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Research Article

# Influence of Family Culture on Enterprise Risk Management in Brazilian Companies

## Influência da Cultura Familiar no Gerenciamento de Risco Empresarial em Empresas Brasileiras

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## ABSTRACT

**Context:** family involvement creates specific goals that include family interests and values, and is used to pursue the family's vision, creating effective corporate governance and risk management practices. **Objective:** our objective is to evaluate the relationship between family influence and enterprise risk management in Brazilian family businesses. **Method:** data from 142 family businesses was analyzed using descriptive statistics and structural equation modeling. The construct of enterprise risk management comprised: identification, evaluation, response, and communication. Family influence was captured by power, experience, and culture. **Results:** the results broaden the understanding that, among the three family dimensions investigated, culture is the one that better explains risk management practices. **Conclusions:** we concluded that the higher the level of family culture, the higher the level of attention to enterprise risk management.

**Keywords:** family business; F-PEC model; enterprise risk management; Brazilian businesses.

## RESUMO

**Contexto:** o envolvimento da família cria objetivos específicos que incluem os interesses e valores da família e é usado para buscar a visão da família, criando práticas eficazes de governança corporativa e gerenciamento de risco. **Objetivo:** nosso objetivo é avaliar a relação entre a influência familiar e o gerenciamento de riscos empresariais em empresas familiares brasileiras. **Método:** os dados de 142 empresas familiares foram analisados por meio de estatística descritiva e modelagem de equações estruturais. O construto de gerenciamento de riscos corporativos compreendeu: identificação, avaliação, resposta e comunicação. A influência da família foi capturada pelo poder, experiência e cultura. **Resultados:** os resultados ampliam o entendimento de que, entre as três dimensões familiares investigadas, a cultura é a que melhor explica as práticas de gerenciamento de riscos. **Conclusões:** concluímos que quanto maior o nível de cultura familiar, maior o nível de atenção ao gerenciamento de riscos empresarial.

**Palavras-chave:** negócio familiar; modelo F-PEC; gerenciamento de riscos corporativos; empresas familiares.

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## INTRODUCTION

In dynamic, complex, and competitive environments, such as those currently faced by organizations, there is pressure for adaptation and survival (Arena, Arnaboldi, & Azzone, 2010; Gordon, Loeb, & Tseng, 2009). As a result, organizations are exposed to risks arising from business activities, human actions, as well as natural effects (Committee of Sponsoring Organizations of the Treadway Commission [COSO], 2007). Those sources of risk can affect the companies in various aspects, reaching all organizational levels, and are related to different risk perspectives or categories (Arena, Arnaboldi, & Azzone, 2011; COSO, 2004; Woods, 2009).

McConaughy, Matthews, and Fialko (2001) assert that in order to ensure compliance with the company's objectives it is necessary to implement actions to reduce negative impacts and map opportunities arising from risks. In a recent research published by the ACI Institute — KPMG (2017), it is possible to see that one of the biggest challenges perceived by the organizations is the risk management process. According to this research, about 41% of respondents consider risk a relevant theme; considering Brazilian respondents specifically, this concern is around 54%.

Therefore, there seems to be an opportunity to discuss enterprise risk management (ERM) in terms of governance and management mechanisms in the context of family businesses. Specifically, we understand governance elements as an antecedent for how mechanisms of risk management will be used in family businesses. As previous literature recognizes, family influence can be viewed as a mechanism of corporate governance (Astrachan, Klein, & Smyrnios, 2002; Ponomareva, Nordqvist, & Umans, 2019).

Additionally, it is also important to highlight that corporate governance "is not only about reduction of the cost arising from contractual arrangements within a firm but also a way to develop and grow the company" (Ponomareva et al., 2019, p. 97). According to Gulzar and Wang (2010), the implementation of good corporate governance is vital for the continuity and sustainability of family businesses, and for supporting economic growth. In addition, according to the Committee of Sponsoring Organizations of the Treadway Commission (COSO, 2017), enterprise risk management contributes to corporate governance, communicating information to stakeholders and measuring performance. Its principles apply to all levels of the organization and across all functions.

Organizations founded and managed by family(ies), here named family businesses (Chua, Chrisman, & Sharma, 1999), face some risks and uncertainties common to nonfamily business. However, family businesses also deal with specific risks arising from the interactions between family and business (Reyna & Encalada, 2016; Zahra, 2005). For instance, in family businesses, the 'double identity' of the members — relatives and business partners — sometimes causes problems in balancing rationality and affectivity (Masri, Tekathen, Magnan, & Boulianne, 2017).

More precisely, family businesses are recognized for making decisions on much longer timeframes than nonfamily businesses (Bartholomeusz & Tanewski, 2006). This particularity, according to the literature, appears due to affective features: the need to preserve the family's socio-emotional wealth (Gomez-Mejia, Haynes, Núñez-Nickel, Jacobson, & Moyano-Fuentes, 2007) and the owners' intent of passing on their assets (company) to the next generations (Chua et al., 1999). However, it also presents influences in terms of governance, specifically pertaining to short-term performance and wealth maximization — how to balance the shareholders' interests? Furthermore, this interrelationship between the spheres of family, ownership, and business (Gersick, Davis, Hampton, & Lansberg, 1997) can result in different perceptions about the risks, and consequently, different risk management practices and mechanisms.

Discussing ERM in family businesses is important for many reasons. First, studies addressing ERM in family businesses are scarce, and the literature is still underdeveloped even if we broaden our scope to control systems in general in family businesses (Speckbacher & Wentges, 2012; Thekdi & Aven, 2018). In this sense, Bressan, Schiell, Procianoy, and Castro (2019) emphasize the need for a theoretical framework for evaluating strategic decision-making processes in family businesses. According to Allouche, Amann, Jaussaud, and Kurashina (2008), since this is an emerging theme, some fundamental questions, both theoretical and practical, remain unsolved when dealing with family businesses.

Second, family businesses are sometimes characterized as conservative, with resistance to change because of the fear of losing the wealth created by the family (Donckels & Frochich, 1991; Zahra, 2005). However, an alternative viewpoint is that family businesses are entrepreneurs, engaging in risky projects (Naldi, Nordqvist, Sjöberg, & Wiklund, 2007; Zahra, 2005). Both features help explain the behavior of family business managers pertaining to taking risks (Naldi et al., 2007). Gómez-Mejia, Haynes, Núñez-Nickel, Jacobson, and Moyano-Fuentes (2007) explain that family business owners and managers are averse to risk for opportunities that can reduce socio-emotional wealth, but become more willing to accept risk when this wealth is threatened. These traits, therefore, should affect their risk management practices.

Another aspect that has demanded attention from researchers is how the level of family involvement/influence affects management control practices (Speckbacher & Wentges, 2012; Hiebl, Duller, and Feldbauer-Durstmüller, 2015). To investigate this, research must focus on the level of family influence rather than a dichotomous family business variable (Astrachan et al., 2002). In particular, the present study is focusing on the following research question: What is the relationship between the level of family influence and enterprise risk management practices? Our objective is to evaluate the relationship between family influence and ERM in Brazilian family businesses.

