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What Causes Differences in Family Business Performance? A Composite Model of Family Business Characteristics

Mária Režňáková, Pavla Srbová, Michal Karas, Jan Pěta

Abstract

Family businesses typically place an emphasis not merely on financial goals, but also on preserving family values, maintaining family ownership, ensuring long-term survival and meeting social obligations, i.e., non-financial goals. This can lead to differences in their competitiveness and performance. Therefore, we focused on creating a compound variable that would allow us to quantify the differences between family businesses arising from their ownership and management structure, as well as from different family values. We simplify the measurement of the influence of socioemotional wealth on business performance using data from Central and Eastern Europe. Confirmatory factor analysis was used to create this variable. To verify the influence of family on the performance of family businesses, we created a linear mixed-effects model. The model was created based on the accounting data of micro, small, and medium-sized enterprises, which have a greater tendency to preserve family values. We measured performance by return on equity, and we used a derived compound variable, financial ratios, and other control variables as independent variables. We concluded that family relationships and socially responsible business influence the performance of family businesses. Moreover, in the interaction model, we demonstrated that the influence of the family is moderated by asset turnover and labour costs.

Keywords: *family business, socioemotional wealth theory, compound variable, confirmatory factor analysis, financial performance, linear mixed-effects model*

JEL Classification: D22, L21, L25, M21

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1 INTRODUCTION

Family businesses are the most widespread type of business in both developed and developing economies and play an irreplaceable role in them as they contribute to economic growth and the competitiveness of the economy (Gómez-Mejía et al., 2007). They make a large contribution towards creating new jobs and reducing unemployment, thereby strengthening the competitiveness of the entire economy. Family businesses are a specific type of entity in which members of the owning family work and which they manage. Unlike in traditional agency theory, there is no conflict of interest between owners, managers, and employees in family businesses, which contributes to the development of an entrepreneurial mindset and their competitiveness and performance (Botero et al., 2015; Halili et al., 2015; Toska et al., 2022, etc.). Their management is more in line with the stewardship theory, as decisions are discussed within the family (i.e., collective decision-making prevails), decision-making is based on trust, and the interests of family members converge and unite in the interest of the long-term sustainability of the family business. Family businesses benefit from the unique abilities of family members, cohesion, trust, and

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empathy, all of which form the basis of their social capital (social capital theory; see Cruz et al., 2012). In an effort to preserve the family legacy for future generations, it is necessary to encourage family members to educate themselves, develop their unique skills, and acquire management abilities (Calabrò et al., 2025). The influence of family values, relationships, and social ties contributes to the competitiveness of family businesses (Mansouri et al., 2024) and enhances their performance (Ghalke et al., 2023). However, if these resources are depleted as a result of family dynamics, expansion of the family, or, conversely, unwillingness to participate in the family business, the existing social capital is weakened, and the advantages of collective decision-making are lost. These resources must be replaced from outside the business, thereby weakening the basic principles of family business and leading to a shift towards traditional corporate governance.

Research in the field of family business has developed in several directions. It initially focused on defining the characteristics of family businesses, making it possible to distinguish them from non-family businesses (see, e.g., the overview of definitions of family businesses by Diaz-Moriana et al. (2019)). Researchers have identified characteristics that distinguish family businesses from non-family businesses and that are reflected in their management. This led to the development of a comprehensive model describing the specifics of family businesses and quantifying the degree of identification with them (Berrone et al., 2012; Gómez-Mejía et al., 2007). The concept of socioemotional wealth (SEW), which describes the motivation of family members to engage in the family business and the benefits of the business for the owning family, has become the most widespread. Derived from the model of Gómez-Mejía et al. (2007), SEW represents a key frame of reference through which family firms' strategic decisions are evaluated and is firmly rooted in behavioural agency theory (Berrone et al., 2012). Unlike traditional agency theory, SEW assumes that family owners assess choices based on their impact on socioemotional capital and often prioritize non-financial goals over purely financial ones (Berrone et al., 2012; Madison et al., 2016). SEW extends the behavioural agency model by introducing non-financial reference points into decision-making processes and by explaining the coexistence of agency-like and stewardship-like behaviour in family firms. When owners are oriented toward financial goals, an agency logic and formal monitoring mechanisms tend to prevail, whereas a focus on the "family agenda" and the preservation of SEW leads to the dominance of stewardship theory, which is grounded in trust, identification, and altruism among family members (Madison et al., 2016). The emphasis on preserving SEW on the part of family principals (owners) becomes critical. Family owners therefore evaluate problems in terms of their impact on SEW, and risk aversion regarding SEW takes priority over risk aversion to financial losses. Furthermore, social capital theory emphasizes that family relationships, cohesion, and trust create specific family social capital that strengthens competitive advantage and shapes governance towards informal, relational mechanisms, thereby complementing the limitations of traditional agency theory (Mansouri et al., 2024).

SEW theory is widely accepted because it is based on the behavioural model of agency theory, incorporates elements of stewardship theory and social capital theory, and thus complements the limitations of traditional agency theory and allows for a multidimensional view of family business management that better captures the influence of family, relationships, and social ties on their competitiveness (Mansouri et al., 2024). Despite its success, this theory is often criticized for the fact that its basic construct is difficult to measure explicitly. Family businesses represent a heterogeneous group, and the ability to measure SEW explicitly would provide better explanatory power for behavioural differences and also measure differences in their competitiveness and performance (Gómez-Mejía & Herrero, 2022).

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Some authors attempted to develop methods for measuring SEW, thereby enabling significant progress toward direct measurement of SEW, which had previously been only a theoretical concept. In their research, they emphasized certain elements included in SEW, which led to the emergence of different variants of SEW dimensions (for more detail, see Smajić et al. (2022)). Berrone et al. (2012) were the first to elaborate five dimensions of SEW, denoted as FIBER: family control and influence (F), identification of family members with the company (I), binding social ties (B), emotional attachment of family members (E), and renewal of family bonds through dynastic succession (R). The authors suggest that this line of research could also examine which combination of the five dimensions has the most favourable or unfavourable impact on family firms' performance. Not all dimensions are uniform, nor do they always coexist; a deficit in one area (e.g., emotional attachment) may be offset by a stronger presence in another (e.g., binding social ties) – see Swab et al. (2020). They further emphasized that SEW dimensions may differ in their valence and in their degree of necessity and sufficiency, implying that some components must be present for SEW to exist, while others alone may not be sufficient to sustain it. Initial research into the theoretical foundations of family businesses was followed by research focusing on differences in the performance of family and non-family businesses most often in connection with the degree of control over the business by the owning family (Wagner et al., 2015). Some authors have concluded that family businesses outperform non-family businesses in many respects. For example, Chu (2011) found that family ownership has a positive effect on business performance, especially when family members hold senior positions, and that this effect is stronger in small and medium-sized enterprises than in large ones. This means that a necessary condition for achieving this positive effect is that family members participate in the management and control of the business. Botero et al. (2015) argue that existing studies show the excellent performance of European family businesses compared to non-family businesses. On the other hand, according to Oswald et al. (2009), there is a negative relationship between family control of a business and its financial performance. The most common arguments for the lower performance of family businesses are conservatism of the owners, risk aversion in decision-making, and the preference for family interests in decision-making, which can lead to a loss of competitiveness and performance of family businesses. These conclusions are supported by the behavioural agency model and prospect theory, which are considered by some authors to be the basis of SEW (Smajić et al., 2022).

