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A MANAGER'S STEWARDSHIP IDENTIFICATION IN BRAZILIAN FAMILY FIRMS: THE ROLE OF CONTROLS' DESIGN AND PROCEDURAL JUSTICE

Authors: Daniel Magalhaes Mucci, Ann Jorissen and Fabio Frezatti

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ABSTRACT

Purpose: This paper investigates whether a family firm's control context is directly associated with a manager's stewardship attitude or whether this relationship is mediated by the manager's perception with respect to the fairness of the control processes.

Design/methodology/approach: We have sent a survey to family businesses in Brazil. We tested the hypotheses with the data collected from 141 responding family and nonfamily managers with the use of Structural Equation Modeling analyses (SmartPLS).

Findings: We find that more participative and more formal controls are associated with higher procedural justice perceptions. Zooming in on the types of control namely forward-looking action controls like target setting (TS) and backward-looking results controls like performance measurement (PM), we observe that TS is significantly positively associated with stewardship identification through a manager's procedural justice perceptions for both control characteristics (partial mediation for participative TS and full mediation for formal TS). PM on the other hand is only significantly directly related to a stewardship identification if it is of a participative character. In addition, we find a significant moderating effect of family affiliation, increasing the strength of the association between PM procedural justice and stewardship identification for nonfamily managers.

Originality: Prior literature focused on discussing stewardship attitudes and behaviors in family firms, but few provided empirical evidence that a stewardship attitude in a family firm is associated with contextual factors like the design of controls in family firms in combination with a manager's individual perception of family firm's processes factors.

Keywords: Stewardship; Design of controls; Procedural Justice; Family affiliation status.

1. INTRODUCTION

In the family business literature, managers are assumed to behave as agents or as stewards, depending on whether they hold a family status (e.g., James, Jennings, & Jennings, 2017). Based on this idea, nonfamily managers are expected to act as self-interested, opportunistically, and economically driven (Eisenhardt, 1989), while family managers are considered to be trustworthy, collectivists, and are assumed to develop pro-organizational behaviors toward the firm (Davis et al., 1997). However, previous literature indicates that family managers may also act as agents rather than stewards (Chrisman et al., 2007), and nonfamily managers may act as stewards rather than agents (James et al., 2017). A recent claim from the literature is the need to explore stewardship theory's assumptions considering both its antecedents and consequences (Madison et al., 2016; Chrisman, 2019). For instance, Bormann, Backs, and Hoon (2020) investigate the drivers of stewardship behaviors by combining affective states, perceptions of stewardship culture, and individual differences. The stewardship proponents support this rationale and state that stewardship behavior is a consequence of both contextual and individual factors (Davis et al., 1997; Hernandez, 2012; Neubaum, Thomas, Dibrell, & Craig, 2017; Bormann et al., 2020).

Stewardship theorists claim that when managers act as stewards, social and trust controls may be more suitable to maximize stewardship attitudes and behaviors since there is no need for aligning managers' and organization's goals (Davis et al., 1997). When managers act as agents, monitoring systems and formal controls effectively align interests between principals and agents (Tosi, Brownlee, Silva, & Katz, 2003; Madison et al., 2016). However contrary to agency assumptions, a number of authors state that formal control mechanisms might not be used only for mitigating opportunistic behaviors, but actually, they might lead to positive manager's attitudes such as organizational identification, affective commitment and trust (e.g., Langevin & Mendoza, 2013; Cugueró-Escofet & Rosanas, 2013; Groen, 2018), which are constructs related to stewardship (e.g., Davis et al., 1997; Hernandez, 2012; Neubaum et al., 2017). Control's design characteristics widely studied in the management accounting literature are the degree of participation allowed in the use of the controls (Groen, 2018) and the degree of formality applied to the controls (Hartmann & Slapničar, 2012; 2009; Vouřem, Kramer, Schäffer, 2016). These design characteristics of controls are claimed to influence a manager's justice perceptions and several other attitudinal outcomes of managers. For instance, Hartman and Slapničar (2009; 2012) examined whether the design of controls could enhance trust and Groen (2018) studied whether participative goal-setting could increase goal commitment.

Extending this reasoning, we argue that the design of controls (being of a participative or formal character) in a family firm (as contextual factor) and a manager's procedural justice perceptions (as an individual factor derived from manager's perceptions towards managerial controls) might be related to a manager's stewardship attitude in the family firm. A manager's stewardship identification is related to stewardship behavior since evidence is available in the literature that organizational identification is one of the underlying concepts related to stewardship behaviors (Davis et al., 1997; Craig, Dibrell, & Neubaum, 2011; Neubaum et al., 2017). Few studies in the family business literature have investigated the drivers and consequences of justice perceptions considering the perspective of both family managers (Pimentel, Pires, & Almeida, 2020) and nonfamily managers/employees (e.g., Carmon, Miller, Raile, & Roers, 2010; Sieger, Bernhard, & Frey, 2011; Tabor, Chrisman, Madison, & Vardaman, 2018; Waterwall & Alipour, 2021). In addition, there is little evidence about the relationship between individual's justice perceptions and stewardship attitudes (Sieger et al., 2011; Marler, Barnett, & Vardaman, 2019).

Motivated by the debate regarding the combination of individual and contextual drivers of stewardship (Bormann et al., 2020), we empirically investigate the following research questions: Is there a direct relationship between a family firm's control context (studied from a control's design perspective) and a manager's stewardship attitude? Or is this relationship mediated by the manager's perception of the fairness of the process of these controls (focusing on two types of controls being target setting or performance evaluation). In addition, we investigate whether a manager's family affiliation moderates the relationship between fairness and stewardship attitude. This is particularly important since prior literature shows that family members' relationship with the firm usually arises and is nurtured by their family ties while nonfamily managers build their relationship based on the informal (i.e., trust, long-term job tenure, psychological ownership) and formal organizational processes and design that are adopted by the firm (Henssen, Voordeckers, Lambrechts, & Koiranen, 2014; Ramos, Man, Mustafa, & Ng, 2014; Medina-Craven et al., 2020). These different relational ties to the family might have implications towards how individual's perceptions in their job (being the procedural justice perception with respect to the family firm's controls) influence manager's stewardship identification with the family firm. In this paper we focus on whether a family firm's design of controls can influence a manager's attitude towards the family firm and whether the presence or absence of family ties is related to a different stewardship attitude in the end.