Although family businesses are commonly found in most of the world's developed or developing economies (Zahra & Sharma, 2004) and have a significant economic impact (Speckbacher & Wentges, 2012), they remain a scarcely explored topic in organizational research (Arena, Arnaboldi, & Palermo, 2017; Thekdi & Aven, 2018). For example, Speckbacher and Wentges (2012) point out that there is no analysis of the impact of family control on the traits of management controls systems, and Hiebl et al. (2015) affirm that we do not know how family businesses promote ERM. By looking specifically to the Brazilian literature, the scarcity of studies discussing the governance and management aspects of family businesses is even more expressive (Bressan, Schiehll, Procianoy, & Castro, 2019).

According to Poletti-Hughes and Williams (2017), family businesses face risks in preserving future performance and use heritage as a means of protecting resources for heirs. From this perspective, we can cite Chua, Chrisman, and Sharma (1999), who argue that the standards of ownership, governance, management, and succession significantly influence a company's objectives, strategies, structure, and the way in which it establishes its practices.

Most Brazilian family businesses are characterized, in terms of corporate governance, by their small and informal boards of directors, in which the members of the board are usually relatives of the owner, sometimes without independent directors (Bressan et al., 2019). At the same time, the main goal of this kind of company is to maintain the continuity of the business (Chua et al., 1999; Gulzar & Wang, 2010), which highlights how discussing ERM is important for the continuity of family businesses (Arena et al., 2017; Gordon et al., 2009; Schiller & Prpich, 2014; Weitzner & Darroch, 2010; Wieczorek-Kosmala, 2014). In this context, this research contributes to that end by presenting the relationship between specific characteristics of family businesses and these companies' risk management practices.

Thus, the present research aims to contribute to the discussion of the relationship between family influence and ERM in Brazilian family businesses with the intent of filling the gaps highlighted by the previous literature, such as Gulzar and Wang (2010), Acquaah (2013), and Hiebl, Duller, and Feldbauer-Durstmüller (2015). In particular, this study further develops the discussion of family businesses by not only identifying the intensity and the way in which family influence is related to ERM practices, but also doing so outside of a dichotomous perspective. Therefore, we contribute to the literature by addressing how family involvement can, through ownership, management, experience, and culture, affect enterprise risk management practices in order to promote the perpetuity and conservation of family heritage.

Additionally, this study contributes by showing empirical evidence from a developing country — Brazil — where family businesses play an important and representative role: around 90% of all Brazilian private companies are family businesses, responsible for employing 85% of the country's workforce (see Family Firm Institute, 2015). Furthermore, it is important to stress the unavailability of databases for Brazilian private family businesses; in this way, the present research provides indications about family influence and risk management practices in the Brazilian context.

## THEORETICAL REVIEW

### Family businesses

Family businesses (FB), like nonfamily businesses, have the fundamental goal of obtaining profit and, through that profit, securing their continued existence (Ussman, 1996). However, as established by Sharma, Chrisman, and Chua (1997), a family company is passed from generation to generation, being the sole property of a family or a group of families.

The literature stresses that the involvement of the family in the business is associated with a certain way of managing and controlling the company (Holt, Rutherford, & Kuratko, 2010). Consequently, depending on the intensity of this involvement, family businesses create specific objectives that contemplate family interests and values (Gómez-Mejia et al., 2007), which are used to pursue the family(ies)'s vision (Chua et al., 1999) and achieve a combination of financial and non-financial targets. It should be noted that family businesses that have effective corporate governance practices are more likely to carry out strategic planning and succession (Gulzar & Wang, 2010) and are more engaged in minimizing agency problems (Mizumoto & Machado Filho, 2007).

For Astrachan, Klein, and Smyrnios (2002), the relevant question is not whether a company is familial or

not, but understanding the extent and form of that family involvement and how it influences the company. To solve this problem, the authors proposed a scale that evaluates the extent and quality of family influence throughout the dimensions of power, experience, and culture — F-PEC (family — power, experience, and culture).

In the F-PEC scale, the dimension of power refers to the proportion of shares, percentage of positions in strategic management, and proportion of council seats belonging to members of the family(ies). Holt, Rutherford, and Kuratko (2010) argue that family involvement in this dimension can manifest in various ways, including ownership, governance, or management.

The dimension of experience encompasses what the family brings to the business. It is operationalized, for example, when succession provides the opportunity for relevant memories (Klein, Astrachan, & Smyrnios, 2005), acquired through knowledge, information, and intuition, to be passed on to successive generations. Shared beliefs among individuals, in the process of historical evolution, stand out as a particularity of family businesses (Holt et al., 2010). It is worth noting that in family business, many roles are passed from generation to generation and managerial processes are often not fully formalized.

Finally, the dimension of culture refers to values and commitments (Klein et al., 2005) and the alignment between the family's objectives and those of the company (Holt et al., 2010). The founders have a considerable influence because they see their business as a means to sustain the family, valuing the family feeling and limiting the growth of the company (Sharma, 2004). This influence considers the family history, future perspectives, mission, and vision of the company. In this sense, the elaboration of a strategic planning aligned with the family's objectives allows the creation of a unique and flexible work environment, which is able to inspire the employees in order to awaken loyalty and commitment in them (Acquaah, 2013).

Klein, Astrachan, and Smyrnios (2005) applied the F-PEC scale to assess the extent and quality of family influence. They present a method to operationalize understanding about family businesses, providing a measure of the family influence in a company. This measure is predictive of the success of family businesses, since from it, one can develop studies that aim to investigate the different levels of family influence and the different implications of these levels (Sharma, 2004).

According to F-PEC, family involvement is a prerequisite for the essence of the family business (Dawson & Mussolino, 2014). On deeper examination, prior literature points out that family influence can be discussed in terms of corporate governance. To Ponomareva, Nordqvist, and Umans (2019), family influence can be viewed as a mechanism of corporate governance that involves: (a) ownership — family owners have knowledge about the company and strong needs and incentives to be involved in its governance; (b) boards — composition of the boards, where the directors represent the interests of the shareholders, which seems to be a particular discussion in family businesses (Astrachan et al., 2002); and (c) management — related to the people — family members or not — responsible for implementing the strategy chosen.

In this sense, the F-PEC dimensions can be useful lenses to explore and understand aspects of corporate governance in family business. Consequently, they also help by explaining how those characteristics affect the companies' decision-making process and organizational behaviors — more specifically, those involving enterprise risk management.

## Enterprise risk management (ERM)

Enterprise risk management (ERM) is a systematic process to identify, measure, analyze, control, communicate, and manage uncertain events that may affect the company (Brighenti & Silva, 2016; Renn, 1992). This process, known as a holistic view of risks, creates a portfolio that encompasses the maximum risks and the interactions between these risks and the organization's strategic goals (Schiller & Prpich, 2014; Wieczorek-Kosmala, 2014). ERM is a multidirectional and interactive process, according to which components such as internal environment, objectives, and information influence each other (COSO, 2004).

