Received: 2 September 2022 | Revised: 20 December 2023 | Accepted: 21 December 2023

DOI: 10.1002/sej.1497

RESEARCH ARTICLE

SMS | Strategic Entrepreneurship Journal

WILEY

The strategic role of owners in firm growth: Contextualizing ownership competence in private firms

Jannis von Nitzsch[1] | Miriam Bird[1] | Ed Saiedi[2]

[1]TUM School of Management, Technical University of Munich, Heilbronn, Germany

[2]Department of Strategy & Entrepreneurship, BI Norwegian Business School, Oslo, Norway

Correspondence
Miriam Bird, TUM School of Management, Technical University of Munich, Bildungscampus 9, 74076 Heilbronn, Germany.
Email: miriam.bird@tum.de

Funding information
Schweizerischer Nationalfonds zur Förderung der Wissenschaftlichen Forschung, Grant/Award Number: 100018_185132

Abstract

Research Summary: We integrate the emerging literature on the strategic role of firm owners in firms' value creation with Penrosean growth theory to investigate how and under what conditions two experience-based competences among owners—matching competence and governance competence—influence firm growth. Employing a longitudinal sample of 2509 owner-managed German firms, we find a positive relationship between owners' experience-based competences and firm growth. Further, we find that in family firms, the positive relationship between owners' experience-based governance competence and firm growth is weaker and that both experience-based competences matter more in younger firms compared with older firms. Our findings make important contributions to research on strategic ownership and Penrosean growth theory.

Managerial Summary: In our study, we show that two competences of owner–managers are important for the growth of their firms: their matching competence, which is the ability to theorize about valuable resource configurations and cognitively envision a path to implement them, and their governance competence, which is the ability to create effective governance arrangements to align incentives

within a firm. Our results suggest that it is challenging for owner–managers from family firms to leverage their governance competence to achieve growth, which could potentially be resolved by instituting governance mechanisms that prevent nepotism. We also show that owner–managers' competences are particularly important in the early years of their firms when no standardized processes are in place.

KEYWORDS
entrepreneurial judgment, experience-based matching and governance competences, owner–management, ownership competence, Penrosean growth theory

1 | INTRODUCTION

Firm owners have the right to decide on their firms' resource allocation in alignment with their idiosyncratic theories of value (Schulze & Zellweger, 2021). Hence, their judgment[1] on how to deploy firm resources under Knightian uncertainty in the most efficient way constitutes an important antecedent for their firms' value creation (Foss et al., 2021; Foss & Klein, 2012; Foss & Klein, 2020). This argument lays the foundation for the emerging literature on strategic ownership (e.g., Felin & Zenger, 2017; Foss et al., 2021, 2023) and coincides with Penrosean growth theory (Penrose, 1952, 1955, 1959)—the most prominent theory of firm growth—in that it recognizes efficient resource deployment as a building block for firms' value creation and puts entrepreneurial judgment center stage. However, while Penrose (1959) emphasized the role firm decision-makers' *sound judgment* plays in firm growth, she did not elaborate on what underlies this sound judgment, such as the types of competences firm owners have (Foss et al., 2021). Thus, understanding how ownership competence underlies owners' sound judgment and how it translates into firm growth constitutes an important research gap.

The effect of ownership competence on firm growth is likely particularly salient in private firms, in which ownership is typically concentrated in a few individuals who are often managers of their firms (Foss et al., 2021; Schulze & Zellweger, 2021) and in which firm growth is a key indicator of value creation (Davidsson et al., 2017; Penrose, 1959). Accordingly, private firms provide an appropriate setting to study how and under what conditions ownership competence affects firm growth. Thus, in this article, we integrate conceptual work on ownership competence (Foss et al., 2021, 2023) with Penrosean growth theory to answer the following research questions: (1) *How does ownership competence affect firm growth in private firms*, and (2) *what are the boundary conditions for the effect of ownership competence on firm growth?*

Exercising ownership competence refers to firm owners executing three competences (i.e., matching, governance, and timing competences) to create value for their firms (Foss et al., 2021). In this article, we examine the relationships between two of these competences—namely, matching competence and governance competence—and firm growth. These two distinct competences reflect owners' ability to theorize about the potential value of specific resource combinations (i.e., matching competence) and their ability to compose desired resource combinations through effective governance arrangements (i.e., governance competence).[2] Since these competences likely help owners structure firm resources and governance in a way that is conducive to growth, we contend that there are positive baseline relationships between owners' matching and governance competences and firm growth. Moreover, the strength of the relationship between ownership competence and firm growth is likely to depend on the organizational context (Foss et al., 2019, 2021). We therefore examine two boundary conditions of our baseline relationships:

First, we investigate family firms as an organizational context characterized by owners' family embeddedness (Aldrich & Cliff, 2003), in which firms' inherent family ties can both enable and constrain the influence of owners' different competences on firm growth (Penrose, 1959). Second, we examine the role of firm age as a proxy for the degree of professionalization within a firm, which likely reduces firms' reliance on owners' competences (Foss et al., 2019; Foss & Klein, 2012; Schulze & Zellweger, 2021).

To empirically test our hypotheses, we created a unique dataset of 2509 private owner-managed firms in Germany for the period between 2011 and 2018 using data from Bureau van Dijk's Orbis. This database was matched with detailed LinkedIn data on each firm owner (i.e., the shareholder with the most shares) using large-scale data extraction, supplemented with hand-collected data. Our focus on owner-managed firms is rooted in the fact that owner-management makes the influence of owners' different competences on firm growth direct and measurable (Schulze & Zellweger, 2021; Staw, 1991) and in the fact that owner–managers are particularly growth-oriented, seeming "more interested in the growth of their firm than they do in the income they withdraw from it" (Penrose, 1959, p. 25). We find evidence for our baseline hypotheses that owners' matching and governance competences (measured as experience-based competences [cf. Kor, 2003]) are positively associated with firm growth. Our results also suggest that the growth-inducing effect of owners' experience-based governance competence is weaker in family firms. Finally, our findings reveal that both experience-based competences matter more in younger firms compared with older firms.

Our study offers three main contributions to the literatures on strategic ownership and Penrosean growth theory. First, we contribute to the strategic ownership literature (e.g., Felin & Zenger, 2017; Foss et al., 2021; Foss & Klein, 2020; Schulze & Zellweger, 2021) by examining boundary conditions (i.e., family firms and firm age) for the relationship between ownership competence and firm growth as an important facet of firms' value creation. Exploring these boundary conditions helps contextualize the theoretical relationship between ownership competence and firms' value creation. Second, as the first (to the best of our knowledge) to empirically operationalize ownership competence, we extend the strategic ownership literature—thus far dominated by conceptual work—with a novel approach that enables the empirical measurement of ownership competence. Finally, we contribute to the literature on Penrosean growth theory (Penrose, 1952, 1955, 1959) by elaborating on the competences and boundary conditions thereof that enable firm decision-makers (notably firm owners) to exercise *sound judgment* to achieve firm growth.

2 | THEORETICAL FOUNDATIONS

2.1 | The strategic role of owners in value creation

The emerging literature on the strategic role of owners in firms' value creation builds on the notion that owners have residual control rights over firm resources, which gives them ultimate decision-making authority to allocate these resources in line with their idiosyncratic theories of value (Alchian, 1961; Alvarez et al., 2020; Foss et al., 2021; Schulze & Zellweger, 2021). Previous research has investigated how ownership form (Fitza & Tihanyi, 2017; Thomsen & Pedersen, 2000); heterogeneous owner interests (Connelly et al., 2010; Lungeanu & Zajac, 2016; Ramaswamy et al., 2002); and owners' cognitive processes, such as their belief- and theory-formation and testing processes (Felin & Zenger, 2009, 2017; Zellweger & Zenger, 2023), are associated with different forms of value creation. The current literature mostly converges on the assumption that owners' *judgment* of how to access, invest, and allocate (scarce) resources under Knightian uncertainty becomes critical in the pursuit of firms' value creation (Foss et al., 2021; Foss & Klein, 2012, 2020). Overall, previous research has suggested that owners differ not only in their *theories of value* (Felin & Zenger, 2009; Zellweger & Zenger, 2023) but also in their competences (i.e., in the quality of their judgment) in composing and executing these theories (Foss et al., 2021; Foss & Klein, 2020).[3]

In their pioneering work on ownership competence, Foss et al. (2021) explicitly formulated the idea that firms' value creation depends on ownership competence, which refers to owners' skillful use of ownership as an instrument

for value creation. Ownership competence can be broken down into three subdimensions: matching competence ("what to own"), governance competence ("how to own"), and timing competence ("when to own"; Foss et al., 2021). Matching competence describes owners' ability to theorize about valuable resource configurations and cognitively envision a causal path to implement them, and governance competence denotes owners' ability to create effective governance arrangements that match their envisioned strategies (Foss et al., 2021). However, the importance of these competences for firms' value creation likely depends on the context (Boudreaux, Nikolaev, & Klein, 2019; Foss et al., 2019, 2021; Foss & Klein, 2012): For example, owners' family embeddedness (such as owners' family ties with other owners and managers in a firm), and the degree of professionalization within a firm (Schulze & Zellweger, 2021) may enable or constrain the exercise of owners' judgment with respect to certain strategic actions such as pursuing firm growth (Foss et al., 2021).

2.2 | The role of judgment in Penrosean growth theory

In her seminal work, Penrose (1959, p. 21) argued that firms represent "a collection of productive resources, the disposal of which between different uses and over time is determined by administrative decision."[4] Penrose further explicated how the effective exploitation of unused resources is central to achieving firm growth and how firm growth depends on entrepreneurs' supply of *entrepreneurial services* to their firms. These entrepreneurial services include, for instance, developing and experimenting with novel ideas, implementing changes to the administrative structure of an organization, and acquiring new managerial resources (Penrose, 1959). As the supply of these services depends on entrepreneurs' idiosyncratic imagination, Penrose also recognized the role of entrepreneurial judgment in firm growth.

Specifically, Penrose (1959) emphasized that entrepreneurial judgment plays an important role in firm growth because entrepreneurs have to choose between different alternatives of how to allocate resources to achieve growth under uncertainty. One way for entrepreneurs to reduce uncertainty is to collect and evaluate information about the viability of different action plans. They then need various competences to harness this information in their skillful judgment (Penrose, 1959). Penrose denoted *entrepreneurs* as "individuals or groups within the firm providing entrepreneurial services, whatever their position or occupational classification may be" (Penrose, 1959, p. 28). Thus, she implicitly and, at times, explicitly treated owners as providers of entrepreneurial services and the origin of authoritative communication highlighting owners' ultimate decision-making authority (Penrose, 1959, p. 18). The critical role of firm owners' judgment is particularly salient in Penrose's discussion of how owners of smaller firms exert significant influence on their firms' operations and strategies.[5] In this context, Penrose (1959) described owners as an important source of competences and skillful judgment that can spur firm growth, especially when ownership is concentrated.

3 | HYPOTHESIS DEVELOPMENT

In the following, we elaborate on how we operationalize ownership competence in this article and explain how we combine insights from Penrosean growth theory and the strategic ownership literature to hypothesize on *how and under what conditions* ownership competence influences firm growth. Owners' past experience should increase their competences (Kor, 2003; Lungeanu & Zajac, 2016; Penrose, 1959; Uygur & Kim, 2016). Past experience not only enhances individuals' ability to map situations to the outcomes of past decisions but also expands the range of carefully analyzed alternatives available due to the higher frequency of similar past decisions individuals can refer to (Gigerenzer & Gaissmaier, 2011; Uygur & Kim, 2016).[6] Hence, in line with past work (e.g., Kor, 2003; Lungeanu & Zajac, 2016), in the following, we theorize about the role of owners' *experience-based* competences (i.e., experience-based matching and governance competences) in firm growth. We also investigate the role of two moderators

pertaining to owners' family embeddedness in the firm (i.e., *family firms*) and to the degree of professionalization within a firm (i.e., *firm age*; Thornhill & Amit, 2003) to understand how the organizational context shapes the exercise of owners' judgment.

