

# ARTICLES

Submitted 03-04-2022 Approved 01-31-2023

Evaluated through a double-blind review. *Ad hoc* Associate Editor: Ana Paula Matias Gama

Reviewers: Catarina Alves , Instituto Politécnico da Guarda, Guarda, Portugal. The reviewers did not authorize the disclosure of their identity.

Open review report: The reviewers did not authorize the disclosure of their review report.

Translated version | DOI: <http://dx.doi.org/10.1590/S0034-759020230403>

## CONTROL MECHANISMS AND STRATEGIC FLEXIBILITY OF FAMILY FIRMS

*Mecanismos de controle e flexibilidade estratégica das empresas familiares*

*Mecanismos de control y flexibilidad estratégica de las empresas familiares*

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### ABSTRACT

The study aims to evaluate the influence of the culture of family's commitment on strategic flexibility and the mediating effects of control mechanisms from the perspectives of agency and stewardship theories in Brazilian family firms. For data analysis, it was performed Structural Equation Modeling (MEE-SmartPLS). The study's results show that the relationship between the family commitment culture and strategic flexibility is not direct, but mediated by stewardship control mechanisms. However, agency mechanisms do not mediate the relationship between family's commitment culture and strategic flexibility. The study advances the discussions about the coexistence of control mechanisms in family firms, contributes by evaluating mechanisms that precede strategic flexibility, in addition to investigating strategic flexibility in a pandemic context. Furthermore, it provides insights for companies to reflect on the most appropriate use of mechanisms that encourage strategic flexibility.

**Keywords:** culture of family commitment, control mechanisms, family firms, strategic flexibility, COVID-19.

### RESUMO

O trabalho objetiva avaliar a influência da cultura de comprometimento da família na flexibilidade estratégica e os efeitos mediadores de mecanismos de controle sob as óticas das teorias da agência e stewardship em empresas familiares brasileiras. Para análise de dados, foi realizada Modelagem de Equações Estruturais (MEE-SmartPLS). Os resultados evidenciam que a relação entre a cultura de comprometimento da família e a flexibilidade estratégica não se dá de maneira direta, mas mediada por mecanismos de controle stewardship. No entanto, mecanismos de agência não medeiam a relação entre a cultura de comprometimento da família e a flexibilidade estratégica. O estudo avança as discussões acerca da coexistência dos mecanismos de controle nas empresas familiares, contribui ao avaliar mecanismos que antecedem a flexibilidade estratégica e investiga a flexibilidade estratégica em um contexto pandêmico. Além disso, fornece insights para as empresas refletirem quanto ao uso mais adequado de mecanismos que estimulem a flexibilidade estratégica.

**Palavras-chave:** cultura de comprometimento da família, mecanismos de controle, empresas familiares, flexibilidade estratégica, pandemia da Covid 19.

### RESUMEN

El trabajo tiene como objetivo evaluar la influencia de la cultura de compromiso de la familia en la flexibilidad estratégica y los efectos mediadores de los mecanismos de control desde las perspectivas de las teorías de agencia y de stewardship en las empresas familiares brasileñas. Para el análisis de los datos, se implementó el modelado de ecuaciones estructurales (MEE-SmartPLS). Los resultados muestran que la relación entre la cultura de comprometimiento de la familia y la flexibilidad estratégica no se da directamente, sino que está mediada por mecanismos de control de la stewardship. Sin embargo, los mecanismos de agencia no median la relación entre la cultura del compromiso familiar y la flexibilidad estratégica. El estudio hace avanzar las discusiones sobre la coexistencia de mecanismos de control en las empresas familiares, contribuye al evaluar los mecanismos que preceden a la flexibilidad estratégica e investiga la flexibilidad estratégica en un contexto de pandemia. También ayuda a las empresas a reflexionar sobre el uso más adecuado de mecanismos que estimulen la flexibilidad estratégica.

**Palabras clave:** cultura de compromiso familiar, mecanismos de control, empresas familiares, flexibilidad estratégica, pandemia.

## INTRODUCTION

The ability of family businesses to respond to changes in their external environment is a key factor for them to remain competitive in the market (Pérez-Pérez et al., 2019). In particular, the context of the new coronavirus (Covid-19) pandemic generated adverse, broad effects in different areas of society (such as health and education, as well as the economy) and, in this sense, challenged habits, practices and strategies until then employed by organizations. Even the changes necessary to meet the policies to fight Covid-19 led to the bankruptcy of companies considered solid (Donthu & Gustafsson, 2020).

In Brazil, the pandemic was the reason for the closure of activities of about 39.40% of companies, which were forced to stop their activities in the first half of 2020 (Indio, 2020; Instituto Brasileiro de Geografia e Estatística [Brazilian Institute of Geography and Statistics, IBGE], 2020), with other organizations having to adapt to survive, such as migrating their operations to the digital environment (Donthu & Gustafsson, 2020). In this context of uncertainty and volatility, the ability of companies to act in a strategically flexible manner and quickly realign their strategies was crucial for them to remain active in the market.

A crisis like the one faced by Covid-19 hits family businesses twice; first, family members as individuals in society, and a second time as business owners (Kraus et al., 2020). Due to emotional involvement and particular ownership structures, recent studies illustrate that family businesses were able to adopt more flexible strategies during the pandemic period compared to companies with a more formal and vertical structure (Kraus et al., 2020). Studies developed during the pandemic argue that family businesses, in situations of external and critical threats such as the pandemic, are capable of taking on greater risks, due to their focus on business longevity (Kraus et al., 2020).

In this sense, the concept of strategic flexibility emerges, which is characterized by the company's ability to seek new opportunities and respond to competitive market threats (Cingöz & Akdogan, 2013; Pérez-Pérez et al., 2019). In other words, it translates into the degree and speed with which companies react to opportunities and threats (Cingöz & Akdogan, 2013; Nadkarni & Herrmann, 2010) and, therefore, makes it a facilitator, so that organizational changes happen in a more agile way, allowing the company to position itself ahead of its competitors (Nadkarni & Herrmann, 2010).

That said, strategic flexibility has become imperative for organizations, especially for family businesses, which have at their core the maintenance of business continuity and family control for the next generations (Kraus et al., 2020). Previous studies, for example, suggest that formal and informal governance mechanisms and flexible systems impact crisis management and the survival of family businesses in challenging times (Calabrò et al., 2021).

Family businesses show different behaviors with regard to strategic flexibility, due to their long-term orientation and the affective ties of family members with the business, among other aspects that are reflected in the management and governance of the business (Pérez-Pérez et al., 2019). There is evidence that strategic flexibility can be stimulated by internal aspects of the organization, including organizational culture (Craig et al., 2014; Eddleston, 2008; Zahra et al., 2008),

management control mechanisms (Kober & Thambar, 2022; Zahra et al., 2008) and governance (Filatotchev & Toms, 2003; Madison et al., 2015). For Zahra et al. (2008), family businesses with greater family commitment, involvement and trust favor an environment of goal alignment, which contributes to the acceptance of strategic changes.

