

Article

Managerial Controls in Private Family Firms: The Influence of a Family's Decision Premises

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Abstract: In most studies, the affiliation of the manager (family-affiliated or non-family affiliated) and supposedly related behavior (agent or steward) is considered the sole antecedent to explain a family business' (non) professionalization of managerial controls. This paper, based on Luhmann's new system theory, examines whether a family's decision premises influence the design of managerial controls in family firms in addition to a manager's family affiliation status. Using survey data of 135 large and medium-sized Brazilian family firms and testing the hypotheses with SEM, this study provides evidence that a family's decision premises significantly influence the design of managerial controls in family firms. This study provides evidence that when a family's intention to transfer the firm to next generation (TGO) is high, more formal controls, as well as controls of a more participative nature are adopted in a family firm. Moreover, the results do not indicate that the level of family involvement in management affects the design of controls in firms with high TGO. The results only showed a significant relationship between a family's intention to control and influence (FCI) the firm and the absence of participative controls. In addition, these findings also illustrate that each single family-induced decision premise has the potential to explain family firm behavior, since each of the two premises considered in our study is related to a different design of the controls adopted by the family firm.

Keywords: managerial controls; decision premises; system's perspective; family involvement; professionalization



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1. Introduction

In recent years, a growing number of studies have investigated the design and use of managerial controls in family firms [1–8]. So far this literature has mainly considered a manager's affiliation (family affiliation or non-family affiliation) with the family owners of the firm as an antecedent, explaining the design and use of managerial controls in family firms. The underlying assumption in most of these studies is that non-family managers will behave as self-interested agents, while family managers will act as pro-organizational stewards. For instance, inspired by agency theory [9], researchers hypothesize that when non-family managers are hired, formal controls need to be put in place to align the interests of these non-family managers [3–5] or of non-family CEOs [10,11] with the interests of the family firm's owners. According to Eisenhardt [12], agency theory points to an important role for formal information systems in controlling agent opportunism. Formal monitoring and/or formal compensation incentives are used to curb opportunistic behavior in order to align the interests of managers with those of the family owner [13]. As such, formal controls are able to reduce information asymmetry, and thereby, enhance transparency. To depict a family manager's behavior, researchers often use a stewardship theory lens [14]

and attribute a stewardship attitude to family managers. As a result, they assume that there is less or no need for formal controls to guide family managers' behavior since their interests are aligned with those of the family owners through their family bonds. Therefore, prior literature, which focused on the adoption of controls in family firms, mainly examined and explained the design of the adopted managerial controls in a family firm by considering only the level of family involvement in management as an antecedent to the design of those adopted controls [3,4]. However, according to Schulze et al. [15], family businesses run by family managers only, are subject to self-serving behaviors derived from asymmetric altruism, and thus, governance mechanisms and formal controls need to be adopted in these types of family firms, in order to mitigate within family-agency costs. This observation by Schulze et al. [15] illustrates that other variables than the presence or absence of non-family managers in the management team of the company, can influence the adoption of controls and their design in family firms. The single research focus on the presence or absence of a non-family managers in a family firm's management team, is also observed in the large majority of studies investigating family business professionalization. Also, in the family business professionalization literature, the design of managerial controls is mainly examined in relation to the presence or absence of non-family manager(s) in the family firm.

While the large majority of studies only considered professionalization of family businesses as the employment of non-family managers [16] in a family firm, there is an emerging literature that claims that professionalization of a family firm is a multidimensional construct, which also captures elements of organizational design and business processes [17–19]. The results of Dekker et al. [20] indeed show that professionalization of the family firm through hiring non-family managers is not the only way to professionalize the family firm. According to Hiebl and Mayrleitner [21], Dekker et al. [20] and Songini [22], the adoption of formal management controls, as well as the installation of decentralized structures and delegated responsibilities, are two important characteristics of the adoption of professional management accounting and management control practices in family firms. Hiebl and Mayrleitner [21] extend the prior literature, and introduce new insights about family preferences and family managers' skills being drivers of the professionalization of management accounting and control practices in family firms. Actually, only few studies have addressed the drivers of the adoption of professional management control practices in family firms that consider family intentions and preferences [21].

To contribute to this literature and examine the influence of a family's intentions on the control choices made in a family firm, we rely on the New Systems Theory (nST) [23], which according to a growing stream of literature, an appropriate theoretical lens to investigate family business governance and family business management [24–26]. According to Luhmann's [27] new system theory, organizations develop through the communication of decision premises which are expected to influence actual decision-making [23,28]. Frank et al. [23] draw on systems theory [27,29] to state that decision premises regulate and institutionalize the influence of the family on the family firm. Arteaga and Escribá-Esteve [24] found that these communication systems, which are translated in terms of decision premises, might lead or hinder the adoption of family governance mechanisms. In terms of our study, we intend to investigate whether a family's decision premises also act as antecedents of the control choices made in a family firm.

In this paper, we examine the relationship between decision premises and the design of controls. In relation to the designs of the controls, we focus on two characteristics of controls that are discussed in the literature with respect to the professionalization of family firms' processes, namely the degree of formality with which the controls are adopted and the participative character of the controls adopted. While, the former is related to the monitoring aspect of controls, the latter is related to the communication function of controls [18,30]. In relation to the decision premises, we focus on the importance of ensuring family control and influence (FCI), and on the importance of ensuring the transfer of the firm to the next generation of family members (TGO) since these relate

to the main characteristics of a family firm [31–33]. They indicate the maintenance of family members' power to decide on the firm's strategic orientations [32], as well as its generational vision and its stance on succession [26,33,34]. According to Frank et al. [23], each single family-induced decision premise also has the potential to explain family firm behavior and family firm resources and capabilities. Moreover, irrespective of the different underlying theoretical approaches, FCI and TGO are also important elements in the FIBER scale proposed by Berrone, Cruz and Gómez-Mejía [35] to capture a family's focus on Socio-Emotional Wealth [23] (p. 735). We also argue that decision premises will translate into decisions and that this translation will be enhanced when the family has actual discretion to pursue those decision premises. To capture this discretion, we consider in our study the level of family involvement in management (FIM) in a family firm. Taking into account the extent to which a family pursues two types of decision premises, (FCI) and (TGO), and combining this information with the level of family involvement in management, allows us to gain more insight into whether, and how, heterogeneity among family firms (captured by a family's decision premises and the level of family involvement in the firm) can explain observed differences in the professionalization of the family firm, more specifically, with respect to the design of managerial controls in a family firm.

This study responds to several calls for a richer understanding of the nature and behavior of family firms by investigating how family-specific features affect accounting phenomena like management accounting and management control [3,21,36]. By responding to these calls in the literature, we investigate whether, in addition to a manager's family affiliation status, family-specific features like family-induced decision premises [23] are significant antecedents to explain the design of controls in family firms.

