

In sum, our study offers a novel family firm angle on the slack-performance relationship in SMEs. We demonstrate the relevance of family ownership and CEO family status as internal contingency factors, opening up new avenues for future research at the intersection of the slack-performance, family business, and agency theory literatures.

Declaration of Conflicting Interests

Some authors of this paper have editorial responsibility at the journal. None of the authors have been involved in the decision-making process for this paper.

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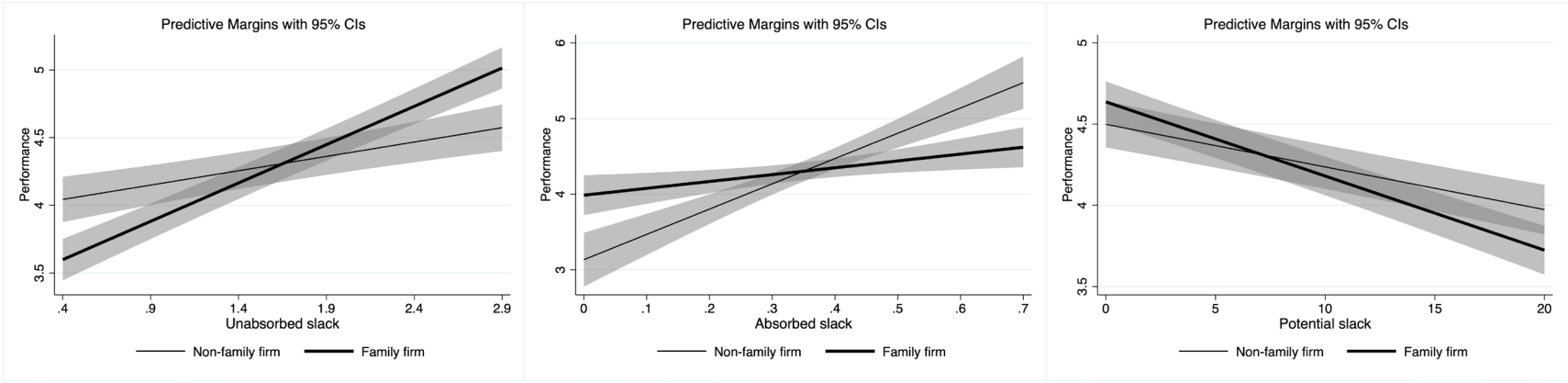
FIGURES 1A, 1B, 1C: Effects of financial slack and family ownership on financial performance



FIGURES 2A, 2B, 2C: Effects of financial slack and CEO family status on financial performance in family SMEs