The formal and informal control and governance mechanisms, while being influenced by family culture, also encourage strategic flexibility, by directing and motivating managers, and can be investigated within two theoretical perspectives, the agency theory and the stewardship theory (Davis et al., 1997; Madison et al., 2015). On the one hand, agency mechanisms are adopted to direct and motivate the agent's behavior to the principal's interests and, therefore, are primarily characterized as formal, control and incentive instruments (Madison et al., 2017; Purkayastha et al., 2019). On the other hand, stewardship mechanisms essentially stimulate trust and the group and, thus, favor the identification of the manager with the family business (Madison et al., 2017; Purkayastha et al., 2019; Vallejo, 2009) and stimulate behaviors aligned with business continuity. The steward, as a premise, is motivated to pursue organizational objectives compatible with the interests of the principal. Although the steward's behavior is anchored in the assumption of the individual's behavior, the cultural and governance context, it needs to be appropriate for it to be consolidated and continuous (Purkayastha et al., 2019).

Although previous studies have demonstrated the relationship between organizational culture, stewardship mechanisms and strategic flexibility (Eddleston, 2008; Zahra et al., 2008), there is a gap in studies that analyze the relationship, considering the complementarity between agency control mechanisms and stewardship or as different ways of stimulating the strategic flexibility of family businesses. Furthermore, for Kober and Thambar (2022), the joint use of control mechanisms facilitates strategic flexibility in times of crisis, as they come to be perceived as complementary, not competing, control mechanisms.

Thus, this study aims to evaluate the influence of the family's culture of commitment on strategic flexibility and the mediating effects of control mechanisms from the perspectives of agency theory and stewardship theory, in Brazilian family businesses.

This way, this research contributes to the literature by addressing the importance of strategic flexibility for family businesses. Furthermore, it evaluates family and organization mechanisms that can facilitate strategic flexibility, as a direct relationship of the family's culture of commitment, or mediated simultaneously by agency and stewardship control mechanisms.

Another particular aspect is the discussion of the antecedents of strategic flexibility, fundamental and sensitive organizational behavior for business continuity during a period of health, social and economic shock such as the one experienced during the Covid-19 pandemic and which broadly affected organizations. In other words, in addition to discussing the complementarity between agency and stewardship mechanisms, the study advances the findings of Zahra et al. (2008), analyzing strategic flexibility during a pandemic context. Still, it responds to the call of Calabrò et al. (2021), who suggest studies on formal and informal governance mechanisms and flexible systems in crisis management and survival of family businesses in challenging times. Furthermore, there are still gaps on how companies adopt strategic flexibility

(Nadkarni & Herrmann, 2010) and the relationship with the company's resources remains little explored (Bamel & Bamel, 2018).

Finally, in practical terms, the study provides insights for family businesses to reflect on the most appropriate use of control mechanisms, which transmit the family's commitment culture on strategic flexibility, that is, on its ability to seek new opportunities and respond to threats in the competitive marketplace.

## THEORETICAL FRAMEWORK AND RESEARCH HYPOTHESES

Competitive, technological and global trends have changed over the years, and this has challenged companies to remain active in the market (Cingöz & Akdogan, 2013; Pérez-Pérez et al., 2019). In more dynamic and tough contexts, companies need to adapt quickly to changes, that is, maintain a high level of flexibility to develop new strategies, take advantage of emerging opportunities, develop and innovate to be competitive in the market (Calabrò et al., 2021; Kraus et al., 2020).

Strategic flexibility is a determining factor in the competitive advantage of companies, especially when it comes to turbulent contexts (Miroshnychenko et al., 2021), such as the pandemic context triggered by Covid-19. In this new context, the consumption pattern changed due to the need for social isolation; therefore, companies needed to act quickly and meet consumer needs remotely (Kober & Thambar, 2022; Leppäaho & Ritala, 2021). At that moment, the lack of strategic flexibility was noticeable in some companies, which were unable to meet the demand of the pandemic and, consequently, ended their activities (Donthu & Gustafsson, 2020). However, even in the face of this scenario, many companies prospered, as they managed to optimize the use of available resources and transform their operations to meet customer needs (Leppäaho & Ritala, 2021).

Strategic flexibility implies the flexible use of company resources and even the adaptation of internal processes, influencing the ability of organizations to innovate (Miroshnychenko et al., 2021). Companies with strategic flexibility are more proactive (Cingöz & Akdogan, 2013) and anticipate their strategic actions in the competitive environment, quickly changing from one strategy to another (Ni et al., 2021). In fact, previous studies provide evidence that strategic flexibility is positively associated with better business performance (Nadkarni & Herrmann, 2010; Ni et al., 2021).

### Relationship between culture of commitment and strategic flexibility

Strategic flexibility can be facilitated in family businesses due to a more centralized structure, with no formal hierarchy, which increases the speed with which strategic changes take place in the company (Craig et al., 2014; Kraus et al., 2020). In addition, family participation in family businesses facilitates the process of change, as the family supports and commits to the strategic direction defined for the business (Sievinen et al., 2020).

Although strategic flexibility can be achieved in several ways, family businesses benefit from the family's culture of commitment to involve and influence managers and other employees

in a more pro-organizational behavior and acceptance of strategic changes (Craig et al., 2014; Zahra et al., 2008). In addition, family businesses, in times of adversity, can accept more risks, as they will take all possible actions to create opportunities and perpetuate the family business (Leppäaho & Ritala, 2021).

The family's culture of commitment may be linked to the fact that some family businesses are more adaptable to changes than others (Kaveski & Beuren, 2021). It refers to the fusion of family and organizational values in a culture of family commitment to the business (Alves & Gama, 2020; Segaro et al., 2014). In this sense, the family represents one of the most reliable social structures for transmitting cultural values and practices between generations in the company (Alves & Gama, 2020).

Still, this culture is characterized by behaviors in which the family member is willing to make an effort beyond what is expected by the family business, supports and is proud to be part of the business, cares about the future of the company and feels favored for being part of it (Zahra et al., 2008). For Alves and Gama (2020), the family's culture of commitment involves attitudes of support for decision-making and alignment of interests and objectives between managers and owners.

For Astrachan et al. (2002), highly committed family members are more capable of impacting their businesses. Commitment involves personal belief, support for the company's goals and visions, and the willingness to contribute and relate in the context of the company. And this behavior can influence the same commitment pattern for managers, contributing to the reduction of resistance to strategic flexibility (Eddleston, 2008).

Previous studies suggest that family businesses have greater strategic flexibility and agility in decision-making, due to the lower degree of formalization of processes (Calabrò et al., 2021). In addition, due to the family's culture of commitment, they act with greater flexibility and innovation (Craig et al., 2014). Thus, this culture is seen as a predictor of strategic flexibility, as it has the ability to maintain a pro-organizational culture, with more collectivist tendencies in the company (Zahra et al., 2008). In addition, the family's culture of commitment makes managers feel more involved in the business and agree more with the strategic changes needed by the company (Eddleston, 2008). In this way, it is expected that a greater culture of family commitment is linked to greater strategic flexibility, and thus, the following research hypothesis is formulated:

H1: The family's culture of commitment is positively associated with strategic flexibility.