Stimulating a stewardship identification might be beneficial for an organization, as empirical stewardship research provides evidence of the positive outcomes and advantages of stewardship for organizations' outcome or performance (e.g., Davis et al., 2010). Hence, in this paper we examine whether or not the design of controls can stimulate a stewardship identification or at least not influence it in a negative way. Our study contributes to the literature by providing insights into how participation and formality in target setting and performance measurement are related to stewardship identification. Hernandez (2012, p. 173) suggests that researchers should examine the “*antecedents that facilitate and explain the emergence of stewardship behaviors,*” which are included in organizational-level mechanisms, such as managerial controls (Bormann et al., 2020; Medina-Craven et al., 2020). Our study provides empirical evidence that certain design choices of controls are more associated with stewardship identification than others, providing additional insights to the family business literature on how controls can be considered as antecedents to stewardship identification (e.g., Davis et al., 2010; Neubaum et al., 2017; James et al., 2017). In contrast to arguments from the agency literature but also from stewardship literature with respect to the impact of formal controls, we provide evidence that traditional formal agency controls are associated with stewardship identification through manager's perception of the fairness of these controls (Lubatkin, Ling, & Schulze, 2007; Barnett & Kellermanns, 2006). This study also provides insights into the moderating effect of a manager's family affiliation status on the relationship between the procedural justice perceptions of the controls with a manager's stewardship identification (e.g., Medina-Craven et al., 2020), considering that family and nonfamily managers have different attitudes which might influence this relationship. The results indicate that the fairness perception with respect to PM is much more important in the relationship between PM and a manager's stewardship identification when a manager is not affiliated with the family. This evidence also supports the arguments of the organizational identification and psychological ownership literatures that suggested mixed evidence regarding the expected differences related to family affiliation status (i.e., Ramos et al., 2014; Erdem & Atsan, 2015). This finding implies that the design of formal organization processes is indeed related to a nonfamily manager's stewardship identification with the family firms, whereas the design of these formal organizational family firm processes is less related to a family manager's attitude to the family firm. A family manager's stewardship attitude to the family firm will probably be more influenced by the quality of the family bonds and within family communication (e.g., family reunions).

This study also contributes empirically to the literature by providing evidence on how individual and contextual factors are associated with managers' attitudes and behaviors. As

such it complements academic studies on these topics conducted in family firms located in the United States (Medina-Craven et al., 2020), Europe (Pimentel et al., 2020; Bormann et al., 2020) and Asia (Ramos et al., 2014). Our study shows that stewardship differences and organizational identification of family and nonfamily managers are also influenced by the design of organizational processes and manager's perception of these processes in Brazilian firms. Family firms in Brazil are the dominant form of business and are characterized by high levels of family control (da Silva Campos, Machado Filho, Costa, Santos-Costa, 2021) such as in family firms on the Latin American continent (Gupta & Levenburg, 2010; 2012; Müller, Botero, Cruz, & Subramanian, 2019). Thus, this study indicates that theories like stewardship theory, psychological ownership and social identification are also useful to explain the heterogeneity in Brazilian family firms.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Management controls have traditionally been regarded as agency mechanisms, which purpose it is to align managers' and principals' interests in an organization. Controls are meant to limit actions, direct attention, and constrain managers' discretion over business decisions, curbing opportunistic behaviors (Eisenhardt, 1989). Most definitions of management control used in the management accounting literature are in line with this theoretical perspective. Besides focusing on the type of controls (i.e., target setting, performance measurement, budgets, reward schemes) (Ferreira & Otley, 2009), studies also concentrated on the design characteristics of these controls. Studies revealed that these design features are determinants for manager's perceptions of procedural justice and manager's attitudes and behavior (Hartmann & Slapničar, 2012; Langevin & Mendoza, 2013; Groen, 2018). For this study, we investigate two different types of controls, namely target setting (TS), which could be considered as an action control since it provides boundaries to managers actions and performance measurement (PM) which is a result control used to monitor and evaluate managers and business performance (Merchant & Van der Stede, 2017). Hence, TS is a forward-looking guidance mechanism, and PM is seen as a backward-looking evaluation mechanism. In this paper, these two types of controls are then combined with two different design choices, namely a design in which the degree of participation varies and a design in which the level of formality varies.

A participative TS and PM design involves voice (Langevin & Mendoza, 2013; Groen, 2018). Hartmann and Slapničar (2012, p. 21) argue that "*voice is a central process variable*" because it "*establishes a feeling of being valued as an equal organizational member*" and

points out that participation encompasses also a manager's influence over decisions (Groen, Wouters, & Wilderom, 2017; Groen, 2018). Participative controls can also be introduced for agency reasons since through the participative nature of the control information might be exchanged which results in a reduction of information asymmetry between the principal and the agent. Formal TS and PM requires the existence of explicit, objective, and quantitative targets and quantitative performance measures (Hartmann & Slapničar, 2009, 2012; Sitkin, Long, & Cardinal, 2020). Informal TS and PM, on the other hand, are characterized by a high level of subjectivity exercised by the superior or the principal (Hartmann & Slapničar, 2009). Extant studies provide evidence that the design of controls is associated with manager's individual perception of procedural justice related to these control mechanisms, which explain attitudinal and behavioral outcomes of managers (e.g., Hartmann & Slapničar, 2012; Groen, 2018).

Van der Heyden, Blondel, and Carlock (2005, p. 1), which is one of the studies that introduced the procedural justice to the family business area, claim that the *"lack of fairness in the decision and managerial processes governing these businesses and their associated families is a source of conflict"* and complement that fair processes are related to several positive outcomes such as trust, identification, and commitment (e.g., Van der Heyden et al., 2005; Sieger et al., 2011). In this study, we focus on an individual's positive outcome being a person's stewardship identification which is linked to the concept of stewardship (Davis et al., 1997; Neubaum et al., 2017). An individual's stewardship identification (see Craig et al., 2011), refers to the extent of manager's identification with the firm by *"accepting the organization's mission, vision, and objectives"* (Davis et al., 1997, p. 29). We further take into account in this study the different social identities between family and nonfamily managers studied under the umbrella of Social Identity Theory (SIT) (e.g., Carmon et al., 2010; Medina-Craven et al., 2020). We argue that a family's affiliation status will moderate the relationship between manager's procedural justice perception of the controls and manager's stewardship identification. We build on the rationale from Bormann et al. (2020), who developed the idea that stewardship behaviors are consequences of both the individual and the collective context, and on Medina-Craven et al. (2020), who provide evidence on how these social identities (family and nonfamily member) might influence the relationship between control and relational practices and organizational identification. These discussions about family and nonfamily managers relationships with the firm have been addressed by previous studies, considering different constructs such as psychological ownership (Ramos et al., 2014) and organizational

identification (Medina-Craven et al., 2020). The theoretical model and hypotheses are presented in Figure 1 and will be developed in the following subsections.

