



THE EFFECTS OF FEMALE PARTICIPATION ON THE BOARD OF DIRECTORS AND FAMILY CONTROL ON REAL EARNINGS MANAGEMENT

OS EFEITOS DA PARTICIPAÇÃO FEMININA NO CONSELHO DE ADMINISTRAÇÃO E DO CONTROLE FAMILIAR NO GERENCIAMENTO REAL DE RESULTADOS

LOS EFECTOS DE LA PARTICIPACIÓN FEMENINA EN EL CONSEJO DE ADMINISTRACIÓN Y DEL CONTROL FAMILIAR EN EL GERENCIAMIENTO REAL DE RESULTADOS

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ABSTRACT

Evidence suggests that the board of directors represents a crucial instrument for reducing real earnings management practices. In this scenario, this study aims to analyze the relationship between female participation on the board of directors and the level of Real Earnings Management in Brazilian companies listed on the Brazil Stock Exchange - B3 from 2010 to 2024. The literature shows that family businesses tend to be influenced beyond corporate interests, aligning more closely with the dynamics of family relationships. Therefore, the presence of women is beneficial for governance and the reduction of financial earnings management. In this sense, the study assumed that these female directors could act, from their family roles, as positive influences on the board of directors. The findings confirm that, in family-controlled companies, female participation on the board of directors is associated with a reduction in real earnings management practices. This finding indicates that, when women assume leadership roles in these organizations, they have a positive impact on strategic

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decisions, particularly in matters related to ethics and transparency. These results highlight the importance of gender diversity in the corporate governance of family firms, promoting greater credibility and integrity in accounting practices. Therefore, this research contributes to a broader understanding of the Brazilian corporate landscape regarding gender diversity and its effects on earnings management practices.

Keywords: Female Representation on the Board of Directors. Family Control. Real Earnings Management.

RESUMO

Evidências indicam que o conselho de administração representa um instrumento fundamental para a redução das práticas de gerenciamento de resultados reais. Nesse contexto, o presente estudo tem como objetivo analisar a relação entre a participação feminina no conselho de administração e o nível de Gerenciamento de Resultados Reais em empresas brasileiras listadas na B3, no período de 2010 a 2024. A literatura aponta que empresas familiares tendem a ser influenciadas por interesses que extrapolam a lógica corporativa, refletindo também as dinâmicas das relações familiares. Dessa forma, a presença de mulheres nos conselhos pode ser benéfica para a governança e para a redução do gerenciamento financeiro dos resultados. Partindo dessa premissa, o estudo considerou que conselheiras com vínculos familiares poderiam atuar como influências positivas nos processos decisórios do conselho. Os resultados confirmam que, em empresas sob controle familiar, a participação feminina no conselho de administração está associada à redução do gerenciamento de resultados reais. Isso demonstra que, quando as mulheres assumem posições de liderança nessas organizações, exercem impacto positivo sobre as decisões estratégicas, especialmente em temas ligados à ética e à transparência. Esses achados reforçam a relevância da diversidade de gênero na governança de empresas familiares, promovendo maior credibilidade e integridade nas práticas contábeis. Assim, esta pesquisa contribui para uma compreensão mais abrangente do panorama das empresas brasileiras no que se refere à diversidade de gênero e aos seus efeitos sobre as práticas de gerenciamento de resultados.

Palavras-chave: Participação Feminina no Conselho de Administração. Controle Familiar. Gerenciamento Real de Resultados.

RESUMEN

Evidencias sugieren que el consejo de administración representa un instrumento crucial para reducir prácticas de gestión real de resultados. En este escenario, este estudio tiene como objetivo analizar la relación entre la participación femenina en el consejo de administración y el nivel de Gestión Real de Resultados en empresas brasileñas pertenecientes en la Bolsa de Valores de Brasil de 2010 a 2024. La literatura muestra que las empresas familiares tienden a ser influenciadas más allá de los intereses corporativos, acercándose a la dinámica de las relaciones familiares. Por lo tanto, la presencia de mujeres es beneficiosa para la gobernanza y la reducción de la gestión de resultados financieros. En este sentido, el estudio partió del supuesto de que estas directoras femeninas puedan actuar, a partir de sus roles familiares, como influencias positivas en el consejo de administración. Los resultados confirman que, en las empresas controladas por familias, la participación femenina en el consejo de administración está asociada con una reducción en las prácticas de gestión de resultados reales (hipótesis H1.b). Este hallazgo indica que, cuando las mujeres asumen roles de liderazgo en estas organizaciones, tienen un impacto positivo en las decisiones estratégicas, particularmente en temas relacionados con la ética y la transparencia. Estos resultados destacan la importancia de la diversidad de