3.1 | Owners' experience-based matching competence and firm growth

Firm resources can be utilized, redeployed (Helfat & Eisenhardt, 2004), or recombined in different ways to create value (Felin et al., 2023), making the resource-allocation process dependent on firm decision-makers' imagination (Penrose, 1959). Put differently, resources themselves can be seen as "an epiphenomenon of the theories that animate them and value in resources is defined through the lens of unique theories, questions, and problems that reveal novel uses and functions" (Felin & Zenger, 2017, p. 259). Hence, owners' cognitive process of crafting and refining theories of value may be central to achieving firm growth.

We argue that owners with experience-based matching competence craft more refined initial theories about how best to deploy and combine resources to grow their firms and are also more adept at further refining their theories based on emerging insights derived from information search, market feedback, and experimentation with different resource combinations (Felin & Zenger, 2009, 2017; Foss et al., 2021; Foss & Klein, 2020; Zellweger & Zenger, 2023). Specifically, we argue that these owners' ability to develop more refined initial theories stems from their accumulated experiential knowledge, which allows them to rely on advanced heuristics in formulating and testing their idiosyncratic theories of how to allocate firm resources to achieve growth (Felin & Zenger, 2017; Zellweger & Zenger, 2023).

Moreover, we contend that owners with experience-based matching competence are equipped to adapt to the uncertainty that accompanies any expansion plan (cf. Penrose, 1959) by efficiently acquiring information that helps them reassess the viability of the chosen expansion path. This acquisition of novel information may be partly rooted in these owners' experimentation with alternative resource configurations (in this case, generating theories about alternative expansion paths, testing their efficacy, and choosing the most value-creating path; Camuffo et al., 2020; Felin & Zenger, 2017; Koning et al., 2022; Zellweger & Zenger, 2023).

To summarize, owners' experience-based matching competence likely leads to a superior understanding of the potential value of specific resource combinations and likely helps owners *pick winners* (cf. Baum & Silverman, 2004) based on well-formulated and constantly refined theories (Felin & Zenger, 2017). When deciding what expansion path to pursue, owners' refined theories about efficient resource deployment likely positively affect firm growth. Therefore, we suggest a positive relationship between owners' experience-based matching competence and firm growth.

Hypothesis 1a. Owners' experience-based matching competence is positively related to firm growth.

3.2 | Owners' experience-based governance competence and firm growth

Firm growth also necessitates revising the focal firm's administrative (and governance) structure (Penrose, 1959), which requires owners' governance competence. For example, owners have to exercise judgment about when to delegate authority to managers, how to distribute rents in a way that generates appropriate incentives for stakeholders, and how to foster stakeholders' firm-specific investments to diminish hold-up concerns (Foss et al., 2021).

While delegating authority to managers is important to effectively pursue expansion, owners may differ in their ability to ensure their intended plans for expansion are implemented despite ceding control to managers (Foss et al., 2021). Owners with experience-based governance competence likely have not only superior abilities to recruit and select the right managers but also the ability to craft control systems that align managers' incentives with their

own goals (Foss et al., 2021; Schulze & Zellweger, 2021). This process of aligning incentives constitutes a delicate balancing act between professionalizing operations through governance mechanisms, such as financial compensation and monitoring (Schulze et al., 2001; Schulze & Zellweger, 2021; Uhlaner et al., 2007), and ensuring that operations are not "handicapped by bureaucratic bottle-necks" (Penrose, 1959, p. 182). Thus, we suggest that owners with experience-based governance competence are more adept at addressing the control dilemma outlined by Wasserman (2017), which explains how owners who relinquish control can enhance firms' value creation (see also Schulze & Zellweger, 2021). In addition, owners with experience-based governance competence are likely equipped with superior skills to both formally and informally institutionalize relationships with important resource providers, such as suppliers (Foss et al., 2021). This management of key stakeholders also includes drafting contractual agreements with stakeholders when necessary to avoid hold-up and to secure reliable access to key resources needed for firm growth (Foss et al., 2021; Penrose, 1959).

Overall, we conclude that owners with experience-based governance competence likely have the skills to create a governance structure (that addresses the control vs. growth dilemma and the institutionalization of relationships with key stakeholders), which allows for the effective pursuit of their envisioned expansion path. Such a formalized and elaborate governance structure also likely increases the efficiency of firm operations, and the resulting efficiency gains, in turn, yield untapped resources that can be used to achieve firm growth (Morris et al., 2006; Penrose, 1959).

Hypothesis 1b. Owners' experience-based governance competence is positively related to firm growth.

3.3 | The moderating effect of family ties

In exploring the boundary conditions of our baseline relationships, we add that family relationships within the firm can enable or constrain the relationship between owners' competences and firm growth. Family firms are unique because of their long-term horizons and aligned goals and preferences (Chrisman et al., 2012), and family relationships within these firms are characterized by altruism (Schulze et al., 2002), reciprocity, and trust (Arregle et al., 2007). We argue that these peculiarities of family firms strengthen the positive relationship between owners' experience-based matching competence and firm growth for two reasons.

First, family members frequently exchange information and other resources, such as financial, human, and social capital (Aldrich & Cliff, 2003; Habbershon et al., 2003). This exchange is particularly important when owners pursue novel resource configurations because other family members can contribute important information that allows owners to efficiently refine their theories of value and can help them acquire the resources necessary to implement these theories. Penrose (1959) also pointed to the critical role of information gathering in reducing uncertainty about various factors that could affect an envisioned expansion plan. In family firms, family members tend to maintain close connections to stakeholders (e.g., customers and suppliers) who provide unique and timely access to information (Arregle et al., 2007), thereby facilitating such information gathering.

Second, Penrose (1959, p. 53) noted that firm decision-makers are more likely to take into account others' judgment if they trust and know them "and if they share a general responsibility for the outcome." Thus, because relationships in family firms are characterized by trust and mutual obligations (Arregle et al., 2007; Bird & Zellweger, 2018; Zellweger et al., 2019), owners may be more likely to take family members' judgment into account (Penrose, 1959). Taken together, these arguments imply that in family firms (compared with nonfamily firms), owners' experience-based matching competence is strengthened by family members' judgment and resources, allowing owners to allocate resources more efficiently and in more novel ways to foster firm growth.

Hypothesis 2a. The positive relationship between owners' experience-based matching competence and firm growth is stronger for family firms compared with nonfamily firms.

However, family firms' unique characteristics also have implications for their governance structures (Mustakallio et al., 2002; Schulze et al., 2001, 2003; Uhlaner et al., 2007) particularly because of how family roles are integrated with and imprinted on business activities (Tagiuri & Davis, 1996; Yang & Aldrich, 2014). For instance, family firms are prone to nepotism (e.g., Vinton, 1998) and tend to focus on persevering their socioemotional wealth (Gómez-Mejía et al., 2007), including their transgenerational control (Zellweger et al., 2012).

We argue that these characteristics inherent in family firms may impede them from implementing an effective governance structure that facilitates firm growth. Specifically, other family members might interfere with strategic plans to professionalize a family firm if it diminishes the family's control. For instance, nepotism might lead owners to favor family managers over (potentially more competent) nonfamily managers (Chen et al., 2021). Therefore, although owners with experience-based governance competence possess the general skills to create an organizational structure that favors firm growth (e.g., delegating authority to managers or enacting growth-enhancing rent-sharing and monitoring regimes), they might be less able—or willing—to institute an effective governance structure when family members are part of their firms (Foss et al., 2021; Neckebrouck et al., 2018). Family members' reduced willingness to take strategic actions that would entail reduced control over their firms is also echoed in Penrose's anecdotal discussion of family firms that refrain from taking advantage of growth opportunities (Penrose, 1959). Taken together, these arguments suggest that family firms are less likely than nonfamily firms to benefit from owners' growth-inducing experience-based governance competence (Penrose, 1959).

Hypothesis 2b. The positive relationship between owners' experience-based governance competence and firm growth is weaker for family firms compared with nonfamily firms.

3.4 | The moderating effect of firm age

Moreover, we propose that firm age weakens the baseline relationship between owners' experience-based matching competence and firm growth. Specifically, during their founding years, firms face the liability of newness and have to establish a strong resource base in an uncertain environment (Stinchcombe, 1965) with a vast number of possible uses for these resources (Felin & Zenger, 2017; Foss & Klein, 2012). Thus, in young firms, which have only a limited amount of information available to evaluate (Bingham et al., 2007) and limited institutional tacit knowledge to build on, owners have to experiment with resource configurations and "reallocate resources as information about the viability of each path emerges" (Schulze & Zellweger, 2021, p. 492). Matching skills are crucial in this period of "experimental resource allocation" (Sirmon et al., 2011, p. 1401) as they allow owners to efficiently bundle and rebundle resources to pursue the most promising expansion path.

As firms mature, their core business stabilizes (Kaplan et al., 2009), and the uncertainty surrounding them decreases (Stinchcombe, 1965). Specific resource combinations have already proven to be successful, and the intensity of experimentation needed is lower than in younger firms (e.g., Coad et al., 2016). Also, individuals in older firms can draw on the firms' experiential learning and knowledge (e.g., Hashai & Zahra, 2022). Put differently, they are informed by previous experience with "what works and what does not" when it comes to allocating resources toward growth. In particular, Penrose highlighted the fact that older firms tend to focus on *related diversification* (i.e., pursuing expansion in similar markets or with similar products as in previous expansions), implying that the amount of novelty and uncertainty accompanying expansions decreases with firm age. We thus expect that owners' experience-based matching competence will become less important over time.[7]

Hypothesis 3a. The positive relationship between owners' experience-based matching competence and firm growth is weaker for older firms than it is for younger firms.

As firms age, owners face pressure to professionalize them by implementing a more decentralized governance structure as well as reporting and monitoring systems. This pressure arises because owners' control efforts become increasingly costly as their firms get older (Gedajlovic et al., 2004; Schulze & Zellweger, 2021). The professionalization of a firm is a gradual process that happens "as it moves from start-up to becoming more established" (Uhlaner et al., 2007, p. 233). Specifically, over time, more governance arrangements, such as formal control and reporting systems (Baron et al., 1999; Penrose, 1959; Uhlaner et al., 2007), are implemented. With these standardized processes in place, owners are more likely to delegate authority to subordinates, whose decisions "in their defined fields are rarely overruled" (Penrose, 1959, p. 46). When delegated such authority, over time, managers grow more experienced in handling the majority of business decisions themselves. Hence, as firms age, the range of situations considered nonroutine and requiring owners' competences narrows. Schulze and Zellweger (2021) also considered this phenomenon, arguing that authority delegated to professional managers likely reduces firms' dependency on owners' judgment and decision-making. Accordingly, we posit that as firms age, owners' experience-based governance competence becomes less relevant for firm growth.

Hypothesis 3b. The positive relationship between owners' experienced-based governance competence and firm growth is weaker for older firms than it is for younger firms.

4 | METHODS

4.1 | Data and sample

To test our hypotheses, we employed a sample of German private owner-managed firms (the majority of which are small and medium-sized enterprises) from the Bureau van Dijk's Orbis database for the period between 2011 and 2018. The Orbis database provides rich annual firm-level financial, ownership, and top management team data on private firms. We chose German firms because they offer particularly rich coverage of their financial and ownership data owing to regulatory filing requirements for private firms in Germany and because German owner-managed firms have been venerated as particularly growth oriented, resilient, and key to German economic growth (Audretsch & Lehmann, 2016; Berlemann et al., 2022; Pahnke & Welter, 2019). Further, we decided to focus on owner-managed firms for the following three reasons: First, in owner-managed firms, ownership is typically less dispersed. Owners have managerial discretion and firm-wide influence over their firms' resource deployment, making their influence more direct and measurable (Schulze & Zellweger, 2021; Staw, 1991). In particular, owner-managed firms typically profit from reduced agency costs (Jensen & Meckling, 1976) and decreased coordination and transaction costs because ownership is assigned to the person who also executes the theory of value (Schulze & Zellweger, 2021).[8] Second, owner–managers' explicit goal of growing their firms makes them an appropriate sample to measure the value-creating growth effects of ownership competence. Penrosean growth theory also highlighted this argument, contending that owner–managers prioritize growth over profit maximization—namely, that "owner–managers often seem to be more interested in the growth of their firm than they do in the income they withdraw from it" (Penrose, 1959, p. 25). Third, owner–management is the predominant form of ownership in private firms worldwide, elevating the practical relevance of our study. For example, in Germany, about 88% of all firms are owner-managed firms (constituting the famous *German Mittelstand*; Foundation for Family Businesses, 2023).