We contribute to the literature in the following ways. First, whereas prior studies explained the design of managerial controls in a family firm as a function of family involvement in management [3,37,38], we provide evidence that a family's decision premises are significant antecedents of the choices made with respect to the design of controls (degree of formality and degree of participation allowed) adopted in family firms. Second, the study provides evidence that when a family's intention to transfer the firm to the next generation (TGO) is high, more formal controls, as well as controls of a more participative nature are adopted in a family firm. The results do not indicate that the level of family involvement in management (FIM) affects the design of controls in firms with high TGO. The results only showed a significant relationship between a family's intention to control and influence the firm (FCI), and the absence of participative controls and this relationship is moderated by FIM. This illustrates that a family firm's level of professionalization (measured from a multi-dimensional perspective), can be influenced by other variables than the presence or absence of non-family managers in the family firm. Third, we provide evidence that each single family-induced decision premise has the potential to explain family firm behavior, since each of the two premises considered in our study influences the design of the controls adopted in different ways. Fourth, with respect to the call for more research to disentangle family firm heterogeneity (see References [39,40]), we capture family firm's heterogeneity by looking at the influence that business families exert over business professionalization through two important family decision premises in combination with the ability of a family to influence the firm. The latter is measured by the level of family involvement in management.

This paper is organized as follows. In the next section, we review the literature and develop our hypotheses. In the subsequent two sections, we set out our research method and results. Thereafter, we discuss the results, present a conclusion and identify the study's limitations and directions for future research.

2. Literature Review and Hypotheses

Responding to the calls by Salvato and Moores [36] and Songini et al. [2], we try to uncover antecedents that have the potential to explain the design of managerial controls in family firms. In this section, we review the literature on the professionalization

of family firms, then describe the literature on Luhmann's [27] new system theory in family businesses and the related debate on decision premises. Thereafter we develop our hypotheses.

2.1. Family Business Professionalization and Managerial Controls Design

Research on family business professionalization has been concentrated on the presence of non-family managers in the Top Management Team (TMT) or non-family directors in the board of directors. However, there is an increasing debate regarding the multidimensionality of professionalization, considering decentralization and delegation of decision rights to non-family managers, the use of formal managerial and governance mechanisms, among other mechanisms [17–20]. Management accounting controls have been debated under the professionalization umbrella due to its recognized importance to support the decentralization and the delegation of responsibility through responsibility centers, as well as the use of budgets and performance evaluation controls, such as target setting, performance measurement, performance appraisal and incentives that are adopted to influence behaviors and to facilitate manager's decisions [21,22]. Managerial controls are put in place to assist "the strategic process and firm management through analysis, planning, measurement, control, rewarding, and broadly managing performance" [41] (p. 264). Target setting and performance measurement are, thus, two important components of a firm's Performance Measurement System (PMS) and are appropriate elements of a firm's control system to focus on for the purpose of this study.

Following Songini's study [22], the theories used to explain the level of professionalization in family firms have been dominated by agency theory, life-cycle theory, stewardship theory, organizational control theory and the resource-based view of the firm. In most studies, the involvement of nonfamily managers versus family managers and supposedly their different behavior (agent or steward) is considered as the main antecedent of the design of a family firm's control mechanisms. Therefore, most studies focusing on the professionalization of a family business examined mainly the relationship between the hiring of non-family managers and the control choices made in the family firm. However, Dekker et al. [18,20] illustrate that the professionalization of a family firm should not be looked at in a one-dimensional manner, but in a multi-dimensional nature. Hiring non-family managers is not the only way to professionalize the family firm. Recently, a number of authors have discussed avenues for future research regarding the antecedents, the configurations and the outcomes of managerial controls in family businesses in the context of the professionalization of a family firm [2,6,8,21] and suggested that a family's intentions and preferences are examined as antecedents to the professionalization of control practices.

To respond to this call, the focus of our study is on the drivers of the design of managerial controls. We consider, in this study, two design characteristics of management controls that have been debated in terms of professionalization. These design characteristics involve the level of formality with which these controls are adopted and the level of participation allowed to managers with respect to the use of these controls. According to agency theory, formal controls are more effective for monitoring an agent's performance [12]. Formal managerial controls serve to direct and monitor managers' behavior [42]. Participative managerial controls are expected to stimulate communication and create cohesion. As a result, controls used in a participative manner also facilitate alignment between the interests of managers and those of the family owners.

2.2. The Family's Influence through Decision Premises

A family's influence on the firm has been studied through different theoretical lenses and different related constructs. Differences in a family's influence on the firm has created a lot of heterogeneity among family firms. This heterogeneity is studied in the family business literature using different dimensions, typologies and theories [39,40]. Early family business research focused mainly on the family involvement component [43]. However, this approach focused on ownership distribution or the number of family members active

in the business, and so does not observe the actual influence of a family on the business [44]. The essence approach therefore became more popular. The essence approach to family influence puts family aspirations at the center of the analysis [44]. The recognition of organizational identity became a complementary extension of the involvement and essence approaches [33]. The components of involvement, essence and family business identity are closely attached to the concept of familiness [43]. The involvement component is related to the ability concept and the essence component to the willingness concept [45]. Ability is the “discretion of the family to direct, allocate, add to or dispose of a firm’s resources” [45] (p. 346). A family’s willingness is defined as the “favorable disposition of the involved family to engage in distinctive behavior” [45] (p. 347). Family business researchers have recently used new systems theory [27] to delve deeper into this issue of family influence/familiness [28]. From a systems theory perspective, the question of why some families are more a resource to their business than others [33] can be answered by considering family-influenced decision premises [43]. Decision premises are decisions that are relevant for several future decisions [23,27]. Frank et al. [23] argue that they have two major functions: (1) they regulate and institutionalize the influence of the family and (2) reduce complexity since they are solid for a long time.

Through decision premises, one is able to measure in which direction or how a family influences the structure of the business. Following the insights of new systems theory, we focus on two decision premises to study a family’s influence on the design of control mechanisms in family firms. These decision premises are: (1) the importance of ensuring family control and influence (FCI) [23]; and (2) the importance of ensuring the transfer of the firm to the next generation of family members (TGO), which reflects the importance of “maintaining the family’s control over the business across generations” [26] (p. 1). These two decision premises are perhaps the most salient in any family firm. Chua et al. [31] consider family control and transgenerational orientation to be the most important characteristics of a family firm. Ensuring FCI is about maintaining the power of family members to decide on the firm’s strategic orientations, which, according to Arregle et al. [32], is essential for a family firm. Maintaining family control is key whereby intra-family agency issues might lead to agency costs in addition to those generated by the traditional principal-agent relationships (family owner/non-family manager). According to Zellweger et al. [33], a transgenerational vision is a core aspect of what family firms exemplify. To ensure the decision premise TGO the family firm must make sure to create long-term survival prospects, which implies that the performance of the family firm (an economic objective) becomes an important goal in addition to non-economic family-centered objectives. According to Frank et al. [23], each single family-induced decision premise, as well as the bundle of family-induced decision premises have the potential to become family resources and capabilities. Moreover, irrespective of the different underlying theoretical approaches, family control and the intention to transfer the firm to the next generation are also important elements in the FIBER scale, proposed by Berrone, Cruz, and Gómez-Mejía [35] to capture a family’s focus on Socio-Emotional Wealth [23] (p. 735).