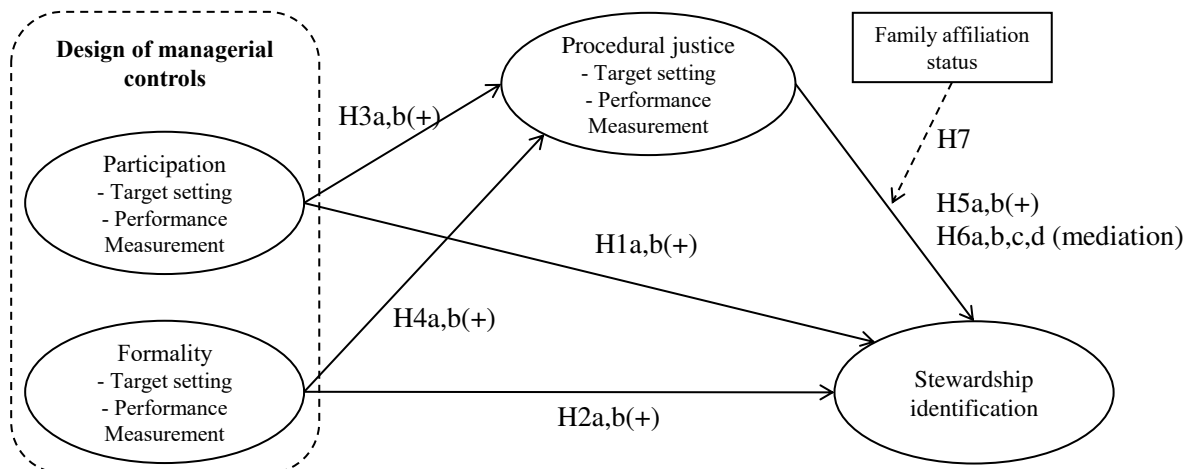


Figure 1. Theoretical research model and hypotheses

Note 1. The mediating hypothesis (H6) indicates the indirect association between process characteristics of managerial controls and stewardship identification, mediated by procedural justice.

2.1. Design characteristics of controls and stewardship identification

Based on the involvement-oriented management philosophy proposed by the seminal study from Davis et al. (1997), we argue that a participative TS design is positively related to stewardship attitudes and behaviors. A participative control design can foster goal congruence and reduce information asymmetry (agency reasons) and also have a motivational effect on managers, by enabling them to express their concerns and opinions into management. Prior studies show that when managers have a high level of participation in setting their goals or targets, they might internalize these goals and pursue them (Groen, 2018). Participative TS can also avoid agency costs through fostering information sharing between boards, top-managers and managers.

Managers involved in determining the business goals, targets and participating in performance measurement processes are more likely to develop a sense of membership of the family firm and accept the firm’s vision and goals, which indicates that participation might be a determinant factor for a manager’s stewardship identification.

A participative PM instigates debate and feedback about a manager’s and business unit’s performance. This might lead to better top management level interactions and the consideration of multiple viewpoints while developing the performance appraisals, and also reducing information asymmetry. In that sense, managers that exert their voice and are listened

are expected to develop pro-organizational attitudes and behaviors with the firm (Bellavance et al., 2013). In other words, empowering managers by means of controls of a participative nature, to use their expertise and skills in the organization maximizes the individual's motivations (Groen et al., 2017). Therefore, we hypothesize that:

H1a: Target setting of a more participative character is positively associated with a stronger manager's stewardship identification.

H1b: Performance measurement of a more participative character is positively associated with a stronger manager's stewardship identification.

A formal design of TS can be adopted to foster goal's transparency and direction, which we argue will promote positive individual attitudinal outcomes. The objectivity of goals and targets, and thereby of a formal TS is to enhance the clarity of the manager's objectives by stimulating internal communication quality through formal business channels (Lau & Sholihin, 2005). Pearson and Marler (2010) propose that owners can foster steward-like attitudes and behaviors in the firm by designing procedures that stimulate to communicate open and in transparent way the organization's goals and rules. For these authors, encouraging and giving managers access to information is crucial to creating reciprocal stewardship in the family firm (Pearson & Marler, 2010).

A formal PM design involves the adoption of performance appraisals that are based on quantitative targets and objective criteria with quantitative and objective performance measures that are not subject to the discretion of superiors (Hartmann & Slapničar, 2009; Vouřem et al., 2016). Prior empirical studies support that formal PM enhances the trust of the evaluated managers since they signal that superiors encourage norms of honesty and clarity (Hartmann & Slapničar, 2009; Lau & Shohilin, 2005). In the family business literature, Lubatkin et al. (2007) point that formality might mitigate inaccurate and biased performance evaluation leading to equal treatment of family and nonfamily managers. Hence, formality may foster a manager's sense of identification with the firm, regardless of their family affiliation. We hypothesize that:

H2a: The level of formality in the target setting is positively associated with a manager's stewardship identification.

H2b: The level of formality in the performance measurement is positively associated with a manager's stewardship identification.

2.2. Design characteristics of controls, procedural justice perceptions, and stewardship identification

The literature has shown that participation and formality are determinants of procedural justice perceptions (Hartmann & Slapničar, 2009, 2012; Groen, 2018). These features have been seen as consistent with procedural justice norms (Hartmann & Slapničar, 2009; Langevin & Mendoza, 2013; Leventhal et al., 1980; Voußem et al., 2016). Prior literature has suggested that a participative control design is aligned with the traditional components of procedural justice (normative rules) such as accuracy, correctability, representativeness, and ethicality (Leventhal et al., 1980; Thibaut & Walker, 1975; Langevin & Mendoza, 2013). Prior studies provide extensive empirical evidence about the association between participative controls design and individual's procedural justice perceptions (Groen, 2018; Hartmann & Slapničar, 2009). Therefore, we hypothesize that:

H3a: Target setting of a more participative character is positively associated with a manager's procedural justice perception of target setting.

H3b: Performance measurement of a more participative character is positively associated with manager's procedural justice perception of performance measurement.