We used Orbis' historical databases to create an unbalanced panel that includes both active and inactive firms (i.e., firms that were dissolved during the period). This approach is closer to empirical reality as it does not restrict the sample to survivors only, thus diminishing survivorship bias (cf. Baum et al., 2000; Kumar & Zaheer, 2022). Similar to Belenzon et al. (2016), we excluded firms when we could not identify who owned at least 90% of the ownership shares in any of the studied years. We also excluded firms whose largest shareholder was an institutional shareholder. To be able to build a panel with three consecutive values for growth rate, we only kept firms for which we

had at least 4 consecutive years of data. After these steps, our sample comprised 57,939 firms, resulting in 225,657 firm-year observations.

Next, to test our hypotheses on the relationship between owners' experience-based competences and firm growth, we collected LinkedIn data on the shareholder with the greatest ownership stake in each firm (whom we will call *the owner* in the rest of the method section for the sake of brevity). For this purpose, we followed a dictionary-based text-extraction approach for those owners we could identify on LinkedIn (similar to Blohm et al., 2020). In particular, we extracted their work experience and formal education by combining manual coding with a bag-of-words approach (i.e., an approach that infers a specific construct from a list of words; for a detailed description, please see the Appendices A and B; Blohm et al., 2020). In doing so, we were able to derive distinct measures for owners' experience-based matching and governance competences as well as further control variables. Our final sample with data on all key variables consisted of 2509 firms, resulting in 9257 firm-year observations.

On average, the firms in the sample were 24.3 years old (SD = 24.7) and had 1.9 owners (SD = 1.2), 39.0 employees (SD = 145.8), and revenues of approximately €6.1 million (SD = 22.4). The largest shareholder owned 75.1% of the firm's shares (SD = 26.5) on average, and around 37% were family firms (following the conservative definition that a firm is considered a family firm when more than one family member of the firm owner is involved in either ownership or management [Miller et al., 2008, p. 53]). Table A1 gives a detailed overview of the descriptive statistics for the firms' and owners' characteristics.

4.2 | Measures

We measured our dependent and independent variables at time *t*, while balance-sheet control variables were lagged 1 year to avoid simultaneity bias.

4.2.1 | Dependent variable

We measured *firm growth* as sales growth because this is the most commonly used growth indicator (Brush & Vanderwerf, 1992; Davidsson & Wiklund, 2006; Rauch et al., 2005) and since it has been argued to align "most closely to the logic of Penrose" (cf. Bradley et al., 2011, p. 544). We calculated the yearly growth rate for each firm *i* at point *t* as the logarithmic difference in sales compared with the previous year. The natural logarithm corrects for the skewed distribution. The variable was computed as $g_{i,t} = ln\ [\text{sales}\ t] - ln\ [\text{sales}\ t-1]$, and we winsorized the values by 1% at each tail to reduce the impact of outliers. In the next step, based on the previous measure, we calculated the mean of sales growth on a two-digit NACE Rev 2 industry level for each year. In our main analysis, we used an industry-adjusted growth measure by subtracting the industry mean of sales growth from each firm's individual sales growth rate (Boeker, 1997).

4.2.2 | Independent variables

Our two independent variables assessed the owners' experience-based matching and governance competences. We measured these variables as the owners' work experience relating to *matching* or *governance*, respectively, in months (cf. Blohm et al., 2020). As described above, similar to Blohm et al. (2020), we used a bag-of-words approach to calculate both matching and governance experience as well as the owners' total work experience. Similar to other work that has derived constructs from computational linguistic analyses (Kanze et al., 2021; König et al., 2018), we employed multiple steps to ensure construct validity. Most importantly, we employed a bottom-up procedure by deriving words related to matching and governance experience based on theoretical alignment and manually coded a

random sample of 100 LinkedIn profiles out of the 2509 firms used in the analysis a priori to collect commonly used keywords describing experience-based matching competence and governance competence. We further derived survey items aligned with our bag of words, distributed them to 234 firm owners using Prolific (Peer et al., 2017), and conducted an exploratory factor analysis to obtain evidence that we had captured experience-based matching competence and governance competence as two latent constructs (for more information, please see the Section 6 and Appendices A and B).

More precisely, to assess the owners' experience-based matching competence, we focused on all experience related to the process of resource allocations (e.g., experience in entrepreneurial endeavors or action verbs like *implement*, *test*, and *build*). Experience-based governance competence was measured as experience gained in positions involving team leadership and shaping corporate structures (keywords included *controlling*, *monitoring*, and *coaching* to further distinguish this experience from pure managerial experience). Further, we calculated the total months an owner had been active on the labor market up to the focal year (included as a control, see below). Finally, we calculated *experience-based matching competence* as the months of experience acquired in matching-related work divided by the total work experience in months and *experience-based governance competence* as the months of experience acquired in governance-related work divided by the total work experience in months to effectively measure the intensity of matching- and governance-related experience in an owner's employment history.[9]

4.2.3 | Moderating variables

In line with our arguments that an owner's judgment is influenced by their family members, we coded *family firm* as 1 if at least one member of an owner's family was involved in either management or ownership (Miller et al., 2008) and 0 otherwise. Family relationships were determined by comparing the last names of all managers and other shareholders in a company to the last name of the owner. *Firm age* was measured as the number of years a firm had been in existence since its year of incorporation (log transformed; Bird & Zellweger, 2018).

4.2.4 | Control variables

We controlled for *firm size* as firm growth tends to decrease with firm size (Delmar et al., 2003; Sutton, 1997). We used the number of employees (log transformed) as a proxy for firm size. We further controlled for *leverage* to account for the financial health of a firm (George, 2005). We also introduced a quadratic term (*leverage*^{2}) to capture any nonlinearity in the effect of leverage on firm growth (as in Korteweg, 2010) and because the detrimental effect of higher leverage on firm growth is well documented (e.g., Giordani et al., 2014). *Leverage* was calculated as the sum of current and noncurrent liabilities divided by total assets (Giordani et al., 2014). *Ownership concentration* was measured as the percentage of shares held by the focal owner (e.g., Schulze et al., 2003). Moreover, we controlled for *eponymy*, measured as a dummy variable equaling 1 if the focal owner's last name was reflected in the firm name and 0 otherwise (Belenzon et al., 2017). Eponymy has been associated with increased reputational benefits and costs for firm owners in previous research (e.g., Belenzon et al., 2017, 2020). It may affect firm growth by serving as a positive signal for other stakeholders and may also alter owners' growth aspirations (e.g., Wiklund & Shepherd, 2003). Finally, we controlled for the presence of an *institutional shareholder*, calculated as a dummy variable equaling 1 if at least one of the shareholders (excluding the focal owner) was an institutional shareholder and 0 otherwise. Institutional shareholders frequently exert influence on the firms they are invested in to ensure their goals are met and to provide them with valuable resources (Bushee, 1998; McCahery et al., 2016). Hence, institutional shareholders may either complement or substitute owners' competences. Finally, we controlled for *industry effects* by including industry dummy variables based on the NACE Rev 2 (one-digit level) and year dummies to account for the panel structure of our dataset.

We also controlled for variables on the owner level that we derived from LinkedIn. *Formal education* might enhance firm growth by enabling owners to more effectively exploit firm resources (Colombo & Grilli, 2005). We measured owners' education (again using a similar bag-of-words approach) as a categorical variable equaling 0 if an owner received no higher (university) education, 1 for a bachelor's degree, and 2 for a postgraduate education (i.e., master's, MBA, or PhD). This ordinal categorical variable was converted to indicator variables for each level of higher education when entered into the empirical model specifications. We controlled for owners' *network ties* given that access to and use of novel information available through one's network is important for growth (Penrose, 1959). We measured network ties as the number of an owner's LinkedIn contacts (log transformed). Finally, we controlled for owners' *total work experience*, measured in months (log transformed), to isolate the effects of experience-based matching competence and governance competence from total work experience (see above).

4.2.5 | Correction for selection biases

Further, we undertook steps to address the survivorship bias that inherently occurs in studies on firm growth (e.g., Colombo & Grilli, 2005) as well as the sample-selection bias arising from the fact that we only included firms for which we could collect experience and education data for their owners via LinkedIn. First, while we employed an unbalanced panel to mitigate survivorship bias, selection concerns remain due to our restriction of the data to observations with three continuous values for growth rate.[10] To correct for this potential bias, we ran a two-stage Heckman model (Heckman, 1979) calculating a selection variable controlling for firms' exits based on a Cox proportional hazard model (Lee, 1983). We used all our control variables (except those derived from LinkedIn) and ran the analysis on the sample of firms we derived prior to our restrictions (i.e., 155,710 firms and 404,149 firm-year observations). The first stage of the Heckman correction can be found in Table A (Supporting information). We included the computed selection parameter (*lambda*) in all regression models (e.g., Taylor & Greve, 2006).

Second, to correct for the potential sample-selection bias arising from our LinkedIn search, we again followed Heckman's (1979) two-step method. Following Malhotra et al. (2018), we compared the firms in our final sample (i.e., 2509 firms with matched LinkedIn data) to all German firms (whose data we extracted between 2011 and 2018) representing the population of firms from which we carried out our LinkedIn search (>50,000 firms). We created a dummy variable equaling 1 if a firm was included in both samples and 0 otherwise. Then, we ran a probit model on all firms using this dummy variable and included all our variables except those derived from LinkedIn. Finally, we estimated the probability of being selected for all observations in our sample based on the estimate from the probit model (Heckman, 1979).[11] We included this estimate (*Inverse Mills Ratio*) in all regressions. The first stage of the Heckman correction can be found in Table B (Supporting information).

4.3 | Analytical procedures

To test our hypotheses, we used firm random-effects model regressions with clustered standard errors at the firm level. Our hypotheses pertained to differences across firms as opposed to how firms change behavior over time since ownership structures change slowly and infrequently for the vast majority of private firms (Ongsakul et al., 2021). Owing to this inherent "stickiness" of ownership, the within-firm variation in the ownership competence variables is limited and predominantly stems from slow-moving changes in the owners' competences rather than ownership changes (owner changes only occurred in ~1% of the observations in our sample). Consequently, we had much smaller within-firm (vis-à-vis between-firm) variation in our competence measures. Benson and Davidson (2009, p. 573) asserted that this consequence of the very slow-changing nature of ownership "may mask an ownership effect on firm value when using a fixed effect model."[12]

5 | RESULTS

Table 1 presents the correlations for the variables used in our analysis. The variance inflation factor values are below 2, indicating that multicollinearity was not a concern in the dataset.

Table 2 presents the results of the regressions. Model 1 includes all of our control and independent variables. Model 2 and Model 3 report the moderating effect of family firm and firm age, respectively, for both independent variables. We also present the full model including all interaction terms (i.e., Model 4).

Model 1 offers strong support for our baseline hypotheses (Hypotheses 1a and 1b). Both owners' experience-based matching competence ($\beta = 0.036$, $p < 0.001$) and governance competence ($\beta = 0.024$, $p < 0.05$) are positively related to firm growth. These results signify that a change of one standard deviation in owners' experience-based matching competence and governance competence equals a 1% and 0.7% change in annual sales growth, respectively. As these are annual figures, they will compound to make a large difference in sales growth over time. To exemplify, after 18 years (i.e., the median age of the firms in our sample), a change of one standard deviation in owners' experience-based matching competence would represent 19.6% growth in total sales.

Model 2 reports the results for Hypotheses 2a and 2b. We did not find support for Hypothesis 2a, which proposed that the relationship between owners' experience-based matching competence and firm growth is reinforced in the case of family firms ($\beta = -0.011$, $p > 0.10$). However, we found support for Hypothesis 2b, which proposed that the effect of owners' experience-based governance competence on firm growth is weakened in family firms ($\beta = -0.051$, $p < 0.01$). That means that holding all other variables constant, an increase of one standard deviation in owners' experience-based governance competence leads to 1.4% lower firm growth in family firms compared with nonfamily firms.