Recent studies supported by the nST combined insights from the governance and management literature by particularly investigating the relationship between decision premises and the adoption of governance and managerial mechanisms [24], trust [25], and social forms related to family business families [46]. In the next subsection, we explore the hypotheses considering the influence of decision premises (FCI and TGO) on the design of formal and participative managerial controls such as target setting and performance measurement.

2.3. The Relationship between Decision Premises and the Design of Managerial Controls

Placing high importance on the family control and influence over the firm’s decision-making processes [23] might inhibit the adoption of mechanisms that have the potential to reduce a family’s control [15]. According to Jensen and Meckling [47], strategic planning, which includes goal and target setting, reduces information asymmetries within the firm,

and hence, the threat of moral hazard, by encouraging agents to obtain and share information that does not typically flow through the firm's communication channels [15]. Setting targets and goals also requires agents to systematically assess firm performance, relative to internal and external benchmarks [15].

Based on this decision premise (FCI) and the insights of Jensen and Meckling [47] and of Schulze et al. [15], a family pursuing a controlling influence over the firm might thus be reluctant to adopt formal controls, since formal target setting reduces the information asymmetry regarding the firm's future, and formal performance measurement reduces the information asymmetry regarding the family firm's past performance. More formalized controls, which reduce information asymmetry between family members and non-family members, could thus, be a threat to the dominant family coalition's intentions to exercise authority and dominance [2,48,49]). Information asymmetries are a source of power between parties [50] and guarantee owner-manager's managerial discretion to engage in self-serving behaviors [15].

Compared to formal practices, informal practices "can be more arbitrary and thus more flexible, but also more controllable when desired by leaders" [51] (p. 282). Therefore, we expect that families with a strong FCI prefer to pass on their insights and family goals with respect to the family firm personally and through informal mechanisms rather than explicitly in formal quantified plans and performance indicators. Formal performance measurement will reveal information, which the dominant family coalition might not be willing to share with others in order to enable the family to pursue their family-centered non-economic goals. Therefore, we hypothesize that:

H1a. *A high level of importance attached to ensuring family control and influence is negatively associated with the adoption of formal managerial controls.*

A family's TGO reflects its long-term perspective in terms of decisions to be made to safeguard the survival of the business across generations [26] (p. 2). When a family wants to transfer the family firm to the next generation, economic objectives become important as well, alongside non-economic family objectives. For a firm to be transferred to the next generation, it needs to survive into the future, requiring a certain level of performance over time. Key to a firm's survival is the avoidance of unexpected elements that could threaten its existence. According to Merchant and Van der Stede [52], formal controls can be put in place in a firm to inform the parties concerned and avoid surprises. Formal target setting and formal performance measurement reduce information asymmetry and inform owners and managers about the firm's future and past performance. Therefore, formal controls may improve the firm's chances of success in the long-term [18,53], as they create transparency and reduce information asymmetry among managers and owners. A family with a strong TGO will, thus, install formal managerial controls to avoid risks and surprises [52] and to avoid that family agency costs such as free riding, nepotism, and a lack of expertise reduce the firm's resources. Therefore, we hypothesize that:

H1b. *A high level of importance attached to ensuring the transfer of the firm to the next generation is positively associated with the adoption of formal managerial controls.*

When FCI is an important decision premise in the firm, family members will also avoid adopting participative managerial controls since this implies involving people from outside the family (like non-family managers), or family members who do not belong to the dominant family group, in discussions related to the firm's strategy and its implementation [2,54–56]). A high FCI will therefore imply the centralization of knowledge and decision-making within the hands of owner-managers [57], and thus, results into less participative managerial controls. With participative target settings and participative performance measurements, the family's insights and objectives have to be shared with non-family managers. Family members may want to avoid this transparency in order to prevent their control and influence over the family firm from being challenged or weakened. Family firms that intend to retain control and influence over the firm might be

more secretive and less open. As a consequence decision rights will not be delegated to non-family managers. Therefore, we hypothesize that:

H2a. *A high level of importance attached to ensuring family control and influence is negatively associated with the adoption of participative managerial controls.*

If a family's decision premise is to pass the firm onto future generations, it is important for the dominant coalition not only to define the firm's goals and strategies, but also to discuss them and set performance targets and action plans that are known and supported by all parties involved in the firm. Participative mechanisms might foster more effective decision-making by combining different experiences and expertise, which could support a dynastic succession process [26,35,53] and assure the continuity of the family business in the long term [2,48]. Participative controls might lead to a higher level of goal transparency, thus mitigating any lack of direction or informational problems [52] and making management and governance mechanisms more effective [58]. According to Giovannoni et al. [53] (p. 131), "management accounting practices [which included target setting and performance measurement] are carriers of knowledge (through time and space) and provide managers a shared language of socially constructed meanings with which to make sense of the organizational reality and to cope with uncertainty associated with periods of transition". If target setting and performance measurement are adopted in a participative manner, which stimulates communication, then goal alignment between parties is enhanced. Thus, we hypothesize that:

H2b. *A high level of importance attached to ensuring the transfer of the firm to the next generation is positively associated with the adoption of participative managerial controls.*

2.4. The Moderation Effect of Family Involvement in Management

Prior studies based on agency theory highlight that the presence of family managers avoids and the presence non-family managers favors family business professionalization [3,4,10,15]. Although family involvement gives the controlling family the ability to influence firm behavior, it does not determine whether and how this influence will be exercised [59]. The larger the family involvement in the business through ownership, management and generations, the greater the family's power and ability to pursue family-centered goals and objectives [59]. Following Frank et al. [23], a family's ability does not sufficiently capture "familiness" but is a necessary condition that exacerbates the influence of decision premises which, when taken together, can determine the family's actual influence on certain outcomes such as a family firm's professionalization, debated in this paper in terms of the design characteristics of managerial controls. Therefore, we investigate how different levels of a family's ability (captured by the level of family involvement in management), moderate the relationship between a family's decision premises and the design of management controls. In order to hypothesize on the direction of the moderation, we built on prior literature that has focused on the design of controls in family firms by only considering the presence or absence of non-family managers in the TMT of the family firm.