Next, research focused on examining differences in the performance of family businesses and evaluating the contribution of family to competitiveness and performance of family businesses. For example, Cruz et al. (2014) show how family ties and the employment of family members influence the competitive advantage of family businesses. With the expansion of SEW as the main theoretical framework in family business research, many authors have attempted to prove a link between SEW and family firm performance. Based on a study by Calabrò et al. (2026), who conducted a literature review of 330 articles on the topic of SEW, 80 of which focused on performance research, it can be concluded that indirect measurement of the influence of SEW on the financial performance of family businesses prevails. The authors used criteria such as the degree of family control/ownership, family CEO, family members in top management or on the board, intergenerational representation, family employment, etc. These are variables from the categories of family control (11 studies) and family involvement (14 studies). One of the studies used a compound variable, "family involvement", which is the factor obtained by a principal component analysis of several characteristics of family monitoring involvement (García-Sánchez et al., 2020a).

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Muñoz-Bullon et al. (2018) created a "family involvement index." The index is the sum of three components measuring family involvement in ownership, on the board of directors, and in management. The research of Calabrò et al. (2026) was conducted using data from China (23 studies), Spain (19 studies), the United States (14 studies), Germany, and Italy; only five studies focused on international comparisons (Calabrò et al., 2026). The reason why comparative international studies are rarely found in research on the impact of SEW may stem from the close connection between SEW and the cultural environment in which family businesses operate (Smajić et al., 2022).

The literature review shows that the most commonly used criteria for family businesses' performance evaluations are return on assets, sales growth, return on sales, profit growth, and return on equity. The objective performance criteria are often replaced by non-financial performance measures such as the ability to adapt to client needs, employee development, customer satisfaction, service quality, customer retention, owner-perceived value, etc. (so-called subjective criteria). The use of subjective performance measures is another common approach to measuring the impact of SEW on the performance of family businesses. According to Williams (2018), more than 83% of studies employ subjective financial measures. The authors of these studies ask respondents to compare the performance of their company with that of similar companies. They take this approach due to the lack of availability of financial data on family businesses and the reluctance of owners to provide these data.

The literature review reveals the following: First, there is a lack of research on family businesses in CEE countries, which have experienced different historical developments that are likely to be reflected in family values. Second, as noted by Smajić et al. (2022), few studies have assessed the SEW directly using the FIBER dimensions developed by Berrone et al. (2012). Instead, criteria such as owners' influence on decision-making or the degree of ownership concentration within the family are predominantly used. Third, subjective nonfinancial criteria are mainly used to measure performance of family businesses.

The aims of our study are as follows:

1. to create a compound variable for measuring the influence of the family on firm performance. Its components are based on SEW theory and the five dimensions of SEW denoted as FIBER. The compound variable measures the alignment of family values with theoretical assumptions describing management and decision-making in family businesses.
2. to verify whether the created compound variable impacts family firm performance, measured by financial indicators over several years (panel data).

First, we created a theoretical model of the family alignment indicator based on a literature review. The model assumes that the greater the emphasis on non-financial business objectives and values, the more a firm can be considered a family business.

Second, we tested the alignment of family values with theoretical assumptions using a survey of family business owners. We applied confirmatory factor analysis to evaluate the theoretical model (Schreiber et al., 2006; Wang et al., 2020; Xia & Yang, 2019). An equation for calculating compound variables, referred to as "factor score" is then derived.

Next, we verified the existence of a relationship between compound variables and the performance of family businesses. We chose ROE (return on equity) to measure performance because it is an

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accounting-based indicator that measures the appreciation of capital invested by owners and is therefore the best accounting indicator expressing the benefit of business for owners. We used linear mixed models to derive the performance model (Pusponegoro et al., 2017; West, 2009). We demonstrated that the compound variable (represented by the factor score) impacts the performance of family businesses (even after adding other financial ratios to the model). Unlike previous studies we refrained from directly incorporating financial performance indicators into the structural model when evaluating the relationship between the specifics of family businesses (represented by factor score) and financial performance. Instead, we used a regression model that includes both the compound variable and financial data observed over multiple years, which allows us a better understanding of the relationships between the family firms' management and their economic results.

Given our knowledge of the Czech business environment, we focused our research on Czech family businesses. The approach to implementing both types of research is described in more detail in Section 3.

2 REASONING BEHIND THE SELECTION OF HYPOTHESES FOR THE THEORETICAL MODEL OF THE FAMILY-ALIGNMENT INDICATOR

The family's shared vision and entrepreneurial orientation over generations create the essence of a family business and allow it to run a successful business to secure the family's future. Value-focused thinking is considered the basis of a successful family business. Changes in the family, ownership structure, or business management can cause problems for the entire system created by the family and the business (Ardyan et al., 2023; Gómez et al., 2025). For these reasons, it is important for family business owners to maintain harmony between the needs of the family and the business.

Family businesses, and SMEs in particular, are usually owned and managed by one family, and important decisions are influenced by the personal attitudes of their owners (e.g., Berrone et al., 2012; Chaudhary et al., 2021). The owner-manager is responsible for implementing business goals (financial and non-financial) and developing strategies for the long-term success of the business. Despite a significant preference for non-financial goals, family businesses show greater growth, resilience and performance than non-family businesses (see, e.g., Miroshnychenko et al. (2021) and Režňáková et al. (2024)). Family business owners are not, however, a homogeneous group of people with the same interests. Each family has its own values, which it carries over into the goals of the business, and each family member is an individual. We consider the ability to measure differences in the attitudes and values of owners and managers to be essential for identifying the influence of family on business performance.

We agree with the view that SEW is a suitable theoretical basis for examining differences in the management of family businesses. However, we do not consider the use of the FIBER model to measure SEW in relation to performance to be appropriate due to the high number of areas (statements) assessed, the evaluation of which would require several respondents from each family business. We consider three areas to be decisive in terms of the family's influence on performance: maintaining family control over the business, the long-term sustainability of the family business, and relationships within the family, the community, and with employees.

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2.1 Family Business Control

The concentration of ownership in the hands of a single family makes it possible to maintain complete command and total control over the enterprise. This is a basic feature of a family business, for which reason it has become part of its definition (e.g., Baltazar et al., 2023; Diaz-Moriana et al., 2019). The connection of ownership and management enables a focus on family goals (both financial and non-financial), and together with long-term orientation, can create conditions for high performing business and lead to unique opportunities and chances for sustainable competitive advantage (Chrisman et al., 2012; Jocic et al., 2023; Rau et al., 2018; Sharma & Sharma, 2024). At the same time, the dispersion of ownership among multiple family owners (as ownership is transferred from the founder to subsequent generations) affects performance and is associated with different levels of conflict, agency problems and goal preferences, as different family owners may prioritise different outcomes (De Massis et al., 2013; Miller et al., 2022).