According to COSO (2004), the first step in establishing ERM is to define the company's strategic objectives. In the sequence, it is necessary to assess the eminent risks of the business in order to identify and measure the frequency and severity of risks. In the present article, we focus on four categories of enterprise risk management established by COSO (2004), presented below.

Risk identification (ID) is described in the literature as the process of searching, recognizing, and describing risks. It involves the recognition of risk sources, events, and their consequences (International Organization for Standardization [ISO], 2008). Risk identification tools provide benefits such as formalization of existing risks and the knowledge needed to anticipate risk events (Project Management Institute, 2013). After the identification and understanding of the risks, risk analysis determines consequences and probabilities of occurrence.

The second stage, risk evaluation (EV), is a process in which different types of risks are diagnosed, calculated, and analyzed (Lima, 2015). This stage develops an understanding of the risks, such as their likelihood, the importance of

addressing them, their positive or negative consequences, their sources, and how to choose appropriate strategies and methods for treating them (ISO, 2008).

The risk response (RR) phase involves determining actions that must be taken in order to meet the company's risk appetite. According to the International Organization for Standardization (COSO, 2017), it is a stage in which one chooses to accept risks, modify them, modify their effects, or both. In this stage, strategic decisions are made around: (a) avoiding risky activity; (b) accepting certain risks in anticipation of increased opportunity; (c) removal of risk sources; (d) modifying risk likelihood; (e) modifying risk consequences; (f) sharing risks with other parties; (g) consciously retaining risks based on risk assessment (ISO, 2008).

The risk communication (RC) phase is relevant for a continuous process involving risk identification, evaluation, and response. The communication discloses the processes and procedures that must be carried out so that they are in line with the organization's strategic objectives and reinforce organizational culture. To be effectively relevant, the information communicated at all levels of the organization must be reliable and timely in order to convey clear and meaningful messages (COSO, 2017).

## Family influence and enterprise risk management (ERM)

Family and nonfamily businesses may be exposed to identical risks and opportunities (Bernhoeft & Gallo, 2003) in terms of business environment, but family influence means that family businesses may consider and practice ERM differently from other companies.

Family businesses are more prone to the influence of personal preferences as they are aligned with the personal objectives of family members in addition to the objectives of the company. Due to this, particular organizational behaviors arise in these kinds of business; an example is the exercise of power, culminating in the process of succession, the maturing of the business, the limitation of growth due to the preference for self-financing, the structural crises in periods of lack of leadership, the need for professionalization, and the changes in family characteristics (Bernhoeft & Gallo, 2003).

Naldi, Nordqvist, Sjöberg, and Wiklund (2007) focused their study on risk decision-making as an impactful dimension in the entrepreneurial orientation of family businesses. The authors considered that family businesses tend to take fewer risks and choose lower levels of investment than nonfamily businesses. Based on a sample of small and medium-sized Swedish companies, the authors emphasize that family businesses are more risk-prone while performing entrepreneurial activities, but it occurs in smaller proportions compared to nonfamily businesses.

Based on the previous literature, Figure 1 was elaborated with the purpose of representing the structure of this study.

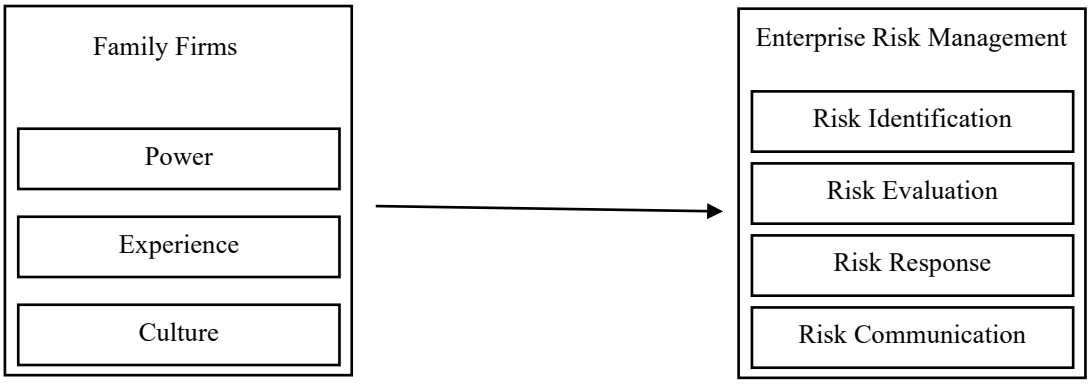


**Figure 1.** Influence of the family on the usage of Enterprise Risk Management tools.
Source: Authors.

As shown in Figure 1, the family influence is measured using the F-PEC scale. The model aims to establish a relationship between each dimension of family influence and the risk management practices described in the ERM model established by the Committee of Sponsoring Organizations of the Treadway Commission (COSO, 2004): identification, evaluation, response, and communication. In this way, we formulate three research hypotheses that will be described further.

According to Otley (2016), there is no single management control system (MCS) design for all organizations. Additionally, several management mechanisms that integrate the MCS are useful for decision-making, such as ERM. With regard to risk management practices as a MCS mechanism, the literature shows some evidence that family influence (ownership, composition of the board of directors, management, etc.) on daily work can result in lower adoption of formal processes to identify, evaluate, respond to, and communicate risk (Acquaah, 2013; Bernhoeft & Gallo, 2003; Hiebl, Duller, & Feldbauer-Durstmüller, 2015; Kellermanns, 2005; Naldi et al., 2007; Poletti-Hughes & Williams, 2017; Zahra, 2005).

According to the literature, a possible reason that may explain the particularities of family businesses' ERM practices can be related to the fact that standards of ownership, governance, management, and succession significantly influence the company's objectives and the strategies implemented (Chua et al., 1999). The main focus of family businesses is not a concern with immediate financial return, but rather with the wealth contained in the perpetuation of the family values through the business (Chua et al., 1999), which is taken seriously when dealing with configuration of ownership.

First of all, the family's need and desire to be in charge and exert influence on the company create the urge to maintain the power. This means keeping the right to direct the company, leading to a concentration of ownership into the family's hands (Mizumoto & Machado Filho, 2007). This factor can also reflect on how those companies organize themselves in terms of corporate governance. For example, it is common for family businesses to have small boards of directors made up mostly of family members, with or without the presence of independent directors (nonfamily members) (Bressan et al., 2019).

Another important aspect that should be considered here is that literature on family businesses recognizes that the agency problem in family businesses is not necessarily related to external (nonfamily) shareholders, but mostly played between the family members (Blanco-Mazagatos, Quevedo-Puente, & Delgado-García, 2016). Therefore, family members are involved in the company's strategic planning through the aforementioned concentration of ownership: family members have control, either direct (as executives) or indirect (as members of the board of directors), which ensures them stability and knowledge of the company's paths. Consequently, there is less obligation for them to prove and/or to formalize their efficiency with regard to running the company, meaning that MCSs tend to be less used (Speckbacher & Wentges, 2012), including ERM.