When the TMT is made up of family managers, the premise related to retaining power and influence in the family's hands (FCI) will be translated in the use of more informal and less participative controls [57]. Evidence is available that in owner-managed firms performance measurement is based on informal and more subjective judgements [4,6,60]. Therefore, we hypothesize that:

H3. *The negative relationship between the decision premise FCI and the adoption of (a) formal and (b) participative managerial controls is moderated by FIM such that the relationship is stronger for higher levels of family involvement in management.*

When a family wants to transfer the firm to the next generation (TGO), transparency and a reduction of information asymmetry within the TMT are key. When the TMT only includes family managers, they have access to the family information channels, but when non-family managers are present, formal and participative controls need to ensure a

reduction of information asymmetry, information-sharing and goal alignment. Therefore, we hypothesize that:

H4. *The positive relationship between the decision premise TGO and the adoption of (a) formal and (b) participative managerial controls is moderated by FIM such that the relationship is weaker for higher levels of family involvement in management.*

The research model and related hypotheses are presented in Figure 1.

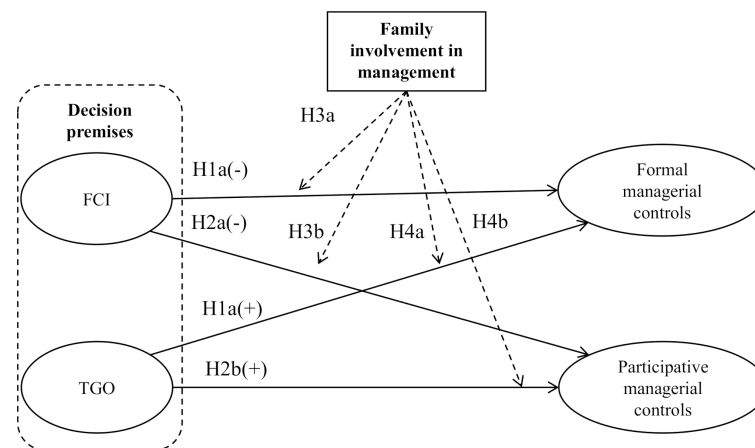


Figure 1. Theoretical research model and hypotheses. Note 1: Decision premises: FCI (Importance of Ensuring Family Control and Influence), TGO (Importance of Ensuring the Transfer of the Firm to the Next Generation). Family Involvement in Management (FIM) is determined based on the percentage of family managers in the top management team. Note 2: Formal managerial controls is a second-order construct which is reflected by formality in target setting and performance measurement. Participative managerial controls is a second-order construct that is reflected by participation in target setting and performance measurement.

3. Method

3.1. Sample and Population

Determining the total population of large and medium-sized firms which are family-controlled in Brazil is very difficult. Despite the available data from the Brazilian Institute of Geography and Statistics (IBGE), there is no reliable database that comprises the total population of Brazilian private family firms [61]. Therefore, for this research we used the EMIS database (formerly known as the ISI Emerging Markets database, developed by scholars from Harvard Business School). We selected the Brazilian firms with the following three characteristics: (1) Unlisted, (2) operational status, and (3) operational revenue between 20 and 5000 million BRL in 2015. These screening criteria, applied to the Brazilian firms in the EMIS database, led to a list of 3911 firms. Thereafter, we applied two additional criteria. First of all, we excluded firms that did not have a limited liability or public limited legal status (exclusion of 402 organizations) following the information in the database. Second, we excluded banks, non-profit organizations, subsidiaries of foreign multinationals and state and semi-state companies by looking at each company's name, primary activity and information on their website (exclusion of 556 organizations). We deleted this latter group of firms since they probably do not have a family business status. After these two additional selection criteria, we ended up with a target population of 2953 Brazilian medium and large private firms. Due to the lack of respondent information or e-mail contacts for many firms in this population, we supplemented the dataset with e-mail contacts for these firms taken from other sources (firm website and prior searches) to reach the potential respondents for the study. From this target population of 2953 firms, we were able to find e-mail contacts for 2279 firms. This total included 371 large-sized firms and 1908 medium-sized firms. For BNDES, medium-sized firms have an annual operating revenue between 4.8 and 300 million BRL, while the figure for large firms is more

than 300 million BRL. We addressed the survey to top team managers in 2279 firms. We approached other management levels when the e-mail addresses of top managers were unavailable.

We received 165 questionnaires (7.2% overall response rate). We tested for potential non-response bias by dividing the sample into two groups, following the argument that late respondents are comparable to non-respondents [62]. Our results suggest that there are no statistically significant differences, at a 5% significance level, between early and late respondents, so our sample is probably not subject to non-response bias. We also tested whether the respondents' population had similar size, industry and geographical distribution (within Brazil) as the target population of 2,953 firms. We observed a similar geographical and industry distribution among the population of the 165 responding firms. With respect to firm size, we received responses from 78 large firms (21% (78/371) response rate). Whereas, we received 87 responses from medium-sized firms. The response rate of the large firms is comparable with other survey-based studies on family firms [63]. The overall response rate of the total survey (large and medium-sized firms together) is lower (7,2%). However this is in line with other survey-based studies on governance mechanisms in Latin America. Brenes et al. [64] observe that "*members of family businesses, both family and non-family members, are usually hesitant to respond to this type of survey in Latin America due to the fear of information leaks*" [64] (p. 285). From the 165 replies we omitted 13 responses because of the absence of many values.

We, then, used the definition proposed by Arregle et al. [32] of a family-controlled firm in terms of ownership within the sample of responding firms as an ex-post operational definition. Hence, family-controlled firms are those in which the controlling family holds at least 50% of the firm's shares. After applying this definition, we excluded 11 firms in which there was no family shareholding or in which the family held less than 50% of the shares. We further excluded 6 firms with missing data for the ratio of family managers in the TMT. Therefore, our analyses are based on a final sample of 135 private family firms.

Brazil as an emerging economy faces several challenges related to economic, political, and institutional instability [65], which impact the longevity and growth of family firms. Brazil has the tenth largest GDP in the world and has a large cultural diversity considering the tradition and cultural values from immigrants that came to different regions of Brazil (during colonialism, and world war periods). As a result of institutional instability, Brazilian family firms are characterized by high ownership stakes of Brazilian families in their family businesses [65,66]. As a result, Latin American family firms score very high on operational resilience, which refers to the degree to which the family business has access to the reservoir of family and community resources to weather temporary crises to overcome more enduring challenges [66,67]. Despite the fact that Brazilian family firms operate in a different institutional environment than family firms in developed economies, Brazilian family firms are still an appropriate population to study a family's influence of the family business.

3.2. Measurement of the Variables

We first present the measurement of the dependent variables, followed by the independent, moderator and control variables.

Dependent variables. First, we measured formality of managerial controls (FormalMC) as a second-order reflective construct [68] related to target setting and performance measurement. Formality in target setting (TSform) is measured using the instrument developed by Covin, Slevin, and Heeley [69]. In the questionnaire, we explained that the target setting is usually for a 12-month period and could be based at organizational or departmental levels. Formality in performance measurement (PMform) is captured with a scale used by Hartmann and Slapnicar [70] related to the use of objective and quantitative measures for performance measurement. Second, we measured participative managerial controls (ParticipativeMC) as a second-order reflective construct based on managers' level of participation in target setting and in performance measurement. Participation in target setting (TSpart) is

measured using a five-point Likert scale adapted from the instrument validated by Shields and Young [71]. Participation in performance measurement (PMpart) was measured by a scale developed by Dulebohn and Ferris [72] and validated by Bellavance, Landry, and Schiehl [73].