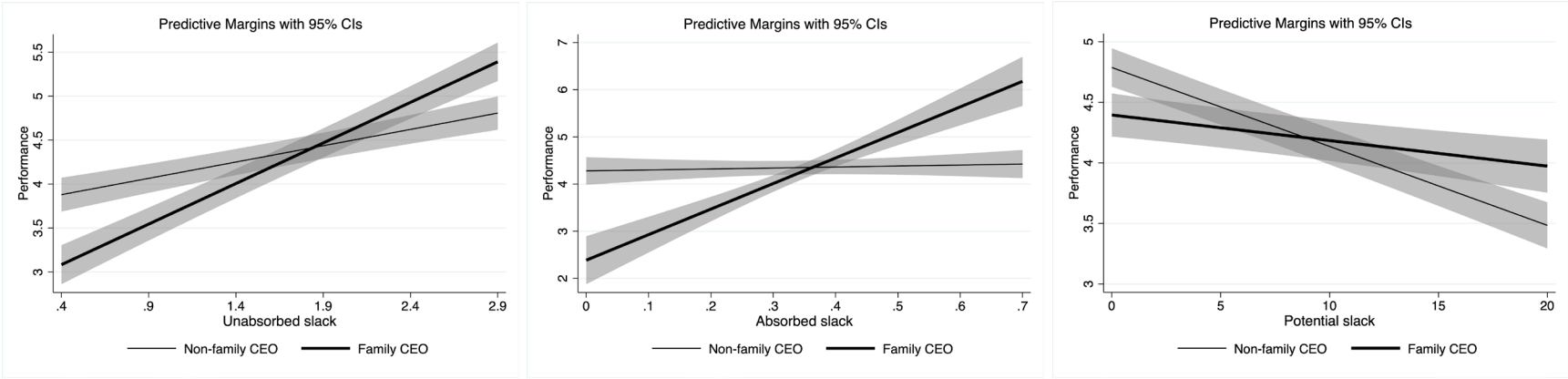


TABLE 1. Family versus non-family firm comparison, pre- and post- matching

	Pre-matching				Post-matching			
	Non-family firms		Family firms		Non-family firms		Family firms	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
1. Performance (ROA)	4.44	7.73	4.05	7.34	4.42	7.68	4.42	7.52
2. Unabsorbed slack	1.61	1.21	1.71	1.29	1.62	1.21	1.67	1.19
3. Absorbed slack	0.35	0.34	0.34	0.42	0.36	0.33	0.34	0.35
4. Potential slack	7.88	13.90	6.46	11.84	7.86	13.89	6.71	11.48
8. Firm age	23.48	13.38	26.96	14.27	24.00	13.26	24.23	13.41
9. Firm size (number of employees)	30.45	30.22	30.20	27.99	28.16	27.29	27.90	24.98
10. Firm capital intensity	1.10	1.09	1.18	2.49	1.10	1.02	1.13	3.13
11. Number of patents	1.30	5.08	1.12	4.38	1.20	4.73	1.02	3.99
12. Industry munificence	0.97	0.09	0.98	0.09	0.97	0.09	0.97	0.09
13. Industry complexity	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.01
14. Industry profitability	3.74	0.76	3.68	0.81	3.73	0.76	3.71	0.78
Industry	N		N		N		N	
Food products, beverages and tobacco products	17		0		0		0	
Textiles, apparel, leather and related products	2,202		3,293		1,797		1,797	
Wood and paper products, and printing	3,231		6,900		3,012		3,012	
Chemicals and chemical products	1,429		1,885		974		974	
Pharmaceuticals, medicinal and botanical products	186		169		61		61	
Rubber, plastics, and other mineral products	4,390		8,686		4,035		4,035	
Basic metals and fabricated metal products	11,642		20,646		11,076		11,076	
Computer, electronic and optical products	1,874		1,525		1,083		1,083	
Electrical equipment	2,212		2,822		1,642		1,642	
Machinery equipment (other)	6,577		9,372		5,874		5,874	
Manufacture of transport equipment	1,150		1,769		780		780	
Other manufacturing	3,483		5,524		2,992		2,992	
Region	N		N		N		N	
Italy: North-West	13,843		25,492		12,678		12,678	
Italy: North-East	8,304		14,087		7,322		7,322	
Italy: Centre	11,829		16,592		10,016		10,016	
Italy; South and Islands	4,417		6,420		3,310		3,310	
Year*	N		N		N		N	
2010	3,720		6,230		3,071		3,071	
2011	6,806		11,207		5,993		5,993	
2012	6,927		11,377		6,082		6,082	
2013	6,887		11,294		5,986		5,986	
2014	7,015		11,275		6,091		6,091	
2015	7,038		11,208		6,103		6,103	
Year-observations	38,393		62,591		33,326		33,326	

Notes: N indicates the number of year-observations; * year refers to the independent variables, matching variables, and controls; the dependent variable is lagged by 1 year.