Model 3 shows the results for Hypotheses 3a and 3b. As expected, we found that firm age weakens the relationship between owners' experience-based matching competence and firm growth ($\beta = -0.034$, $p < 0.05$) and the relationship between owners' experience-based governance competence and firm growth ($\beta = -0.042$, $p < 0.01$). These coefficients imply that a change in firm age from the 10th percentile (7 years) to the 90th percentile (49 years) corresponds to a 56% (55%) decrease in the effect of owners' experience-based governance (matching) competence on firm growth when holding owners' experience-based governance (matching) competence constant at its mean. All interaction terms remained statistically significant when put into one model (i.e., Model 4).

6 | ADDITIONAL ANALYSES

6.1 | Construct validity for the experience-based matching and governance competence measures

To check the construct validity of our measures for experience-based matching competence and governance competence, we transformed a selection of words from our bag of words into survey items, distributed them to a sample of firm owners in a questionnaire, and then carried out an exploratory factor analysis. We assumed that our observed variables (i.e., the occurrence of words in owners' LinkedIn profiles) are associated with two latent variables that we labeled as experience-based matching competence and governance competence, respectively. Given that both constructs are relatively new to the literature, this additional analysis serves as an objective verification of our bag-of-words approach. It further helps clarify the nuances of experience-based matching competence and governance competence and offers an opportunity to enhance the discriminant validity between these measures.

Specifically, we created 24 items related to matching and governance skills (see Table 3 for all items and Table C, Supporting information for information on their development). We sent a questionnaire consisting of these items to 234 firm owners[13] using Prolific, a crowdsourcing platform for behavioral research that is known

TABLE 1 Correlations for the variables.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
(1) Industry-adjusted sales growth	1.000															
(2) Employees (Log)	−0.050	1.000														
(3) Leverage	0.032	0.004	1.000													
(4) Leverage^2	0.025	−0.040	0.912	1.000												
(5) Formal education	0.007	0.022	−0.051	−0.044	1.000											
(6) Total work experience (Log)	−0.050	0.067	−0.022	−0.022	−0.002	1.000										
(7) Network ties (Log)	0.030	0.040	0.020	0.015	0.043	0.043	1.000									
(8) Ownership concentration	−0.009	−0.121	0.005	0.016	−0.085	−0.027	−0.043	1.000								
(9) Eponymy (0/1)	−0.061	0.004	0.005	0.013	−0.054	−0.081	−0.046	0.236	1.000							
(10) Inst. shareholder (0/1)	0.008	0.110	−0.010	−0.003	0.058	0.047	0.021	−0.211	−0.147	1.000						
(11) Lambda	0.033	−0.171	0.244	0.208	−0.032	−0.057	−0.001	0.079	−0.072	−0.032	1.000					
(12) Inverse Mills Ratio	−0.037	0.167	0.109	0.109	−0.048	−0.016	−0.059	−0.033	−0.208	0.031	−0.010	1.000				
(13) Family firm (0/1)	−0.030	0.163	0.017	0.015	−0.008	−0.025	−0.017	−0.126	0.259	−0.053	−0.109	0.286	1.000			
(14) Firm age (log)	−0.135	0.259	−0.066	−0.050	−0.001	0.134	−0.052	0.036	0.266	−0.028	−0.220	0.366	0.299	1.000		
(15) Exp.-based matching competence	0.027	0.004	−0.029	−0.020	0.077	0.006	−0.047	−0.004	−0.074	−0.025	−0.020	−0.015	−0.027	−0.002	1.000	
(16) Exp.-based governance competence	0.014	0.016	−0.011	−0.011	0.022	0.079	0.067	−0.012	−0.087	0.015	0.012	−0.003	−0.045	−0.051	−0.518	1.000

TABLE 2 Random-effects panel regressions for industry-adjusted sales growth.

DV: Industry-adjusted sales growth	(1)	(2)	(3)	(4)
Firm size ($t-1$)	−0.007† (0.004)	−0.007† (0.004)	−0.007† (0.004)	−0.007† (0.004)
Leverage ($t-1$)	0.042 (0.062)	0.043 (0.062)	0.041 (0.062)	0.041 (0.062)
Leverage^2 ($t-1$)	−0.014 (0.041)	−0.015 (0.041)	−0.014 (0.042)	−0.014 (0.041)
Bachelor's degree	0.004 (0.012)	0.004 (0.012)	0.003 (0.012)	0.003 (0.012)
Postgraduate degree	0.001 (0.005)	0.002 (0.005)	0.001 (0.005)	0.001 (0.005)
Total work experience	−0.010** (0.003)	−0.010** (0.003)	−0.010** (0.003)	−0.010** (0.003)
Network ties	0.004** (0.002)	0.004** (0.002)	0.004** (0.002)	0.004** (0.002)
Ownership concentration	0.007 (0.018)	0.007 (0.018)	0.007 (0.018)	0.007 (0.018)
Eponymy (0/1)	0.002 (0.114)	0.006 (0.114)	0.001 (0.114)	0.002 (0.114)
Institutional shareholder (0/1)	0.004 (0.025)	0.004 (0.025)	0.004 (0.025)	0.004 (0.025)
Lambda	−0.004 (0.028)	−0.004 (0.028)	−0.002 (0.028)	−0.002 (0.028)
Inverse Mills Ratio	0.056 (0.416)	0.072 (0.416)	0.053 (0.417)	0.057 (0.417)
Family firm (0/1)	0.003 (0.038)	0.029 (0.039)	0.004 (0.038)	0.017 (0.040)
Firm age	−0.039 (0.041)	−0.040 (0.041)	−0.008 (0.042)	−0.011 (0.042)
Industry dummies	YES	YES	YES	YES
Year dummies	YES	YES	YES	YES
Key independent variables				
H1a: Exp.-based matching competence	0.036*** (0.010)	0.042** (0.014)	0.138** (0.048)	0.139** (0.048)
H1b: Exp.-based governance competence	0.024* (0.009)	0.045*** (0.013)	0.148*** (0.044)	0.143** (0.044)
Moderating effects				
H2a: Exp.-based matching competence × Family firm		−0.011 (0.019)		0.005 (0.020)
H2b: Exp.-based governance competence × Family firm		−0.051** (0.018)		−0.034† (0.020)
H3a: Exp.-based matching competence × Firm age			−0.034* (0.015)	−0.034* (0.015)
H3b: Exp.-based governance competence × Firm age			−0.042** (0.013)	−0.035* (0.014)
Constant	−0.001 (0.755)	−0.043 (0.755)	−0.094 (0.759)	−0.099 (0.757)
Observations	9257	9257	9257	9257
Number of firms	2509	2509	2509	2509
R^2-overall	0.024	0.025	0.026	0.026
R^2-between	0.062	0.066	0.067	0.069
R^2-within	0.021	0.021	0.022	0.022

Note: The coefficients for the industry and year dummies are included but not reported. Standard errors are in parentheses (clustered at the firm level). Analyses with the logarithm of total assets as an alternative measure of firm size yield identical results. †$p < 0.10$, *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

for its high-quality data generation (Peer et al., 2017). The 24 items asked participants to indicate their experience with specific activities in a firm related to either matching or governance on a seven-point Likert scale (see Table 3).

TABLE 3 Exploratory factor analysis for experience-based matching competence and governance competence.

C	Items	Factor 1	Factor 2
M	I am experienced in searching for alternative uses for the firm's resources.	**0.63**	0.25
M	I am experienced in implementing new solutions to increase the firm's efficiency.	**0.68**	0.23
M	I am experienced in founding new ventures.	**0.58**	0.15
M	I am experienced in assembling the firm's resources to pursue innovative ideas.	**0.82**	0.26
M	I am experienced in integrating new resources into the firm's existing resource base.	**0.73**	0.28
M	I am experienced in optimizing the firm's efficiency and effectiveness by configuring resources in a novel way.	**0.64**	0.24
M	I am experienced in developing new products or services out of the firm's existing resource base.	**0.72**	0.23
M	I am experienced in finding creative solutions to address the firm's challenges.	**0.70**	0.19
M	I am experienced in transforming existing resource bundles to a new use to create value for the firm.	**0.76**	0.30
M	I am experienced in conducting thought experiments and testing alternative resource configurations to determine their potential value.	**0.54**	0.24
M	I am experienced in launching new products or services.	**0.64**	0.10
M	I am experienced in conceptualizing new opportunities for value creation.	**0.65**	0.14
M	I am experienced in developing strategies to strengthen the firms' future value creation.	**0.73**	0.34
M	I am experienced in collaborating with stakeholders to create new opportunities for the firm.	0.27	**0.61**
M	I am experienced in recruiting managers that complement the firm's resource base well (e.g., in terms of knowledge or other capabilities).	0.30	**0.71**
G/M	I am experienced in coordinating activities (e.g., decomposing tasks into subtasks or budgeting) within the firm that contribute to achieve the firm's overarching goal.	**0.40**	**0.50**
G	I am experienced in managing other people (e.g., employees).	0.11	**0.86**
G	I am experienced in crafting incentives for the firm's employees that help to align their interests with those of the firm.	0.31	**0.73**
G	I am experienced in introducing control-mechanisms to ensure that the firm's goals are fulfilled.	**0.56**	**0.49**
G	I am experienced in monitoring employees (e.g., using budgeting and reporting systems) to increase the efficiency of the firm.	0.27	**0.74**
G	I am experienced in coaching employees on how to employ their talents to contribute to the envisioned organizational strategy.	0.26	**0.84**
G	I am experienced in advising employees on how to contribute to the firm's overarching goals.	0.25	**0.86**
G	I am experienced in supervising employees to increase the firm's efficiency (e.g., when delegating key tasks).	0.15	**0.88**
G	I am experienced in delegating day-to-day decisions to employees	0.08	**0.90**
Eigenvalue		11.03	2.94
Variance explained by each factor (with other factors controlled)		0.68	0.18
Cronbach's alpha		0.93	0.94

Note: The first column represents the intended latent constructs (i.e., "M" = matching and "G" = governance). Factor 1 is related to the bag of words used to capture experience-based matching competence. Factor 2 is related to the bag of words used to capture experience-based governance competence. Factor loadings >0.40 are in bold. Alpha coefficients are based on the a priori intended latent constructs (marked with gray shading).

In an exploratory factor analysis (Preacher & MacCallum, 2003), we identified two factors with eigenvalues >1, so we followed Kaiser (1960) and restricted the analysis to two factors. In our subsequent analysis, we employed a varimax rotation to determine factor loading on two interpretable factors (i.e., experience-based matching competence and governance competence; Kaiser, 1958). The results are given in Table 3. Taken together, both factors explained 86% of the variance of all items. Most of our items had factor loadings larger than 0.40 (which can be interpreted as a solid cutoff point [Stevens, 2012]) on the intended construct. We finally checked the reliability of scales consisting of all the items that were supposed to load on the respective constructs and found sufficiently high Cronbach's alpha's for both measures ($\alpha \geq 0.93$ for both). These results indicated that the bag of words we employed satisfactorily captured owners' distinct competences in matching and governance.

6.2 | Construction of the measure for experience-based timing competence

In our theorizing and empirical analysis, we did not focus on (experience-based) timing competence—the third dimension of the ownership competence construct introduced by Foss et al. (2021). The main reason we excluded this dimension was that it is exceptionally hard to infer timing competence from owners' LinkedIn profile descriptions because users do not report the timing of their decisions. We also note that a general lack of data on the precise timing of private firm owners' investments or divestments also complicates the inference of owners' timing skills from financial, ownership, or other secondary data sources and that ownership transfers and major observable activities, such as mergers and acquisitions, are less common compared with public firms (Celikyurt et al., 2010; Maksimovic et al., 2013). Also, even with greater information on owners' decisions, it would be extremely challenging to reliably attribute the fortuitous timing of any individual owner's actions to luck or skill.[14]

Meanwhile, we assume that the timing aspect of competence is partly captured by our measure of experience-based matching competence (e.g., owners with experienced-based matching competence are better at determining when to acquire critical resources). Nevertheless, we derived a separate measure of experience-based timing competence in line with the procedure described above and included it in our regressions (e.g., we included action verbs like *exit* and *entry* in the corresponding bag of words). We show the bag of words and the output of the regression (see Table B1) in Appendix B. We did not find significant results for this measure of timing competence; however, the coefficient of our other two competence measures remained statistically significant, suggesting that the other ownership competence measures retain explanatory power and their effects are not minimized in significance, or subsumed, by the inclusion of timing competence.