género en la gobernanza corporativa de las empresas familiares, promoviendo una mayor credibilidad e integridad en las prácticas contables. Por lo tanto, esta investigación contribuye a una comprensión más amplia del panorama corporativo brasileño en relación con la diversidad de género y sus efectos sobre las prácticas de gestión de resultados.

Palabras-clave: Participación Femenina en el Consejo de Administración. Control Familiar. Gerencia Real de Resultados.

1 INTRODUÇÃO

The Board of Directors (BoD) is a fundamental mechanism in corporate governance, tasked with shaping organizational strategy and protecting the interests of multiple stakeholders, including shareholders, employees, creditors, and regulators (Hermalin & Weisbach, 2003). A proficient BoD plays a critical role in reducing information asymmetry and curbing opportunistic behaviors, which, in turn, diminish the likelihood of earnings manipulation (Peasnell, Pope & Young, 2005; Pham & Nguyen, 2019). Moreover, the BoD's composition is pivotal to its effectiveness, with evidence suggesting that gender diversity enhances governance outcomes by fostering ethical decision-making and corporate accountability (Bajra & Cadez, 2018; Prudêncio, Forte, Crisóstomo & Vasconcelos, 2021; Orazalin, 2020).

Considering the significance of Boards of Directors as integral components of corporate governance, it is apparent that the structure of their composition influences their competence (Bajra & Cadez, 2018). Substantial evidence supports a positive relationship between the presence of women in board compositions and improvements in corporate governance benchmarks (, Olugbode & Petracci, 2015; Orazalin, 2020; Prudêncio et al., 2021; Saona, Muro, San Martín & Baier-Fuentes, 2019), even within the realm of family-owned enterprises (Costa, Sampaio & Flores, 2019).

Earnings management, defined as the manipulation of financial results through either accrual-based adjustments or operational decisions, poses significant challenges to corporate transparency (Martinez, 2008). Real Earnings Management (REM), which involves altering real activities to influence financial reports, has garnered increased attention due to its potential to obscure a firm's true financial performance (Cohen & Zarowin, 2010; Roychowdhury, 2006). Governance mechanisms, especially those embodied by the BoD, are critical in mitigating such practices (Bajra & Cadez, 2018). Despite being permitted by accounting and legal standards, these actions can result in a lack of transparency in corporate outcomes (Martinez, 2008).

Gender diversity on boards has emerged as a vital determinant of governance quality, with studies consistently demonstrating its role in reducing opportunistic behaviors, including earnings manipulation (Kyaw et al., 2015; Prudêncio et al., 2021). This relationship extends to family-controlled firms, where the blending of familial and corporate interests can amplify governance challenges (Vaccari & Beuren, 2017). While family ownership is often associated with stronger alignment between management and shareholders, it may also create opportunities for entrenchment, leading to higher levels of earnings management (Chi, Hung, Cheng & Lieu, 2014; Holanda & Coelho, 2016).

Existing studies, such as Guo, Wu, Yao & Chen (2024), have analyzed gender dynamics in Chinese family firms, showing that family control and board diversity can mitigate the relationship between female CEOs and earnings management. Costa et al. (2019) also investigate the impact of female participation in family businesses on the performance and risk of 218 firms listed on B3 during the period from 2010 to 2016. They conclude that there is a positive relationship between female participation and Tobin's Q, but this relationship is weaker in family businesses.

Despite a growing body of literature on gender diversity and corporate governance, few studies have examined the interplay between female board representation, family control, and REM, particularly in emerging markets like Brazil. Brazil's corporate landscape, characterized by the predominance of family-owned firms (Aldrighi & Postali, 2011; Sampaio, Lima, Aquino Cabral & Paula, 2014) and increasing regulatory focus on board diversity, offers a unique context for exploring these dynamics. These studies often neglect the specific impact of female board members and the broader governance structures within family-controlled firms. Therefore, the aim of this study is to explore the relationship between female participation on the Board of Directors and Real Earnings Management in Brazilian firms listed on the Brazil Stock Exchange from 2010 to 2024.