Unlike participation, the association between a formal design of controls and procedural justice perceptions is not straightforward (Hartmann & Slapničar, 2012; Voußem et al., 2016; Langevin & Mendoza, 2021; Tran & Järvinen, 2022). While a formal TS and PM design enables more consistent judgments and decisions, they restrict to a certain extent correctability (Lau & Moser, 2008), which is another rule of procedural justice (Leventhal et al., 1980). Nevertheless, in this study, we consider formality a fair design characteristic of TS and PM, which is associated positively with procedural justice perceptions (Hartmann & Slapničar, 2009). The rationale rests on the information clarity and transparency that a formal target setting provides to managers. In formalized PM, superiors “*will be able to deliver more consistent, more accurate and less biased performance evaluations*” (Hartmann & Slapničar, 2009, p. 725). Consistency indicates that performance evaluation is developed by clear rules and metrics, making managers accountable for the criteria used for evaluating the firm's and manager's performance (Cugueró-Escofet & Rosanas, 2013).

Van der Heyden et al. (2005) list two characteristics related to fairness in the family business context that are linked to formality. First, the formality of TS and PM can foster clarity of information, processes, and expectations in the organization. Second, formality can guarantee that procedures are implemented with consistency across people, over time, and by

the firms' values and norms (Van der Heyden et al., 2005) within an utilitarian notion of justice (Samara & Paul, 2019). According to this literature, we state the following hypotheses:

H4a: The level of formality in the target setting is positively associated with a manager's procedural justice perception in the target setting.

H4b: The level of formality in the performance measurement is positively associated with a manager's procedural justice perception of performance measurement.

Justice perceptions foster deeper exchange relationships between managers and superiors and develop social identities among individuals in organizations. Considering these reciprocation rules (Blau, 1964; Groen, 2018), procedural justice perceptions are expected to be related to beneficial attitudes and behaviors towards managers (e.g., Cropanzano & Byrne, 2000). Social exchange relationships foster a relational obligation between managers and organizations in how they identify with the firm and support the pursuance of its goals (Lavelle, Rupp, & Brockner, 2007). Lavelle et al. (2007) argue that the outcomes of such reciprocation rules embrace a multi-foci notion that involves favorable consequences for the organization, such as commitment, trust, organizational citizenship, and identification (e.g., Cropanzano & Byrne, 2000).

Prior literature suggests that procedural justice perceptions satisfy the need for control and the need for esteem and belonging (Lau & Oger, 2012), which enhances manager's trust (Cropanzano, Prehar, & Chen, 2002), goal commitment (Groen, 2018), and organizational commitment (Cropanzano, Bowen, & Gilliland, 2007). Justice perceptions have also been linked to organizational identification in the context of the family firm (Carmon et al., 2010). Therefore, we state that:

H5a: Procedural justice perceptions with respect to target setting are positively associated with the manager's stewardship identification.

H5b: Procedural justice perceptions with respect to performance measurement are positively associated with the manager's stewardship identification.

As a result, we also formulate the following mediation hypotheses

H6a,b,c,d: Procedural justice perceptions mediate the association between the design of controls and manager's stewardship identification, considering participative TS and PM and formal TS and PM.

2.3. Manager's family affiliation moderating effect

The assumptions related to procedural justice (based on the Social Exchange Theory) can also be attributed to other organizational theories. Among these theories is the Social Identity Theory (SIT), which suggests that individuals define themselves in terms of their membership of a social group (Tajfel & Turner, 1986; Hogg & Abrams, 1988). Based on SIT, individuals self-select into social categories to improve their mental self-view, and each of these categories represents a social identity (Hogg & Abrams, 1988). Tajfel (1981, p. 251) defines social identity as “*that part of the individual’s self-concept which derives from his knowledge of his membership of a social group (or groups) together with the value and emotional significance attached to that membership.*” In family firms, family managers and nonfamily managers potentially have different social identities and particularly different identification processes (Carmon et al., 2010). In other words, a family’s affiliation matters to understand the different processes from which individuals’ identification emerges.

This rationale is also supported by prior studies that shed light on the differential relationships among family and nonfamily managers with the firm. Many studies in the family business literature point at differences in psychological ownership between family managers and nonfamily managers (Erdem & Atsan, 2015; Ramos et al., 2014; Sieger et al., 2011). Psychological ownership makes one feel as if she/he was the owner of a place and these feelings help a person to express her/his own identity; it creates a sense of having a place (Pierce, Kostova, & Dirks, 2001). According to Sieger et al. (2011), the creation of an in-group perception helps to develop psychological ownership and a high-level of psychological ownership can bind nonfamily members to the family firm (Bernhard & O’Driscoll, 2011; Pieper, 2010). In this paper, we argue that participative controls, which allow family managers as well as nonfamily managers to communicate and discuss the future goals of the family firm, create a sense of psychological ownership. Formal controls that lead to transparency on the firm’s performance can also stimulate psychological ownership. Drawing on social identity and stewardship theories, Ramos et al. (2014) argue that the presence or absence of family ties has an impact on the degree to which organization-based psychological ownership affect pro-organizational behavior and attitude. Therefore we consider a manager’s family affiliation to be a possible moderator on the relationship between a manager’s procedural justice perceptions with respect to the controls in the company and his or her stewardship attitude towards the family firm.

For instance, family managers are supposed to have stronger emotional and financial ties to the family firm which implies that if the business fills those needs (for instance, harmony, profitability, longevity) the identification of family members with the firm’s goals and values

is more apparent compared to nonfamily managers (Carmon et al., 2010). Hence, we argue that the individual's perception of the fairness of the controls applied, is likely more relevant to nurturing a sense of identification for nonfamily managers than for family managers, considering that family managers might nurture their identification towards the family business by their family ties. In addition, nonfamily managers usually only have the business channels to nurture their affective relations and positive attitudes towards the firm. Therefore the link between individual's fairness perception and stewardship identification would be more salient for nonfamily managers than for family managers.

Carmon et al. (2010) provide evidence that an individual's organizational identity is developed through workplace interaction. These authors argue that family firm employees "*are likely to form their perceptions of organizational identification and commitment based on their perceptions of how they are treated within their family businesses and whether or not that treatment varies among employees*" (Carmon et al., 2010, p. 211). However, fairness applies to treatment and the characteristics of managerial processes that are adopted (Medina-Craven et al., 2020), such as the procedural justice perceptions regarding TS and PM. Since family managers are intrinsically linked to the organization's identity by their family membership, nonfamily managers might consider, to a greater extent, the procedural justice of the firm's managerial processes to develop a stewardship identification with the firm (following the rationale from Medina-Craven et al., 2020). A procedural justice perception might influence a manager's attitude towards the potential asymmetric treatment from firm's leadership, as well as its possibly negative consequences to managers behaviors, which are discussed by the literature under the umbrella of bifurcation bias (Verbeke & Kano, 2012; Madison, Daspit, Turner, & Kellermanns, 2018).