6.3 | Robustness tests

We further ran multiple robustness tests to confirm the reliability of our results. First, we reran our analysis with two alternative dependent variables. Specifically, we used the logarithm of sales growth (not adjusted by the industry mean of sales growth) as the dependent variable in our model, and the results remained qualitatively identical. We also employed an *industry-adjusted ratio of sales to employees* (Walter et al., 2006) to more generally assess firms' capacity to create value, verifying that the positive effect of ownership competence on growth extends to other measures of value creation. Owners' experience-based matching competence and governance competence are both positively related to this ratio (see Table D, Supporting information).

Second, we excluded firms for which we could not definitively identify a single individual as the largest shareholder (i.e., mostly cases in which the two or three largest shareholders held exactly the same number of shares). The results remained very similar (see Table E, Supporting information). We further excluded firms in which the largest shareholder held <25% of the shares, and again, the results remained similar (see Table F, Supporting information).

Third, we further investigated the relationship between both competence measures and firm growth for two separate subsamples of younger and older firms. Specifically, we repeated the main analysis (Model 1) in the lower- and upper-quartile subsamples of the values for firm age (firm ages ≤ $p(25) = 10$ and firm ages equal to or higher than $p(75) = 28$), respectively (see Tables G and H, Supporting information). We found an increase in coefficients in our main effects for firms younger than 11 years ($N = 799$) but a drop in coefficients (indistinguishable from zero) for firms in the upper quartile indicating firms older than 27 years ($N = 712$).[15] This test enabled us to ensure that the effects of owners' experience-based matching competence and governance competence on firm growth are strongest in young firms. We also confirmed that the growth effect of owners' experience-based governance competence is weakened in family firms for the subsample of younger firms (see Table H, Supporting information), implying that family influence is already strong in young organizations.

Finally, we additionally controlled for owners' total number of managerial positions (up to the respective year) to mitigate concerns that owners' managerial competence drives our effects, effectively controlling for and teasing out the portion of ownership competence effect driven by owners' managerial experience. We observed similar results as in our main analysis (see Table I, Supporting Information).

7 | DISCUSSION

This research integrated insights from the emerging literature on the strategic role of ownership in firms' value creation—particularly that of ownership competence (Foss et al., 2021)—with Penrosean growth theory (Penrose, 1959) to empirically investigate the theoretical question of how and under what conditions ownership competence affects firm growth. Our empirical findings suggest a positive relationship between two ownership competences—owners' experience-based matching competence and governance competence—and firm growth in private firms; however, the magnitude of these effects depends on the organizational context. Namely, we found evidence that in family firms, the positive growth effect of owners' experience-based governance competence is weakened, while the relationship between experience-based matching competence and firm growth appears to be unaffected. Furthermore, we found that owners' experience-based competences are more strongly related to firm growth in younger firms than in older firms. Our work makes several important contributions to the strategic ownership literature and to Penrosean growth theory.

7.1 | Implications for research

Our first major contribution is that our study sheds light on how the relationship between ownership competence and firms' value creation depends on the organizational context. Prior studies have provided strong theoretical arguments on how owners' judgment (Foss & Klein, 2012; Foss & Klein, 2020), owners' competences (Foss et al., 2021), and owners' abilities to form and test theories about resource configurations (Felin & Zenger, 2009, 2017; Zellweger & Zenger, 2023) enhance firms' value creation. However, while prior work has exemplified potential *boundary conditions* for the relationships between owners' competences and firms' value creation (Foss et al., 2019, 2021, 2023), so far they have not examined these contextual factors in depth. Accordingly, our study had the stated goal of deepening knowledge on the *contextualized* relationship between ownership competence and firms' value creation.

Counterintuitively, our findings did not confirm that the positive relationship between owners' experience-based matching competence and firm growth is strengthened in family firms. We explain this finding by suggesting that the reinforcing effect of family members providing critical resources (that enable owners' experience-based matching competence) is potentially offset by the mitigating effect of family members blocking the exploration of novel (and thus inherently risky) resource configurations that may threaten firms' socioemotional wealth (Gómez-Mejía

et al., 2007). Our results suggest that in family firms, family dynamics that undermine owners' experience-based matching competence may be at play. These mechanisms imply that family firms may not be able to fully leverage their unique bundle of resources in conjunction with owners' experience-based matching competence, representing an important and informative extension of the research on ownership competence (Foss et al., 2021, 2023). Further, our finding that the positive growth effect of owners' experience-based governance competence is weakened in family firms sheds light on the specific governance mechanisms at play in family firms and highlights that family firms do face issues in professionalizing their organizations even if owners' governance competence is high (Foss et al., 2021; Neckebrouck et al., 2018).

Our findings with respect to firm age also extend previous claims that older firms can draw on their own internalized experiential learning and knowledge, resulting in owners' experience-based matching competence and governance competence becoming less critical for firms' value creation over time (Beckman & Burton, 2008; Grant, 1996; Hashai & Zahra, 2022). We add to research on the "owner effect" in private firms (cf. Fitza & Tihanyi, 2017) by suggesting that once resources are *competently configured* and owners delegate authority to managers and establish governance mechanisms that ensure their envisioned theories of value are pursued, owners' governance and matching skills become less consequential for firm growth. Specifically, we show that the "owner effect"—or ownership competence effect—on firm-level outcomes is especially pronounced when firms are younger (Bryant, 2014; Simsek et al., 2015), which also supports arguments of the path dependency of firms' (initial) resource deployments (Felin et al., 2023).

Our second contribution is that we laid the groundwork for empirically measuring ownership competence. Research on the strategic role of owners and the impact of owners' unique characteristics and competences on value creation is just beginning to emerge and has mostly been conceptual in nature so far (e.g., Foss et al., 2021; Schulze & Zellweger, 2021; Zellweger & Zenger, 2023). Thus, understanding how to navigate the inherent difficulties of measuring ownership competence is critical for advancing knowledge in this burgeoning research area. Our unique bag-of-words approach, in conjunction with our survey-based construct-validity test (to operationalize ownership competence), provides a novel methodological framework for researchers to build on. Given that we made efforts to ensure the discriminate validity of our measures via an exploratory factor analysis, future researchers could rely on our survey items to conduct further empirical research on owners' matching and governance competences.

Further, by situating our empirical context in private firms, for which data is generally scarce, we respond to calls cautioning that attempts "to generalize findings about the determinants of public firm performance to other populations such as private firms may lead to erroneous conclusions" (Fitza & Tihanyi, 2017, p. 2727) and generate knowledge on this highly predominant organizational form. For private firms, firm growth is an important facet of value creation. We thus chose firm growth as our focal variable of interest and empirically tested our hypotheses on a construct that is of high relevance for private firms, practitioners, and researchers alike.

Third, we contribute to the literature on firm growth—and explicitly to Penrosean growth theory (Penrose, 1952, 1955, 1959)—by investigating what types of competences residing within firm decision-makers (i.e., firm owners in our setting of private firms) play a role in firm growth. Specifically, Penrose (1959) elaborated on how growth depends on the entrepreneurial services, such as changes to a firm's administrative organization or the development of novel ideas, provided to firms by entrepreneurs. While she recognized the importance of judgment in directing these services, she did not elaborate on the broad heterogeneity in the *quality of judgment* among firms' entrepreneurs (i.e., she primarily argued about the importance of entrepreneurs' "sound judgment"). Against this background, Penrose and scholars in the Penrosean tradition (e.g., Lockett et al., 2011) have typically not elaborated on the specific competences residing in firms' upper echelons (for an exception, see Kor, 2003). We extend this literature by highlighting the role of two competences of firm owners—matching competence and governance competence—that can be well mapped to the different types of entrepreneurial services described by Penrose (1959).

Additionally, while researchers following the Penrosean tradition have explored the role of top management teams' competences in firm growth (Kor, 2003), we are the first to examine the competences of firm owners, who constitute firms' *ultimate decision-makers* (Alchian, 1961). The Penrosean logic of how firms grow applies to firm

owners in particular because the ultimate decision-making authority of owners allows them to direct their firms' most important resources—namely, their human resources—in an efficient manner (Schulze & Zellweger, 2021). Hence, with our research, we set further anchor points on how Penrose's famous ideas of firm growth can be utilized in management and entrepreneurship research.

7.2 | Limitations and avenues for future research

Our research has certain limitations that offer fruitful avenues for future research. First, empirically, we focused on owner-managers because in owner-managed firms, the effects of owners' competences are direct and measurable (Staw, 1991), thus making these effects less diluted by nonowning managers' characteristics (which we are not able to empirically measure within the same firm). However, future research should seek to better understand how the competences of nonmanaging owners, in conjunction with the competences of external managers, affect firms' value creation. We also note that our data-collection efforts were influenced by the availability of LinkedIn profiles for the owner-managers in our sample. Although we proactively addressed the potentially resulting selection bias by including a corresponding selection parameter in all regressions, future research could repeat our analyses in different countries where LinkedIn is more widely used (vis-à-vis in Germany).

Another limitation could be that LinkedIn users may potentially omit relevant information or inflate their own accomplishments. While inferring experience from LinkedIn is a well-established approach in entrepreneurship and strategy research (e.g., Blohm et al., 2020), it is sensitive to the choice of information volunteered, which introduces a potential bias. We addressed this concern by triangulating LinkedIn information with other sources, such as Google searches, and were able to validate the reliability owners' job titles for 100 randomly selected cases. Still, future research may find additional ways to extend and corroborate the LinkedIn (and Orbis) data with additional data sources.

Finally, we solely focused on the largest shareholders. On average, the largest shareholder held around 75% of their firm's shares (see Table A1, for details on the distribution), indicating that our approach was viable. However, given the impossibility of identifying all private shareholders for all firms on LinkedIn, we could not calculate average competences across shareholders, again offering a fruitful avenue for future research.

8 | CONCLUSION

Our article presents a novel perspective to explain why firms grow by investigating owners' experience-based matching and governance competences as antecedents to firm growth. These relationships can, however, be constrained or enabled depending on the organizational context of the firm. We conclude that adopting an *ownership competence perspective* shows great promise for research on private firms in the field of entrepreneurship and call for further empirical explorations of the role of ownership competence in firms' value creation.

ACKNOWLEDGMENTS

We are grateful for the thoughtful guidance and suggestions of coeditor Peter Klein and two anonymous reviewers. We also thank Oliver Alexy, Peter Schou, Philipp Sieger, Vangelis Souitaris, Bala Vissa, Karl Wennberg, Andy Wu, and the anonymous reviewers at the Academy of Management Annual Meeting 2022, at Strategic Management Society Annual Conference 2022, and the Babson College Entrepreneurship Research Conference 2021 for their feedback on an earlier draft. Miriam Bird acknowledges funding from the Swiss National Science Foundation (Project ID: 100018_185132). Open Access funding enabled and organized by Projekt DEAL.

ORCID

Jannis von Nitzsch https://orcid.org/0000-0003-4873-8285
Miriam Bird https://orcid.org/0000-0001-6620-5760
Ed Saiedi https://orcid.org/0000-0003-3679-1222

ENDNOTES

[1] Judgment is defined as the cognitive function of making decisions about the future when one cannot meaningfully use clear decision models and rules—for instance, when it is difficult to indefinitely assign probabilities to (desired) outcomes (cf. Foss et al., 2019).

[2] The third competence Foss et al. (2021) introduced in their original work is labeled timing competence, which is "the skill to time investments into resources for maximized value creation" (Foss et al., 2021, p. 310). We do not focus on timing competence in our study due to inherent difficulties in empirically measuring it. Nevertheless, we provide some explorative evidence for the role of owners' timing competence in firm growth in Section 6 of the article.

[3] For example, the work of Felin and Zenger (2017) suggests that owners may be more or less competent in developing and refining the theories guiding their actions, and the work of Schulze and Zellweger (2021) implies that owners differ in their skills to set up a governance structure that addresses the control hazards associated with owner–management.

[4] Penrose (1959, p. 22) continued by stating that "it is never resources themselves that are the 'inputs' in the product process, but only the services that the resources can render. The services yielded by resources are a function of the way in which they are used." Thus, this statement points to the fact that entrepreneurial judgment and competences about resource use matter for firms' value creation.