This study addresses these gaps by investigating how gender diversity on the BoD influences REM in Brazilian firms, particularly under family control. It builds on the findings of Costa et al. (2019), who demonstrated the positive impact of female board participation on firm value and risk but did not examine earnings management. By focusing on REM, this research broadens the understanding of how governance mechanisms operate in family-controlled environments.

Studying earnings management holds significance due to the market's reliance on the financial information disseminated by companies (Almeida-Santos, Dani, Dal Magro & Machado, 2017). Given the historical instability of the Brazilian economy, perceived as a potential obstacle to domestic capital market growth, a situation where firms manipulate financial results could amplify uncertainty (Martinez, 2008).

The results of this study reveal that family-controlled firms have a negative relationship with REM which is further reinforced by the presence of women on the board of directors, further reducing the likelihood of REM in family firms. These findings highlight the governance benefits of gender diversity, particularly in mitigating the risks associated with family ownership structures. To the authors' knowledge, no Brazilian study has reached a similar result. The results of this study confirm the benefits of having a balanced board in terms of gender diversity. A balanced board tends to mitigate earnings management practices, reinforcing legal enforcement in Brazil. This work reveals that the regulatory framework concerning gender diversity on boards of directors plays a crucial role in achieving equality in decision-making positions.

The contributions of this study are threefold. First, it provides new evidence on the role of female board participation in curbing REM, extending the existing literature on gender diversity and corporate governance. Second, it offers insights into the unique governance dynamics of family-controlled firms in Brazil, addressing a significant gap in the literature. Third, it underscores the importance of regulatory initiatives promoting gender diversity on corporate boards, with implications for policymakers, investors, and practitioners seeking to enhance transparency and ethical standards in emerging markets.

The structure of this paper is as follows: Section 2 reviews the theoretical framework on board diversity, family control, and REM. Section 3 outlines the methodological procedures, including data and econometric models. Section 4 presents the findings, while Section 5 concludes with final remarks and implications.

2 THEORETICAL FRAMEWORK

2.1 Earnings Management

The economic and financial data within financial reports serve as the primary communication tool for various users (investors, managers, shareholders, employees, etc.) to monitor a company's performance (Almeida-Santos, Dani, Dal Magro & Machado, 2017). Consequently, there is an anticipation that these reports transparently reflect the economic and

financial reality of the firm, enabling effective decision-making (Almeida-Santos, Dani, Dal Magro & Machado, 2017).

When a company engages in earnings management, it involves adopting practices to achieve specific goals or advantages within the legal boundaries of accounting (Almeida-Santos, Dani, Dal Magro & Machado, 2017). In this context, earnings management (EM) emphasizes the importance of corporate governance mechanisms, especially those linked to information transparency and oversight, to deter opportunistic behaviors (Saona et al., 2019).

Despite being perceived as negative, particularly for manipulating information quality and concealing the true financial position of companies (Bajra & Cadez, 2018), earnings management is not considered illegal. In cases where accounting regulations allow discretion or fail to address operational complexities, managers possess decision-making flexibility and may resort to EM to present financial data that differs from the actual business reality (Martinez, 2008). These actions are, therefore, legal and managerial choices that typically do not involve fraudulent processes (Martinez, 2008).

As per Martinez (2013), accounting earnings management can manifest through discretionary accruals – termed Discretionary Accruals Earnings Management (DAEM) – or via tangible operational decisions – Real Earnings Management (REM). Both strategies aim to manipulate perceptions of the company's financial gains (Martinez, 2013).

DAEM stems from accounting outcomes recorded as profits but might not necessarily involve cash outflows (e.g., depreciation). Dechow, Sloan, and Sweeney (1995) suggest employing a modified version of Jones' model (1991) to quantify discretionary accruals, deemed more reliable for DAEM measurement. However, Roychowdhury (2006) introduces a progression in the field by proposing a REM model grounded in manipulations of real activities stemming from the company's operations (unusual sales fluctuations, cash flow, expenses, inventory, production costs, etc.), which is the model applied in this study.