With an increasing concentration of ownership, the owners have greater motivation and opportunity to become involved in the management of the company mainly in the founder and early generations (e.g., Hoopes & Miller, 2006), although some authors (e.g., Minichilli et al., 2010; De Massis et al., 2013) draw attention to the possibility of conflict arising between family members, which has a negative effect on the company's performance. Identification with non-financial goals is higher, and fewer non-family managers are employed in companies with a majority of family members in the management. The willingness to employ non-family members also increases, however, with the growth of the company, innovation and internationalisation (Vandekerkhof et al., 2015), which may be caused not only by greater demands on the number of employees and their qualifications, but also by a decrease in the emotional attachment of the family to the company (Sciascia et al., 2014). Families often perceive higher entrepreneurial risk when a nonfamily director (Lardon et al., 2017) or external investor (Henn & Lutz, 2016; Schell et al., 2023) gains influence and are therefore reluctant to cede managerial or ownership control to non-family actors, especially when preserving emotional value is important.

The differences between family businesses can, therefore, be explained by the degree of engagement of family members in the business and the intention of keeping the business in the family over the long term (Diaz-Moriana et al., 2019). It is assumed that the family's emotional attachment to the business falls with the growth of the business and the involvement of further generations, and the company loses some of the characteristics typical of family businesses and increasingly prioritises financial goals. These described specifics constitute factor model F1 – Family business control in the theoretical model of the family-alignment indicator. A list of the variables making up factor F1 is given in Tab. 1. The table also shows how these variables can affect family cohesion and manifest themselves in the management and performance of the business.

2.2 Long-term Family Business Sustainability

The intention of passing the business on to the next generation is one of the key motivational aspects that drives family businesses (Tiberius et al., 2021; Mörth & Kuttner, 2025). The business is not only seen as an asset that can be easily sold, but also symbolises the family heritage and traditions. Family firms are typically future-oriented with an explicit intent to pass the business to subsequent generations and, being privately held, often face less capital-market pressure, which

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allows more patient decision-making and openness to opportunities triggered not only by external forces but also by internal curiosity (Tiberius et al., 2021). The family prefers long-term sustainable business and high-quality services that support competitiveness of their business. The return on investment in the business is long-term; however, this is compensated by the growth in the value of the family business (Gu & Mo, 2025; Yilmaz et al., 2024).

The benefits of family businesses oriented towards the long term are strong family identity, the owner's emotional attachment to the business, and a plan to pass the business on to the next generation (Berrone et al., 2012; Ritter et al., 2025; Suess-Reyes, 2017). Strong motivation to continue the business in the next generation and family harmony are considered key motives for the successful handover of a business (Cesaroni & Sentuti, 2017; Ardyan et al., 2023; Gómez et al., 2025). In order to maintain a successful business, it is important that the successor acquires the necessary knowledge and integrates it into company management, while at the same time being allowed to implement their own approach to the business (Nordqvist et al., 2013). In many cases, second-generation involvement strengthens sustainable development by introducing new management concepts, technologies, and market approaches, while still balancing family values with business performance (Gu & Mo, 2025).

On the other hand, the strong attachment of the original owner to the business may cause problems if the owner (often the founder) is not willing to leave the business and hand over full responsibility to the next generation (Cesaroni and Sentuti, 2017; Chaudhary et al., 2021). The risk of unsuccessful succession may, therefore, have an adverse effect on the performance and continuity of the business. This risk can be mitigated by early planning of the handover process and its communication among family members, including clarity about whether and how current owners will remain involved in the business after the handover. Inadequate planning is one of the principal reasons for the failure of the business handover (Baltazar et al., 2023; Matias & Franco, 2020; Porfírio et al., 2020; Reif et al., 2025).

Factor model F2 – Long-term family business sustainability in the theoretical model of the family-alignment indicator was created on the basis of the given specifics. A list of the variables constituting factor model F2 and the potential direction of their influence on management is given in Tab. 1.

2.3 Family Business Social Responsibility & Family Relationships

There is a strong connection between family and work relationships in family businesses. Emotional ties between family members, mutual communication and family values influence the functioning of a family business (Björnberg & Nicholson, 2012; Cabrera-Suárez et al., 2014) and have the potential to align family interests and create a competitive advantage, particularly in the beginnings of a business. This reflects the importance of non-financial goals, which include the preservation of family values and meeting social obligations.

Relatives are often willing to devote their time (Stamm et al., 2023) and financial resources to the business with the expectation that the business could lead to self-fulfilment, secure the family's future and provide family members with advantages including opportunities for personal development and skill enhancement that they would not receive in regular employment. The family is characterised by trust between family members, helping them to overcome obstacles and challenges (Lude & Prügl, 2018).

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On the other hand, conflicts between family members may lead to a loss of confidence in the business and to a decline in its competitiveness and performance. Because family members share both goals and roles, relationships are complex and interwoven, and conflicts take various forms and evolve dynamically over time (Gavrić, 2021; Mismetti et al., 2025). Previous research shows that integrating and obliging conflict management strategies are the most effective for fostering open communication, trust, and succession planning, whereas avoiding conflicts generally hampers future planning, negatively affects knowledge transfer and succession planning, and leads to business stagnation (Gavrić, 2021).

The reputation of the family is intertwined with the reputation of the company, as the name of the family is generally associated publicly with the business. It is therefore in the interest of the owners to build the company's positive image through responsible and ethical behaviour, mutual trust and long-term relationships with all stakeholders, including employees and the local community (Chaudhary et al., 2021; Nyffenegger et al., 2025).

In family businesses, employees are often perceived as members of the extended family, and their involvement strengthens shared trust and support for the company's direction. Previous research shows that family firms achieve higher levels of corporate social responsibility and stakeholder orientation than non-family firms (García-Sánchez et al., 2020b; Sun et al., 2024).

The research indicates that a well-functioning family business promotes healthy family relationships and that the family behaves in a socially responsible manner. These assertions constitute factor model F3 – social responsibility and family relationships. A list of variables is given in Tab. 1 (including the potential direction of influence on management).

3 RESEARCH OBJECTIVE, METHODOLOGY AND DATA

The main objective of our research is to determine whether differences in the latent orientations of the owners affect the financial performance of family businesses. The following secondary goals were chosen for this purpose:

- creation of a theoretical model of the family alignment measure (indicator) describing the relationships between the family and the business, and its evaluation employing confirmatory factor analysis. The model covers three areas (single-factor models): family control over the business (model F1), the long-term sustainability of the family business (model F2), and social responsibility and family relationships (model F3);
- compound variable quantification for each model to measure differences in control, long-term sustainability, family relationships, and social responsibility among family firms;
- determination whether the compound variables (referred to as F1, F2 and F3) can explain the differences in the performance of family businesses;
- verification of whether the compound variables remain statistically significant even after adding other indicators, particularly financial ratios.