## Relationship between culture of commitment, control mechanisms and strategic flexibility

Family businesses have different characteristics from non-family businesses, due to the combination of family and work (Calabrò et al., 2021; Martínez et al., 2019). However, what distinguishes a family business is not just family involvement, but the interaction of family,



property and business resources, which entails a series of unique characteristics, such as those related to behavior, attitude and processes (Martínez et al., 2019). In this way, it generates a culture of family commitment and influences managers in the company (Craig et al., 2014; Zahra et al., 2008). Even the influence of the family in the business can impact the choice of use of adopted control mechanisms, such as agency and stewardship (Kaveski & Beuren, 2021; Madison et al., 2017; Mucci et al., 2021; Vallejo, 2009).

Considering that family involvement, such as culture, acts as an antecedent to the control mechanisms adopted (Kaveski & Beuren, 2021; Mucci et al., 2021; Vallejo, 2009) and that factors related to governance and management can affect strategic flexibility in companies (Filatotchev & Toms, 2003; Madison et al., 2015), therefore it is assumed that the main relationship between the family's culture of commitment and strategic flexibility can be mediated by control mechanisms of the agency and stewardship type.

The application of these control mechanisms in companies can even occur together, since agency and stewardship control mechanisms coexist in organizations (Chrisman, 2019; James et al., 2017; Madison et al., 2015, 2017). Studies in the area of Management Control also suggest that mechanistic and organic control mechanisms are complementary in times of crisis, such as the pandemic caused by Covid-19 (Kober & Thambar, 2022). And, in this sense, our theoretical model and research hypotheses are anchored in the logic of complementarity between the stewardship and agency mechanisms, discussed below.

First, family influence on family businesses is viewed through a positive lens of stewardship theory. This theory supports the idea that a governance system, based on trust, uses informal and group mechanisms to strengthen a more collective behavior in the company. In this way, managers are willing to put individual interests aside for the long-term well-being of the company (Chrisman, 2019; Davis et al., 1997; Madison et al., 2017). As delimited by the stewardship theory, the steward, who is the manager with more pro-organizational behavior, who prioritizes the interests of the organization rather than his individual interests, is centered on the organization, as this individual assumes a strong commitment to the success of the company (Davis et al., 1997). This trust, involvement, collectivity and pro-organizational environment arising from the stewardship theory can be facilitated by the family's culture of commitment (Zahra et al., 2008).

The use of stewardship control mechanisms can be stronger when the family is involved in the business, while sharing a sense of loyalty and trust (Songini et al., 2013). Therefore, greater involvement and commitment of managers can be achieved by the influence of the family's culture of commitment (Kaveski & Beuren, 2021). Stewardship control mechanisms encourage pro-organizational behavior, which makes managers feel part of, identify with and effectively participate in the business, which, consequently, influences the level of acceptance of changes in the strategic positioning of family businesses (Zahra et al. al. 2008). Managers who identify with their organizations and are committed to the company's values are also more likely to meet organizational ends (Davis et al., 1997) and encourage the same behavior in other employees (Eddleston, 2008; James et al., 1997). al., 2017). Thus, their more altruistic and pro-organizational

behavior reflects an improvement in the commitment of everyone in the company, favoring the acceptance of strategic changes (Eddleston, 2008).

Given the existing relationship between a culture of family commitment and stewardship control mechanisms (Zahra et al., 2008; Vallejo, 2009), it is expected that a greater culture of family commitment is positively related to the greater use of stewardship mechanisms, and that the greater use of stewardship mechanisms is positively related to greater strategic flexibility in companies. Thus, the following research hypothesis is proposed:

H2: Stewardship control mechanisms mediate the relationship between the family's culture of commitment and strategic flexibility.

Second, the influence of the family on the firm can also be studied through the negative lens of agency theory. This theory portrays the assumption that agents are individualistic and economically rational and, therefore, with interests that differ from the principal. In family businesses, the owner is named as the principal of the relationship, and the executive hired to manage the company is the agent (Eisenhardt, 1989). The logic of agency theory advocates that the agent prioritizes their individual interests over the interests of the company (Davis et al., 1997; Eisenhardt, 1989; James et al., 2017; Jensen & Meckling, 1976). In this way, the limited control that the owner has over the managers' decisions, the divergent interests and risk preferences contribute to a relationship with potential conflicts of interest between the parties (Alves & Gama, 2020). To mitigate the conflicting interests between principal and agent, agency theory prescribes more formal managerial control mechanisms, such as incentive plan, monitoring and governance board (Eisenhardt, 1989; James et al., 2017; Jensen & Meckling, 1976; Madison et al., 2017).

However, when formal control mechanisms are adopted, in addition to not necessarily mitigating opportunistic behavior, they can limit autonomy and indicate a lack of trust (Huang et al., 2014). The use of formal control mechanisms is mechanistic and rigid, hindering the congruence of organizational objectives (Kaveski & Beuren, 2021). Furthermore, a more controlling organizational environment, such as that formed by the use of formal control mechanisms, constitutes an environment of less trust and, consequently, reduces the probability of acceptance of strategic changes (Eddleston, 2008). When companies adopt a high level of formal control, this results in high monitoring costs, in addition to being linked to the inability to absorb external changes, such as strategic flexibility, thus hindering a more pro-organizational and cooperative relationship in the company (Huang et al., 2014). In short, formal control mechanisms reduce the ability to act with strategic flexibility, trust and organizational performance (Huang et al., 2014). In addition, they can hinder the process of strategic change, as they make change slower, due to the formality and inflexibility of the processes (Huang et al., 2014).

On the other hand, recent studies have shown that stewardship and agency control mechanisms coexist. Furthermore, they demonstrate that both controls have a complementary influence on organizational behaviors and on managers' performance (Chrisman, 2019; James

et al., 2017; Kober & Thambar, 2022; Madison et al., 2015, 2017; Purkayastha et al., 2019), even more so in periods of shock, such as the Covid-19 pandemic. The use of these control mechanisms tends to facilitate strategic flexibility based on the perception of complementarity between both mechanisms (Kober & Thambar, 2022).