Independent variables. We focus on two main decision premises based on the Family Influence Familiness Scale (FIFS) developed by Frank et al. [23], which is supported by Luhmann's new system theory. We capture the importance of ensuring family control and influence over decisions (FCI) and the importance of ensuring the transfer of the firm to the next generation (TGO). Both instruments were adapted to a five-point Likert scale.

Moderating variable. We measure family involvement in management (FIM) as the ratio of family managers in the top management team by dividing the number of family managers in the TMT by the size of the TMT [74,75].

Control variables. In line with previous studies, we used the following variables to control for individual managers' characteristics and organizational characteristics. For respondents' family affiliation we used a dummy variable (family) indicating whether the respondent is a member of the family (family manager or founder) or a non-family manager, since they might have different perceptions regarding the design of managerial controls [76]. Our population consists of family-controlled firms (= either majority-owned or fully owned by the family). In order to capture differences in terms of family business ownership, we controlled for the presence a minority shareholder in the firm (minority_own) which might require the installation of formal mechanisms to protect minority shareholders from family owners' discretionary power [77]. We controlled for generational involvement by introducing a dummy, whether or not the family had experienced at least one transfer of shares from the first generation to the next (firstgeneration). We also controlled for firm size based on the number of employees (size), with four categories: (i) Fewer than 100, (ii) between 101 and 300, (iii) between 301 and 1000 and (iv) more than 1000 (the group of firms with fewer than 100 employees was the reference category). Increasing a firm's size often reflects a higher level of business complexity, which might influence a firm professionalization [4]. Finally, we controlled for industry (industry) – manufacturing, retail and services – and for our analyses we considered services as the reference category.

The survey included questions about firm characteristics, the manager's characteristics and the controls adopted in the family firm. Before we conducted the survey, we first translated the questionnaire from English into Portuguese and then translated it back into English [78], in order to check whether the back translation had the same content as the initial English version. We compared the backtranslation with the original version to check for face validity of the items. Next, we conducted a pre-test involving two non-family managers, one founder and one heir from medium and large family businesses, and one academic. This led only to minor changes, adding labels to questions on firm characteristics such as firm size. No changes were made to any of the items included in the constructs. For the administration of the survey we followed the recommendations of Dillman [79]. The questionnaire was sent by e-mail in September 2016, followed by four reminders between September 2016 and February 2017. We sent surveys to all recipients via e-mail. In these e-mails, a link was attached to the web-based questionnaire with an explanation of the purpose of the study and a guarantee of confidentiality regarding the participant's private information.

3.3. Method of Analysis

To test our hypotheses, we applied the multivariate technique of structural equation modeling estimated by partial least squares (PLS-SEM). This technique is appropriate considering the complexity of the constructs, the relationships and the sample size [80,81]. In particular, (i) it estimates reliably complex models with fewer observations than SEM-covariance based methods (LISREL, AMOS, EQS, Lavaan), and (ii) it does not impose the data distribution assumptions as in the case of SEM-covariance based methods [68,81,82]. We applied the 'mean replacement procedure' which involves replacing the missing cells

in our database with the mean score of the specific variable [83]. In line with Parwoll and Wagner [83] we applied this procedure to a very small number of missing cells (25 cells missing out of a total of 2700 cells = 0.01%) in the dataset of respondents.

We addressed validity concerns by following the recommendations of Podsakoff, MacKenzie, and Podsakoff [84] with respect to survey design and analysis. First, we used validated measures for the constructs, both independent and dependent variables of our models. Second, we performed Harman's single-factor test to detect the presence of common method bias [84] as reported in previous family firm studies [38]. We obtained four factors with an eigenvalue higher than one, of which the first accounts for 42.2% of the variance. In addition, we checked for common method bias by using the 'measured latent marker variable approach (MLMV)' [85], whereby a control variable that is expected not to be correlated to the variables in the model is added [86,87]. We used the following four items as MLMVs based on a five-point Likert scale: (i) Businesses controlled by families represent a significant proportion of the Brazilian economy; (ii) businesses controlled by families cannot afford the most advanced technologies; (iii) the activities of businesses controlled by families can be as globalized as those of other types of firms; (iv) the hiring process in businesses controlled by families involves greater risk than in businesses not controlled by families. To validate the MLMV measure, we ran correlation analyses that demonstrate that the MLMV items are not significantly correlated to the indicators used to measure our dependent variables [81,85,87].

4. Results

4.1. Descriptive Statistics of Respondents

Our sample is predominantly made up of firms that are fully owned (= 100% ownership) by the controlling family (76.3%) and whose CEO is a family member (80.7%) (see Table 1). In terms of the ratio of family managers in the TMT, our sample presents a heterogeneous distribution from no family managers (17.0%) to exclusively family managers (21.5%). Additionally, we observe that most of our respondent sample is made up of firms that have been operating for more than 40 years (61.5%) and are owned by the second or later generation (74.1%). In our sample, most firms are manufacturing firms (63.0%) and are large in size, having more than 300 employees (65.9%).

Table 1. Family firms: descriptive information.

Panel A: Controlling Family Ownership			Panel E: Family Generations (Ownership)		
There are majority and minority shareholders	32	23.7%	First generation	35	25.9%
Family owns 100% of the shares	103	76.3%	Second and later generations	100	74.1%
Panel B: Percentage of family members in the TMT			Panel F: Firm age		
No family members	23	17.0%	Between 0 and 20 years	12	8.9%
More than 0% and up to 25%	29	21.5%	Between 21 and 40 years	30	22.2%
More than 25% and up to 50%	32	23.7%	Between 41 and 60 years	32	23.7%
More than 50% but less than 100%	22	16.3%	More than 61 years	51	37.8%
100%	29	21.5%	Missing	10	7.4%
Panel C: Is the CEO from the controlling family?			Panel G: Industry		
Yes	109	80.7%	Manufacturing	85	63.0%
No	26	19.3%	Retail	24	17.8%
			Services	22	16.3%
Panel D: Does(Do) the founder(s) manage(s) the business?			Panel H: Size (employees)		
Yes	70	51.9%	Fewer than 100	21	15.6%
No	63	46.7%	Between 101 and 300	25	18.5%
Missing	2	1.5%	Between 301 and 1000	36	26.7%
			More than 1000	53	39.3%

In terms of the respondents' family status, 64.4% are non-family managers, 35.6% are family managers (of whom 11.1% are founders). In relation to their hierarchical level, 49.6% report directly to shareholders and the board of directors (Tier 1), 46.7% directly to the

CEO or top managers (Tier 2), and 3.7% to middle managers. In terms of tenure, 80.0% of the respondents have been working in the family business for more than five years. In addition, 66.7% report directly to a family manager, while 33.3% report to a non-family manager. Non-family managers who report to another non-family manager and have been in the firm for less than 5 years represent only 5.2% of our sample.