Kleffner, Lee, and McGannon (2003), Beasley, Clune, and Hermanson (2005), and Lundqvist (2015) indicate that the reasons for the adoption of risk management practices include the influence of a risk manager and the support of the board of directors. According to Bressan et al. (2019), board members build a so-called 'competence-based trust,' which enables conflict resolution and affects the quality of board decision-making as well as the alignment of interests within the organization. According to Karam, Machado Filho, and Abib (2019), competence-based trust comes from knowledge that is specific to family members, which forms an influential basis capable of stimulating the sharing of information. This, in turn, generates negative relationships of stewardship and reduces relationship conflicts in family businesses.

Karam et al. (2019) also add that there is a positive effect when an external member is present on the board of directors of the family business. From this, we understand that a higher level of family power will lead to less need for formalization and standardization, consequently leading to less attention to risk management practices. In this context, we have the following hypothesis:

> H1 — There is a negative relationship between the power dimension and risk management practices.

Evidence indicates that the level of family involvement, through experience, positively influences the perception of the various risks present in the company (Acquaah, 2013; Bernhoeft & Gallo, 2003; Hiebl et al., 2015; Kellermanns, 2005; Naldi et al., 2007; Poletti-Hughes & Williams, 2017; Zahra, 2005), which may result in a positive relation between the family's experience and risk management practices.

As presented in the literature, experience is based on sharing beliefs among individuals and provides the opportunity for sharing information and required knowledge (Holt et al., 2010; Klein et al., 2005), which includes knowledge about matters of risk and how to deal with them. It is understood that when there are more family members in the first generation of the company, adoption of ERM is less likely. However, the presence of a second, third, or more generations is understood to bring a higher level of expertise, as well as a higher demand for risk control, and consequently, more attention to risk management practices. In this context, we have the following hypothesis:

> H2 — There is a positive relationship between the experience dimension and risk management practices.

The elaboration of a strategic planning aligned with the family objective allows the creation of a unique and flexible work environment, able to inspire the employees and motivate them, in order to foster loyalty and commitment to the business (Acquaah, 2013). This can be captured once the objectives of the family members are compatible with those of the company, so that this coherence can influence the other stakeholders, such as: employees, customers, and providers.

Several studies have indicated that depending on the prominent culture in the organization, the perception of the

various risks can be modified (Acquaah, 2013; Bernhoeft & Gallo, 2003; Hiebl et al., 2015; Kellermanns, 2005; Naldi et al., 2007; Poletti-Hughes & Williams, 2017; Zahra, 2005). In particular, image and reputation play an important role in family business (Sageder, Mitter, & Feldbauer-Durstmüller, 2018). Furthermore, risks can represent a threat to the family's socio-emotional wealth since they can bring not only financial loss, but also the loss of a personal emotional heritage (Berrone, Cruz, & Gomez-Mejia, 2012). Therefore, it is expected that those companies will apply ERM in order to maintain family objectives, which includes its image and reputation.

> H3 — There is a positive relationship between the culture dimension and risk management practices.

## METHODOLOGICAL PROCEDURES

### Sample

We developed a quantitative study with the data collected through a survey. The Brazilian company managers listed in LinkedIn represent the study's population, and the respondents linked to family businesses represent the sample of the study, with the F-PEC model being used to determine which companies were family businesses. Thus, through LinkedIn, we requested connections in the network of professionals responsible for making decisions in Brazilian businesses.

In this process, invitations for connection were forwarded to 4,326 CEOs and directors, previously filtered in the network, 2,600 of which accepted the invitation. The choice of this population was because CEOs and directors are influential roles in the organization, which means their perceptions about risk management are relevant and inform their companies' stances on risk (Klein et al., 2005). Despite our focus on having family members as respondents, we also accepted nonfamily member respondents under the assumption that those professionals not only act directly with the family in charge, but also that their position in the company's hierarchy puts them in situations that involve risk analysis.

The data was gathered between March and June of 2018 via Google Form. The research instrument encompasses instruments validated by the literature (see Astrachan et al., 2002) used to capture F-PEC (numerical and binary scale to capture the power and experience variables, and Likert-type 5-point scale to capture the culture variable) and COSO-ERM (Brighenti & Silva, 2016; Silva & Fernandes, 2019) to capture ERM practices, for which we used a Likert-type 5-point scale, varying from 'totally disagree' to 'totally agree.'

The F-PEC model includes the presence of family members as executives, who become a potential resource in understanding, predicting, and modifying behaviors (Chua et al., 1999). Ownership, governance, management, and succession standards significantly influence the company's objectives and the strategies implemented (Chua et al., 1999). Through family involvement in the business, it is opportune to study and identify these particularities for enterprise risk management. According to Astrachan et al. (2002), family businesses are distinguished by the type of family involvement, be it through shareholding (power), generations who have the command (experience), or the alignment of the family's goals and values with the business (culture).

The analyzed sample is characterized as non-probabilistic intentional and achieved by accessibility. We obtained a return of 204 respondents, representing a rate of respondents of 7.85% (the questionnaire was sent to 2,600 managers). A non-parametric method, the Mann-Whitney test, was used to assess the differences between family and nonfamily businesses and each ERM variable. However, due to the impossibility of predetermining whether the company to which the respondent was linked was familiar, it was necessary to exclude from the sample respondents who, according to the F-PEC model, were linked to the nonfamily business. To determine if the company represented by a respondent was a family firm, we used criteria from Hauck, Suess-Reyes, Beck, Prügl, and Frank (2016), which defines family businesses as those in which the family or group of families own 50% or more of the company. So, our final sample reached 142 valid questionnaires.

According to sensitivity test in the G*Power® software, this quantity of respondents meets the assumptions (Faul, Erdfelder, Lang, & Buchner, 2007; Hair, Gabriel, & Patel, 2014). In specific, by defining a median level for the effect size as f2 = 0.15, significance level of 1% (α err prob = 0.050), power (1-β err prob) = 0.80, and four numbers of predictors, we obtained a minimum sample of 85 respondents.

### Empirical model

The analysis of the data occurred in stages, as recommended by Hair, Anderson, Tatham, and Black (2005). Initially, we identified values outside the limits, proceeding to the conversion of scales when necessary. Additionally, we developed the descriptive statistical analysis in terms of sample and constructs. Furthermore, for the data analyses, we employed structural equation modeling (SEM) multivariable technique (SmartPLS software) (Hair, Hult, Ringle, & Sarstedt, 2016; Nitzl, 2016).

This technique was selected because it was more adequate to the research problem stated in the present research. Specifically, SEM has some advantages related to other techniques. For instance: (a) the absence of data distribution assumptions; (b) high reliability for the estimation of complex models even with few observations; and (c) it allows researchers to incorporate unobservable variables measured indirectly in the established relationships, which provides a systematic analysis

through the simultaneity between multiple constructs (Hair et al., 2016; Hair, Black, Babin, Anderson, & Tatham, 2009; Nitzl, 2016).