Hence, Roychowdhury (2006) elucidates that earnings management can be discerned through manipulating a company's genuine activities, such as opportunistically reducing Research & Development (R&D) expenses, offering excessive price discounts to stimulate sales, selectively cutting selling and administrative expenses, stockpiling excessive production inventory to artificially lower the cost of goods sold, among other tactics. These actions aim to generate information that portrays a semblance of normalcy based on operational practices but fails to reflect accurate information representing the firm's reality (Roychowdhury, 2006).

Cohen and Zarowin (2010) analyze how various real earnings management strategies undertaken by CEOs impact, for example, cash flow. They examine, through the Roychowdhury (2006) model, how CEOs prefer real earnings management over discretionary accruals. Additionally, they formulate econometric models of abnormal cash flows, abnormal discretionary expenses, and abnormal production costs, considering the expected relationship with REM. Amidst the landscape of earnings management, corporate governance mechanisms play a pivotal role in ensuring transparency in financial information and safeguarding the interests of investors (Bajra & Cadez, 2018). Furthermore, these mechanisms serve as vital tools in mitigating risks linked to the manipulation of actual earnings within companies (Lin, 2017). Within this framework, the Board of Directors (BoD) assumes a strategic position, striving to enhance the quality of corporate governance and promote transparency in organizational data (Orazalin, 2020).

2.2 Family-Owned Companies and Earnings Management

Considering the agency conflicts arising from the perspectives of owners and agents, comprehending the identity of the firm's controller becomes pertinent, given the potential for

conflicts of interest among corporate stakeholders (Means, 1991; Jensen & Meckling, 1976). Therefore, this study focuses on family-controlled organizations, as they constitute a substantial portion of Brazilian companies (Moura, Bianchet, Mazzioni & Macêdo 2018; Sampaio et al., 2014).

In the context of companies primarily under family control, although there might not be a clear division between the principal and the agent, majority shareholders enjoy advantages over minority ones (Chi et al., 2014; La Porta, Lopez-de-Silanes & Shleifer 1999), including concentrated voting rights and indirect control structures (Holanda & Coelho, 2016). Consequently, control concentration within the framework of family-run firms might suggest a higher inclination toward opportunistic behaviors, such as earnings management (Chi et al., 2014).

In this vein, Razzaque, Ali & Mather (2016) investigated the quality of financial information in listed firms in Bangladesh. They illustrated how, in an emerging economic environment, family control influences the practices of real earnings management within corporations. Employing Roychowdhury's (2006) model to gauge the manipulation of companies' actual activities (Real Earnings Management - REM), they concluded that compared to non-family firms, family-owned companies demonstrate a higher tendency towards REM practices (Razzaque et al., 2016).

Positive correlations between family-controlled companies and earnings management have also been noted in other emerging economies, such as Taiwan and Indonesia (Chi et al., 2014; Masri, 2018). Masri (2018) delves into this association concerning real earnings management and discretionary accruals, affirming that the latter are more prevalent within the family context. Furthermore, the role of corporate governance as a management control mechanism is underscored (Masri, 2018).

Similarly, Holanda and Coelho (2016) investigate the presence and nature of the relationship between the control structure of publicly traded Brazilian companies and the levels of earnings management. They examine firms listed on the Brazil Stock Exchange spanning from 1998 to 2010, outlining diverse control structures. The outcomes reveal that companies with a concentrated control structure, predominantly consisting of family capital, exhibit a higher inclination towards earnings management, as measured by accruals (Holanda & Coelho, 2016).

Aligned with these findings, Almeida-Santos et al. (2017) analyze publicly traded Brazilian firms from 2000 to 2010, aiming to comprehend the influence of control structure and family management on earnings management. Their conclusion suggests that family-owned companies, in contrast to non-family entities, tend to smoothen information regarding their profits to safeguard family capital. This indicates a greater presence of discretionary accruals, serving as an indicator of earnings management (Almeida-Santos, Dani, Dal Magro & Machado, 2017).

Considering the conflicts of interest (Means, 1991; Jensen & Meckling, 1976) and how this characterizes family-controlled companies (La Porta et al., 1999), a framework for potential opportunistic practices by majority shareholders is established (Holanda & Coelho, 2016). For instance, family firms demonstrate a higher incidence of financial earnings management (Almeida-Santos, Dani, Dal Magro & Machado, 2017; Chi et al., 2014; Holanda & Coelho, 2016; Masri, 2018; Razzaque et al., 2016). Consequently, it is anticipated that:

H1: Companies under family control structures demonstrate a higher inclination toward Real Earnings Management practices.