[5] For example, she stated, "[…] even if a firm is not very ambitious, it may nevertheless be competently managed. This is particularly true of those smaller firms where there is a close relation between the 'goals' of the owners and the 'goals' of firms" (Penrose, 1959, p. 41). On the flipside, she stated, "[…] firms that have grown large (according to any of the commonly accepted criteria of what is large) have reached a size where either the ownership equity is widely shared, or the owners' control of operations is in practice effectively limited by the managerial bureaucracy" (Penrose, 1959, p. 24).

[6] Entrepreneurs who are also firm owners particularly rely on simplifying heuristics in decision-making (Busenitz & Barney, 1997). Individuals acquire heuristics from the idiosyncratic experience they have accumulated. Therefore, experience engenders more nuanced and appropriate heuristics and a broader pool of alternatives to draw upon for decision-making. For instance, Uygur and Kim (2016) showed that entrepreneurs' judgment becomes more selective (i.e., they have a better overview of and stronger confidence in their opinions of their ventures' success factors) with the accumulation of experience.

[7] There remain nonroutine cases in which owners' experience-based matching competence may become important for certain activities in later stages, such as mergers and acquisitions. However, while requiring well-developed resource reconfigurations, such nonroutine activities are not prevalent among the private owner-managed firms in our sample (e.g., see Celikyurt et al., 2010; Maksimovic et al., 2013).

[8] In this vein, Staw (1991, p. 807) eloquently proposed that when individuals exert significant control over their organizations, "organizational action is a direct extension of individual behavior," such as their judgment-driven resource deployments.

[9] Since we controlled for total work experience, this decomposition effectively isolates the effects of our experience-based competence measures from a mere mechanical effect of years of work experience on firm growth.

[10] This requirement means that firms that did not survive beyond 2013 or those that survived for fewer than 4 years were excluded in sample construction.

[11] Following suggestions by Li and Prabhala (2008) for selection models, we did not use an exclusion criterion as the model is identified by nonlinearity.

[12] In addition, given that there was some randomness regarding which Orbis owners we can match to LinkedIn, and which individuals have completed the education and work experience section of their LinkedIn profiles, we recognize that individuals in our sample were randomly selected and thus consider individual differences, captured by an intercept parameter, to be random rather than fixed, making random effects models the appropriate estimation strategy (Hill et al., 2018).

[13] After excluding participants who took suspiciously little time, failed attention checks, or did not complete the whole survey, we used answers from 170 firm owners for our analyses. Overall, 47% of the participants were women. On average, they were 45.01 years old (SD = 12.28) and had an average of 83.92 (SD = 97.82) months of entrepreneurial experience and 77.41 (SD = 110.60) months of leadership experience.

[14] See Harvey and Liu (2022) for a discussion on the requirement for at least 12 observations per unit of analysis (investors), using the most suitable method, to distinguish skill from luck.

[15] Coefficients for the competence measures when firm age ≤ $p(25)$: main effect of owners' experience-based matching competence ($\beta = 0.086$, $p < 0.001$), main effect of experience-based governance competence ($\beta = 0.074$, $p < 0.01$). Coefficients for the competence measures when firm age ≥ $p(75)$: main effect of owners' experience-based matching competence ($\beta = 0.006$, $p > 0.10$), main effect of owners' experience-based governance competence ($\beta = -0.006$, $p > 0.10$).

[16] Given that we focused on German firms, we included both German and English words.

[17] Some positions related to both the matching and governance bags of words (e.g., "founder and CEO" would contribute both to matching [founder] and governance [CEO] experience). If more than one type of experience was reported in one position, the months of experience were distributed equally across the respective categories.

[18] An example would be holding an administrative position without personnel responsibility where neither of these aspects are present.

[19] Masters, MBA, and PhD are summarized in a single category, "postgraduate degree."

REFERENCES

Alchian, A. A. (1961). *Some economics of property*. Rand Corporation.

Aldrich, H. E., & Cliff, J. E. (2003). The pervasive effects of family on entrepreneurship: Toward a family embeddedness perspective. *Journal of Business Venturing*, *18*(5), 573–596. https://doi.org/10.1016/S0883-9026(03)00011-9

Alvarez, S. A., Zander, U., Barney, J. B., & Afuah, A. (2020). Developing a theory of the firm for the 21st century. *Academy of Management Review*, *45*(4), 711–716. https://doi.org/10.5465/amr.2020.0372

Amabile, T. M. (1988). A model of creativity and innovation in organizations. *Research in Organizational Behavior*, *10*(1), 123–167.

Arregle, J.-L., Hitt, M. A., Sirmon, D. G., & Very, P. (2007). The development of organizational social capital: Attributes of family firms. *Journal of Management Studies*, *44*(1), 73–95. https://doi.org/10.1111/j.1467-6486.2007.00665.x

Audretsch, D. B., & Lehmann, E. (2016). *The seven secrets of Germany: Economic resilience in an era of global turbulence*. Oxford University Press. https://doi.org/10.1093/acprof:oso/9780190258696.001.0001

Baron, J. N., Hannan, M. T., & Burton, M. D. (1999). Building the iron cage: Determinants of managerial intensity in the early years of organizations. *American Sociological Review*, *64*(4), 527–547. https://doi.org/10.2307/2657254

Baum, J. A. C., Calabrese, T., & Silverman, B. S. (2000). Don't go it alone: Alliance network composition and startups' performance in Canadian biotechnology. *Strategic Management Journal*, *21*(3), 267–294. https://doi.org/10.1002/(SICI)1097-0266(200003)21:3%3C267::AID-SMJ89%3E3.0.CO;2-8

Baum, J. A. C., & Silverman, B. S. (2004). Picking winners or building them? Alliance, intellectual, and human capital as selection criteria in venture financing and performance of biotechnology startups. *Journal of Business Venturing*, *19*(3), 411–436. https://doi.org/10.1016/S0883-9026(03)00038-7

Beckman, C. M., & Burton, M. D. (2008). Founding the future: Path dependence in the evolution of top management teams from founding to IPO. *Organization Science*, *19*(1), 3–24. https://doi.org/10.1287/orsc.1070.0311

Belenzon, S., Chatterji, A. K., & Daley, B. (2017). Eponymous entrepreneurs. *The American Economic Review*, *107*(6), 1638–1655. https://doi.org/10.1257/aer.20141524

Belenzon, S., Chatterji, A. K., & Daley, B. (2020). Choosing between growth and glory. *Management Science*, *66*(5), 2050–2074. https://doi.org/10.1287/mnsc.2019.3296

Belenzon, S., Patacconi, A., & Zarutskie, R. (2016). Married to the firm? A large-scale investigation of the social context of ownership. *Strategic Management Journal*, *37*(13), 2611–2638. https://doi.org/10.1002/smj.2441

Benson, B., & Davidson, W. (2009). Reexamining the managerial ownership effect on firm value. *Journal of Corporate Finance*, *15*(5), 573–586. https://doi.org/10.1016/j.jcorpfin.2009.08.002

Berlemann, M., Jahn, V., & Lehmann, R. (2022). Is the German Mittelstand more resistant to crises? Empirical evidence from the Great Recession. *Small Business Economics*, *59*, 1169–1195. https://doi.org/10.1007/s11187-021-00573-7

Bingham, C. B., Eisenhardt, K. M., & Furr, N. R. (2007). What makes a process a capability? Heuristics, strategy, and effective capture of opportunities. *Strategic Entrepreneurship Journal*, *1*(1), 27–47. https://doi.org/10.1002/sej.1

Bird, M., & Zellweger, T. (2018). Relational embeddedness and firm growth: Comparing spousal and sibling entrepreneurs. *Organization Science*, *29*(2), 264–283. https://doi.org/10.1287/orsc.2017.1174

Blohm, I., Antretter, T., Sirén, C., Grichnik, D., & Wincent, J. (2020). It's a peoples game, isn't it?! A comparison between the investment returns of business angels and machine learning algorithms. *Entrepreneurship Theory and Practice*, *46*(4), 1–38. https://doi.org/10.1177/1042258720945206

Boeker, W. (1997). Strategic change: The influence of managerial characteristics and organizational growth. *Academy of Management Journal*, *40*(1), 152–170. https://doi.org/10.2307/257024

Boudreaux, C. J., Nikolaev, B. N., & Klein, P. (2019). Socio-cognitive traits and entrepreneurship: The moderating role of economic institutions. *Journal of Business Venturing*, *34*(1), 178–196. https://doi.org/10.1016/j.jbusvent.2018.08.003

Bradley, S. W., Wiklund, J., & Shepherd, D. A. (2011). Swinging a double-edged sword: The effect of slack on entrepreneurial management and growth. *Journal of Business Venturing*, *26*(5), 537–554. https://doi.org/10.1016/j.jbusvent.2010.03.002

Brush, C. G., & Vanderwerf, P. A. (1992). A comparison of methods and sources for obtaining estimates of new venture performance. *Journal of Business Venturing*, *7*(2), 157–170. https://doi.org/10.1016/0883-9026(92)90010-O

Bryant, P. T. (2014). Imprinting by design: The microfoundations of entrepreneurial adaptation. *Entrepreneurship Theory and Practice*, *38*(5), 1081–1102. https://doi.org/10.1111/j.1540-6520.2012.00529.x

Busenitz, L. W., & Barney, J. B. (1997). Differences between entrepreneurs and managers in large organizations: Biases and heuristics in strategic decision-making. *Journal of Business Venturing*, *12*(1), 9–30. https://doi.org/10.1016/S0883-9026(96)00003-1

Bushee, B. J. (1998). The influence of institutional investors on myopic R&D investment behavior. *The Accounting Review*, *73*(3), 305–333.

Camuffo, A., Cordova, A., Gambardella, A., & Spina, C. (2020). A scientific approach to entrepreneurial decision making: Evidence from a randomized control trial. *Management Science*, *66*(2), 564–586. https://doi.org/10.1287/mnsc.2018.3249

Celikyurt, U., Sevilir, M., & Shivdasani, A. (2010). Going public to acquire? The acquisition motive in IPOs. *Journal of Financial Economics*, *96*(3), 345–363. https://doi.org/10.1016/j.jfineco.2010.03.003

Chen, G., Chittoor, R., & Vissa, B. (2021). Does nepotism run in the family? CEO pay and pay-performance sensitivity in Indian family firms. *Strategic Management Journal*, *42*(7), 1326–1343. https://doi.org/10.1002/smj.3263

Chrisman, J. J., Chua, J. H., Pearson, A. W., & Barnett, T. (2012). Family involvement, family influence, and family-centered non-economic goals in small firms. *Entrepreneurship Theory and Practice*, *36*(2), 267–293. https://doi.org/10.1111/j.1540-6520.2010.00407.x

Coad, A., Segarra, A., & Teruel, M. (2016). Innovation and firm growth: Does firm age play a role? *Research Policy*, *45*(2), 387–400. https://doi.org/10.1016/j.respol.2015.10.015

Colombo, M. G., & Grilli, L. (2005). Founders' human capital and the growth of new technology-based firms: A competence-based view. *Research Policy*, *34*(6), 795–816. https://doi.org/10.1016/j.respol.2005.03.010

Connelly, B. L., Hoskisson, R. E., Tihanyi, L., & Certo, S. T. (2010). Ownership as a form of corporate governance. *Journal of Management Studies*, *47*(8), 1561–1589. https://doi.org/10.1111/j.1467-6486.2010.00929.x

Davidsson, P., Delmar, F., & Wiklund, J. (2017). Entrepreneurship as growth: Growth as entrepreneurship. In M. A. Hitt, R. D. Ireland, S. M. Camp, & D. Sexton (Eds.), *Strategic entrepreneurship: Creating a new mindset* (pp. 328–342). Wiley-Blackwell.