TABLE 2. Correlation and descriptive statistics

	Mean	S.D.	Min	Max	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1. Performance (ROA)	4.42	7.60	-20.39	34.26												
2. Unabsorbed slack	1.65	1.20	0.00	20.17	0.20											
3. Absorbed slack	0.35	0.14	0.00	11.65	0.05	-0.01										
4. Potential slack	7.28	12.75	0.00	90.91	-0.16	-0.25	0.06									
5. Family ownership	0.50	0.50	0.00	1.00	0.00	0.02	-0.05	-0.05								
6. Family CEO*	0.44	0.50	0.00	1.00	0.01	0.01	0.02	-0.00	0.53							
7. Firm age	24.11	13.34	1.00	123.00	-0.06	0.17	-0.07	-0.20	0.01	0.05						
8. Firm size (number of employees)	28.03	26.16	11.00	249.00	0.00	0.02	-0.05	-0.10	-0.00	-0.07	0.25					
9. Firm capital intensity	1.12	2.33	0.04	443.43	-0.08	0.03	0.03	-0.01	0.01	-0.01	0.06	0.00				
10. Number of patents	1.11	4.38	0.00	100.00	0.02	0.05	-0.06	-0.05	-0.02	-0.02	0.15	0.28	0.01			
11. Industry munificence	0.97	0.09	0.57	1.33	-0.05	-0.04	0.18	0.03	-0.00	-0.02	-0.06	-0.06	-0.01	-0.10		
12. Industry complexity	0.00	0.01	0.00	0.09	-0.02	0.02	-0.18	-0.03	-0.01	-0.03	0.09	0.06	0.01	0.04	-0.01	
13. Industry profitability	3.72	0.77	-2.21	5.78	0.15	0.07	0.13	-0.05	-0.01	-0.00	0.08	0.06	-0.03	0.07	-0.32	0.06

Notes: Values greater than |0.01| are significant at $p<.05$; * values calculated for the subsample of family firms.

TABLE 3. Relationship between financial slack and family ownership on financial performance (ROA)

	1.	2.	3.	4.	VIF
Firm age	-0.043***	-0.056***	-0.055***	-0.041***	3.25
	(0.004)	(0.004)	(0.004)	(0.006)	
Firm size	0.002	0.001	0.001	0.000	1.24
	(0.002)	(0.002)	(0.002)	(0.002)	
Firm capital intensity	-0.095***	-0.091***	-0.091***	-0.092***	1.02
	(0.010)	(0.010)	(0.010)	(0.010)	
Number of patents	0.018	0.016	0.016	0.014	1.12
	(0.011)	(0.010)	(0.010)	(0.010)	
Industry munificence	0.402	0.408	0.407	0.373	4.00
	(0.460)	(0.463)	(0.463)	(0.463)	
Industry complexity	-5.449	-5.599	-5.665	-5.674	1.10
	(7.665)	(7.397)	(7.398)	(7.395)	
Industry profitability	0.686***	0.672***	0.672***	0.672***	1.64
	(0.050)	(0.050)	(0.050)	(0.050)	
Unabsorbed slack		0.403***	0.403***	0.212***	2.13
		(0.029)	(0.029)	(0.042)	
Absorbed slack		1.717***	1.714***	3.343***	4.31
		(0.306)	(0.306)	(0.473)	
Potential slack		-0.034***	-0.034***	-0.026***	1.84
		(0.002)	(0.002)	(0.003)	
Family ownership			-0.047	0.411†	1.02
			(0.090)	(0.226)	
Unabsorbed slack × Family ownership				0.354***	2.10
				(0.058)	
Absorbed slack × Family ownership				-2.437***	2.21
				(0.517)	
Potential slack × Family ownership				-0.019***	1.81
				(0.005)	
Endogeneity score: slack		0.051	0.050	-0.010	3.70
		(0.048)	(0.048)	(0.050)	
Endogeneity score: family ownership			-0.320**	-3.241**	4.44
			(0.098)	(1.006)	
Year-observations	66,652	66,652	66,652	66,652	
Wald chi^2	1,713.697	2,275.311	2,275.708	2,372.224	
$P > Chi^2$	0.000	0.000	0.000	0.000	

Notes: All the models include region, industry, and year; the dependent variable is lagged by 1 year; the variance inflation factor (VIF) was calculated with Model 4 (mean value: 2.45); † $p<0.1$; * $p<0.05$; ** $p<0.01$; *** $p<0.001$.