The validity of the measurement model was verified in three ways, namely: Cronbach's alpha (AC), composite reliability (CR), and average variance extracted (AVE). Cronbach's alpha performs the internal consistency analysis of the construct — values close to 1 are desirable, although values greater than 0.70 should be accepted (Hair et al., 2009). Composite reliability (CR) indicates the proportion of variance of the true scores of a construct in relation to the total variance of the calculated score, in which the desired values are those greater than 0.50. Average variance extracted (AVE) refers to the variance in the indicators that are explained by the latent construct, with the average of the factor loads being squared, and its desirable value is 0.50 or above (Hair et al., 2009).

Once the measurement model criteria were analyzed, we proceed to the analysis of the structural paths and their respective statistical significance, the analysis of the coefficient of determination (R2), and finally the effect size analysis (f2). We used the criterion suggested by Cohen (1988) to assess the magnitude of the predictive power of the measurement model and the size of the contribution of each construct to the determination coefficient (0.01: small effect; 0.09: medium effect; and 0.25: high effect). Thus, in addition to the adequacy of the predictive quality of the models, the paths observed in the structural model of measurement present significant statistical relationships when they present a p-value of *** $p < 0.01$; ** $p < 0.05$; or * $p < 0.10$.

## RESULTS

### Descriptive statistics

According to the data, around 91% of the respondents occupy the position of CEO, director, or president; the remaining 9% occupy other functions that also have decision-making responsibilities. In average, they have been in the company for nine years and have roughly five years of experience in the function. Most of the respondents of this research are male (89%), between 41 and 50 years of age (35%); 25% of the respondents declared to be post-graduated (master/PhD); and 50% have specialization (MBA). It is worth noting that they are mostly educated in the field of Administration (44.37%), followed by Engineering (21.83%), Information Technology (9.86%), and finally Accounting Sciences (4.93%).

Table 1 shows the areas of activity of the companies in which the respondents work, as well as the size of these organizations.

**Table 1.** Main segments of activity and size of organizations by invoicing and number of employees.

| Sector | $n_i$ | fi |
|---|---|---|
| Industry | 35 | 24.65 |
| Trade | 18 | 12.68 |
| Service | 89 | 62.68 |
| Total | 142 | 100 |
| Average revenues | $n_i$ | fi |
| Less than or equal to R$ 2.4 million | 63 | 44.37 |
| Greater than R$ 2.4 million and less than or equal to R$ 16 million | 29 | 20.42 |
| Greater than R$ 16 million and less than or equal to R$ 90 million | 24 | 16.90 |
| Greater than R$ 90 million and less than or equal to R$ 300 million | 15 | 10.56 |
| Greater than R$ 300 million | 11 | 7.75 |
| Total | 142 | 100 |
| Number of employees | $n_i$ | fi |
| Up to 9 | 56 | 39.44 |
| From 10 to 49 | 31 | 21.83 |
| From 50 to 99 | 12 | 8.45 |
| 100 or more | 43 | 30.28 |
| Total | 142 | 100 |

**Note.** $n_i$ — absolute number of cases; $f_i$ — frequency in percentage. Source: Survey data.

The Table 1 shows the predominance of small- and medium-sized companies in the service sectors. When considering the age of these businesses, of the total of 142 participating businesses, it was found that 50% have less than ten years of existence.

## Construct's descriptive data analysis

The F-PEC construct had a Cronbach alpha of 0.94. We followed the study of Jaskiewiecz, González, Menéndez, and Schiereck (2005) — specifically, our study analyzes only the proportion of shares held by the family (PW01) and the proportion of family members on the board of directors (PW02), since Brazilian companies are not obliged to formalize their corporate governance. The total variance explained resulted in 48.5%, which indicates reliability as told by Hair, Black, Babin, Anderson, and Tatham (2009). The KMO test showed an index of 0.90 and Bartlett's test of sphericity showed statistical significance ($p < 0.05$).

When analyzing the results of the construct of the culture dimension of family, we verified, for all indicators, the reach of the maximum and minimum degrees of agreement. The averages obtained are similar in all questions, which indicates agreement among the participants.

**Table 2.** Descriptive analysis of F-PEC construct.

| Dimension | Indicator* | Mean | Std. Dev. | Minimum | Maximum |
|---|---|---|---|---|---|
| Power | PW01 | 82.0 | 29.53 | 0.00 | 100.00 |
| | PW02 | 0.48 | 2.12 | 0.00 | 25.00 |
| | PW03 | 1.73 | 0.44 | 1.00 | 2.00 |
| Experience | EX02 | 0.53 | 0.14 | 0.00 | 0.937 |
| | EX03 | 0.57 | 0.16 | 0.00 | 0.935 |
| | EX04 | 0.49 | 0.24 | 0.00 | 0.875 |
| Culture | OC01 | 3.72 | 1.51 | 1.00 | 5.00 |
| | OC02 | 3.73 | 1.36 | 1.00 | 5.00 |
| | OC03 | 3.84 | 1.33 | 1.00 | 5.00 |
| | OC04 | 3.86 | 1.33 | 1.00 | 5.00 |
| | OC05 | 3.64 | 1.25 | 1.00 | 5.00 |
| | OC06 | 4.08 | 1.22 | 1.00 | 5.00 |
| | OC07 | 3.99 | 1.30 | 1.00 | 5.00 |
| | OC08 | 4.01 | 1.34 | 1.00 | 5.00 |
| | OC09 | 3.65 | 1.32 | 1.00 | 5.00 |
| | OC10 | 3.68 | 1.27 | 1.00 | 5.00 |
| | OC11 | 4.07 | 1.22 | 1.00 | 5.00 |
| | OC12 | 3.84 | 1.35 | 1.00 | 5.00 |
| | OC13 | 3.81 | 1.28 | 1.00 | 5.00 |

**Note.** Cronbach's alpha = 0.94; Kolmogorov-Smirnov = 0.90; Bartlett's test of sphericity = 2,099.47; TVE (total variance explained) = 48.25. *PW — power; EX — experience; OC — culture. The number that accompanies the indicators described corresponds to the number of questions found in the research instrument used in the present study, according to open data made available. Source: Research data.

The theoretical construct of the ERM process has a Cronbach's alpha of 0.96. The total variance explained resulted in 42.55%, indicating reliability as determined by Hair et al. (2009). The KMO test showed an index of 0.90 and Bartlett's test presented statistical significance ($p < 0.05$). We also note that the standard deviations are similar for all the result sets evidenced for the variables. We observed that when analyzing risk identification tools, the highest standard deviations are for the auditing and inspection variables (ID01) and failure mode and effect analysis — FMEA (ID12).

When analyzing the risk evaluation tools, a higher standard deviation is found for the computer simulation variable (EV18) and FMEA (AV19). When analyzing the measures of risk responses, we perceived a higher standard deviation for the response that indicates no measure for risk non-acceptance was adopted (RR01). Pertaining to risk communication, a greater standard deviation was obtained for the variable (CR02) that deals with the importance of communicating the risks to the employees.