The creation of the family-alignment indicator assumes that the essence of family businesses is better captured when the company places greater emphasis on non-financial goals associated with family business. This means, the theoretical model is based on the following hypotheses:

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- a family business is better managed if the owners originate from a single family (factor model F1 – family business control),
- the owning family has an interest in its long-term existence (factor model F2 – long-term family business sustainability), and
- the owners transfer family values to the business, create conditions for a work-life balance for family members and employees, and adhere to the principles of socially responsible business (factor model F3 – family business social responsibility and family relationships).

The family alignment indicator represents the degree of alignment between the sentiments of family business (FB) owners and those anticipated based on extensive literature research, i.e., it is based on the following theoretical hypotheses (set in Tab. 1).

Tab. 1 – List of variables for factor models F1–F3 and their expected impact on performance. Source: the literary research introduced in section 2.1–2.3.

Family Business Control *(Factor model F1)*	*C1* Percentage of family ownership	+
	C2 Number of family owners	+/-
	C3 Percentage of family members in management	+
	C4 Generation of owner	+/-
	C5 Willingness to accept non-family investors	-
	C6 Generation of managers	+/-
	C7 Willingness to accept non-family managers.	+/-
Long-term Family Business Sustainability *(Factor model F2)*	*S1* Length of plans in family firms	+
	S2 Preparation of a successor to take over the business	+
	S3 Family succession intention (plan to hand over the business)	+
	S4 owners' intention to remain involved after succession	+/-
Family Business Social Responsibility & Family Relationships *(Factor model F3)*	*R1* The FB brings the family members together	+
	R2 The FB is associated with a better reputation for the family in the business sphere	+
	R3 The FB is associated with an excellent social reputation (recognition) for family members	+
	R4 The FB provides an opportunity for better reconciling gainful activity and care for the family than an employment relationship (work-life balance)	+
	R5 The FB allows for better development and improving the qualifications of family members	+
	R6 The FB leads to greater cohesion in the local community	+
	R7 The FB leads to greater satisfaction of family members at work and in the family	+
	R8 The FB makes it possible to secure children's future	+
	R9 The FB leads to more frequent disagreements among family members	-

Our research focused on micro, small and medium-sized Czech family businesses. Sufficient attention was not devoted to this segment of family businesses in previous research because it is difficult to obtain data, particularly economic results, on them, though this is the most widespread

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form of family business. We considered a family business to be one in which at least two members of the same family work, with the family in question retaining ownership and managerial control of the business. The given definition is in line with the definitions used in family business research (e.g., Diaz-Moriana et al., 2019). For a family company to be included in the analysis, it was required that the owners considered the business to be family-owned. Only the owners of such family businesses emphasise non-financial family-related objectives (e.g., Nejman et al., 2021).

No database of family businesses was available in the Czech Republic at the time of the research, because no definition of a family business had yet been established (such a definition was not adopted until 2022). This led us to create our own database based on responses from the owners of 10,684 businesses, 59.5% of which were identified as family businesses (complete dataset). We approached 2,569 family businesses with a request for the completion of a questionnaire in the period August 2019 – January 2021, representing approximately one quarter of our database. The questionnaire return rate was 9%. A proportion of the responses was excluded because the respondents stated that they did not consider their company a family business. The total number of questionnaires to be further analysed was 212 (Sample 1).

Most of the companies surveyed were limited liability companies (93.9%) with less than 10 employees (55.6%) operating in the service sector (56.1%). The group also includes companies operating in the manufacturing industry (25.5%), construction (17%) and agriculture (1.4%). Almost a third of the group is made up of companies that were founded after 2009; 52.4% of the businesses were founded before 2001. The questionnaire was designed for family business owners and was part of a broader research project.

We used confirmatory factor analysis (Wang et al., 2020; Xia & Yang, 2019) using data from sample 1 to validate the theoretical models. Factor analysis is a method of multivariate analysis and is used to verify formulated hypotheses. Each factor model consists of a set of observed variables (assumptions), and factor analysis reduces them to a latent construct, represented by its factors score (new compound variable).

The quality of estimated models was assessed using standard fit measures, including the adjusted goodness of fit index (AGFI), the comparative fit index (CFI), the Tucker-Lewis index (TLI) and the root mean square error of approximation (RMSEA). The validity of the models was also analysed using Bayesian information criteria (BIC), which are designed to compare multiple models. The model with the lower value of the information criteria is more appropriate. The result is the acceptance or rejection of the model concept, i.e., the hypothesis of the structure of the variables and the existence of the factor(s).

Regression equations were then derived from the factor models, and factor scores (compound variables) were calculated for each company. These compound variables make it possible to measure the differences among family firms arising from the differing preferences of their owners.

Finally, we examined the effect of the compound variables on business performance. For this purpose, we estimated a linear mixed-effects model (Pusponegoro et al., 2017; West, 2009), which is appropriate for analysing panel data. The creation of this model assumed that stronger identification with a family business is associated with its greater efficiency and competitiveness. This model was created in three variants. First the relationship of compound variables to performance was verified (Model $RM1(ROE) = \gamma + \alpha * F_j + \varepsilon$), after which additional

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explanatory variables were added to the model (Model RM2). Finally, an interaction model (Model RM3) was created, which can be expressed as follows:

$$RM3(ROE) = \gamma + \alpha * F_j + \beta * X_j + \delta * CV_j + \theta * (F_j * X_j) + \varepsilon \quad (1)$$

in which γ is a constant (intercept), α, β, δ and θ are regression coefficients, F_j are compound variables, X_j are financial ratios, CV_j are dummy control variables such as company size, company age and industry, and ε is the residual value.

Return on equity (ROE) was selected as an indicator of company performance (dependent variable). ROE is frequently used to assess the performance of family businesses, as it allows owners to measure the return on the capital invested in the business (e.g., Afonso Alves et al., 2020; Alves & Gama, 2020; Hansen et al., 2020; Simarasl et al., 2020; Veltri et al., 2021). We admit that ROE does not measure the other financial benefits that owners may get from their business (for example, using business assets for personal use or getting back certain expenses). However, we consider it to be the best way to measure the benefits gained by family owners. In addition to compound variables F1–F3 (family alignment indicators), financial ratios were also used as explanatory (independent) variables. We devoted considerable attention to the reasoned selection of these indicators, because when a large number of indicators are incorporated into a regression model, their significance decreases, and it becomes difficult to identify those factors that are decisive for financial performance. We decided to use variables that approximate value drivers, i.e., indicators affecting the performance and value of a business (Martínez-Romero et al., 2020). The profit margin indicator (operating profit to sales) was replaced, as it did not provide sufficient specificity for the analysis. Instead, more detailed cost-based sub-indicators were used, i.e., labour costs to sales (LC/S), material and energy costs to sales (MEC/S), and costs of services to sales (SE/S). Additional indicators were included: asset turnover (*S/TA, sales to total assets*), liquidity ratio (*CA/CL, current assets to current liabilities*) and indebtedness ratio (*TL/TA, total debt/total assets*). We estimated models RM1–RM3 to determine whether the differences in the performance of family businesses can be explained by the newly created variables representing the specifics of family businesses. Dummy variables were used as control variables: company age, industry and company size (e.g., Chrisman et al., 2012; Debicki et al., 2017).