Therefore, we argue that the relationship between procedural justice perceptions in TS and PM and stewardship identification will be higher for nonfamily managers than for family managers since fairness in the managerial process might be considered to a much larger extent by nonfamily managers (e.g., Sieger et al., 2011; Pimentel et al., 2020). Hence, we hypothesize that:

H7: The positive relationship between the level of procedural justice and stewardship identification will be higher for a nonfamily manager than for a family manager.

3. METHODOLOGY

3.1. Sample

To respond to the research questions of this study, we administered a survey emailed to Brazilian firms. Brazil is an emerging economy and is subjected to several challenges derived from economic and institutional instability (Xu & Meyer, 2013), which have implications towards firm's survival and behaviors. Family firms in Brazil are predominant and in these organizations we can observe a high level of power held by dominant coalitions in terms of ownership control, governance, and management (da Silva Campos et al., 2021) and with a cultural background characterized by paternalistic and community embedded behaviors such as other in countries from Latin America (Gupta & Levenburg, 2010; Müller et al., 2019). Although these common features can be observed, there is still enough heterogeneity among family firms in Brazil which ensures that it is an appropriate research context to test our hypotheses.

The firms' population was selected from the EMIS database (formerly known as ISI Emerging Markets database developed by scholars from Harvard Business School). To select the survey population, we excluded from a list formed by 3,911 firms those listed, non-operational, and had the status of banks, cooperatives, associations, multinationals, or semi-state companies. Hence, we targeted a population of 2,953 Brazilian medium and large private firms. Due to the lack of information for some firms, we sent out 2,279 surveys.

The data collection procedure followed the recommendations from Dillman (2007). First, the instrument was translated from English into Portuguese and then translated back into English. After that, we checked the items' face validity and conducted a pre-test involving four senior managers and one academic. These procedures led only to minor changes in the survey questions while not changing the research constructs. The questionnaire was sent by email in September 2016, followed by four reminders between September 2016 and February 2017.

We received 165 questionnaires, which indicates an overall response rate of 7.2%. We tested potential non-response bias by dividing the sample into two groups, following the argument that late respondents are comparable to non-respondents (Oppenheim, 1966). Our results suggest no statistically significant differences, at a 5% significance level, among early and late respondents except for one item being (PMform_1).

From the 165 replies, we omitted 13 responses because they contained a lot of missing items. We then used an ex-post operational definition proposed by Arregle et al. (2012) of a family-controlled firm considering ownership, in which the controlling family holds more than 50% of the firm's shares. After applying this definition, we excluded 11 firms in which the family held less than 50% of the shares. Therefore, our analyses are based on a final sample of

141 private family firms. Of those responses, 51 are provided by family managers, and 90 are provided by nonfamily managers.

3.2. Measurement of the variables

The questionnaire contains measurement instruments taken from published studies. Most of the constructs were captured by multi-item questions. All the instruments are based on a five-point Likert scale except for managers family affiliation status.

3.2.1. Dependent variable

Stewardship identification (Stew_identification) is an individual-level measure based on a three-item scale developed and tested by Craig et al. (2011), which refers to the extent to which managers identify with the firm by “*accepting the organization’s mission, vision, and objectives*” (Davis, Schoorman, & Donaldson, 1997, p. 29). Stewardship identification is aligned with the concept of organizational identification, a particular type of social identity related to shared values, belonging, and loyalty to an organization (Carmon et al., 2010; Craig et al., 2011).

3.2.2. Independent variables

Participation in the target setting (TSpart) is measured based on a four-item scale adapted from Shields & Young (1993). We excluded one item from the original instrument since it captured a manager’s satisfaction with the budget (“*How important is it that a budget is not finalized until a manager is satisfied with it?*”). *Participation in performance measurement (PMpart)* is measured based on a two-item scale proposed by Dulebohn and Ferris (1999) and recently validated by Bellavance et al. (2013).

Formality in target setting (TSform) is measured using the three-items developed by Covin, Slevin, and Heeley (2001). *Formality in performance measurement (PMform)* is measured based on a two-item scale developed and validated by Hartmann and Slapničar (2009). We adapted these items to capture the organizational level since they were mainly developed to address the superior-subordinate relationship.

Procedural justice in the target setting (TSpj) is measured on a four-item scale validated by Hartmann and Slapničar (2009) and adapted from Vouřem et al. (2016) to address the target setting process. *Procedural justice in performance measurement (PMpj)* is captured on a two-item scale proposed and validated by Hartmann and Slapničar (2012).

3.2.3. Moderating variable

Family status (*Family_status*) captures whether or not a manager is affiliated to the family and is measured as a dummy variable whether the respondent considers himself/herself as a family manager (dummy= 1) or as a nonfamily manager (dummy= 0). This variable was treated as a moderator in our model.

3.2.4. Control variables

In line with prior studies (i.e., Hartmann and Slapničar, 2009, 2012; Groen, 2018), we control for a number of influencing variables revealed by prior studies. First, we controlled for the hierarchical level of the respondent in the family firm based on Tier 1 (report to shareholders or board of directors), Tier 2 (report to Top Managers, Chief officers or CEO), and Tier 3 (report to middle managers or supervisors). Second, we controlled for a manager's tenure based on the number of years the manager is working for the firm. Third, we control for firm size (*Org_size*), which was treated as a dummy variable based on the number of employees: (i) less than 50 employees (small firms); (ii) between 50 and 300 employees (medium firms); (iii) and above 300 employees (large firms).

3.3. Data Analyses Methods

To test this study's hypotheses, we applied the multivariate technique of Structural Equation Modeling (SEM-SmartPLS). This technique has some advantages (Hair Jr., Hult, Ringle, & Sarstedt, 2013; Hair Jr., Sarstedt, Ringle, & Gudergan, 2017): (i) it allows researchers to analyze the mediation model; (ii) it estimates reliably complex models with fewer observations in comparison to regression analysis for example; (iii) and does not impose a data distribution assumption since in our model we have a nonnormal distribution for procedural justice. The SEM technique has been used extensively on management accounting (e.g., Hartmann & Slapničar, 2009; Nitzl, 2016) and family business research (e.g., Hair Jr. et al., 2020).