**Table 3.** Descriptive analysis of the construct of risk management practices.

| Dimension | Indicator* | Mean | Std. Dev. | Min. | Max. |
|---|---|---|---|---|---|
| Risk identification | ID01 | 3.30 | 1.48 | 1.00 | 5.00 |
| | ID02 | 3.91 | 1.15 | 1.00 | 5.00 |
| | ID03 | 3.82 | 1.16 | 1.00 | 5.00 |
| | ID04 | 3.90 | 1.22 | 1.00 | 5.00 |
| | ID05 | 4.19 | 0.96 | 1.00 | 5.00 |
| | ID06 | 3.75 | 1.20 | 1.00 | 5.00 |
| | ID07 | 2.50 | 1.44 | 1.00 | 5.00 |
| | ID08 | 3.25 | 1.45 | 1.00 | 5.00 |
| | ID09 | 3.35 | 1.44 | 1.00 | 5.00 |
| | ID10 | 2.89 | 1.43 | 1.00 | 5.00 |
| | ID11 | 2.15 | 1.46 | 1.00 | 5.00 |
| | ID12 | 2.27 | 1.48 | 1.00 | 5.00 |
| Risk evaluation | EV01 | 3.68 | 1.17 | 1.00 | 5.00 |
| | EV02 | 2.96 | 1.42 | 1.00 | 5.00 |
| | EV03 | 2.33 | 1.38 | 1.00 | 5.00 |
| | EV04 | 2.56 | 1.39 | 1.00 | 5.00 |
| | EV05 | 3.70 | 1.31 | 1.00 | 5.00 |
| | EV06 | 2.15 | 1.36 | 1.00 | 5.00 |
| | EV07 | 2.37 | 1.44 | 1.00 | 5.00 |
| | EV08 | 2.08 | 1.33 | 1.00 | 5.00 |
| | EV09 | 2.32 | 1.40 | 1.00 | 5.00 |
| | EV10 | 2.11 | 1.37 | 1.00 | 5.00 |
| | EV11 | 2.78 | 1.51 | 1.00 | 5.00 |
| | EV12 | 2.69 | 1.47 | 1.00 | 5.00 |
| | EV13 | 2.13 | 1.36 | 1.00 | 5.00 |
| | EV14 | 1.63 | 1.07 | 1.00 | 5.00 |
| | EV15 | 1.82 | 1.19 | 1.00 | 5.00 |
| | EV16 | 2.49 | 1.53 | 1.00 | 5.00 |
| | EV17 | 3.47 | 1.38 | 1.00 | 5.00 |
| | EV18 | 2.81 | 1.54 | 1.00 | 5.00 |
| | EV19 | 2.16 | 1.49 | 1.00 | 5.00 |
| Risk response | RR01 | 3.49 | 1.23 | 1.00 | 5.00 |
| | RR02 | 3.89 | 1.13 | 1.00 | 5.00 |
| | RR03 | 3.65 | 1.10 | 1.00 | 5.00 |
| | RR04 | 1.83 | 1.12 | 1.00 | 5.00 |
| Risk communication | RC01 | 4.30 | 0.97 | 1.00 | 5.00 |
| | RC02 | 3.87 | 1.32 | 1.00 | 5.00 |
| | RC03 | 3.63 | 1.27 | 1.00 | 5.00 |
| | RC04 | 3.43 | 1.30 | 1.00 | 5.00 |

**Note.** Cronbach's alpha = 0.96; Kolmogorov-Smirnov = 0.908; Bartlett's test of sphericity = 4,565,41; TVE (total variance explained) = 42.55. *ID — risk identification; EV — risk evaluation; RR — risk response; RC — risk communication. The number that accompanies the indicators described corresponds to the number of questions found in the research instrument used in the present study, according to open data made available. Source: Research data.

The descriptive analysis of this construct shows differences between the perceptions of the research participants, which emphasizes the opportunity to analyze the risk management process in the context of Brazilian family businesses. This attention is deserved because, according to the FB literature, these organizations are exposed to specific risks arising from the interdependence between family and company (Holt et al., 2010; Reyna & Encalada, 2016; Ussman, 1996; Zahra, 2005); furthermore, the family's decisions regarding risk appetite are postulated between rationality and affectivity (Masri et al., 2017).

As the risk management process aims to maintain an acceptable and manageable risk profile, the perception of cost-benefit is evidenced in this study, as previously highlighted by Kleffner et al. (2003) and Bromiley, McShane, Nair, and Rustambekov (2015). In this context, the risk management process is an important variable because, according to McConaughy et al. (2001) and Weitzner and Darroch (2010), it ensures the achievement of the objectives, reduces negative impacts, and assists in mapping opportunities. When managers are able to have a perception of imminent risks in the organization, it is possible to implement actions and determine the focus of organizational activities, in order to identify, measure, analyze, control, and prevent events that can affect the organization (Gordon et al., 2009) and create a portfolio with the main perceived risks (Lechner & Gatzert, 2017).

## Measurement model analyses

In the first round of the confirmatory factorial analysis of each measurement construct, it was necessary to exclude some variables from the constructs. The first excluded indicators were the following: one of the culture construct (OC01); two indicators were excluded from the risk identification construct (ID11) and (ID12); two other indicators were excluded from the risk evaluation construct (EV01) and (EV07); and one indicator was excluded from the risk response construct (RR04).

Subsequently, a second round was performed for the confirmatory factor analysis, leading to the exclusion of the variables (ID10) of the risk identification construct and (EV05) of the risk evaluation construct. Such exclusions were necessary since they did not reach the minimum value of variance extracted and presented undesirable factorial loads for each construct.

As evidenced in Table 4, the results demonstrate the reliability of the measurement scales, allowing for the validation and appropriate use of the structural equation model to be tested in this study. Regarding discriminant analysis, we also proceeded to calculate the shared variances, in accordance with the model of Fornell and Larcker (1981), which compares the variance extracted in the constructs with the shared variance.

**Table 4.** Discriminant analysis of the measurement model.

| Variables | EV | RC | OC | EX | ID | PW | RR |
|---|---|---|---|---|---|---|---|
| EV | 0.77 | | | | | | |
| RC | 0.45 | 0.86 | | | | | |
| OC | 0.16 | 0.36 | 0.85 | | | | |
| EX | 0.08 | 0.08 | 0.26 | 0.79 | | | |
| ID | 0.68 | 0.58 | 0.31 | 0.03 | 0.73 | | |
| PW | 0.14 | 0.05 | 0.13 | 0.36 | 0.05 | 1.00 | |
| RR | 0.42 | 0.58 | 0.49 | 0.10 | 0.48 | 0.08 | 0.86 |
| *Cronbach's alpha* | 0.95 | 0.88 | 0.97 | 0.71 | 0.89 | 1.00 | 0.82 |
| Average variance extracted | 0.59 | 0.74 | 0.73 | 0.62 | 0.54 | 1.00 | 0.74 |
| Composite reliability | 0.96 | 0.92 | 0.97 | 0.83 | 0.91 | 1.00 | 0.89 |

**Note.** EV — risk evaluation; RC — risk communication; OC — organizational culture; EX — experience; ID — risk identification; PW — power; RR — risk response. The estimated values were obtained based on structural equations modeling in the SmartPLS 3 software (Hair et al., 2016). The values in the diagonals are the square root of the average variance extracted. These values are expected to be greater than the correlation between the latent variables, which is one of the discriminant validity analyses (Hair et al., 2016). Source: Research data.