2.3 Diversity in the Composition of Family-Owned Boards of Directors

Recognizing the strategic role that Boards of Directors play in leadership and decision-making (Fama & Jensen, 1983; Lin, 2017; Saito & Silveira, 2008), the representation and diversity in this body's membership have become focal points of interest across numerous research studies (Kyaw et al., 2015; Orazalin, 2020; Prudêncio et al., 2021; Saona et al., 2019).

Regarding gender diversity, an increasing concern centers on the presence of women in top management, garnering significant attention in countries such as Norway, Italy, Spain, Germany, Portugal, and France (Saona et al., 2019). In these nations, legal frameworks and incentive policies of varying levels, legalities, and adherence mechanisms concerning gender diversity in corporate environments exist (Kyaw et al., 2015; Saona et al., 2019). This underscores the understanding that women play pertinent and impactful roles in the performance and corporate governance of companies within these regions (Saona et al., 2019).

Moreover, the involvement of women in boards of directors, holding key strategic and leadership positions, is regarded as a matter of justice, respect for fundamental rights, and the tenets of good corporate governance (Saona et al., 2019). Additionally, it has been established that the presence of women in top management can enhance firm efficiency and safeguard the interests of stakeholders, even in emerging economies (Orazalin, 2020).

The positive relation between the presence of women on boards of directors and the prioritization of corporate values is emphasized in the findings of Haro-de-Rosario, Galvez-Rodriguez, Sáez-Martín and Caba-Pérez (2017). Their analysis of principles espoused in corporate codes of ethics indicates that women exert a positive influence on fostering efficiency, loyalty, and transparency of information (Haro-de-Rosario et al., 2017).

The benefits associated with gender diversity within board compositions are evident, as the inclusion of female directors diminishes earnings management practices (Kyaw et al., 2015). It is further noted that companies with higher female representation on their boards demonstrate more restrained behavior in manipulating accounting information, showcasing a significant impact in curtailing such practices when women are more prevalent on the board (Orazalin, 2020).

Additionally, beyond issues concerning the diversity of board compositions, a comparison can be drawn between family-owned and non-family-owned companies. It's noted that in the context of less developed countries, firms controlled by families are more inclined toward engaging in earnings management practices (Chi et al., 2014). This tendency might be explained by the absence of a clear distinction between principal and agent in family firms. There exists a conflictual relationship between majority shareholders, i.e., families, and minority shareholders, suggesting a greater willingness to manipulate earnings.

Contrarily, Costa et al. (2019) delve into the interplay between the presence of women on the boards of directors in family-controlled and non-family-controlled enterprises. Their analysis indicates that having women in top management positions within family firms positively impacts financial performance. When considering this aspect alongside the family variable, they also note a positive effect on corporate risk (Costa et al., 2019). Despite the still limited representation of women on boards, there's a discernible positive relation between the presence of female directors, capital structures, and organizational aspects (Costa et al., 2019).

Another aspect to examine is that the profile of family businesses tends to replicate family hierarchy, especially concerning the succession of the patriarch (Costa et al., 2019). To comprehend the succession process, Aldamiz-Echevarría, Idígoras and Vicente-Molina (2017) conducted interviews with small Spanish family businesses to explore how gender might influence the positioning of women as leaders within these firms.

The findings revealed that according to the interviewees, the most significant factors in the succession process were primogeniture, experience, and requirements established within the family dynamics, rather than the gender of the successor (Aldamiz-Echevarría et al., 2017).

Nevertheless, a preference for males in leadership and decision-making positions in these companies was evident.

On the flip side, it's evident that within family businesses, women who occupy positions in these organizations are deemed crucial for their operations and management. An illustration of this lies in the heightened demand for work, characterized by a blend of more rigorous personal and professional obligations compared to women who are also family members but not employed outside the family structure (Aldamiz-Echevarría et al., 2017). In essence, within this organizational-family context, corporate dynamics intertwine with family dynamics (Costa et al., 2019).

Therefore, concerning family businesses, it becomes apparent that corporate decisions might not solely align with business strategies, as these are influenced by the intricacies of family ties within this context (Costa et al., 2019). Additionally, women belonging to the controlling families of firms and occupying management positions often steer companies based on an administrative logic that mirrors sentiments and values associated with integrity, trustworthiness, and a sense of belonging within the company (Grzybowski, Boscarin & Migott, 2002).