4.2. Measurement Model

We used the two-step Structural Equation Modeling technique [82], which involves the assessment of the measurement model (first step) and the hypotheses testing (second step). The measurement model was assessed following the guidelines outlined by Hair Jr. et al. [68,82]. First, we evaluated the internal consistency reliability and convergent and discriminant validity, for which the results are presented in Tables 2 and 3. Internal consistency reliability was evaluated through composite reliability, which scores above 0.70. Convergent validity was assessed through indicator loadings and through the Average Variance Extracted score (above 0.5).

Table 2. Assessment of the results of the measurement model (n = 135).

	Loading	T-Statistics	VIF	CA	AVE	CR
Family control and influence over decisions				0.764	0.585	0.800
FCI_2	0.987	3.260	1.625			
FCI_3	0.672	2.190	1.784			
FCI_4	0.573	2.094	1.413			
Ensuring the transfer of the firm to the next generation				0.830	0.744	0.897
TGO_1	0.846	12.449	2.018			
TGO_2	0.796	11.053	1.729			
TGO_3	0.941	35.215	2.568			
Formal managerial controls				0.742	0.564	0.838
TSform_1	0.731	12.504	1.688			
TSform_2	0.716	12.593	1.688			
PMform_1	0.771	13.414	2.624			
PMform_2	0.785	15.429	2.624			
Participative managerial controls				0.862	0.594	0.897
TSpartic_1	0.823	18.565	2.568			
TSpartic_2	0.783	13.616	2.769			
TSpartic_3	0.851	26.333	3.034			
TSpartic_4	0.740	13.223	1.791			
PMpart_1	0.691	12.269	2.271			
PMpart_2	0.724	12.719	2.271			

Note 1: CA (Cronbach's Alpha), AVE (Average Variance Extracted), CR (Composite Reliability) and VIF (Variance Inflation Factor). Note 2: We excluded FCI_1 and TSform_3 indicators because they lack discriminant validity. Note 3: Formal managerial controls is a second-order construct reflected by TS_form and PM_form. Participative managerial controls is a second-order construct reflected by TS_part and PM_part. Family Involvement in Management was not presented in the Table since it is a 1-item variable. Note 4: All factor loadings are significant ($p < 0.05$).

Table 3. Latent Variable Correlations (n = 135).

	1	2	3	4	5
1. FCI	0.765				
2. TGO	0.331 **	0.863			
3. FIM	0.536 **	0.185 *	1.000		
4. FormalMC	−0.062	0.294 **	−0.134	0.751	
5. ParticipativeMC	−0.138	0.146	−0.007	0.621 **	0.771

Note 1: Correlations above $|0.170|$ are significant * $p < 0.05$ and $|0.221|$ are significant at ** $p < 0.01$. Note 2: The values on the diagonal are the square roots of the average variances extracted; because these values are higher than the correlations between the latent variables (values outside the diagonal), there is discriminant validity [82]. The values outside the diagonal are the correlation coefficients between the latent variables.

We also conducted the discriminant validity analysis using cross loadings and the correlation matrix criterion (Tables 2 and 3). Our results show that the cross loadings are considered low compared to the outer loadings and that the square root of the AVE

of each latent variable is found to be greater than the correlations between the latent variables [82]. We also analyze the HTMT criterion to assess discriminant validity, which we found to have values lower than 0.85 [88], consistent with the Fornell-Larcker criterion. In sum, our measurement model was validated after excluding FCI_1 and GSform_3 items for a lack of convergent and discriminant validity by presenting a lower outer loading and higher cross loadings. We validated the second-order latent constructs (formality and participative managerial controls) considering the threshold parameters of internal reliability and convergent validity, as well as for the first-order constructs.

4.3. Structural Model

The structural model examines the hypothesized relationships between latent variables [82]. First, we analyzed the incidence of multicollinearity based on the variance inflation factor (VIF), with values above 5 indicative of excessive multicollinearity [82]. The results suggest that multicollinearity is not a concern because all VIF values are below 1.6. We notice that when controls are added to the model, they do not change the significance of the coefficients, which indicates that our results are robust.

Second, we analyzed the structural path coefficients regarding size and the statistical significance of effects. We ran bootstrapping analyses based on 5000 subsamples, with a bias-corrected confidence level and two-tailed tests. We show the results of the path coefficients in Table 4. We assess the R^2 , which indicates the percentage of a dependent variable's variance that is explained by the independent variables. To avoid bias in a complex model, we present the results for the adjusted coefficient of determination (R^2_{adj}) as suggested by Hair Jr. et al. [82]. This is used to compare models with a different number of variables or sample size. The fourth step is to determine the effect size coefficient (f^2), which indicates the extent to which the independent variable has a substantial impact on the dependent variable. We used the classification suggested for the social sciences by Cohen [89] to interpret our results: Small effect ($f^2 = 0.02$); medium effect ($f^2 = 0.15$); and large effect ($f^2 = 0.35$). Hair Jr. et al. [82] state that an f^2 lower than 0.02 indicates no relationship between variables (practical importance).

Table 4. Significance and Relevance of Path Coefficients - Structural Model.

	H	β	T Statistics	p-Value	f^2	R^2_{adj}
FCI -> FormalMC	H1a(-)	-0.068	0.511	0.610	0.005	0.269
TGO -> FormalMC	H1b(+)	0.307	3.689	0.000	0.119	
FIM -> FormalMC		-0.157	1.903	0.057	0.023	
Mod_FIM_FCI -> FormalMC	H3a	0.056	0.493	0.622	0.003	0.198
Mod_FIM_TGO -> FormalMC	H4a	0.055	0.605	0.545	0.004	
family -> FormalMC		0.052	0.616	0.538	0.003	
minority_own -> FormalMC		-0.051	0.625	0.532	0.003	
size -> FormalMC		-0.183	0.920	0.358	0.042	
firstgeneration -> FormalMC		-0.002	0.020	0.984	0.000	
industry-> FormalMC		-0.019	0.210	0.834	0.001	
MLMV -> FormalMC		0.372	2.266	0.024	0.189	
FCI -> ParticipativeMC	H2a(-)	-0.233	1.756	0.079	0.048	
TGO -> ParticipativeMC	H2b(+)	0.164	1.845	0.065	0.031	
FIM -> ParticipativeMC		0.021	0.251	0.802	0.000	
Mod_FIM_FCI -> ParticipativeMC	H3b	0.224	2.205	0.028	0.041	
Mod_FIM_TGO -> ParticipativeMC	H4b	-0.054	0.632	0.527	0.003	
family -> ParticipativeMC		0.131	1.478	0.139	0.019	
minority_own -> ParticipativeMC		-0.132	1.451	0.147	0.021	
size -> ParticipativeMC		-0.118	0.727	0.467	0.016	
firstgeneration -> ParticipativeMC		-0.073	0.975	0.330	0.007	
industry-> ParticipativeMC		-0.069	0.691	0.489	0.006	
MLMV -> ParticipativeMC		0.293	1.985	0.047	0.109	

Our model includes family involvement in management as a moderator. Hair Jr. et al. [82] indicate three different procedures to estimate the moderating effects. We employ the orthogonal approach which is used to minimize estimation bias (due to multicollinearity between the independent variables and the multiplicative term of the interaction) and max-

imize predictive ability. Technically, the orthogonal approach uses the standard residuals as indicators for the interaction terms [82]. Regarding the effect size of the moderation, Hair Jr. et al. [68] suggest the following: small effect ($f^2 = 0.005$); medium effect ($f^2 = 0.01$); and large effect ($f^2 = 0.025$).