We addressed validity concerns by basing our survey design and analysis on Podsakoff, MacKenzie, and Podsakoff (2012) recommendations. First, we used validated measures for the constructs. To test for the concerns related to common method bias, we first conducted Harman's single factor test. We obtained five factors with an eigenvalue higher than one, accounting for 76.36% of the variance, where the first factor accounts for 46.80% of the items' variance. This result might be attributable to the subjective measures of procedural justice and

stewardship identification. To address the potential common method bias problem, we adopted a procedure called “*the measured latent marker variable approach*” (Chin et al., 2013).

4. DATA ANALYSES

4.1. Descriptive statistics of the respondents

Our responding population is predominantly composed of firms whereby all the shares are in the hands of the controlling family (77.3%) and whose CEO is a family member (80.9%) (see Table 1). Additionally, our sample is made up of mainly second and later generations family firms (74.5%). In terms of the respondents, managers responding to the survey are 36.2% family managers, while 63.8% consider themselves nonfamily managers (see Table 2). Regarding their hierarchical level, 49.6% are in Tier 1 and 46.8% in Tier 2. In terms of tenure, 56.7% of the respondents worked in the firm for more than ten years.

Table 1
Firms’ characteristics

	n	%		n	%
<i>Panel A: Controlling family ownership</i>			<i>Panel C: Is the CEO from the controlling family?</i>		
There are majority and minority shareholders	32	22.7%	Yes	114	80.9%
Family owns 100% of the shares	109	77.3%	No	27	19.1%
<i>Panel B: Ratio of family members in the TMT</i>			<i>Panel D: Family Generations (ownership)</i>		
No family members	23	16.3%	First generation	36	25.5%
More than 0% and up to 25%	29	20.6%	Second and later generations	105	74.5%
More than 25% and up to 50%	32	22.7%			
More than 50% but less than 100%	22	15.6%			
100,00%	29	20.6%			
Missing	6	4.3%			

Table 2
Respondents’ characteristics

	n	%		n	%
<i>Panel A: Family status</i>			<i>Panel C: Tenure</i>		
Family manager	51	36.2%	Between 1 and 2 years	4	2.8%
Nonfamily manager	90	63.8%	Between 3 and 5 years	22	15.6%
			Between 6 and 10 years	34	24.1%
<i>Panel B: Hierarchical level</i>			More than 10 years	80	56.7%
Tier 1	70	49.6%	Missing	1	0.7%
Tier 2	66	46.8%	<i>Panel D: Superior family status</i>		
Tier 3	5	3.5%	Nonfamily manager	47	33.3%
			Family manager	94	66.7%

Note 1. Tier 1 (report to shareholders or board of directors), Tier 2 (report to Top Managers, Chief Officers or CEO), and Tier 3 (report to middle managers or supervisors).

4.2. Measurement Model Assessment

We follow Hair et al.'s (2013) steps to proceed with the validation of the measurement model based on the reflective model evaluation. First, we analyze the outer loadings and Average Variance Extracted (AVE) for convergent validity. We also analyze the Composite Reliability (CR) for internal consistency. The AVE and CR of the latent variables in the model are respectively higher than 0.5 and higher than 0.7, and the outer loadings are also higher than 0.7.

Also, we conducted the discriminant validity analysis based on the cross-loadings (level indicators) and the Fornell-Larcker criterion (Fornell & Larcker, 1981). First, AVE's square roots were greater than the correlations between the latent variables (Hair Jr., Hult, Ringle, & Sarstedt, 2013), which we present in Table 3. The results also show that the cross-loadings are considered high in some cross-correlations, which were expected since we used subjective constructs such as procedural justice and stewardship identification. In a reflective latent variable, items are expected to be correlated, and it does not consist of a statistical concern for the model. In sum, following Hair Jr. et al. (2013) recommendations, our measurement model was validated after excluding the TSform_3 item, which did not pass in the convergent and discriminant validity criteria, since this item presented a low level of outer loadings and high level of cross-loadings. We finally analyze the Heterotrait-Monotrait criterion (HTMT) to assess discriminant validity (values lower than 0.85) (Hair Jr. et al., 2020), where we have found results consistent with the Fornell-Larcker criterion.

Table 3
First-Order Latent Variable Correlations

	1	2	3	4	5	6	7
1. TSform	0.908						
2. TSpartic	0.429	0.857					
3. PMform	0.312	0.373	0.945				
4. PMpartic	0.357	0.473	0.637	0.935			
5. TSpj	0.494	0.634	0.444	0.532	0.946		
6. PMpj	0.448	0.475	0.714	0.703	0.576	0.969	
7. Stew_identification	0.455	0.639	0.377	0.524	0.701	0.504	0.931
Alfa de Cronbach	0.787	0.881	0.881	0.856	0.961	0.935	0.923
Average Variance Extracted (AVE)	0.824	0.735	0.893	0.874	0.895	0.939	0.867
Composite Reliability	0.903	0.917	0.944	0.933	0.972	0.968	0.951

Note 1. The diagonal values 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 (Hair Jr. et al., 2013).

Note 2. The Heterotrait-Monotrait Ratio (HTMT) values are all below 0.85, being the maximum value presented 0.785. This parameter also indicates discriminant validity.

4.3. Structural Equation Modeling

Supported by the recommendations from Hair et al. (2013), we developed the structural model assessment. First, we analyzed multicollinearity between the constructs based on the Variance Inflation Factor (VIF) parameter. In our model, these measures were lower than five, indicating that multicollinearity may not be a concern for the structural model. Then, we analyzed the path coefficients in terms of the size and statistical significance based on the bootstrapping procedure with 5,000 repetitions, bias-corrected confidence level, and two-tailed tests (Hair Jr. et al., 2013). We also report the effect size coefficient (f^2), which indicates an independent variable's impact on the dependent variable, based on the omitted variable procedure. To evaluate these parameters, we used the classification suggested by Cohen (1988) that is usually applied in the social sciences. Table 4 present the coefficients for the direct effects of the Structural Equation modeling analyses.

We test the moderating effect based on the statistical significance of the moderation variables. Our sample is not large enough to segregate the manager's (non)family affiliation into groups and performs the Multi-group Analysis in SmartPLS, recommended by Hair Jr. et al. (2013; 2017). Therefore, we used the multiplicative term to evaluate moderation since a dummy variable and numerical variables allow this type of operation.