Recognizing that family-controlled organizations often experience influences beyond corporate interests, delving into family relationship dynamics (Aldamiz-Echevarría et al. 2017), and acknowledging the advantageous impact of women on governance and the reduction of financial earnings management (Brazilian Institute of Corporate Governance, 2021; Saona et al., 2018; Orazalin, 2020), it can be inferred that these female directors might serve as positive influencers on Boards of Directors from their familial roles. Consequently, expectations arise:

H2.a: The participation of women on the board of directors can decrease the level of Real Earnings Management.

H2.b: Within family-owned companies, the participation of women on the board of directors can decrease the level of Real Earnings Management.

3. METHODOLOGY

3.1. Sample and Data Source

The dataset examined in this study comprises 345 non-financial companies listed on the Brazil Stock Exchange - B3 from 2010 to 2024. Following Bansal, Ali and Choudhary (2021), financial firms were excluded in this study due to their capital structure and financial particularities from their counterparts. To mitigate the influence of extreme outliers, all continuous variables used in the analysis were individually winsorized at the 2.5% level in both tails. This conservative threshold was chosen to reduce the impact of aberrant observations while preserving the underlying distribution of the data. The decision follows recommendations from statistical literature, which supports modest trimming or winsorization levels (e.g., 2.5% to 5%) as effective in balancing bias reduction and efficiency in multivariate analyses (Martinoz et al., 2015; Cheng & Young, 2023).

Information utilized in this study was sourced from the Refinitiv Thomson Reuters® database and the Reference Forms filed with the Brazilian Securities and Exchange Commission (CVM). Specifically, financial and market data were obtained from the Refinitiv Thomson Reuters® platform, while information related to corporate governance mechanisms was manually collected from the Reference Forms (Formulários de Referência) submitted by each company to the CVM, for each year analyzed. Given the level of detail required for collecting this primary data, the analysis focused on the period from 2010 to 2024.

3.2. Study Variables

The dependent variable was formulated based on Roychowdhury's seminal study in 2006 and the research conducted by Cohen and Zarowin (2010) aimed at quantifying the manipulation of companies' actual activities to construct the Real Earnings Management (REM) variable. Following Roychowdhury (2006), firms in regulated industries and financial institutions. Additionally, the models to estimate the normal or expected CFO, production costs, discretionary expenses, and accruals were estimated annually for each sector, requiring at least 15 observations per industry-year grouping. This model progresses beyond the Dechow et al. (1998) model by extending its scope beyond accounting descriptions of discretionary accruals. It encompasses abnormal operating cash flows, discretionary expenses, and production costs (Roychowdhury, 2006).

Consequently, linear regressions (1), (2), and (3) were developed to ascertain abnormal information concerning operating cash flows, discretionary expenses, and production costs. Subsequently, based on the outcomes of these regressions, the model indicated in regression (4) was formulated. For the calculation of abnormal operating cash flow, the methodology involved:

$$AbnCFO_{t,i} = \frac{CFO_t}{At-1} = \beta_0 + \beta_1 \frac{1}{At-1} + \beta_2 \frac{Vt}{At-1} + \beta_3 \frac{\Delta Vt}{At-1} + \varepsilon_t \quad (1)$$

Where CFO_t represents the company's operating cash flow in year t , $At-1$ denotes the difference in the firm's total assets in year t minus the assets of the previous period, Vt signifies the company's total sales measured by total annual revenue, and ΔVt stands for the variation in total sales in year t . Following these variables, abnormal discretionary expenses were estimated.

$$AbnDISEXP_{t,i} = \frac{DISEXP_t}{At-1} = \beta_0 + \beta_1 \frac{1}{At-1} + \beta_2 \frac{Vt-1}{At-1} + \varepsilon_t \quad (2)$$

Where $DISEXP_t$ represents the company's discretionary expenses in year t , $Vt-1$ signifies the lag in the company's total sales in period t , and the other variables remain consistent with those utilized in regression (1). Ultimately, abnormal production costs are derived from the variable $PRODt$ and $\Delta Vt-1$, which denotes the difference between the variations in total sales in year t and the preceding one.