Accounting data of family businesses for the years 2016–2018 were used to calculate the ROE and other financial indicators. Accounting data were available for only 168 businesses in the set of family businesses the owners of which completed the questionnaire (referred to as sample 2). The structure of the dataset in terms of industry and legal form remained similar to sample 1, though the proportion of businesses with fewer than five employees and businesses that were not founded until after 2009, i.e., younger businesses, decreased. The reason for this is the unavailability of accounting data on these businesses. The average value of the ROE in the analysed set is 28.4%, which is a relatively high value. The resulting value may be influenced by a number of conditions: both by the fact that the data come from a period of economic growth and also by the high proportion of service enterprises in the set (approx. 55%) and the high level of indebtedness of a significant proportion of these businesses. Data from the period of economic decline during the Covid pandemic were not used in the analysis, as it would have been necessary to consider the impact of external conditions on changes in business results. In this way, we ensured that the analysed accounting data were relatively homogeneous and consistent with the answers received from the respondents. During data collection (2019 and 2020), family business owners perceived

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uncertainty about the future development of their businesses, but at the same time they benefited from subsidies that eliminated their additional expenses and decline in sales. The accounting data were transformed using modular data transformation (John & Draper, 1980), and extreme values were replaced by the threshold values of variables. The decision-tree technique (CHAID) was applied to the complete dataset to inpute missing values for the calculation of financial ratios (Higashijima et al., 2010). We used IBM Amos to process the data and estimate models F1–F3, and used IBM SPSS Statistics to estimate models RM1–RM3.

4 RESULTS AND DISCUSSION

This section presents the results of the factor models capturing the specifics of family businesses and provides an analytical interpretation of their structure.

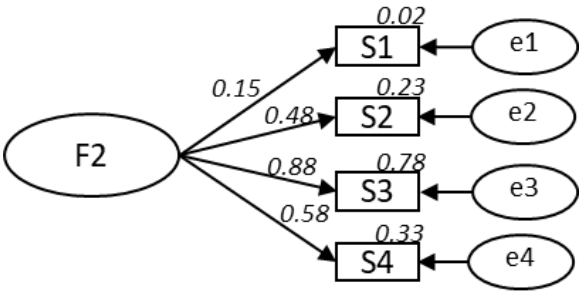
4.1 Factor Model F1: Family Business Control

Factor model *F1 family business control* presents the assumption that a business exhibits stronger family orientation when ownership and management are concentrated in a single family. However, this assumption was not supported due to the low variability of responses.

This homogeneity reflects the current stage of development of Czech family businesses, which are now undergoing their first intergenerational transition. In our sample, 90% of family businesses are fully family owned, 92% have no more than two owners (typically spouses) and 99% are owned by the first or second generation, who also manage 98% of the businesses. The results demonstrate that a high degree of family control is a universal feature of early-generation Czech SMEs, meaning it cannot be used to differentiate performance. These findings are consistent with Hauck et al. (2016) and Gómez-Mejía and Herrero (2022), who argue that although family control is often used as an indirect measure for SEW, it is not part of its core structure, but rather acts as a precondition enabling the family to pursue affective, relational, and non-economic goals.

A further indicator of strong control is the reluctance to accept non-family investors, where 69% of respondents reject external nonfamily equity, unless the stake is small and does not affect strategic decision-making. This financial conservatism highlights the prioritization of preserving SEW through maintained managerial and ownership control (Berrone et al., 2012; Gómez-Mejía et al., 2007). Differences in the behaviour of family businesses only become apparent with a decline in emotional attachment to the business, typically in later generations (Schulze et al., 2002).

4.2 Factor Model F2: Long-term Family Business Sustainability



Factor model *F2 long-term family business sustainability* (see Fig. 1) examines whether the owners actively secure long-term continuity and intend to preserve the business within the family. It

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incorporates items related to succession planning, preparation of heirs, and owners' long-term intentions.

Fig. 1 – Factor model F2: long-term family businesses sustainability. Source: own research

$$F2 = 0.027 * S1 + 0.078 * S2 + 0.653 * S3 + 0.139 * S4 \quad (2)$$

Model fit criteria (Tab. 2) indicate that F2 performs well and can be used to compute the compound variable F2. The influence of S3 variable (plan to hand over the business to the next generation) prevails in the derived equation, followed by the S4 variable (owners' intention to remain involved after succession). These results highlight a paradox of succession: on the one hand, the activity of the original owner ensures business continuity and is a prerequisite for maintaining good relations with other stakeholders, while on the other hand, an incomplete handover may hinder the development of the business and lead to a limitation on innovation, since the successors remain under the supervision of the original owners (often their parents) who adhere to established procedures. This paradox is documented in previous studies: while the founder's strong attachment stabilises the business, prolonged incumbency may limit successors' autonomy and slow the adoption of new routines, technologies, or innovations (Sciascia et al, 2014). It follows from the responses that concurring positions prevailed among respondents in respect to the formulated assertions (hypotheses). From a stewardship perspective, we can infer that founder involvement preserves SEW and stabilises the firm, however, prolonged incumbent control can limit successors' autonomy and slow organisational adaptation, producing agency-like constraints on innovation. This duality explains why long-term orientation (F2) does not necessarily improve short-term ROE.

The homogeneity of responses indicates that long-term orientation is a shared value among family businesses, consistent with European studies highlighting the importance of intergenerational continuity for family-business development (Cesaroni & Sentuti, 2017; Chaudhary et al., 2021). This pattern aligns with SEW and stewardship logic when the intention to succeed helps preserve SEW. However, incumbent stewardship can reduce successor autonomy and slow organisational change.

4.3 Factor model F3: Family Business Social Responsibility and Family Relationships

Factor model F3 (see Fig. 2) presents the following assumptions:

1. a family business functions better if the family behaves in a socially responsible manner,
2. the functioning of a family business is positively influenced by the family's connection with the business (emotional attachment),
3. this emotional attachment is stronger when there are good relationships within the family, and
4. a family business provides benefits to the family.