TABLE 4. Effect of financial slack and family CEO on financial performance (ROA)

	5.	6.	VIF@
Firm age	-0.064***	-0.065***	1.26
	(0.005)	(0.005)	
Firm size	0.005†	0.004	1.31
	(0.002)	(0.002)	
Firm capital intensity	-0.064***	-0.061***	1.02
	(0.011)	(0.011)	
Number of patents	-0.008	-0.005	1.10
	(0.014)	(0.014)	
Industry munificence	0.484	0.370	4.00
	(0.652)	(0.652)	
Industry complexity	-4.224	-3.078	1.12
	(9.737)	(9.706)	
Industry profitability	0.861***	0.841***	1.64
	(0.069)	(0.069)	
Unabsorbed slack	0.582***	0.371***	1.82
	(0.040)	(0.050)	
Absorbed slack	0.794*	0.208	2.59
	(0.365)	(0.374)	
Potential slack	-0.047***	-0.065***	1.98
	(0.004)	(0.005)	
Family CEO	-0.097	-3.109***	1.12
	(0.107)	(0.298)	
Unabsorbed slack × Family CEO		0.552***	1.80
		(0.076)	
Absorbed slack × Family CEO		5.209***	1.65
		(0.696)	
Potential slack × Family CEO		0.044***	1.94
		(0.007)	
Endogeneity score: slack	0.090	-0.054	
	(0.064)	(0.066)	
Endogeneity score: family CEO	0.182***	0.200***	
	(0.050)	(0.050)	
Year-observations	33,326	33,326	
Wald chi^2	1,476.873	1,624.355	
$P > Chi^2$	0.000	0.000	

Notes: All the models include region, industry, and year; the dependent variable is lagged by 1 year; @ VIF is calculated with Model 6 (mean value: 2.30) † $p<0.1$; * $p<0.05$; ** $p<0.01$; *** $p<0$

APPENDIX: Testing for Endogeneity

Our analysis considered the possibility that financial slack resources and family ownership might be endogenously determined (Wang et al., 2016). In other words, it is possible that factors that influence financial performance also influence the level of financial slack and drive the family's decision to preserve ownership of the firm as a family business. To address these sources of endogeneity, we used an econometric approach involving simultaneous equations estimated with a two-stage residual inclusion (2SRI) model (Terza et al., 2008). The 2SRI estimator is similar to the linear two-stage least squares estimator, except that in the second-stage regression, the endogenous variables are not replaced by the first-stage predictors. Instead, the first-stage residuals are included as additional regressors. In the first stage, we calculated three random-effect regressions using our measures of financial slack (i.e., unabsorbed, absorbed, and potential) as dependent variables. Thus, as instruments, we adopted *past sales* (t-1), *past total assets* (t-1), *industry-specific characteristics* (competitors' size and industry density), and *industry-level (average) financial slack* (George, 2005). In particular, industry-level financial slack satisfies the requirements of an instrumental variable since industry average slack is expected to affect firm financial slack through the pressures of isomorphism (DiMaggio & Powell, 1983). However, it is unlikely that the slack of other firms in the same industry has a direct impact on a focal firm's subsequent financial performance. Following this procedure, we obtained three endogeneity scores (one per measure of slack), and due to the excessive correlation between the three scores, we calculated a composite value resulting from the sum of the standardized values of the three scores (Finkelstein, 1992). Second, we performed a random-effect logistic regression using our dummy variable for family ownership as the dependent variable. As instruments, we used the percentage of *family SMEs in the industry* (4-digit NACE-rev2) and the percentage of *family SMEs in the province* (107 administrative divisions). These variables are correlated with the family ownership variable but not with performance. Indeed, families are best at leveraging the benefits of industrial and local relationships, favoring collaboration between family SMEs (Cucculelli & Storai, 2015). In the second stage, we included these variables' residuals as predictors of our dependent variable, together with our independent variables (Terza et al., 2008). Thus, we controlled for the endogeneity score of slack and the endogeneity scores of slack and family ownership in the main analyses.

We also considered that firm performance might be endogenous to the strategic control exercised through family CEO status. Like in the procedure described above, we employed a 2SRI model to control for endogeneity. In the first stage, we used the *percentage of family firms in the industry* (4-digit NACE-rev2) and the *percentage of family firms in the province* (107 administrative divisions) where a family CEO controls the business. In the second stage, we included these variables' residuals as predictors of our dependent variable, thus controlling for the endogeneity score of having a family CEO in addition to the endogeneity score of financial slack.