Table 4
Direct and Moderating effect results

	Hypotheses	Beta	T Statistics	P-value	f ²	R ² adj
TSpartic -> TS_procedural justice	H3a	0.440	6.162	0.000	0.297	0.522
TSform -> TS_procedural justice	H4a	0.206	2.658	0.008	0.069	
Tier -> TS_procedural justice		0.028	0.467	0.641	0.002	
MLMV -> TS_procedural justice		0.295	4.112	0.000	0.158	
PMpartic -> PM_procedural justice	H3b	0.399	4.382	0.000	0.252	0.622
PMform -> PM_procedural justice	H4b	0.412	6.321	0.000	0.261	
Tier -> PM_procedural justice		0.083	1.576	0.115	0.019	
MLMV -> PM_procedural justice		0.122	1.995	0.046	0.034	
TSpartic -> Stew_identification	H1a	0.263	3.307	0.001	0.101	0.617
TSform -> Stew_identification	H2a	0.129	1.609	0.108	0.032	
PMpartic -> Stew_identification	H1b	0.197	1.850	0.064	0.047	
PMform -> Stew_identification	H2b	-0.070	0.708	0.479	0.006	
TS_procedural justice -> Stew_identification	H5a	0.330	3.249	0.001	0.124	
PM_procedural justice -> Stew_identification	H5b	-0.003	0.023	0.982	0.000	
Family_status -> Stew_identification		0.159	2.385	0.017	0.056	
Mod-TS-familyStatus -> Stew_identification	H7	0.131	1.518	0.129	0.025	
Mod-PM-familyStatus -> Stew_identification	H7	-0.136	1.905	0.057	0.033	
Tier -> Stew_identification		0.094	1.540	0.124	0.019	
Org_size -> Stew_identification		-0.046	0.506	0.613	0.006	
Tenure -> Stew_identification		-0.092	1.645	0.100	0.021	
MLMV -> Stew_identification		0.115	1.657	0.098	0.026	

Note 1. Classification of Cohen (1988): small effect ($f^2 = 0.02$), medium effect ($f^2 = 0.15$) and large effect ($f^2 = 0.35$).

4.3.1. The relationship between the design of controls and a manager's stewardship identification

Our results show that participative TS and PM are positively associated with stewardship identification, presenting a small effect size (respectively $f^2 = 0.101$ and $f^2 = 0.047$). These results confirm H1a and H1b and are in line with prior literature that found evidence that participative controls foster positive managers' or employees' attitudes like organizational identification, commitment, and trust (Groen, 2018). Our results are in line with stewardship theory's assumptions in that participative mechanisms like an involvement-oriented, collectivist and low power distance management culture stimulate stewardship attitudes (Davis et al., 1997; Neubaum et al., 2017).

In contrast to participation, we do not find a positive direct significant relationship between the degree of formality of the controls and stewardship identification. Therefore, H2a and H2b were not confirmed. Our results are in line with Hartmann and Slapničar (2012), considering that the results regarding formality and pro-organizational attitudes have been mixed with evidence of both positive and negative associations. However, this non-significant

result with respect to the level of formality of the controls shows that formal managerial mechanisms do not necessarily reduce stewardship attitudes and behaviors as is claimed in a number of studies (Davis et al., 1997).

4.3.2. The role of procedural justice perceptions on the relationship between controls and stewardship identification

Our results support that both higher participative controls and more formal controls are positively and significantly associated with procedural justice perceptions. This result is in line with the findings of Hartmann & Slapničar (2012), Groen (2018), and Vouřem et al. (2016). First, the results show a medium effect size between participative TS and procedural justice in TS ($f^2=0.297$) and a small effect size between formal TS and procedural justice in TS ($f^2=0.069$). Second, our results indicate a strong positive association between participative PM and procedural justice ($f^2=0.252$) and between formal PM and procedural justice in PM ($f^2=0.261$). Therefore we can confirm H3a, H3b, H4a, and H4b. These results are consistent with the procedural justice literature that provided evidence that these process characteristics (the participative and the formal character of the controls) are associated with procedural justice perceptions (Hartmann & Slapničar, 2009, 2012; Groen, 2018; Langevin & Mendoza, 2013). We also support that procedural justice in the TS is positively associated with stewardship identification ($f^2=0.124$). Our results support that procedural justice perceptions in the TS process create a sense of reciprocity on the manager and enhance their identification and support to the organization's goals (Langevin & Mendonza, 2013; Cropanzano & Byrne, 2000; Lavelle et al., 2007). However, we do not find a statistically significant relationship between procedural justice in PM and stewardship identification. Therefore, we confirm only the hypothesis H5a.

Regarding the mediated relations, our study shows differences in types of mediation (see Table 5). We observe a full mediated relationship between formal TS and stewardship attitude (H6c), which suggests that a formal TS design only influences stewardship identification through procedural justice perceptions in TS. We find a partial mediated relationship between participative TS and stewardship attitude, through perceived fairness in TS (H6a), suggesting significance in both direct ($\beta=0.263$, $p\text{-value}=0.001$) and indirect effects ($\beta=0.145$, $p\text{-value}=0.002$). For the PM controls, we observe no mediation between both participative (H6b) and formal PM (H6d) with stewardship identification. We only find a direct relationship between participative PM and stewardship identification.

Table 5

Indirect effect of process characteristics and stewardship attitude (mediation results)

	Hypotheses	Beta	T Statistics	P-value
TSpartic -> TS_procedural justice -> Stew_identification	H6a	0.145	3.048	0.002
PMpartic -> PM_procedural justice -> Stew_identification	H6b	-0.001	0.022	0.983
TSform -> TS_procedural justice -> Stew_identification	H6c	0.068	1.983	0.047
PMform -> PM_procedural justice -> Stew_identification	H6d	-0.001	0.023	0.982

4.3.3. The moderating role of a manager's family affiliation status

With regard to the moderation hypothesis (H7), our results provide evidence that the positive relationship between PM procedural justice and stewardship identification is stronger for a nonfamily manager. Figure 2 shows that the effect of a high level of procedural justice in PM increases when the manager is a nonfamily member and decreases for family managers (see the different slope in Figure 2). In addition, for nonfamily managers, a low level of procedural justice in PM implies lower levels of stewardship identification, which suggests that the negative consequences of a lack of fairness in PM is more apparent for nonfamily managers. The level of stewardship identification among nonfamily managers increases with higher procedural justice perceptions as evidenced by prior empirical studies (Sieger et al., 2011; Carmon et al., 2010; Pimentel et al., 2020). However, our results do not provide statistically significant results for the moderation effect considering TS procedural justice.