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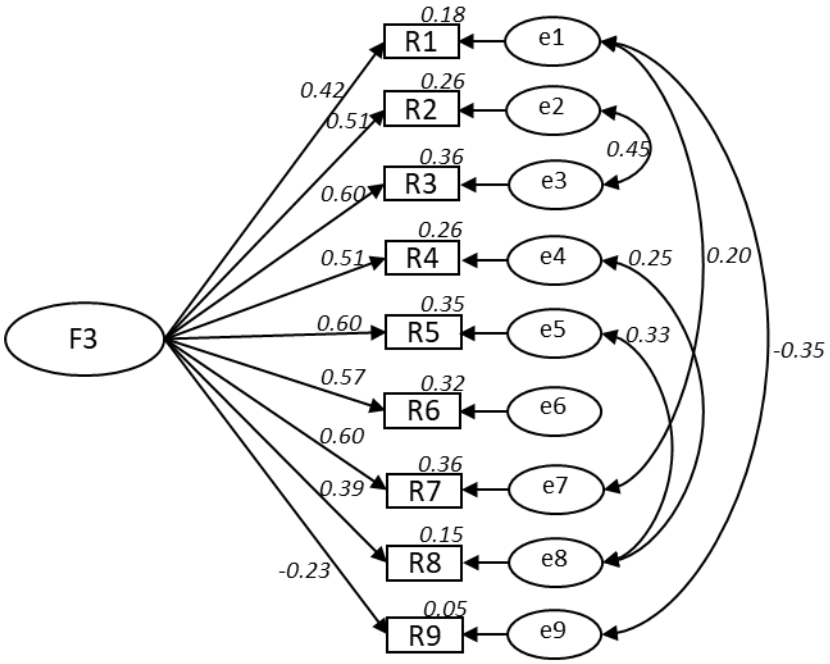

Fig. 2 – Factor model F3: family business social responsibility and family relationships Source: own research

Most of the evaluation criteria for factor model F3 are at around the limit of the recommended values (see Tab. 2). According to the criterion *BIC*, the constructed model is adequate because its value is lower than that of the saturated model. The only variable with a negative influence is *disagreements in the family*, which is in line with the assumptions. The negative effect of family conflict is consistent with studies showing that such disharmony weakens the family's emotional attachment to the firm, impairs communication, and can lead to reduced performance (Gavrić, 2021; Mismetti et al., 2025). Conversely, a culture of mutual trust and respect fosters creativity, collaboration, and long-term stability (Lude & Prügl, 2018).

Three groups of co-occurring characteristics emerge:

- if the family business promotes personal development of family members, it also contributes to their long-term security and enables a balanced family-work environment. This supports the assertion that a functioning family plans to pass the business on to its descendants and also educates them for this purpose (interdependence of R8, R5, R4)
- strong family cohesion reduces disagreements, supports stable interpersonal relations, and increases satisfaction in both work and family domains (interdependence of R1, R7, R9), reflecting social capital benefits.
- for a well-functioning family business, it is important to build relationships with the outside world that provide the family with social recognition (interdependence of R3 and R2). External relations underpin reputation and source access, aiding competitiveness.

These groups correspond closely with theoretical arguments. The pattern of indicators' influence suggests that family social capital, shared values, and responsible behaviour enhance

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competitiveness, creativity, employee motivation, and innovation capacity (Chaudhary et al., 2021; Lude & Prügl, 2018). Using the model parameters, the compound variable F3 was estimated:

$$F3 = 0.036 * R1 + 0.045 * R2 + 0.084 * R3 + 0.064 * R4 + 0.100 * R5 + 0.099 * R6 + 0.098 * R7 + 0.004 * R8 - 0.013 * R9 \quad (3)$$

It follows that family businesses the owners of which support the personal development and skills enhancement of family members and care about job satisfaction achieve a higher family alignment indicator score. Below are statistics for models F2 and F3.

Tab. 2 – Model Fit Summary. Source: own research

Criterion	Factor model F3	Factor model F2	Desired Value
AGFI	0.881	0.951	> 0.90
CFI	0.920	0.979	> 0.90
TLI	0.869	0.936	> 0.90
RMSEA	0.089	0.074	< 0.08
	Default model		**Saturated model**
BIC	181.573		241.046
			149.984
		47.160	53.566

4.4. Financial Performance and Family-alignment Indicator

We used compound variables to measure family alignment. The results show that only the compound variable F3 (family social responsibility and family relationships) is statistically associated with financial performance measured by ROE (*Sig. < 0.05*). The results for the relationship ROE = f(F3) are given in Tab. 3 (Model RM1).

Tab. 3 – Model RM1: Parameters of performance model for factor F3. Source: own research

Parameter	Estimate	SE	df	T	Sig.
Intercept	0.088	0.023	120.155	3.782	< 0.001
F3	0.111	0.047	118.355	2.371	**0.019**
Parameter	**Estimate**	**Std. Error**	**Wald Z**		**Sig.**
Repeated Measures	0.031	0.003	10.665		< 0.001
Intercept (business unit)	0.024	0.005	4.909		< 0.001

These results indicate that the performance of family businesses increases along with an increase in the variable F3, i.e., with a positive attitude towards socially responsible business and better family relationships. This finding is consistent with the social capital theory, which anticipates that family social capital, the quality of interpersonal relationships, and responsible family behaviour can contribute to employee motivation, team stability, a positive company reputation, and more efficient use of resources. These factors can also positively impact financial results (Lude & Prügl, 2018; García-Sánchez et al., 2020a).

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Even if the conclusion is clear (compound variable F3 is significant at the 5% level of significance), it cannot be assumed that F3 is the only variable causing differences in the ROE of family businesses. We also included company's age, company size and industry sector in the model, as these variables have been identified in previous studies as factors influencing firm performance. The results are given in Tab. 4 (Model RM2).

Tab. 4 – Model RM2: ROE and its relationship to F3 and other ratios. Source: own research

"°" for α = 0.1; "" for α = 0.05; "**" for α = 0.01; "***" for α = 0.001*

Parameter	Estimate	SE	df	t	Sig.	95% Confidence Interval	
						Lower limit	Upper limit
Intercept	0.009	0.149	157.630	0.063	0.950	-0.286	0.305
[Size=micro]	0.092	0.067	83.678	1.368	0.175	-0.042	0.226
[Size=small]	0.068	0.063	80.696	1.085	0.281	-0.057	0.192
[Size=medium]	0[b]	0.000					
[Industry=S]	0.032	0.050	93.966	0.631	0.530	-0.068	0.132
[Industry=A]	-0.049	0.142	82.829	-0.346	0.730	-0.332	0.233
[Industry=C]	0.074	0.059	103.159	1.257	0.212	-0.043	0.190
[Industry=F]	0[b]	0.000					
[Year=<2001]*	-0.100	0.045	92.184	-2.216	**0.029**	-0.190	-0.010
[Year=(2001, 2009)]°	-0.094	0.055	93.551	-1.713	**0.090**	-0.202	0.015
[Year=>2009]	0[b]	0.000					
F3°	0.084	0.048	89.173	1.748	**0.084**	-0.012	0.180
TL/TA*	0.330	0.149	244.729	2.213	**0.028**	0.036	0.624
CA/CL°	0.161	0.096	302.525	1.685	**0.093**	-0.027	0.350
S/TA	-0.068	0.097	191.532	-0.695	0.488	-0.259	0.124
LC/S*	-0.361	0.146	186.726	-2.474	**0.014**	-0.649	-0.073
Se/S	-0.096	0.131	276.169	-0.731	0.465	-0.355	0.163
MEC/S	-0.157	0.136	294.807	-1.156	0.249	-0.425	0.111

After controlling for these additional variables, F3 (family business social responsibility and family relationships) remains statistically significant at the 10% level, suggesting that social emotional factors contribute to performance alongside standard financial determinants. Among the financial indicators analysed, liquidity, leverage, and labour costs exhibited the greatest variability, and these variables subsequently entered the performance model as control variables, together with the age of the firm. The results show that higher indebtedness and growth of the liquidity have a positive effect on the growth of ROE; conversely, ROE declines as the ratio of labour costs to sales increases. No differences in ROE caused by the industry sector or the size of the company were found. Younger companies tend to have higher ROE, which may reflect more dynamic growth opportunities.