We do not observe a significant direct relationship between a family's FCI and the adoption of formal managerial controls (H1a). However, our results provide evidence that a family's TGO is positively significantly associated with the adoption of formal controls, supporting H1b, particularly a medium effect size ($\beta = 0.307$, $p < 0.01$, $f^2 = 0.119$). Therefore, when a family's TGO is strong, more formal target setting and more formal performance measurement practices are adopted in the family firm.

We also find a negative significant association between FCI and the adoption of participative managerial controls, with a small effect size and 10% significance level ($\beta = -0.233$, $p < 0.10$, $f^2 = 0.048$). Our findings imply that when FCI is high, significantly less participative target setting and less participative performance measurement practices will be adopted in the family firm (H2a). Our results also show a positive and statistically significant association between TGO and the presence of participative controls in the family firm (H2b), indicating a small effect size ($\beta = 0.164$, $p < 0.10$, $f^2 = 0.031$). Hence, when the intention to transfer the firm to the next generation is high, target setting and performance measurement will not only be more formal, they will be of both a formal and participative nature.

The moderating effect of FIM on the relationship between the decision premises and the design of the controls present in the family firm (H3 and H4) was only statistically significant for the relationship between FCI and the presence of participative managerial controls (H3b). However the significance observed (H3b) was in a different direction than the relationship hypothesized. Hence, the results indicate that for higher levels of family involvement in management the negative relationship between FCI and the adoption of participative controls becomes weaker. Based on Hair Jr. [82], the effect size was large ($\beta = 0.224$, $p < 0.05$, $f^2 = 0.041$). So FIM is only a significant moderator for the relationship between FCI and the presence of participative controls. We observe that a higher intention to control the family firm is associated with less participative target setting and performance measurement present in the family firm. We can see from Figure 2 that this negative relationship becomes even stronger when more non-family managers are involved in a family firm's management team. With respect to H4, we observe that there is no indication of a moderating influence of family involvement in management on the relationship between TGO and the adoption of formal and participative controls.

The results in Table 4 also indicate that FIM is directly negatively associated with the presence of formal controls in the family firm which in our study shows a small significant negative effect ($\beta = -0.157$, $p < 0.10$, $f^2 = 0.023$). This result implies that that when more non-family managers are present in the TMT of the family firm, more formal target setting, and more formal performance measurement are adopted. These findings support the agency theory and are in line with existing empirical evidence [3,4,7]. We did not observe a direct significant relationship between FIM and the presence of participative controls.

4.4. Robustness Checks and Additional Analyses

To strengthen our analyses, we ran robustness checks and additional analyses. First, we excluded from the sample those non-family managers who had worked in the firm for less than 5 years. This left us with a subsample of 121 respondents. The results for this subsample are consistent with those of the main analysis supporting both the direct effects of decision premises on the design of controls and the moderating effect of FIM on the relationship between FCI and participative controls. The difference compared to the results presented in Table 4 was that the moderating effect of FIM on the relationship between FCI and participative controls presents a higher significance level and a higher effect size ($\beta = 0.339$, $p < 0.01$, $f^2 = 0.105$). Second, we conducted a robustness check with respect to the replacement procedure for missing cells. As in the study by Grafton, Lillis

and Widener [90], we re-ran the model, leaving out 7 firms (subsample of 128) that had one item missing with respect to the measurement of the dependent variables. The results obtained are quantitatively consistent with the findings in the main analyses. The results of these tests are available from the authors upon request.

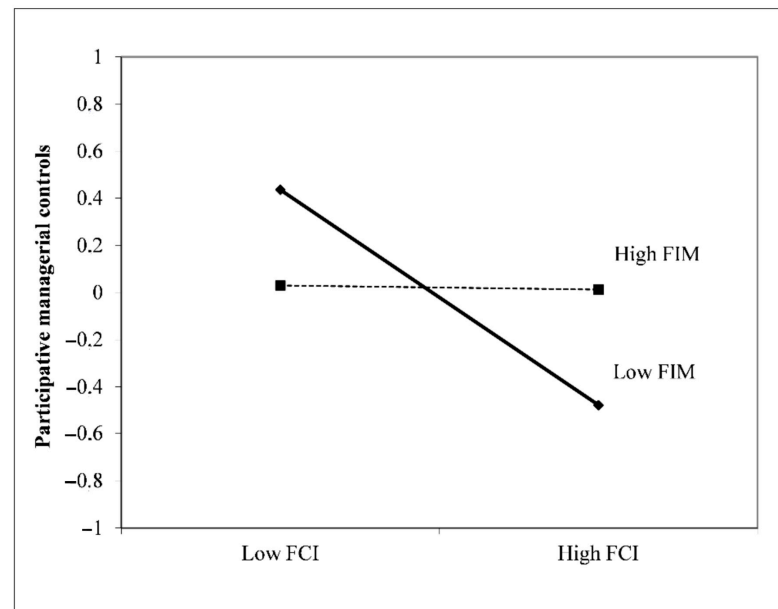


Figure 2. Moderating effect (FIM) on the FCI-ParticipativeMC relationship. Note 1: Decision premises: FCI (Importance of Ensuring Family Control and Influence). Family Involvement in Management (FIM) is determined based on the percentage of family managers in the top management team. Note 2: Participative managerial controls is a second-order construct which is reflected by participation in target setting and performance measurement. Note 3: The relationship between FCI and Participative managerial controls is negative, and it weakens as FIM increases.