The model shows that the variances extracted from the analyzed variables are superior to the shared variance in all the analyzed constructs, which indicates its discriminant validity. This demonstrates that there is no redundancy in the construction of the construct variables — they are different constructs. After completing the validations of the measurement model, we were able to proceed, through structural modeling, with the investigation of the hypotheses proposed in this study.

## Structural model analyses

Initially, we sought to investigate the existing relationships between the constructs with the goal of answering the research question (see Figure 2).

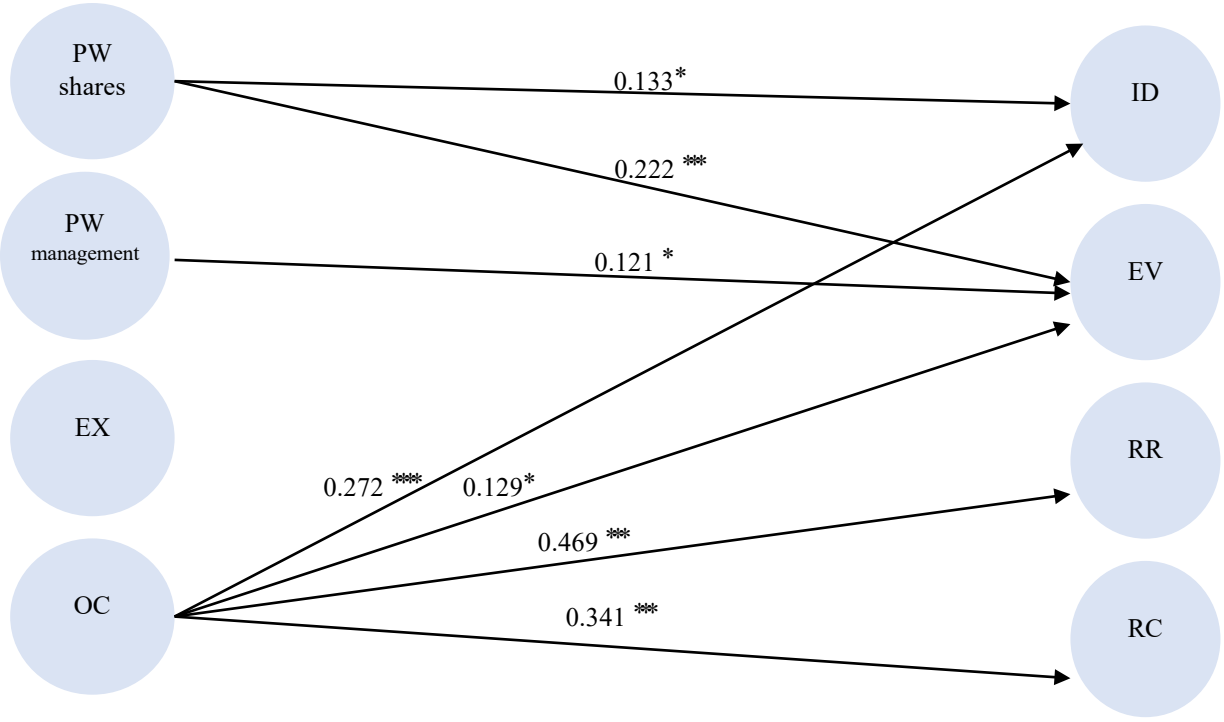


**Figure 2.** Structural model of the relations investigated.

*** Significance level of 0.01; ** Significance level of 0.5; * Significance level of 0.10. PW shares — proportion of power held by the shareholding power; PW management — proportion of family members in management; EX — experience — generations that are part of the organization and have direct participation in the management; OC — organizational culture; ID — identification; EV — evaluation; RR — risk response; RC — risk communication. The model presented in Figure 2 shows the segregation of the power construct into two different dimensions from the original model developed by Astrachan et al. (2002). In the adopted version, due to the fact that few companies in the sample had a formalized board of directors, we decided to exclude the variable that measured the power exercised according to the proportion of participation in the board of directors, which represents an adjustment in our model. Source: Research data.

As stressed in the methodological literature, the $R^2$ of the investigated relationships indicates the percentage of variance of a latent dependent variable that is explained by other independent latent variables. It is observed in our model that the family influence enables 24% of the variance of the risk response use to be explain, which according to Cohen (1988) could be considered between a medium to large $R^2$ for social sciences. Additionally, we found that family influence, captured by F-PEC dimensions, enables 12% variance of risk communication, 10% variance of risk identification, and finally, 0.9% variance of risk evaluation. Those last results are considered between small and medium $R^2$ for social science (Cohen, 1988).

Considering that in the sample the majority of investigated family companies do not have formal directors' boards for governance, the model for measuring power was based mostly on shareholder control (power share). Thus, differently than predicted we obtained a positive, small, and significant structural path coefficient on the variables of identification (0.133, p = 0,072) and evaluation (0.221, p = 0.006), respectively. The values of (f2) may be considered low, but according to Cohen (1988), values around 0.01 are accepted in the field of applied social sciences.

Our result is contrary to the arguments stated by Bernhoeft and Gallo (2003), Kellermanns (2005), Zahra (2005), Naldi et al. (2007), Acquaah (2013), Hiebl et al. (2015), and Poletti-Hughes and Williams (2017), who discussed that family members do not need to prove their effectiveness, which tends to decrease the use of MCS, including ERM. This statement, in terms of the specific context of risk management practices, was not corroborated by our findings: there was a significant and positive relationship between power (proportion of family-owned shares) and formal processes of risk management practices. The relationship between the variables PW management and risk evaluation also showed a positive, small, and significant structural path coefficient (0.121, p = 0.074).