$$AbnPROD_{t,i} = \frac{PRODt}{At-1} = \beta_0 + \beta_1 \frac{1}{At-1} + \beta_2 \frac{Vt}{At-1} + \beta_3 \frac{\Delta Vt}{At-1} + \beta_4 \frac{\Delta Vt-1}{At-1} + \varepsilon_t \quad (3)$$

Therefore, the Cohen and Zarowin (2010) model delineates the real earnings management of companies through regression (4), using the absolute values of the variables Abnormal cash flow, abnormal discretionary expenses, and abnormal production, which establishes the construction of the dependent variable in this study.

$$REM_{t,i} = AbnCFO_{t,i} * (-1) + AbnPROD_{t,i} + AbnDISEXP_{t,i} * (-1) \quad (4)$$

It is observed that $REM_{t,i}$ corresponds to the company's earnings management in year t . $AbnCFO(t,i)$ stands for the abnormal operating cash flow of firm i in year t , $AbnDISEXP(t,i)$ represents the abnormal discretionary expenses of company i in year t , and $AbnPROD(t,i)$ denotes the production costs of organization i in year t . Therefore, model (4) analyzes REM based on the individual effects of each variable and how their manipulation would impact the firm's earnings management.

Thus, $AbnCFO(t,i)$ and $AbnDISEXP(t,i)$ are multiplied by negative ones, as it is inferred that the higher the abnormal cash flow and abnormal discretionary expenses, the greater the probability of earnings management through price discount manipulation or expense reductions. On the other hand, $AbnPROD(t,i)$ is not multiplied by negative ones, as it is

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expected that higher production costs indicate greater REM through overproduction or manipulation of the cost per unit produced (Cohen & Zarowin, 2010).

The control variables were selected based on previous studies with similar objectives to this research. The age of the firm was collected based on the number of years since listing, following the methodology proposed by Orazalin (2020). Older companies tend to have more concentrated control, which is positively associated with earnings management. The firm size variable, following the studies of Saona et al. (2019) and Alkebsse, Alhebry, and Tian (2021), indicates that larger companies tend to have more monitoring mechanisms, negatively impacting management.

Return on Assets (ROA) was chosen based on the research by Alkebsse et al. (2021), Kyaw et al. (2015). Similarly, Tobin's Q growth opportunity proxy, based on the study by Saona, Muro, and San Martín (2019), tends to exhibit a negative relationship with management since it can affect information related to firm profits. Finally, leverage, representing the indebtedness of companies, is theoretically grounded in the works of Saona, Muro, and San Martín (2019), and Costa et al. (2019).

Table 1
Variables of the Study

Variables	Metrics	Data Source	Expected Sign	Author Based
Dependent				
<i>Real Earnings Management (REM)</i>	$AbnCFO_{t,i} * (-1) + AbnPROD_{t,i} + AbnDISEXP_{t,i} * (-1)$	Thomson Reuters®		Roychowdhury (2006); Cohen & Zarowin (2010)
Independents				
Family Business (<i>Family</i>)	Dummy variable that takes a value of 1 when the company has an individual controller or family holdings	Thomson Reuters®	-	Costa et al. (2019); Da Silva & Leal (2005)
Women's participation in the Board of Directors (<i>Women</i>)	Number of women on the Board of Directors divided by the total number of members on the Board of Directors	Thomson Reuters®	-	Prudêncio <i>et al.</i> (2021); Orazalin (2020).
Board Size (<i>Size</i>)	Number of Board Members	Thomson Reuters®	-	Saona et al. (2019); Alkebsse, et al. (2021)
Independence of the Board of Directors (<i>Independence</i>)	Number of independent directors on the Board of Directors	Thomson Reuters®	-	Saona et al. (2019); Kyaw et al. (2015)
Controls				
Firm Age (<i>Firm_Age</i>)	Date of the company's listing on B3, subtracted from the current date	Thomson Reuters®	+	Orazalin (2020)
Company Size (<i>Size</i>)	Natural logarithm of total assets	Thomson Reuters®	+/-	Saona et al. (2019), Alkebsse, Alhebry & Tian (2021)
Return on Assets (<i>ROA</i>)	$\frac{Net\ Income}{Total\ Assets}$	Thomson Reuters®	-	Alkebsse et al. (2021); Kyaw et al. (2015)
Leverage (<i>Leverage</i>)	$\frac{Total\ Debts}{Total\ Assets}$	Thomson Reuters®	+/-	Saona et al. (2019); Costa et al. (2019)
Tobin's Q (Tobin's Q)	$\frac{Market\ Value + Total\ Debts}{Total\ Assets}$	Thomson Reuters®	-	Saona et al. (2019);

Source: Authors' elaboration.