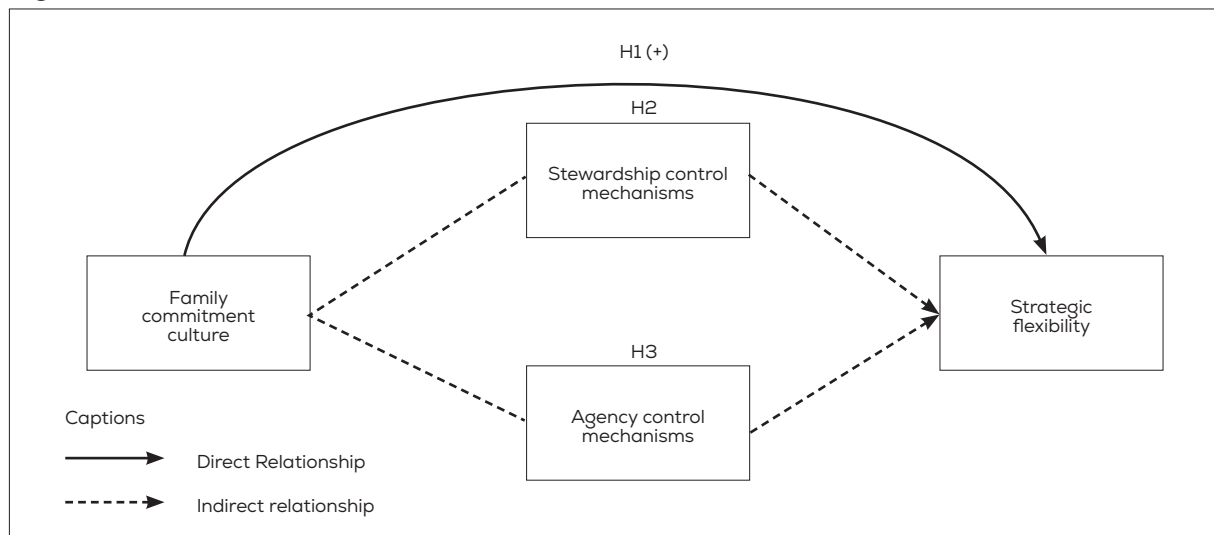
Recent studies within the perspective of managerial control have shown that, in periods of crisis such as the one experienced by the Covid-19 pandemic, formal monitoring, control and incentive controls also become fundamental to support the effective use of available and scarce resources, direct strategies and behaviors and, consequently, provide favorable conditions for changes in strategies to occur (Calabrò et al., 2021; Kober & Thambar, 2022). Furthermore, the complementary use of control mechanisms contributes to strategic flexibility and survival in times of crisis (Calabrò et al., 2021; Kober & Thambar, 2022).

It should be noted that high levels of coexistence of agency mechanisms and stewardship mechanisms in family businesses increase the likelihood of manager stewardship behavior, as well as decrease agent opportunistic behavior (Madison et al., 2017). Formal controls, such as remuneration for performance, can be seen as incentives by stewardship managers, contributing to the discussion that agency and stewardship mechanisms are complementary (James et al., 2017). Considering these authors' view, typically agency controls would be important to support strategic flexibility during the pandemic. In this sense, the following research hypothesis is presented:

H3: Agency control mechanisms mediate the relationship between the family's culture of commitment and strategic flexibility.

The three research hypotheses come from the relations of the four constructs of the study's theoretical model, which is shown in Figure 1.

**Figure 1.** Theoretical research model



Source: Elaborated by the authors.



## METHODOLOGY

### Population, sample and data collection process

To achieve the proposed objective of the article, a research with a quantitative approach was carried out, based on a survey with family businesses. The study population is Brazilian family businesses in the food sector, not listed on the B3 stock exchange (Brasil, Bolsa, Balcão). These companies' constant need to innovate and remain competitive justifies the definition of foodstuff as a suitable context for this research, as suggested by Zahra et al. (2008). These are highly dynamic and competitive companies, with significant pressures on profitability. Furthermore, as they deal with products for human consumption, they need to comply with a series of regulations and safety restrictions, which vary constantly and impact long-term decisions.

The focus given to family businesses is mainly due to the fact that they represent around 85% of Brazilian businesses (Instituto Brasileiro de Governança Corporativa [Brazilian Institute of Corporate Governance, IBGC], 2018), in addition to becoming major drivers of the economy in Brazil and the world (Alves & Gama, 2020; Martínez et al., 2019). Thus, it is important to study the management of these companies in times of crisis to see how they behave in challenging times (KPMG, 2021).

The study intended to reach the population set of one thousand privately held Brazilian family-owned food companies listed in the Emerging Markets Information Service (EMIS<sup>®</sup>) Database. For this, based on the companies identified in the database, the LinkedIn<sup>®</sup> professional network of contacts was used to invite managers and send the questionnaire. The research instrument was prepared using MicrosoftForms<sup>®</sup>. Initially, a thousand companies were identified in the list of companies in the EMIS<sup>®</sup> Database, however, only 426 companies were part of the study population, as no active profile of the others was found in the LinkedIn<sup>®</sup> professional network of contacts or, even, the connection request was not accepted.

For the composition of the sample, the operational definition of Basco (2013) was used, which treats as a family business the one in which the family holds more than 50% of the shares or quotas of the company and has the participation of at least one family executive in the board or company management. Thus, at the end of this convenience sample, 125 responses were obtained, from which we eliminated: seven companies listed on the B3 Stock Exchange; 10 companies that did not meet the criteria for defining a family business adopted in this study, and one outlier. Therefore, in total, 107 valid responses were considered (25.12% response rate). Due to the continuous process of sending invitations through LinkedIn<sup>®</sup>, it was not possible to perform the non-response bias test between early and late respondents.

Data collection was carried out between September and November 2020, sending two reminders with a 15-day window between them. Respondents are family members or non-family members of the company, that is, they directly reflect the family and/or are non-family members with direct contact with the family, these being management members such as Controller, Chief Executive Officer (CEO), Chief Financial Officer (CFO), Vice President, Directors, General Managers and Operations Managers.

## Research variables

To meet the objective proposed in this research, instruments already validated in an international context were used, which were translated by a professional from English to Portuguese. After translation, the collection instrument underwent validation by the researchers (considering face validity) and also a pre-test process with four researchers and three target respondents (family business professionals), aiming to identify potential adjustment needs on the instrument (i.e., terminology, fluidity). The instruments were operationalized using a 5-point Likert scale (ranging from “totally disagree” to “totally agree”), with the exception of some indicators of the variable “agency control mechanisms”, which were operationalized as dummy variables. The survey instruments are presented in Appendix A.

To measure the Family Commitment Culture (CCF), the “culture” dimension of the F-PEC scale (Family – Power, Experience, and Culture Scale) was used as an instrument, which is operationalized through 13 questions on a 5-point Likert scale. The F-PEC scale is used to assess the extent of family influence and was developed by Astrachan et al. (2002). The culture dimension of the F-PEC scale was validated to measure the family's culture of commitment (Segaro et al., 2014; Zahra et al., 2008) and the family's culture (Alves & Gama, 2020; Craig et al., 2013).

To measure Strategic Flexibility (EF), the Nadkarni and Herrmann (2010) instrument was adopted, which is operationalized through five questions on a 5-point Likert scale, which comprises the company's ability to respond and adapt to changes in the competitive environment (ranging from “not at all flexible” to “very flexible”). It is also related to the degree and speed with which companies react to opportunities and threats (Nadkarni & Herrmann, 2010). Although the instrument by Nadkarni and Herrmann (2010) was not developed for a crisis context, it is understood that it also reflects the strategic flexibility of companies during the Covid-19 pandemic period, when data collection it was made.

For the Agency Control Mechanisms (MA) construct, the instrument by Madison et al. (2017), who operationalized the Agency Mechanisms index through the sum of four scores: (1) level of monitoring activity, (2) presence of a board of directors, (3) existence of a family members incentive plan and (4) existence of an incentive plan for non-family members. Each of items 2, 3 and 4 were measured using a dummy question. The level of monitoring activity (item 1) is measured by five questions measured using a 5-point Likert scale.