**Table 5.** Summary of the hypotheses F-PEC and risk management practices.

| | Hypothesis | Beta | Standard deviation | Test T | p-value | f2 |
|---|---|---|---|---|---|---|
| Power share -> Identification | H1 — There is a negative relationship between the power dimension and risk management practices. | 0.133 | 0.073 | 1.804 | 0.072 | 0.019 |
| Power share -> Evaluation | | 0.221 | 0.080 | 2.744 | 0.006 | 0.054 |
| Power share -> Response | | 0.075 | 0.079 | 0.954 | 0.340 | 0.007 |
| Power share -> Communication | | 0.110 | 0.068 | 1.635 | 0.102 | 0.014 |
| Power management -> Identification | | 0.111 | 0.085 | 1.306 | 0.192 | 0.014 |
| Power management -> Evaluation | | 0.121 | 0.068 | 1.786 | 0.074 | 0.016 |
| Power management -> Response | | 0.091 | 0.074 | 1.216 | 0.224 | 0.011 |
| Power management -> Communication | | 0.035 | 0.058 | 0.593 | 0.553 | 0.001 |
| Experience -> Identification | H2 — There is a positive relationship between the experience dimension and enterprise risk management practices. | 0.099 | 0.119 | 0.831 | 0.406 | 0.011 |
| Experience -> Evaluation | | 0.168 | 0.148 | 1.133 | 0.258 | 0.031 |
| Experience -> Response | | 0.129 | 0.121 | 1.065 | 0.287 | 0.022 |
| Experience -> Communication | | 0.086 | 0.098 | 0.876 | 0.381 | 0.008 |
| Culture -> Identification | H3 — There is a positive relationship between the culture dimension and risk management practices. | 0.272 | 0.103 | 2.653 | 0.008 | 0.084 |
| Culture -> Evaluation | | 0.129 | 0.078 | 1.661 | 0.097 | 0.019 |
| Culture -> Response | | 0.469 | 0.082 | 5.747 | 0.000 | 0.296 |
| Culture -> Communication | | 0.341 | 0.088 | 3.896 | 0.000 | 0.135 |

**Note.** The estimated p-value derives from the bootstrapping of 1,000 resamples. The following parameters should be followed to evaluate the size of the effect ($f^2$): large size of the effect ($f^2 = 0.25$); medium size of the effect ($f^2 = 0.09$); and small size of the effect ($f^2 = 0.01$) (Cohen, 1988). Source: Survey data.

As suggested by Chua et al. (1999), this result sheds light on the fact that family members in charge of their own business understand risk assessment as an important matter, specifically for how it helps them reflect on possible risks that may harm the continuity of the business. It also evidences the preservation of socio-emotional wealth, which is observed by Gomez-Mejia et al. (2007).

There were no significant relationships between the variables power management and identification, evaluation, and response to risk. This result also highlights the discussion raised by Ussman (1996), in which one of the characteristics of family businesses is the centralization of power around the founding partner; therefore, this result makes sense since the family member manager has a deep knowledge of the business, tends to manage risk mostly intuitively, and, by doing so, has less formal tools to identify risks pertinent to the business. This context is applied to the sample businesses, 52.2% of which belong to the first generation of the family. Risk communication also did not show statistical relevance, according to the proposed model. This may be due to the fact that decisions are centralized and the answers do not necessarily imply solutions come from ERM, but from the decision-making of the family member, such as the founder.

Additionally, we did not find a significant relationship between the dependent variables (identification, evaluation, response, and communication) and the independent variable experience measured by the generations that are part of the organization and have direct participation in the management. Therefore, we could not confirm our hypothesis that there is a positive relationship between family experience and ERM. This hypothesis was based on previous research in FB literature that assumes that family businesses have an accumulation of knowledge over the generations, which would make it easier to recognize risks to the organization and therefore would result in better use of ERM.

Finally, the relationships between the variable of family culture and the variables of risk identification, risk evaluation, risk response, and risk communication are positive and significant. In specific, the model reached a positive and significant structural path coefficient (0.469, p = 0.000) with a size effect of 0.296 — considered large by Cohen (1988) — for the relationship between family culture and risk response. Similarly, as predicted, we find out a positive and significant structural path coefficient for the relationship between family culture and risk communication (0.341, p = 0.000), with a size effect considered between low and medium by Cohen (1988).

The relationship between the culture and risk identification presented a positive, low size effect and

significant path coefficient (0272, p = 0.008). Finally, the culture of risk evaluation was also positive, low, and significant (0.129, p = 0.097). Given these results, we perceive the importance of aligning the strategic objectives of the organization with the objective of the family in order to motivate and inspire nonfamily members and other stakeholders and to foster loyalty and commitment to the business. Therefore, this engagement of the work team allows the detection of risks in the organization and can change the perception of imminent risks.

In summary, the evidences found at this stage of the research suggest that family involvement — in particular through shareholding control (power) — and the dissemination of family values and believes (culture) in the organization lead to, in some respects, a greater concern with the ERM process. It was not possible to confirm H1 because we found a positive relationship between power and ERM; however, while we did not find significance in all ERM variables, there was significance in the relationships between the power share variables, as well as between management power and risk assessment. We also did not confirm H2 since there was no relationship between experience and ERM. H3 was confirmed with a positive and significant relationship between culture and ERM.

## CONCLUSIONS

This study aimed to evaluate the relationship between the family dimensions of power, experience, and culture and the practices of ERM in Brazilian family business. We concluded that the power dimension is related to some of the components of risk management. By segregating the dimension into power in ownership (power share) and participation in management (power management), a positive and significant relationship was obtained between power share and the risk management variables of identification and evaluation. In turn, by looking specifically to power management, the relationship is positive and significant only for the process of risk evaluation. This result is interesting because, according to the literature, family influence through power leads to a centralization of power, which consequently reduces the usage and the formalization of MCSs, including ERM. Hence, our results contradict the previous literature by highlighting that the greater influence of the family in terms of power is the usage and formalization of risk management practices in this kind of companies.

Contrary to expectations, we did not find a relationship between the experience dimension and the components of ERM. However, when analyzing the interactions between ERM and the culture dimension of the F-PEC, all relationships were positive and significant. This allows us to conclude that the analyzed context presents a process of risk management aligned with the organizational culture due to the participation of the family. In this way, culture interferes in the way organizations identify, respond to, and communicate their risks. In this perspective, the greater the influence of family culture, the greater the adoption of such risk management practices.

From a practical perspective, it appears that the family businesses analyzed in this study generally perceive the importance of risk management practices but do not yet manage them in an integrative manner, according to proposed frameworks such as those of COSO (2004) and the International Organization for Standardization (2008). It should be noted that risk identification tools are relatively well disseminated and used among family firms. However, there are weaknesses in the risk evaluation process, which can lead to a poor dimensioning of the impact of risks on the business and on the possibility of achieving its strategic objectives.

Finally, we conclude that, for our sample, the risk management practices investigated are generally still incipient and are used in different ways among the analyzed companies. Our initial expectation that the specific characteristics of the family businesses would be able to influence risk management practices was a partial one.

The research findings contribute to the expansion of existing knowledge on the topics related to this research problem. These results contribute with evidences about the effects of family influence in the organization and on how ERM practices work in relation to that influence. These findings stimulate the development of new studies. Considering the limitations exposed, future research under the corporate governance and family risk management approach may focus on specific sectors and geographic segmentations, which may show specific differences due to varying cultural characteristics. Another limiting factor is the amplitude of the sample considered in this study. Researches can also use contingency variables, such as technology and organizational structure, life cycle, and strategy, with the goal of assisting in the identification of the use of ERM. The succession process in family businesses may be another important aspect in the necessity and decision for an ERM.

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