Our findings suggest that the link between procedural justice in performance measurement and stewardship identification is more salient for nonfamily managers. Nonfamily managers are “outsiders” to the family and therefore do not take part in discussions on the firm at gatherings of family members (gatherings to discuss the family firm among family members or at family occasions). As a result, opportunities within the firm to discuss the future of the family firm and its performance in the case of participative controls might be highly appreciated by nonfamily managers and might create a sense of psychological ownership which is positively related with the nonfamily manager's stewardship identification with the firm.

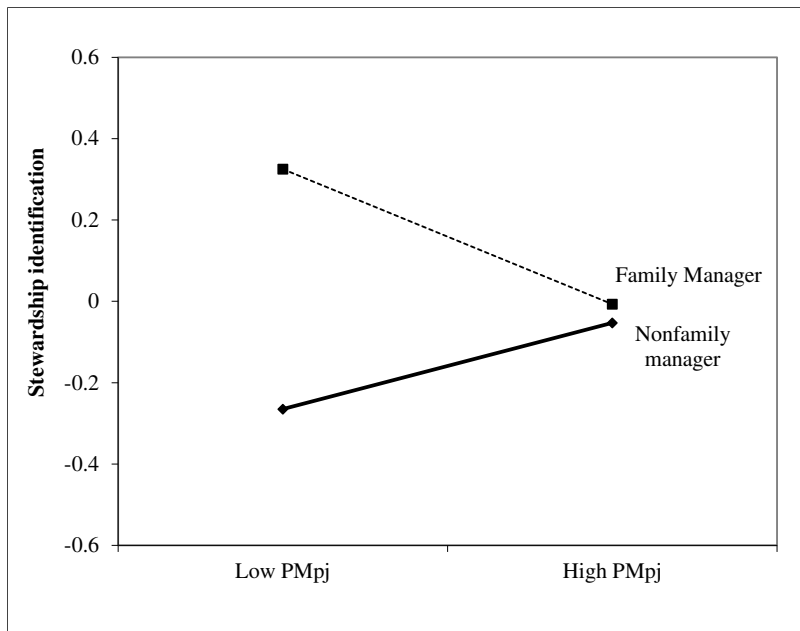


Figure 2. Moderating effect

Panel A was plotted using the multivariate model's coefficients, controlling for the other variables (see Table 4).

5. CONCLUSION

In this paper we focused on two types of controls, TS and PM, which are conceptualized respectively as action and result control (e.g., Merchant & Van der Stede, 2017). Our results do indicate that certain design characteristics of controls are indeed associated with a stewardship identification. A participative design of controls is directly and significantly associated with a higher stewardship identification for both participative TS and PM. In addition, our results support a partial mediation between participative TS controls and stewardship identification, through individual manager's fairness perceptions. Concerning the level of formality of the controls adopted in the family firm, we do not observe any significant direct association with manager's stewardship identification, nor for TS nor for PM. However, we find a mediated relationship between formal TS and stewardship identification through procedural justice. We observe a full mediated relationship between formal TS and stewardship identification. With respect to formal PM, we find no significant, direct, or mediated relationship with stewardship identification. These results also indicate that introducing formal controls is not detrimental for a manager's stewardship identification. In none of our relationships studied, we observed a negative significant influence of formal controls on stewardship identification.

Whereas prior studies in the family business literature claim that stewardship attitudes and behaviors are a consequence of both individual characteristics and collective contexts

(Davis et al., 1997; Madison et al., 2016; Bormann et al., 2020), this paper also investigates whether a manager's family affiliation moderates the perception on procedural justice with respect to the design characteristics of controls and stewardship identification. By studying this moderation, we consider the influence of managers' perceptions of procedural justice with respect to these control mechanisms since Lubatkin et al. (2007) argued that controls could only be associated with stewardship through a procedural justice lens. Besides, it is aligned with the debate proposed by Medina-Craven et al. (2020), considering the different social identities between family and nonfamily managers, and Carmon et al. (2010), contemplating the processes from which managers identification emerges. When analyzing the moderating effect of the manager's family affiliation on the association between procedural justice and stewardship identification, our results indicate a difference in the strength of this association between family and nonfamily managers, particularly for PM, showing that procedural justice influence on stewardship is more important for nonfamily managers than for family managers.

Combining all these results allows us to state some implications for practice. When companies want to stimulate a stewardship identification with the firm, our results show that both forward-looking action controls like TS and backward-looking results controls like PM are associated with higher stewardship identification as long as these controls have a participative character. Formal controls seem to have no negative influence on stewardship identification, so therefore they should not be avoided to control agency conflicts in the firm because they do not destroy a stewardship identification. Even formal target setting influences stewardship identification positively through procedural justice perceptions. So with respect to the different types of control we can state that forward looking action controls like TS are in more circumstances associated with a higher stewardship identification than PM. PM is only associated with stewardship identification if it is of a participative character. This study also indicates that it is important especially for nonfamily managers that the controls are perceived as fair in order to be associated with a higher stewardship identification with the firm.

This study is also subject to limitations, which provide avenues for future research. This study comprises a cross-sectional design that limits causal interpretations. A longitudinal approach might provide additional insights into how process characteristics of control influence managers' attitudes and behavior over time. We controlled for common method bias by applying the Harman test (Podsakoff et al., 2012) and treated this concern statistically by adding a common method variance control variable in the model (Chin et al., 2013; Nitzl, 2016). However, using multiple respondents per company would have been preferred. We conducted this research in Brazil. Brazil is an emerging economy with a large number of similar

economic characteristics as in western market economies, like Anglo Saxon and Eastern European countries. However, Brazilian as Latin American family firms are on average characterized by a high level of family control and a paternalistic culture (e.g., Gupta & Levenburg, 2010; 2012; Müller et al., 2019). These issues might have consequences to how organizations are managed and the implications of individual and contextual characteristics for managers' attitudes and behaviors, which are the topic of this study. However, our results do illustrate that in family firms across the globe characterized by a high level of family control and a paternalistic culture, a more participative and formal design of controls is related to a higher stewardship attitude, especially for nonfamily managers. Finally, the study relied on data collected from managers active in family firms and with a high level of ownership. Even though the literature states that family firms are an appropriate environment to study managers' attitudes regarding stewardship and agency (Neubaum et al., 2017), studies that replicate our research design in firms with dispersed ownership and another institutional environment could provide additional evidence to this topic.

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