For the Stewardship Control Mechanisms (MS) construct, the instrument by James et al. (2017). In the author's version, the variables were measured as dummy variables, however, in the present study, these questions were adapted to a 5-point Likert scale. The Stewardship Mechanisms reflect the sense of trust, group, involvement, belonging to the company and identification of managers in relation to management. They are informal mechanisms that share a sense of loyalty and trust.

Control variables were included in the study. First, the family's share control, evaluated using a dummy variable, where 1 indicates 100% family share control and 0 indicates that the

company does not hold 100% of the property. Second, the generation of the family, measured through a question that expresses the generation currently running the business (i.e., first generation, second generation, and so on). Third, the size of the company, measured by the number of employees who work there, segregated into Microenterprise for Industry with up to 19 employees, Small Enterprise for 20 to 99 employees, Medium Enterprise for 100 to 499 employees and Large Enterprise when with more than 500 employees, according to the classification of the Serviço Brasileiro de Apoio às Micro e Pequenas Empresas ([Brazilian Micro and Small Business Support Service] Sebrae, 2013).

## Data analysis methods

For descriptive data analysis, Microsoft Excel® and SPSS® software were used. For Structural Equation Modeling (SEM), using the Partial Least Squares method (PLS-SEM), the SmartPLS® software was used (Ringle et al., 2015). The SEM has some advantages related to the reliable estimation of complex models and with fewer observations, and does not impose data distribution assumptions (Hair et al., 2013). It should also be noted that this technique has been used in studies in the area of family businesses (Sarstedt et al., 2014). Based on the power analysis, performed using the GPower 3.1.9.2 software (Faul et al., 2007), the sample is adequate to detect a mean relative effect ( $f^2$  greater than 0.135) as statistically significant, considering a statistical power of 0.8 (type II error of 20%) and significance level of 5% (type I error) and six predictors (Nitzl, 2016).

In this study, we addressed validity issues as recommended by Podsakoff et al. (2012). First, measures validated by previous studies were used, in addition to the instrument itself guaranteeing the confidentiality of the respondent. Second, the single factor test by Harman (1976) was performed, which seeks to detect the presence of common method bias (CMB), from which seven factors with eigenvalues greater than one were obtained, of which the first accounts for 38.87% of the total variance. The test result suggests that common method bias tends not to affect the interpretation of our results.

## RESULTS ANALYSIS

The survey comprised 107 privately held Brazilian family businesses in the food industry. Approximately 74.80% of the families hold 80% or more of the control (shares/quotas) of the company, and 84.10% of the companies in the study have a family member as president. This reveals that the companies in the study have significant participation in the management and control of the family(ies) in the business.

As for the time of existence, 66.35% were founded more than 30 years ago, and these companies are mostly in their second generation. In addition, 76.70% of the companies are

medium (from 100 to 499 employees) to large (more than 500 employees), according to the framework of Sebrae (2013).

## Evaluation of the measurement model

The first component of the SEM is the analysis of the measurement model. Thus, the latent variables were analyzed, in which the indicators that were necessary to reach convergent, discriminant and reliability validity were excluded. In the first stage of the model, all variables showed adequate values for convergent validity, discriminant validity and reliability, with the exception of Agency Mechanisms, which did not meet the factor loading parameters for convergent validity. When this happens, it is suggested to eliminate the indicators with factor loadings (correlations) of lower value (Ringle et al., 2014).

This analysis took place at the latent variable level. An analysis was also carried out at the level of indicators; in this verification, it was identified that the CCF10, MA2, MS2 and FE1 indicators did not present the necessary loads, so it was necessary to eliminate these indicators from their respective constructs. It should be noted that the MA2 indicator is a dummy variable and that the MS2 indicator is a reverse question.

In the second round, the final model met all assumptions: convergent validity, discriminant validity and reliability, as indicated by Bido e Silva (2019) and Hair et al. (2019). Table 1 shows the final model of the correlation matrix between the latent variables, with the diagonal being the square root of the AVE. The Cross Loads Matrix is presented in Appendix B.

**Table 1.** Correlation matrix between latent variables (final model)

Latent Variable	CCF	FE	MA	MS
CCF	0.776			
FE	0.491	0.846		
MA	0.455	0.371	0.740	
MS	0.617	0.612	0.455	0.899
Average Variance Extracted (AVE)	0.603	0.716	0.547	0.808
Compound Reliability (CC)	0.948	0.910	0.781	0.954
Cronbach's Alpha (AC)	0.940	0.869	0.607	0.940

Captions: CCF: Family Commitment Culture. FE: Strategic Flexibility. MA: Agency Control Mechanisms. MS: Stewardship Mechanisms.

Note 1. All correlations are significant at 1%.

Note 2. The CCF10, MA2, MS2 and FE1 indicators were removed because they do not present recommended minimum factor loading values.

Source: Elaborated by the authors.

## Evaluation of the structural model

Once the measurement model validation criteria were reached, the next step was to evaluate the results of the structural model. The structural model consists of the dependency relationships of the constructs for testing the hypotheses, analyzed based on the analysis of the structural coefficient (Beta), the statistical significance (p-value) and the effect size ( $f^2$ ) of the independent variables on the dependent variables (Hair et al., 2019). In Table 2, it is possible to observe the results of the direct effects between the latent variables.

**Table 2.** Results of the direct effects of the evaluation of the structural model

	Beta	T Statistics	P-value	$f^2$	R2adj	Beta	T Statistics	P-value	$f^2$	R2adj
CCF → MS	0.617	6.301	0.000	0.615	0.375	0.618	5.771	0.000	0.564	0.363
Ownership → MS						-0.036	0.451	0.652	0.002	
Size → MS						0.083	0.859	0.390	0.010	
Generation → MS						-0.020	0.219	0.827	0.001	
CCF → MA	0.455	4.955	0.000	0.261	0,200	0.437	4.484	0.000	0.228	0.214
Ownership → MA						-0.062	0.724	0.469	0.005	
Size → MA						0.193	1.498	0.134	0.041	
Generation → MA						0.007	0.052	0.958	0.000	
CCF → FE	0.160	1.092	0.275	0.025	0,383	0.155	1.060	0.289	0.022	0.382
MA → FE	0.082	0.829	0.407	0.008		0.057	0.577	0.564	0.004	
MS → FE	0.476	3.458	0.001	0.219		0.470	3.525	0.000	0.219	
Ownership → FE						0.071	0.848	0.397	0.008	
Size → FE						0.119	1.259	0.208	0.020	
Generation → FE						-0.014	0.133	0.894	0.000	

Captions: CCF: Family Commitment Culture. FE: Strategic Flexibility. MA: Agency Control Mechanisms. MS: Stewardship Mechanisms. VIF: Variance Inflation Factor.  $f^2$ : Effect size

Note 1. Regarding multicollinearity, VIF values were adequate in all relationships, which rules out problems with multicollinearity; VIF values are adequate when they reach values between 0.20 and 5 (Hair et al., 2019).