To better understand the family's influence on performance, we estimated a model with interactions between F3 and financial ratios. The results are given in Tab. 5 (Model RM3).

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Tab. 5 – Model RM3: ROE and its relationship to F3 and other ratios – model with interactions. Source: own research

"○" for α = 0.1; "" for α = 0.05; "**" for α = 0.01; "***" for α = 0.001*

Parameter	Estimate	SE	df	t	Sig.	95% confidence interval	
						Lower limit	Upper limit
Intercept	0.158	0.218	226.428	0.728	0.467	-0.270	0.587
[Size=micro]	0.087	0.071	80.008	1.219	0.226	-0.055	0.229
[Size=small]	0.075	0.066	77.496	1.145	0.256	-0.056	0.207
[Size=medium]	0[b]	0.000					
[Industry=S]	0.025	0.054	90.785	0.473	0.637	-0.081	0.132
[Industry=A]	-0.124	0.153	82.016	-0.815	0.418	-0.428	0.180
[Industry=C]	0.049	0.062	99.223	0.792	0.430	-0.074	0.172
[Industry=F]	0[b]	0.000					
[Year=<2001]*	-0.104	0.048	89.609	-2.164	**0.033**	-0.200	-0.009
[Year=⟨2001,2009⟩]°	-0.102	0.058	89.470	-1.767	**0.081**	-0.217	0.013
[Year=>2009]	0[b]	0.000					
F3	-0.249	0.378	235.914	-0.659	0.511	-0.995	0.496
TL/TA	0.282	0.235	318.090	1.198	0.232	-0.181	0.745
CA/CL*	0.377	0.162	347.229	2.331	**0.020**	0.059	0.695
S/TA*	-0.334	0.139	225.909	-2.406	**0.017**	-0.608	-0.061
LC/S***	-0.925	0.224	262.389	-4.136	**0.000**	-1.365	-0.484
Se/S	-0.069	0.194	273.602	-0.355	0.723	-0.450	0.312
MEC/S	-0.139	0.176	231.212	-0.791	0.430	-0.486	0.207
F3 x TL/TA	0.136	0.475	329.155	0.285	0.776	-0.799	1.070
F3 x CA/CL°	-0.568	0.324	354.593	-1.754	**0.080**	-1.204	0.069
F3 x S/TA*	0.747	0.296	213.439	2.522	**0.012**	0.163	1.330
F3 x LC/S**	1.394	0.485	218.963	2.876	**0.004**	0.439	2.350
F3 x Se/S	-0.218	0.423	287.840	-0.516	0.606	-1.050	0.614
F3 x MEC/S	-0.003	0.410	177.524	-0.008	0.994	-0.813	0.806

Interaction results indicate significant F3 x S/TA and F3 x LC/S ($p < 0.05$) interactions, showing that F3 moderates the impact of asset efficiency and labour-cost intensity on ROE. The influence of variable F3 on ROE is now opposite for the very reason that it manifests itself through other variables. The labour costs to sales variable has the greatest influence in the model and logically has a negative effect on the financial performance of family businesses. Its negative influence is, however, moderated by the influence of compound variable F3, i.e., the positive influence of family relationships and attitudes towards socially responsible behaviour. Variable F3 has a similar effect in interaction with the indicator asset turnover. This could mean that families with a positive attitude towards social responsibility and good relationships are better able to exploit available resources and achieve profit with a smaller volume of assets. This supports the idea that family members are willing to become involved in the business when needed, thereby substituting for

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investment in the business by means of work performed outside standard hours (Stamm et al., 2023), without immediate remuneration for the work performed. However, all results must be interpreted with caution due to the sample's bias towards the service sector.

The demonstrated effect of F3 (family business social responsibility and family relationships) on financial performance confirms that family relationships and socially responsible behaviour play an important role in the economic results of family businesses. This aligns with the core principles of SEW, where family owners balance financial objectives with family interests, including relationships with employees and the local community. Some authors (e.g., De Massis et al., 2013; Minichilli et al., 2010) support the existence of an inverted U-curve between performance and the involvement of other family members in top management and ownership of the business. This occurs when the business is passed on to further generations. Villalonga and Amit (2006) also argue that involvement of the next generation can lead to performance declines due to increased conflicts and succession problems. This view is indirectly supported by our results through variable R9 (disagreements among family members), which entered the calculation of compound variable F3 with a negative sign.

In foreign studies, family business control is often used both to describe the differences between family businesses and to examine its effect on performance. The ownership structure of Czech family firms and the degree of family involvement in management are similar: most businesses are owned by the first or second generation, and many report full (100%) family ownership. Consequently, differences in performance cannot be explained by ownership control in our sample (compound variable F1 representing family business control). On the other hand, previous research has already confirmed that family control of the company is considered a lower-order goal that needs to be satisfied in order to achieve higher-order goals such as family succession, emotional attachment, greater family reputation, job satisfaction, development for family members, etc. (see, e.g., Dou et al., 2020; Smajić et al., 2022). It can, therefore, be considered merely a necessary condition for the existence of family businesses.

The finding that F1 is non-significant in explaining performance differences is theoretically supported by Swab et al. (2020), which posit that F (control) and R (renewal) are necessary conditions but not sufficient for SEW to exist. Because our sample of early-generation Czech SMEs exhibits near-universal, high family control (F1) and transgenerational intent (F2), these factors act as constraints that define the group but do not differentiate performance within it. We therefore conclude that the significance of F3 supports the view that the core of family-firm heterogeneity lies in affective dimensions (I – identification of family members with the company, B – binding social ties, and E – emotional attachment of family members), which capture the dynamic reference points, emotions and ties that drive strategic decisions, and which are the very nuances that F3 measures.