Davidsson, P., & Wiklund, J. (2006). Conceptual and empirical challenges in the study of firm growth. *Entrepreneurship and the Growth of Firms*, *1*(1), 39–61. https://doi.org/10.4337/9781781009949.00010

Delmar, F., Davidsson, P., & Gartner, W. B. (2003). Arriving at the high-growth firm. *Journal of Business Venturing*, *18*(2), 189–216. https://doi.org/10.1016/S0883-9026(02)00080-0

Felin, T., Kauffman, S., & Zenger, T. (2023). Resource origins and search. *Strategic Management Journal*, *44*(6), 1514–1533. https://doi.org/10.1002/smj.3350

Felin, T., & Zenger, T. R. (2009). Entrepreneurs as theorists: On the origins of collective beliefs and novel strategies. *Strategic Entrepreneurship Journal*, *3*(2), 127–146. https://doi.org/10.1002/sej.67

Felin, T., & Zenger, T. R. (2017). The theory-based view: Economic actors as theorists. *Strategy Science*, *2*(4), 258–271. https://doi.org/10.1287/stsc.2017.0048

Fitza, M., & Tihanyi, L. (2017). How much does ownership form matter? *Strategic Management Journal*, *38*(13), 2726–2743. https://doi.org/10.1002/smj.2671

Foss, N., Klein, P., Lien, L., Zellweger, T., & Zenger, T. (2023). Ownership competence: The enabling and constraining role of institutions. *Strategic Management Journal*, *44*(8), 1955–1964. https://doi.org/10.1002/smj.3494

Foss, N., & Klein, P. G. (2012). *Organizing entrepreneurial judgment: A new approach to the firm*. Cambridge University Press. https://doi.org/10.1017/CBO9781139021173

Foss, N., & Klein, P. G. (2020). Entrepreneurial opportunities: Who needs them? *Academy of Management Perspectives*, *34*(3), 366–377. https://doi.org/10.5465/amp.2017.0181

Foss, N., Klein, P. G., & Bjørnskov, C. (2019). The context of entrepreneurial judgment: Organizations, markets, and institutions. *Journal of Management Studies*, *56*(6), 1197–1213. https://doi.org/10.1111/joms.12428

Foss, N., Klein, P. G., Lien, L. B., Zellweger, T., & Zenger, T. (2021). Ownership competence. *Strategic Management Journal*, *42*(2), 302–328. https://doi.org/10.1002/smj.3222

Foundation for Family Businesses. (2023). Daten, Fakten, Zahlen zur volkswirtschaftlichen Bedeutung von Familienunternehmen. https://www.familienunternehmen.de/de/daten-fakten-zahlen

Gedajlovic, E., Lubatkin, M. H., & Schulze, W. S. (2004). Crossing the threshold from founder management to professional management: A governance perspective. *Journal of Management Studies*, *41*(5), 899–912.

George, G. (2005). Slack resources and the performance of privately held firms. *Academy of Management Journal*, *48*(4), 661–676. https://doi.org/10.5465/AMJ.2005.17843944

Gigerenzer, G., & Gaissmaier, W. (2011). Heuristic decision making. *Annual Review of Psychology*, *62*(1), 451–482. https://doi.org/10.1146/annurev-psych-120709-145346

Giordani, P., Jacobson, T., von Schedvin, E., & Villani, M. (2014). Taking the twists into account: Predicting firm bankruptcy risk with splines of financial ratios. *Journal of Financial and Quantitative Analysis*, *49*(4), 1071–1099. https://doi.org/10.1017/S0022109014000623

Gómez-Mejía, L. R., Haynes, K. T., Núñez-Nickel, M., Jacobson, K. J. L., & Moyano-Fuentes, J. (2007). Socioemotional wealth and business risks in family-controlled firms: Evidence from Spanish olive oil mills. *Administrative Science Quarterly*, *52*(1), 106–137. https://doi.org/10.2189/asqu.52.1.106

Grant, R. M. (1996). Toward a knowledge-based theory of the firm. *Strategic Management Journal*, *17*(2), 109–122. https://doi.org/10.1002/smj.4250171110

Habbershon, T. G., Williams, M., & MacMillan, I. C. (2003). A unified systems perspective of family firm performance. *Journal of Business Venturing*, *18*(4), 451–465. https://doi.org/10.1016/S0883-9026(03)00053-3

Harvey, C. R., & Liu, Y. (2022). Luck versus skill in the cross section of mutual fund returns: Reexamining the evidence. *The Journal of Finance*, *77*(3), 1921–1966. https://doi.org/10.1111/jofi.13123

Hashai, N., & Zahra, S. (2022). Founder team prior work experience: An asset or a liability for startup growth? *Strategic Entrepreneurship Journal*, *16*(1), 155–184. https://doi.org/10.1002/sej.1406

Heckman, J. J. (1979). Sample selection bias as a specification error. *Econometrica*, *47*(1), 153–161. https://doi.org/10.2307/1912352

Helfat, C. E., & Eisenhardt, K. M. (2004). Inter-temporal economies of scope, organizational modularity, and the dynamics of diversification. *Strategic Management Journal*, *25*(13), 1217–1232. https://doi.org/10.1002/smj.427

Hill, R. C., Griffiths, W. E., & Lim, G. C. (2018). *Principles of econometrics*. John Wiley & Sons.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, *3*(4), 305–360. https://doi.org/10.1016/0304-405X(76)90026-X

Kaiser, H. F. (1958). The varimax criterion for analytic rotation in factor analysis. *Psychometrika*, *23*(3), 187–200. https://doi.org/10.1007/BF02289233

Kaiser, H. F. (1960). The application of electronic computers to factor analysis. *Educational and Psychological Measurement*, *20*(1), 141–151. https://doi.org/10.1177/001316446002000116

Kanze, D., Conley, M. A., & Higgins, E. T. (2021). The motivation of mission statements: How regulatory mode influences workplace discrimination. *Organizational Behavior and Human Decision Processes*, *166*(1), 84–103. https://doi.org/10.1016/j.obhdp.2019.04.002

Kaplan, S. N., Sensoy, B. A., & Strömberg, P. (2009). Should investors bet on the jockey or the horse? Evidence from the evolution of firms from early business plans to public companies. *The Journal of Finance*, *64*(1), 75–115. https://doi.org/10.2139/ssrn.657721

König, A., Mammen, J., Luger, J., Fehn, A., & Enders, A. (2018). Silver bullet or ricochet? CEOs' use of metaphorical communication and infomediaries' evaluations. *Academy of Management Journal*, *61*(4), 1196–1230. https://doi.org/10.5465/amj.2016.0626

Koning, R., Hasan, S., & Chatterji, A. (2022). Experimentation and start-up performance: Evidence from A/B testing. *Management Science*, *68*(9), 6434–6453. https://doi.org/10.1287/mnsc.2021.4209

Kor, Y. Y. (2003). Experience-based top management team competence and sustained growth. *Organization Science*, *14*(6), 707–719. https://doi.org/10.1287/orsc.14.6.707.24867

Korteweg, A. (2010). The net benefits to leverage. *The Journal of Finance*, *65*(6), 2137–2170. https://doi.org/10.1111/j.1540-6261.2010.01612.x

Kumar, P., & Zaheer, A. (2022). Network stability: The role of geography and brokerage structure inequity. *Academy of Management Journal*, *65*(4), 1139–1168. https://doi.org/10.5465/amj.2020.0903

Lee, L.-F. (1983). Generalized econometric models with selectivity. *Econometrica*, *51*(2), 507–512. https://doi.org/10.2307/1912003

Li, K., & Prabhala, N. R. (2008). Self-selection models in corporate finance. In B. E. Eckbo (Ed.), *Handbook of empirical corporate finance* (pp. 37–86). Elsevier. https://doi.org/10.2139/ssrn.843105

Lockett, A., Wiklund, J., Davidsson, P., & Girma, S. (2011). Organic and acquisitive growth: Re-examining, testing and extending Penrose's growth theory. *Journal of Management Studies*, *48*(1), 48–74. https://doi.org/10.1111/j.1467-6486.2009.00879.x

Lungeanu, R., & Zajac, E. J. (2016). Venture capital ownership as a contingent resource: How owner–firm fit influences IPO outcomes. *Academy of Management Journal*, *59*(3), 930–955. https://doi.org/10.5465/amj.2012.0871

Maksimovic, V., Phillips, G., & Yang, L. (2013). Private and public merger waves. *The Journal of Finance*, *68*(5), 2177–2217. https://doi.org/10.2139/ssrn.1625848

Malhotra, S., Reus, T. H., Zhu, P., & Roelofsen, E. M. (2018). The acquisitive nature of extraverted CEOs. *Administrative Science Quarterly*, *63*(2), 370–408. https://doi.org/10.1177/0001839217712240

McCahery, J. A., Sautner, Z., & Starks, L. T. (2016). Behind the scenes: The corporate governance preferences of institutional investors. *The Journal of Finance*, *71*(6), 2905–2932. https://doi.org/10.1111/jofi.12393

Miller, D., Le Breton-Miller, I., & Scholnick, B. (2008). Stewardship vs. stagnation: An empirical comparison of small family and non-family businesses. *Journal of Management Studies*, *45*(1), 51–78. https://doi.org/10.1111/j.1467-6486.2007.00718.x

Morris, M. H., Allen, J., Schindehutte, M., & Avila, R. (2006). Balanced management control systems as a mechanism for achieving corporate entrepreneurship. *Journal of Managerial Issues*, *18*(4), 468–493.

Mustakallio, M., Autio, E., & Zahra, S. A. (2002). Relational and contractual governance in family firms: Effects on strategic decision making. *Family Business Review*, *15*(3), 205–222. https://doi.org/10.1111/j.1741-6248.2002.00205.x

Neckebrouck, J., Schulze, W., & Zellweger, T. M. (2018). Are family firms good employers? *Academy of Management Journal*, *61*(2), 553–585. https://doi.org/10.5465/amj.2016.0765

Ongsakul, V., Jiraporn, P., & Treepongkaruna, S. (2021). Does managerial ownership influence corporate social responsibility (CSR)? The role of economic policy uncertainty. *Accounting & Finance*, *61*(1), 763–779. https://doi.org/10.1111/acfi.12592

Pahnke, A., & Welter, F. (2019). The German Mittelstand: Antithesis to Silicon Valley entrepreneurship? *Small Business Economics*, *52*, 345–358. https://doi.org/10.1007/s11187-018-0095-4

Peer, E., Brandimarte, L., Samat, S., & Acquisti, A. (2017). Beyond the Turk: Alternative platforms for crowdsourcing behavioral research. *Journal of Experimental Social Psychology*, *70*(1), 153–163. https://doi.org/10.1016/j.jesp.2017.01.006

Penrose, E. (1952). Biological analogies in the theory of the firm. *The American Economic Review*, *42*(5), 804–819.

Penrose, E. (1955). Limits to the growth and size of firms. *The American Economic Review*, *45*(2), 531–543.

Penrose, E. (1959). *The theory of the growth of the firm*. John Wiley & Sons.

Preacher, K. J., & MacCallum, R. C. (2003). Repairing tom Swift's electric factor analysis machine. *Understanding Statistics: Statistical Issues in Psychology, Education, and the Social Sciences*, *2*(1), 13–43. https://doi.org/10.1207/S15328031US0201_02

Ramaswamy, K., Li, M., & Veliyath, R. (2002). Variations in ownership behavior and propensity to diversify: A study of the Indian corporate context. *Strategic Management Journal*, *23*(4), 345–358. https://doi.org/10.1002/smj.227

Rauch, A., Frese, M., & Utsch, A. (2005). Effects of human capital and long-term human resources development and utilization on employment growth of small-scale businesses: A causal analysis. *Entrepreneurship Theory and Practice*, *29*(6), 681–698. https://doi.org/10.1111/j.1540-6520.2005.00103.x

Schulze, W. S., Lubatkin, M. H., & Dino, R. N. (2002). Altruism, agency, and the competitiveness of family firms. *Managerial and Decision Economics*, *23*(4–5), 247–259. https://doi.org/10.1002/mde.1064

Schulze, W. S., Lubatkin, M. H., & Dino, R. N. (2003). Exploring the agency consequences of ownership dispersion among the directors of private family firms. *Academy of Management Journal*, *46*(2), 179–194. https://doi.org/10.2307/30040613

Schulze, W. S., Lubatkin, M. H., Dino, R. N., & Buchholtz, A. K. (2001). Agency relationships in family firms: Theory and evidence. *Organization Science*, *12*(2), 99–116. https://doi.org/10.1287/orsc.12.2.99.10114

Schulze, W. S., & Zellweger, T. (2021). Property rights, owner-management, and value creation. *Academy of Management Review*, *46*(3), 489–511. https://doi.org/10.5465/amr.2018.0377

Simsek, Z., Fox, B. C., & Heavey, C. (2015). "What's past is prologue" a framework, review, and future directions for organizational research on imprinting. *Journal of Management*, *41*(1), 288–317. https://doi.org/10.1177/0149206314553276

Sirmon, D. G., Hitt, M. A., Ireland, R. D., & Gilbert, B. A. (2011). Resource orchestration to create competitive advantage: Breadth, depth, and life cycle effects. *Journal of Management*, *37*(5), 1390–1412. https://doi.org/10.1177/0149206310385695

Staw, B. M. (1991). Dressing up like an organization: When psychological theories can explain organizational action. *Journal of Management*, *17*(4), 805–819. https://doi.org/10.1177/014920639101700412

Stevens, J. P. (2012). *Applied multivariate statistics for the social sciences*. Routledge. https://doi.org/10.4324/9780203843130

Stinchcombe, A. (1965). Social structure and organizations. In J. P. March (Ed.), *Handbook of organizations* (pp. 142–193). Rand McNally.