Source: Elaborated by the authors.

Table 2 shows that, for direct effects, the results suggest a statistically significant relationship between the family's culture of commitment and agency mechanisms ( $\beta= 0.437$ ;  $p\text{-value}< 0.001$ ) and stewardship mechanisms ( $\beta= 0.618$ ;  $p\text{-value}< 0.001$ ). A statistically significant relationship was also observed between stewardship mechanisms and strategic flexibility ( $\beta= 0.470$ ;  $p\text{-value}< 0.001$ ). Hypothesis 1 was not supported by the results; in particular, the results do not suggest a direct relationship between the family's culture of commitment and strategic flexibility. As evidenced in Table 2, the control variables (family ownership, family generation and company size) did not impact the interpretation of the model results.

After analyzing the direct effects, it is also necessary to observe the indirect effects of these relationships, which reflect the interpretations of Hypotheses 2 and 3 (H2 and H3) of the research, whose results are presented in Table 3.

**Table 3.** Results of the indirect effects of the evaluation of the structural model

	Beta	T Statistics	P-value
CCF -> MS -> FE	0.290	3.453	0.001
CCF -> MA -> FE	0.025	0.543	0.587

Captions: CCF: Family Commitment Culture. FE: Strategic Flexibility. MA: Agency Control Mechanisms. MS: Stewardship Mechanisms.

Source: Elaborated by the authors.

According to the values presented in Table 3, it is possible to verify that the stewardship mechanisms mediate the relationship between the family's culture of commitment and strategic flexibility ( $\beta= 0.290$ ;  $p\text{-value}< 0.001$ ), therefore H2 was confirmed. However, mediation is not supported for agency control mechanisms. Thus, it appears that H3, which suggested the mediation of agency mechanisms in the relationship between the family's culture of commitment and strategic flexibility, was not supported.

According to the direct and indirect effects presented in the study, it is possible to say that the results are of total mediation, since there is no direct relationship between the family's culture of commitment and strategic flexibility, but through the stewardship control mechanisms.

## Results analysis and discussion

The results found in this study show that stewardship mechanisms mediate the relationship between the family's culture of commitment and strategic flexibility, and the effect of this mediation is total, as no significance was proven between the direct relationship between the family's culture of commitment and strategic flexibility. On the other hand, the hypothesis of mediation of agency mechanisms in the relationship between family commitment culture and strategic flexibility (H3), based on agency theory, was not supported in this study.

Therefore, the argument that stewardship and agency control mechanisms coexist (Chrisman, 2019; James et al., 2017; Madison et al., 2015, 2017; Purkayastha et al., 2019) and that the complementary



use in times of crisis would benefit the strategic responses of companies (Calabrò et al., 2021; Kober & Thambar, 2022) was not evidenced in the analyses. Even though H3 was not supported, it does not eliminate the possibility that agency mechanisms may coexist with stewardship mechanisms, demonstrated by the relation culture of family commitment with agency mechanism ( $\beta = 0.437$ ) and with stewardship mechanism ( $\beta = 0.618$ ). Thus, it was possible to highlight and reiterate what some authors had already mentioned (Madison et al., 2017; Mucci et al., 2021; Vallejo, 2009; Zahra et al., 2008): that the family influences the behavior of managers, since there was a significant relationship between the family's culture of commitment and the control mechanisms (agency and stewardship).

On the other hand, only stewardship mechanisms were evidenced as mediators of the relationship between a culture of commitment and strategic flexibility, diverging from evidence from studies in the area of Management Control that, during the pandemic, companies needed to balance mechanistic and organic mechanisms to respond effectively to the threats posed by the environment (Kober & Thambar, 2022).

The relationship evidenced in the study is the mediation of stewardship mechanisms in the relationship between the family's commitment culture and strategic flexibility, indicating that this relationship has greater explanatory power over the variation in strategic flexibility. This result is in line with the literature, which shows that the use of stewardship mechanisms, in addition to being a predominant context in family businesses, can also be more effective, which generates an environment conducive to strategic flexibility (Eddleston, 2008; Zahra et al., 2008), as managers identify with the company and feel committed to organizational goals (Alves & Gama, 2020).

The results of this study contribute to the findings of Zahra et al. (2008), according to which stewardship contexts influence strategic flexibility, and the effects of the family's culture of commitment on strategic flexibility are not necessarily direct. The results also meet Eddleston's (2008) recommendations for further research on the family's culture of commitment, in particular the call by Calabrò et al. (2021), to carry out studies that discuss formal and informal governance mechanisms and flexible systems in crisis management and survival of family businesses in challenging times, which, in this case, was the pandemic context of Covid-19.

The results meet the recommendation of Nadkarni and Herrmann (2010) to seek understanding about the adoption of strategic flexibility in companies, and of Bamel and Bamel (2018), to contribute to studies on strategic flexibility and company resources.

## FINAL CONSIDERATIONS

The results of the study indicate that there is no significant relationship between the family's culture of commitment and strategic flexibility, however this relationship occurs with the inclusion of mediating elements: stewardship control mechanisms. The main relationship between the family's culture of commitment and strategic flexibility only showed significance

with the mediation of stewardship mechanisms, this did not occur with the mediation of agency mechanisms.

The present study contributes to the family business literature, as the results add knowledge and understanding about the family's culture of commitment, strategic flexibility, agency mechanisms and stewardship mechanisms. It also reflects on the importance of strategic flexibility for companies, with the study by Zahra et al. (2008) being one of the only ones to deal with the theme in family businesses. Furthermore, it advances the discussions of Madison et al. (2015, 2017), James et al. (2017), Chrisman (2019) and Purkayastha et al. (2019) about the coexistence of agency and stewardship control mechanisms in organizations.

It also contributes to the findings of Zahra et al. (2008), when proposing the relationship between the family's culture of commitment and strategic flexibility mediated by agency mechanisms and stewardship mechanisms, a reality not previously explained in a theoretical and empirical way, and investigating the phenomenon in a different cultural context, during a crisis such as the Covid-19 pandemic. In addition, the study contributes to the literature by evaluating mechanisms that precede strategic flexibility in family businesses and comes to the conclusion that stewardship mechanisms mediate the relationship between the family's culture of commitment and strategic flexibility.

As for the practical contribution, the study showed the importance of the family's culture of commitment for the use of agency mechanisms and stewardship mechanisms. In this way, it brings reflection on the importance of the choice of control mechanisms by the family and how these mechanisms affect strategic flexibility. Thus, when the company achieves greater strategic flexibility, it becomes more attentive to business opportunities or foresees challenges in the face of the continuity and growth of the organization. In this way, family businesses can focus on family involvement (in terms of family culture) and the use of stewardship mechanisms in business strategies, so that they have more strategic flexibility. Therefore, it is concluded that the elements "family commitment culture" and "stewardship mechanisms" are important for the strategic flexibility of Brazilian family-owned food businesses.