5 CONCLUSION

In our research, we examined the specific characteristics of family firms and their influence on financial performance, drawing on the widely accepted concept of socioemotional wealth (SEW), which captures the non-financial goals of family businesses. Unlike much of the existing literature, which usually measures SEW indirectly and relies on subjective performance indicators, we

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developed a theoretical model based on twenty variables and constructed a composite family alignment indicator. This indicator reflects the alignment of family values, the degree of family involvement in management, and attitudes toward social responsibility. These dimensions are transferred into the governance of family businesses and form the basis of their competitiveness. The hypotheses underlying the family alignment indicator are based on agency theory, stewardship theory and social capital theory. They were formulated to simplify the existing approach to measuring SEW via FIBER (Swab et al., 2020) and to be understandable to potential respondents. We focused on micro, small and medium-sized family businesses, as they are more likely than larger businesses to transfer family values into business practices. The comprehensibility of the formulated hypotheses was verified through face-to-face interviews with family business owners during the data collection process. The family alignment indicator is a direct measure of SEW and is therefore suitable for use in a business performance model.

Unlike most foreign studies, we used objective financial indicators to measure performance. We measured the performance of family businesses using return on equity as the dependent variable. We selected this metric because it directly measures the return on capital invested by the owners. However, it is a short-term metric based on a single accounting period and therefore cannot fully capture the long-term contributions of family firms. In addition to this indicator, we used other financial ratios as independent variables.

Because most firms in our sample were undergoing a first generational transition, the sample showed high homogeneity and limited variability in ownership and managerial structures, which prevented full empirical validation of the theoretical model. Our key empirical finding is the statistical significance of factor F3 (social responsibility and family relationships). F3 proved to be an important predictor of financial performance measured by ROE, although its precision declined once control variables were added. Using panel accounting data from a period of economic growth, we found that F3 not only increases ROE but also moderates the effects of two important financial indicators. It reduces the negative impact of labour costs to sales and strengthens the positive effect of asset turnover. These results support the idea that strong family social capital and high-quality relationships enable family members to contribute to the business beyond standard contractual arrangements. Such contributions can partially compensate for limited financial investment and improve resource efficiency. The findings are consistent with stewardship theory, which emphasizes family members' identification with their business and their willingness to temporarily forego financial benefits in order to preserve the family business.

Our results suggest that strengthening family relationships and socially responsible behaviour can enhance the financial performance of family firms. Conversely, conflicts within the family arising from failing to consider differing interests of family members, unclear succession strategies, insufficient involvement of the next generation in management, or inadequate transfer of experience can reduce the family alignment indicator and negatively affect firm performance. Although family businesses typically pursue long-term goals, we found that F3 affects performance even in the short term, likely through better use of resources, higher owner engagement and stronger employee motivation. Weak succession planning and family conflicts remain major risks that often lead to unsuccessful generational transitions. We therefore recommend that family firms devote greater attention to building trust, developing successors and adopting socially responsible management practices. This is associated with higher employee creativity and innovation, as well as increased competitiveness of these businesses. Similarly, efforts to maintain social reputation

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through responsible business practices, support for employees and the local community, and a trust-based work environment can enhance business performance. When family resources are constrained, attention should focus on identifying suitable successors among trusted employees who share the family's values and entrepreneurial culture. For owners, this means that investing in family harmony, conflict prevention and reputation building is not only a value-driven choice but also a strategic way to improve efficiency and financial results.

We acknowledge several limitations of this research. Our findings are not universally generalisable due to the structure of the datasets analysed and the period in which the research was conducted. The study focuses on SMEs in the Czech Republic and represents, to our knowledge, the first research of this segment in the Central and Eastern European (CEE) context, thereby contributing to the broader literature on family business. The family alignment indicator was compiled based on data from 212 respondents and accounting data available for more than 150 businesses over multiple periods. We believe the sample size does not limit the explanatory value of our research. The size of our research sample is comparable to that of previous studies (see, e.g., Calabrò et al. (2026); the authors analysed 148 quantitative empirical studies in which the median number of respondents was 230). Furthermore, particularly in the case of small and medium-sized enterprises, it is difficult to obtain responses to questionnaire surveys as well as their financial data. During in-person data collection, owners consistently reported increasing administrative burdens and labour shortages, but did not perceive threats from the external environment, and were not driven by pandemic-related or geopolitical shocks. For this reason, we consider the survey responses and accounting data to be mutually consistent, and we did not consider it appropriate to extend the time series of observed data, although the results from future studies may differ if owners of family firms perceive higher external risk. The relatively low response rate (9%) may lead to non-response bias, making the research sample non-representative. To address this issue, we compared the structure of the surveyed sample (sample 1) with the structure of the database we created (given the lack of a comprehensive database covering the entire Czech Republic). In terms of business size and industry structure, the representativeness of the sample was maintained; however, other characteristics (such as length of operation, number of family members, etc.) could not be compared, which may limit the validity of our results. Another limitation of the research is the potential endogeneity of the data, since reverse causality may be present. Our results indicate that the quality of family ties affects performance. However, it is also possible that poor performance may affect family ties. Therefore, our results should be interpreted with some caution. At the same time, this possible reverse causality still suggests that the family and the business are interconnected. Finally, a methodological limitation is our two-step modelling approach. Using a factor score variable can lead to generated regressor bias, potentially underestimating standard errors. The two-step approach was adopted to avoid an excessive number of explanatory variables in the model (models F1-F3 represent 20 variables) and to retain the longitudinal structure of the financial data.

Further research could benefit from a more differentiated sample with respect to ownership structure and the extent of family involvement in management. Because our sample is highly homogenous in terms of ownership concentration and family involvement in management, our ability to distinguish the effects of these variables is limited. However, greater variation in these characteristics is likely to emerge only after ownership and management have been transferred to future generations. We used ROE to measure financial performance, but it is a short-term metric based on a single accounting period and therefore cannot fully capture the long-term contributions

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of family firms. This limitation is partially mitigated by the use of panel data. Future research could also compare owners' opinions with those of other family members involved in the business to assess whether perceptions among family members are homogeneous. In such a case, however, the research would likely need to be conducted on a small sample of companies.

Despite these limitations, we believe that our findings contribute to a better understanding of the family business specifics and thereby support ongoing efforts to integrate soft measures with objective financial data.

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Contact information

Prof. Ing. Mária Režňáková, CSc.
Brno University of Technology
Faculty of Business and Management
Department of Finance
Czech Republic
E-mail: reznakova@vutbr.cz
ORCID: 0000-0002-7261-607X

Ing. Pavla Srbová, Ph.D.
Brno University of Technology
Faculty of Business and Management
Department of Finance
Czech Republic
E-mail: pavla.srbova@vutbr.cz
ORCID: 0000-0003-4076-9829

Doc. Ing. Michal Karas, Ph.D.,
Brno University of Technology
Faculty of Business and Management
Department of Finance
Czech Republic
E-mail: Michal.Karas@vut.cz
ORCID: 0000-0001-8824-1594

Ing. Jan Pěta, Ph.D.,
Brno University of Technology
Faculty of Business and Management
Department of Finance
Czech Republic
E-mail: Jan.Peta@vut.cz
ORCID: 0000-0001-6309-3601

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