5. Discussion and Conclusion

By responding to the call for more research on the relationship between a family's particularistic behaviors and its possible influence on the design of managerial controls in family firms [2,36], this study investigates whether two single decision premises (the importance of ensuring the family's control and influence over the firm and the intention to transfer the firm to the next generation) are significant antecedents of the adoption of formal and participative managerial controls in a family firm. The results reveal that each single family-induced decision premise is associated with a different design of controls adopted in the family firm. For families with strong intentions in controlling and influencing the family firm, no significant direct relationship with the presence of formal controls were identified, but we did find a significant and direct negative relationship with the presence of participative controls. Participative controls create transparency, since they reduce information asymmetry and stimulate communication about a family firm's past and future. A family coalition keen to safeguard its control over the firm might want to avoid this transparency, since it provides information that could be used to challenge the family's chosen direction and its influence over the firm. The results imply that when the owning family has a strong desire to control and influence the firm, communication through participative controls with management is avoided. Information asymmetry increases the power of the controlling family when they possess more information than non-family members. This finding is in line with existing studies on board governance that illustrate that a reduction in information asymmetry influences the power balance between parties [50]. In particular, we also find that this negative relationship between a family's intention to control and influence the firm and the adoption of participative controls, is stronger when more non-family members are involved in the management of

the family firm. Families with a strong desire to control the firm (high FCI) want to avoid this transparency through participative controls especially towards non-family managers.

The second decision premise considered in this study (TGO) leads to a different adoption pattern of managerial controls in comparison to a family's FCI. Families that attach high importance to transferring the family firm to the next generation adopt both formal and participative target setting and performance measurement. These results show that when TGO is high, the future of the family firm is translated into quantitative objectives that are communicated and expressed through formal plans and discussed within the management team. Also, with respect to the evaluation of the family firm's past performance, all managers have transparent information on the family firm's performance and are involved in evaluating and communicating about its past performance. Whereas, formal controls create transparency and reduce information asymmetry, participative controls stimulate communication, which creates trust among the parties involved. This finding is in line with Kleve et al. [46] who argue that communication is key to make organizations grow. Von Schlippe et al. [91] found that later generation families realized they must put in place formal governance structures to conduct the business and manage business-related communications. Our results indicate that even when early generation firms have the intention to pass on the firm to the next generation, these families adapt formal managerial controls in the firm that facilitate monitoring of the TMT, as well as adopt participative controls that stimulate communication. In line with Luhmann [92], we observe that organizations integrate people into their communications collaboratively, and on an objective basis according to people's competence, performance and position. Our findings indicate that families with a strong intention to transfer the firm to the next generation, adopt not only significantly more formal controls but as important they also adopt significantly more participative controls. This illustrates the importance of communication in family firms pointed at by Luhmann [93].

The significant direct relationships between TGO and the adoption of formal and participative controls are not moderated by the level of FIM. This finding is in line with the observation of Giovannoni et al. [53]. These authors suggest that the increase of communication and transfer of knowledge within family members and between family and non-family managers is not conditioned by the level of family involvement when an organization is passing by succession.

This study contributes to the family business literature in the following ways. First, we provide evidence that the design of control mechanisms in family firms is not only influenced by family involvement in the business [3,4], but more importantly, by a family's decision premises. Our results suggest that family-specific features, like family-induced decision premises, are also predictive of a family firm's control design. Second, this study provides evidence that when a family's intention to transfer the firm to next generation (TGO) is high, more formal controls, as well as controls of a more participative nature are adopted in a family firm. Moreover, the results do not indicate that the level of family involvement in management affects the design of controls in firms with high TGO. The results only showed a significant relationship between a family's intention to control and influence (FCI) the firm and the absence of participative controls. However this later relationship is moderated by FIM. Formal controls which increase transparency through the reduction of information asymmetry (see also [15]) regarding a firm's past performance and future targets, and participative controls which trigger communication and collaboration, mitigate agency costs in the family firm and stimulate a pro-organizational behavior. Family firms with high TGO adopt these formal and participative controls irrespective of the composition of their top management team. Third, these findings illustrate that considering only a family's ability to influence the firm as a dimension to capture family firm heterogeneity is not enough. Differences with respect to a family's willingness to influence the firm captured by family-centered non-economic objectives, or a family's decision premises or a family's focus on SEW, are essential to include in a research design in order to understand the drivers of family firm heterogeneity. We find that family's

involvement in the family firm alone is not sufficient to explain family firm behavior. A family's decision premises have additional significant explanatory power over the ability variables. Fourth, our results also support Frank et al.'s [23] observation that each single family-induced decision premise has the potential to explain family firm behavior. Each of the two decision premises considered in our study has a different impact on family firm behavior. Last, we used insights from the family business literature, generated to a large extent in developed economies, in the context of an emerging economy. We provide evidence that these constructs and theories also have explanatory power in emerging markets. In particular, for private family firms, there has been less evidence from emerging markets in comparison to insights on characteristics and behaviors of family firms that operate in the US or Europe, regions that are characterized by a different competitive and institutional environment than emerging economies [65]. Our findings illustrate that dimensions and theories developed to capture family firm heterogeneity in a Western market economy context, also enable researchers to gain insights in family firm heterogeneity in emerging economies, especially in the largest economy of Latin America.

This paper offers a number of insights to investors, managers and consultants. First investors, managers and consultants should be aware that the professionalization of family businesses (considering the design of formal and participative controls) is not driven only by the presence of non-family managers. It is widely assumed that professionalization of a family firm starts with the introduction of non-family managers into a family firm. Our findings show that, in order to understand when a family firm wants to professionalize, it is not useful to only concentrate on changes in the composition of the management team of the family firm, in terms of the entrance of non-family managers. In order to understand a family's willingness and desire to professionalize it is important to understand and consider a family's decision premises. A family's decision to transfer the firm to future generations stimulates the professionalization of a family firm. A family's decision to control and influence the firm can be an obstacle to professionalization. Second, our findings indicate that professionalization of family firms is not only limited to later generation family firms, but also first generation family firms can pursue the pathway of professionalization of the family business to safeguard the family firm for future family generations. Even if the top management team only consists of family members in an early generation firm, managerial controls can be professionalized to facilitate monitoring and communication in order to secure a firm's long term future. This knowledge is relevant for society in general, considering that family businesses' sustainable perpetuation and growth, through professionalization can lead to job creation and wealth generation. These insights are important for a country such as Brazil, where almost 90% of firms are family business and might face a low level of professionalization as a result of a common belief that family firms only professionalize in later generations when non-family managers enter the family firm.

This study has a number of limitations which will provide avenues for future research. First, it focused on formal and participative target setting and performance measurement managerial controls. Future research could incorporate other types of governance or control systems [4,38]. Second, the majority of the family firms in our respondent sample are first- and second-generation firms that might have different particularities to later-generation family firms. It would be interesting to research these mechanisms in such firms (e.g., fourth or fifth generations). Third, although the decision premise to ensure the family's control and influence over the firm and the decision premise to ensure its transfer to the next generation are the most salient in family firms [23,32], it would be interesting to include other decision premises based on a family's identity in the research. An identity-related decision premise was not explicitly included in this study, since according to Weismeier-Sammer et al. [43], organizational identity is of a complementary nature alongside the involvement and essence approaches. Fourth, most firms in our population of respondents are large family firms. Future research could focus on small family firms to understand whether the relationships found can be generalized across all firm sizes.

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