Sutton, J. (1997). Gibrat's legacy. *Journal of Economic Literature*, *35*(1), 40–59.

Tagiuri, R., & Davis, J. (1996). Bivalent attributes of the family firm. *Family Business Review*, *9*(2), 199–208. https://doi.org/10.1111/j.1741-6248.1996.00199.x

Taylor, A., & Greve, H. R. (2006). Superman or the fantastic four? Knowledge combination and experience in innovative teams. *Academy of Management Journal*, *49*(4), 723–740. https://doi.org/10.5465/AMJ.2006.22083029

Thomsen, S., & Pedersen, T. (2000). Ownership structure and economic performance in the largest European companies. *Strategic Management Journal*, *21*(6), 689–705. https://doi.org/10.1002/(SICI)1097-0266(200006)21:6%3C689::AID-SMJ115%3E3.0.CO;2-Y

Thornhill, S., & Amit, R. (2003). Learning about failure: Bankruptcy, firm age, and the resource-based view. *Organization Science*, *14*(5), 497–509. https://doi.org/10.1287/orsc.14.5.497.16761

Uhlaner, L., Wright, M., & Huse, M. (2007). Private firms and corporate governance: An integrated economic and management perspective. *Small Business Economics*, *29*(3), 225–241. https://doi.org/10.1007/s11187-006-9032-z

Uygur, U., & Kim, S. M. (2016). Evolution of entrepreneurial judgment with venture-specific experience. *Strategic Entrepreneurship Journal*, *10*(2), 169–193. https://doi.org/10.1002/sej.1222

Vinton, K. L. (1998). Nepotism: An interdisciplinary model. *Family Business Review*, *11*(4), 297–303. https://doi.org/10.1111/j.1741-6248.1998.00297.x

Walter, A., Auer, M., & Ritter, T. (2006). The impact of network capabilities and entrepreneurial orientation on university spin-off performance. *Journal of Business Venturing*, *21*(4), 541–567. https://doi.org/10.1016/j.jbusvent.2005.02.005

Wasserman, N. (2017). The throne vs. the kingdom: Founder control and value creation in startups. *Strategic Management Journal*, *38*(2), 255–277. https://doi.org/10.1002/smj.2478

Wiklund, J., & Shepherd, D. (2003). Aspiring for, and achieving growth: The moderating role of resources and opportunities. *Journal of Management Studies*, *40*(8), 1919–1941. https://doi.org/10.1046/j.1467-6486.2003.00406.x

Yang, T., & Aldrich, H. E. (2014). Who's the boss? Explaining gender inequality in entrepreneurial teams. *American Sociological Review*, *79*(2), 303–327. https://doi.org/10.1177/0003122414524207

Zellweger, T., Chrisman, J. J., Chua, J. H., & Steier, L. P. (2019). Social structures, social relationships, and family firms. *Entrepreneurship Theory and Practice*, *43*(2), 207–223. https://doi.org/10.1177/1042258718792290

Zellweger, T., Kellermanns, F. W., Chrisman, J. J., & Chua, J. H. (2012). Family control and family firm valuation by family CEOs: The importance of intentions for transgenerational control. *Organization Science*, *23*(3), 851–868. https://doi.org/10.1287/orsc.1110.0665

Zellweger, T., & Zenger, T. R. (2023). Entrepreneurs as scientists: A pragmatist approach to producing value out of uncertainty. *Academy of Management Review*, *48*(3), 379–408. https://doi.org/10.5465/amr.2020.0503

SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

How to cite this article: von Nitzsch, J., Bird, M., & Saiedi, E. (2024). The strategic role of owners in firm growth: Contextualizing ownership competence in private firms. *Strategic Entrepreneurship Journal*, *18*(3), 553–581. https://doi.org/10.1002/sej.1497

APPENDIX A

TABLE A1 Means, medians, standard deviations, and quartiles for the key descriptive variables.

Variable	Obsv.	Mean	Median	SD	Min	p10	p90	Max
Industry-adjusted sales growth	9257	0.011	−0.016	0.213	−0.997	−0.155	0.210	1.256
Employees (log)	9257	2.820	2.773	1.061	0.000	1.609	4.007	8.273
Leverage	9257	0.643	0.646	0.315	0.049	0.251	0.969	2.450
No higher education	9257	0.415	0.000	0.493	0.000	0.000	1.000	1.000
Bachelor's degree	9257	0.038	0.000	0.192	0.000	0.000	0.000	1.000
Postgraduate degree	9257	0.547	1.000	0.498	0.000	0.000	1.000	1.000
Total work experience (log)	9257	5.370	5.485	0.757	0.693	4.454	6.144	7.357
Network ties (log)	9257	4.789	5.112	1.423	0.000	2.890	6.217	6.217
Ownership concentration	9257	0.750	0.870	0.265	0.100	0.380	1.000	1.000
Eponymy (0/1)	9257	0.475	0.000	0.499	0.000	0.000	1.000	1.000
Institutional shareholder (0/1)	9257	0.051	0.000	0.221	0.000	0.000	0.000	1.000
Lambda	9257	0.937	0.883	0.620	0.001	0.177	1.791	3.768
Inverse Mills Ratio	9257	1.533	1.541	0.219	0.753	1.214	1.795	2.399
Family firm (0/1)	9257	0.372	0.000	0.483	0.000	0.000	1.000	1.000
Firm age (log)	9257	2.922	2.944	0.773	0.693	1.946	3.892	6.091
Exp.-based matching competence	9257	0.370	0.410	0.270	0.000	0.000	0.697	1.000
Exp.-based governance competence	9257	0.464	0.500	0.278	0.000	0.000	0.937	1.000

APPENDIX B

TABLE B1 Random-effects panel regressions for industry-adjusted sales growth including timing competence.

DV: Industry-adjusted sales growth	Coefficients
Firm size ($t-1$)	0.002 (0.007)
Leverage ($t-1$)	0.083† (0.046)
Leverage^2 ($t-1$)	−0.045 (0.031)
Bachelor's degree	0.003 (0.012)
Postgraduate degree	0.001 (0.005)
Total work experience	−0.010** (0.003)
Network ties	0.004* (0.002)
Ownership concentration	0.012 (0.011)
Eponymy (0/1)	0.123 (0.102)
Institutional shareholder (0/1)	0.103 (0.072)
Lambda	−0.004 (0.028)
Inverse Mills Ratio	0.451 (0.335)
Family firm (0/1)	−0.037 (0.035)
Firm age	−0.077* (0.033)
Industry dummies	YES
Year dummies	YES
Key independent variables	
H1a: Exp.-based matching competence	0.034*** (0.010)
H1b: Exp.-based governance competence	0.021* (0.010)
Exp.-based timing competence	0.002 (0.026)
Constant	−0.678 (0.581)
Observations	9257
Number of firms	2509
R^2 overall	0.024
R^2 between	0.062
R^2 within	0.020

Note: The coefficients for the industry and year dummies included in all regressions are not reported. Standard errors are in parentheses (clustered at the firm level). Analyses with the logarithm of total assets as an alternative measure of firm size yield identical results. †$p < 0.10$, *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

B.1. | LINKEDIN DATA-EXTRACTION APPROACH

To assess the owners' experience-based competences, we built on the *bag-of-words approach* employed by Blohm et al. (2020), who assessed the managerial, entrepreneurial, and technical experience of founders via LinkedIn when studying the influence of business angels' biases and experience on their investment returns. Combining their approach with computational linguistic work (e.g., Kanze et al., 2021), we started to build our measures by creating evolving dictionaries based on Foss et al.'s (2021) theoretical paper. For the education section, we drew on the pre-existing bag of words created by Blohm et al. (2020).

Specifically, we first created lists with the word stems of key verbs and nouns[16] from the descriptions and definitions of matching competence and governance competence discussed in Foss et al.'s (2021) article. For instance, we included "creative_" based on the definition stating that matching competence involves "foresight and creativity about valuable resource (re)configurations" (Foss et al., 2021, p. 310). We captured creativity in a context-independent manner as experience in putting new ideas together in new combinations likely also improves matching competence in different contexts (Amabile, 1988). We further manually coded a random sample of 100 LinkedIn profiles (using two coders with a high intercoder reliability of >0.85) and collected keywords that were frequently used to describe matching- and governance-related activities based on face validity/comparison to the literature. After these steps, we had collected 44 words associated with matching experience and 41 words associated with governance experience. Following Kanze et al. (2021), in the next step, we increased the construct validity of our bag of words by presenting the words to a third coauthor who had not been involved in the previous steps. This coauthor independently judged and classified all of the words to determine if they related to matching, governance, or neither. We retained only those words for which all authors agreed on the categorization, which resulted in a dictionary comprising 29 words for experience-based matching competence and 28 words for experience-based governance competence.

We measured experience in months by triangulating the descriptions of the individual positions with the reported lengths of positions.[17] Given the panel nature of our data, we calculated all measures for the years 2011–2018 (e.g., a dummy variable for a master's degree took the value of 1 in the year of graduation). Further, total work experience was calculated backwards from the focal year of the dataset and contained all the months an individual had been active in the labor market, including months they gained in both matching- and governance-related capacities as well as other work experience.[18]

We transferred the bag of words to a data-extraction algorithm and ran it for the 100 profiles we previously coded manually to assess the reliability of our approach. After two iterations of adding keywords and deleting homonyms, we reached a satisfactory Cronbach's alpha of at least 0.80 for both measures and concluded that the approach is reliable.

The final bags of words we employed are shown below. Note that the algorithm transformed all words to lowercase and deleted hyphens. For German words, their English translations were also included and vice versa, but we only report English words.

B.2. | EXPERIENCE-BASED MATCHING COMPETENCE DICTIONARY

("research_," "enginee_," "implement_," "found_," "innovation," "integrat_," "build_," "optimi_," "automation," "develop_," "cofounder," "creat_," "transformation," "acquisition," "testing," "launch_," "freelancer," "startup," "established," "conception," "patent," "expansion," "strateg_," "consult_," "marketing," "design_," "collaboration," "recruiting," "sell," "owner," "coordinat_").

B.3. | EXPERIENCE-BASED GOVERNANCE COMPETENCE DICTIONARY

("coordinat_," "cofounder," "director," "ceo," "cfo," "cio," "cmo," "coo," "cpo," "cro," "cto," "head," "operations," "partner," "lead_," "executive," "operations," "board," "officer," "vice," "chief," "control_," "monitor_," "coaching," "advisor," "supervisor," "manag_," "owner").

B.4. | EDUCATION DICTIONARIES

Bachelor's ("bed," "beng," "ba," "bacoec," "bachelor," "bachelors," "bs," "bsc," "llb").

Master's or Equivalent ("llm," "mfa," "mmus," "ma," "mag," "magister," "master," "masters," "meng," "mlaw," "msc," "dipl," "diplom").

MBA ("cfa," "emba," "iema," "imba," "m.b.a.," "mba").

PhD ("doctor," "dr," "phd," "ph.d.")[19]

B.5. | EXPERIENCE-BASED TIMING COMPETENCE DICTIONARY (ADDITIONAL ANALYSIS)

("acquisition," "launch," "selling," "plan_," "exit," "entry," "bought," "sold," "traded," "timed," "option," "derivative," "arbitrage," "process_," "finance," "export," "risk," "purchas_," "invest_," "procurement," "pricing," "transfer," "market").