Among the limitations of this research, the study was carried out in only one economic sector (foodstuff), thus, it is not possible to extrapolate the effects of this study in other activities of the economic sector, mainly considering a pandemic period in which sectors suffering different impacts (positive and negative). Finally, the generalization of the results is also limited by the low response rate of the survey. It should be noted that these limitations do not invalidate the results of this study, as they can serve as a basis for future studies on the subject. Knowing these limitations, this field is understood to be fertile for future research, both for replication at the national level and for different scenarios in Brazil.

It is suggested that research be carried out to verify other antecedents of strategic flexibility in family businesses. Another point would be to advance discussions on the coexistence of agency and stewardship mechanisms and, especially, to investigate to what extent their complementarity causes beneficial behaviors for organizations, in addition to strategic flexibility, for example, entrepreneurial orientation, organizational resilience and innovation.

## REFERENCES

- Alves, C. A., & Gama, A. P. M. (2020). A performance das empresas familiares: Uma perspectiva da influência da família. *Revista Brasileira de Gestão e Negócios.*, 22(1), 163-182. <https://doi.org/10.7819/rbgn.v22i1.4040>
- Astrachan, J. H., Klein, S. B., & Smyrnios, K. X. (2002). The F-PEC scale of family influence: A proposal for solving the family business definition problem. *Family Business Review*, 15(1), 45-58. <https://doi.org/10.1111/j.1741-6248.2002.00045.x>
- Bamel, U. K., & Bamel, N. (2018). Organizational resources, KM process capability and strategic flexibility: A dynamic resource-capability perspective. *Journal of Knowledge Management*, 22, 1555-1572. <https://doi.org/10.1108/JKM-10-2017-0460>
- Basco, R. (2013). The family's effect on family firm performance: A model testing the demographic and essence approaches. *Journal of Family Business Strategy*, 4, 42-66. <https://doi.org/10.1016/j.jfbs.2012.12.003>
- Bido, D., & Silva, D. (2019). SmartPLS 3: Especificação, estimação, avaliação e relato. *Administração: Ensino e Pesquisa*, 20(2), 488-536. <https://doi.org/10.13058/raep.2019.v20n2.1545>
- Calabrò, A., Frank, H., Minichilli, A., & Suess-Reyes, J. (2021). Business families in times of crises: The backbone of family firm resilience and continuity. *Journal of Family Business Strategy*, 12(2), 100442. <https://doi.org/10.1016/j.jfbs.2021.100442>
- Chrisman, J. (2019). Stewardship theory: Realism, relevance, and family firm governance. *Entrepreneurship Theory and Practice*, 43(6), 1051-1066. <https://doi.org/10.1177/1042258719838472>
- Cingöz, A., & Akdogan, A. A. (2013). Strategic flexibility, environmental dynamism, and innovation performance: An empirical study. *Procedia - Social and Behavioral Sciences*, 99, 582-589. <https://doi.org/10.1016/j.sbspro.2013.10.528>
- Craig, J., Dibrell, C., & Garrett, R. (2014). Examining relationships among family influence, family culture, flexible planning systems, innovativeness, and firm performance. *Journal of Family Business Strategy*, 5(3), 229-238. <https://doi.org/10.1016/j.jfbs.2013.09.002>
- Davis, J. H., Schoorman, F. D., & Donaldson, L. (1997). Toward a stewardship theory of management. *Academy of Management Review*, 22(1), 20-47. <https://doi.org/10.5465/amr.1997.9707180258>
- Donthu, N., & Gustafsson A. (2020). Effects of COVID-19 on business and research. *Journal of Business Research*, 117, 284-289. <https://doi.org/10.1016/j.jbusres.2020.06.008>
- Eddleston, K. A. (2008). Commentary: The prequel to family firm culture and stewardship: The leadership perspective of the founder. *Entrepreneurship Theory and Practice*, 32(6), 1055-1061. <https://doi.org/10.1111/j.1540-6520.2008.00272.x>

- Eisenhardt, K. M. (1989). Agency theory: An assessment and review. *The Academy of Management Review*, 14(1), 57-74. <https://doi.org/10.5465/amr.1989.4279003>
- Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G\*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, 39, 175-191. <https://doi.org/10.3758/BF03193146>
- Filatotchev, I., & Toms, S. (2003). Corporate governance, strategy and survival in a declining industry: A study of UK cotton textile companies. *Journal of Management Studies*, 40(4), 895-920. <https://doi.org/10.1111/1467-6486.00364>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2-24. <https://doi.org/10.1108/EBR-11-2018-0203>
- Hair, J. F., Jr., Hult, T. M., Ringle, C. M., & Sarstedt, M. (2013). *A primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. Sage Publications.
- Harman, H. H. (1976). *Modern factor analysis*. University of Chicago Press.
- Huang, M.-C., Cheng, H.-L., & Tseng, C.-Y. (2014). Reexamining the direct and interactive effects of governance mechanisms upon buyer-supplier cooperative performance. *Industrial Marketing Management*, 43(4), 704-716. <https://doi.org/10.1016/j.indmarman.2014.02.001>
- Indio, C. (2020). Pandemia fecha 39,4% das empresas paralisadas, diz IBGE. *Agência Brasil*. <https://agenciabrasil.ebc.com.br/economia/noticia/2020-07/pandemia-fecha-394-das-empresas-paralisadas-diz-ibge>
- Instituto Brasileiro de Geografia e Estatística. (2020). *Pesquisa Pulso Empresa: Impacto da COVID-19 nas empresas*. Diretoria de Pesquisas, IBGE. [https://agenciadenoticias.ibge.gov.br/media/com\\_mediaibge/arquivos/548281f191c80ecbbb69846b0d745eb5.pdf](https://agenciadenoticias.ibge.gov.br/media/com_mediaibge/arquivos/548281f191c80ecbbb69846b0d745eb5.pdf)
- Instituto Brasileiro de Governança Corporativa. (2018). *Protocolo familiar: Aspectos da relação família e negócios* (Série: IBGC Pesquisa). IBGC.
- James, A. E., Jennings, J. E., & Jennings, P. D. (2017). Is it better to govern managers via agency or stewardship? Examining asymmetries by family versus nonfamily affiliation. *Family Business Review*, 30(3), 262-283. <https://doi.org/10.1177/0894486517717532>
- 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](https://doi.org/10.1016/0304-405X(76)90026-X)
- Kaveski, I. D. S., & Beuren, I. M. (2021). Influência da motivação intrínseca e da cultura organizacional no comprometimento afetivo em empresas familiares: Controles formais e informais como mediadores. *Innovar*, 32(84), 97-110. <https://doi.org/10.15446/innovar.v32n84.99681>

- Kober, R., & Thambar, P. J. (2022). Paradoxical tensions of the COVID-19 pandemic: A paradox theory perspective on the role of management control systems in helping organizations survive crises. *Accounting, Auditing and Accountability Journal*, 35(1), 108-119. <https://doi.org/10.1108/AAAJ-08-2020-4851>
- KPMG (2021, March). *Mastering a comeback: How family businesses are triumphing over COVID-19*. KPMG.US. <https://www.kpmg.us/insights/2021/family-business-mastering-comeback.html>
- Kraus, S., Clauss, T., Breier, M., Gast, J., Zardini, A., & Tiberius, V. (2020). The economics of COVID-19: Initial empirical evidence on how family firms in five European countries cope with the corona crisis. *International Journal of Entrepreneurial Behaviour and Research*, 26(5), 1067-1092. <https://doi.org/10.1108/IJEER-04-2020-0214>
- Leppäaho, T., & Ritala, P. (2021). Surviving the coronavirus pandemic and beyond: Unlocking family firms' innovation potential across crises. *Journal of Family Business Strategy*, 13(1), 100440. doi: <https://doi.org/10.1016/j.jfbs.2021.100440>
- Madison, K., Holt, D. T., Kellermanns, F. W., & Ranft, A. L. (2015). Viewing family firm behavior and governance through the lens of agency and stewardship theories. *Family Business Review*, 29(1), 65-93. <https://doi.org/10.1177/0894486515594292>
- Madison, K., Kellermanns, F. W., & Munyon, T. P. (2017). Coexisting agency and stewardship governance in family firms: An empirical investigation of individual-level and firm-level effects. *Family Business Review*, 30(4), 347-368. <https://doi.org/10.1177/0894486517727422>
- Martínez, A. B., Galván, R. S., Seaman, C., & Palacios, T. M. B. (2019). Factors contributing to familiarity degree in family firms. *International Journal of Business Innovation and Research*, 18(4), 503-527. <https://doi.org/10.1504/IJBIR.2019.098768>
- Miroshnychenko, I., Strobl, A., Matzler, K., & Massis, A. De. (2021). Absorptive capacity, strategic flexibility, and business model innovation: Empirical evidence from Italian SMEs. *Journal of Business Research*, 130, 670-682. <https://doi.org/10.1016/j.jbusres.2020.02.015>
- Mucci, D. M., Jorissen, A., Frezatti, F., & Bido, D. D. S. (2021). Managerial controls in private family firms: The influence of a family's decision premises. *Sustainability*, 13(4), 2158. <https://doi.org/10.3390/su13042158>
- Nadkarni, S., & Herrmann, P. (2010). CEO personality, strategic flexibility, and firm performance: The case of the Indian business process outsourcing industry. *Academy of Management Journal*, 53(5), 1050-1073. <https://doi.org/10.5465/AMJ.2010.54533196>
- Ni, G., Xu, H., Cui, Q., Qiao, Y., Zhang, Z., Li, H., & Hickey, P. J. (2021). Influence mechanism of organizational flexibility on enterprise competitiveness: The mediating role of organizational innovation. *Sustainability*, 13(1), 176. <https://doi.org/10.3390/su13010176>
- Nitzl, C. (2016). The use of partial least squares structural equation modelling (PLS-SEM) in management accounting research: Directions for future theory development. *Journal of Accounting Literature*, 37(1), 19-35. <https://doi.org/10.1016/j.acclit.2016.09.003>



- Pérez-Pérez M., López-Fernández M. C., & Obeso, M. (2019). Knowledge, renewal and flexibility: Exploratory research in family firms. *Administrative Sciences*, 9(4), 87. <https://doi.org/10.3390/admsci9040087>
- Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology*, 63(1), 539-569. <https://doi.org/10.1146/annurev-psych-120710-100452>
- Purkayastha, S., Veliyath, R., & George, R. (2019). The roles of family ownership and family management in the governance of agency conflicts. *Journal of Business Research, Elsevier*, 98, 50-64. <https://doi.org/10.1016/j.jbusres.2019.01.024>
- Ringle, C. M., Silva, D. da, & Bido, D. (2014). Modelagem de equações estruturais com utilização do SMARTPLS. REMark – *Revista Brasileira de Marketing*, 13(2, Edição Especial), 54-71. <https://doi.org/10.5585/remark.v13i2.2717>
- Ringle, C. M., Wende, S., & Becker, J.-M. (2015). *SmartPLS 3*. Software, SmartPLS GmbH.
- Sarstedt, M., Ringle, C. M., Smith, D., Reams, R., & Hair, J. F. (2014). Partial least squares structural equation modeling (PLS-SEM): A useful tool for family business researchers. *Journal of Family Business Strategy*, 5(1), 105-115. <https://doi.org/10.1016/j.jfbs.2014.01.002>
- Segaro, E. L., Larimo, J., & Jones, M. V. (2014). Internationalisation of family small and medium sized enterprises: The role of stewardship orientation, family commitment culture and top management team. *International Business Review*, 23(2), 381-395. <https://doi.org/10.1016/j.ibusrev.2013.06.004>
- Serviço Brasileiro de Apoio às Micro e Pequenas Empresas. (2013). *Anuário do trabalho na micro e pequena empresa*. [https://www.sebrae.com.br/Sebrae/Portal%20Sebrae/Anexos/Anuario%20do%20Trabalho%20Na%20Micro%20e%20Pequena%20Empresa\\_2013.pdf](https://www.sebrae.com.br/Sebrae/Portal%20Sebrae/Anexos/Anuario%20do%20Trabalho%20Na%20Micro%20e%20Pequena%20Empresa_2013.pdf)
- Sievinen, H. M., Ikäheimonen, T., & Pihkala, T. (2020). Owners' rule-based decision-making in family firm strategic renewal. *Scandinavian Journal of Management*, 36(3), 101119. <https://doi.org/10.1016/j.scaman.2020.101119>
- Songini, L., Gnan, L., & Malmi, T. (2013). The role and impact of accounting in family business. *Journal of Family Business Strategy*, 4(2), 71-83. <https://doi.org/10.1016/j.jfbs.2013.04.002>
- Vallejo, M. C. (2009). The effects of commitment of non-family employees of family firms from the perspective of stewardship theory. *Journal of Business Ethics*, 87, 379-390. <https://doi.org/10.1007/s10551-008-9926-6>
- Zahra, S. A., Hayton, J. C., Neubaum, D. O., Dibrell, C., & Craig, J. (2008). Culture of family commitment and strategic flexibility: The moderating effect of stewardship. *Entrepreneurship Theory and Practice*, 32(6), 1035-1054. <https://doi.org/10.1111/j.1540-6520.2008.00271.x>



## NOTE

This article was presented at the XXI USP International Conference in Accounting in 2021. It was funded by the Coordination for the Improvement of Higher Education Personnel - CAPES, Code 001.

## CONFLICTS OF INTEREST

The authors have no conflicts of interest to declare.

## AUTHORS' CONTRIBUTION

Cristiane Wornath Weissmantel: Conceptualization; Data curation; Formal analysis; Investigation; Methodology; Project administration; Software; Validation; Visualization; Writing – original draft; Writing – proofreading and editing.

Franciele Beck: Conceptualization; Data curation; Formal analysis; Methodology; Software; Supervision; Validation; Visualization; Writing – original draft; Writing – proofreading and editing.

Daniel Magalhães Mucci: Conceptualization; Data curation; Formal analysis; Methodology; Software; Validation; Visualization; Writing – proofreading and editing.