3.3. Econometric Model

To examine the hypotheses presented in this article, an econometric model using panel data is developed and analyzed utilizing Stata® software. The study explores the relationship between the presence of women on the boards of family firms listed on the Brazil Stock Exchange and the level of Real Earnings Management in these companies over the period from 2010 to 2024.

There is an expectation that family firms tend to have a higher inclination towards managing their results (Chi et al., 2014). Therefore, in order to analyze hypothesis 1 (*H1*) of the study, which posits that family firms are expected to engage more in earnings management, model (1) is formulated as follows:

$$REM_{it} = \beta_0 + \beta_1 Family_{it} + \beta_2 Independence_{it} + \beta_3 Board_{it} + \beta_4 Size_{it} + \beta_5 Tobin's Q_{it} + \beta_6 Leverage_{it} + \beta_7 ROA_{it} + \beta_8 Age_{it} + \varepsilon_{it} \quad (1)$$

In this equation, REM_{it} represents the real earnings management of company (i) in year (t), β corresponds to the slope coefficients of the variables, and ε_{it} is the regression error term. $Family_{it}$ is the dummy variable that takes a value of 1 if it is a family business and 0 otherwise. $Board_{it}$ is the size of the company's board (i) in year (t). $Independence_{it}$ represents the number of independent directors in the firm. $Size_{it}$ represents the size of the company (i) based on its assets in year (t). Tobin's Q_{it} corresponds to the firm's growth opportunity. $Leverage_{it}$ is the leverage of the company (i) in year (t). ROA_{it} is the return on assets of the company (i) in year (t). Finally, Age_{it} represents the years of activity of the company (i) counted in year (t).

To test hypotheses (*H2.a*) and (*H2.b*), which propose that the presence of women reduces REM, and that when there is a greater proportion of female members on these firms' boards, there is an anticipated decrease in the propensity to manipulate operational results (Costa et al., 2019; Orazalin, 2020; Saona et al., 2019). Therefore, this study investigates the second hypotheses (*H2.a* and *H2.b*) through the following model (2) and (3), respectively:

$$REM_{it} = \beta_0 + \beta_1 Women_{it} + \beta_2 Independence_{it} + \beta_3 Board_{it} + \beta_4 Size_{it} + \beta_5 Tobin's Q_{it} + \beta_6 Leverage_{it} + \beta_7 ROA_{it} + \beta_8 Age_{it} + \varepsilon_{it} \quad (2)$$

$$REM_{it} = \beta_0 + \beta_1 Women * Family_{it} + \beta_2 Independence_{it} + \beta_3 Board_{it} + \beta_4 Size_{it} + \beta_5 Tobin's Q_{it} + \beta_6 Leverage_{it} + \beta_7 ROA_{it} + \beta_8 Age_{it} + \varepsilon_{it} \quad (3)$$

In these models, the control and independent variables from model (1) are maintained, while the variables of interest are altered. These variables are: $Women_{it}$ representing the proportion of women on the boards, and $Women * Family_{it}$ is the interaction between the quantity of women in the boards divided by the total number of members and the dummy representing family control.

Breusch-Pagan, Chow, and Hausman tests were utilized to select between grouped regression models, determining the adoption of the fixed effects modeling for the model. Furthermore, Wooldridge and Wald tests were carried out, revealing no evidence of heteroscedasticity and autocorrelation in the models. Finally, Variance Inflation Factor (VIF) tests did not show any indication of multicollinearity issues in the study models described. It is important to note that the models were not studied together due to the high correlation between the variables.

4 RESULTS ANALYSIS

4.1. Descriptive Statistics

The research findings revealed a minimal representation of women on the boards of directors within Brazilian companies. Table 2 shows that, on average, only 1.23% of board members in the sample were women. Even at the maximum observed value, female participation did not surpass 50%, underscoring a significant gender gap in corporate leadership. This lack of gender diversity may have implications for firm-level decision-making and transparency, potentially influencing outcomes such as earnings management practices or firm valuation, as suggested in previous literature. These statistics are consistent with the findings of the Brazilian Institute of Corporate Governance (2021), which also reports persistent challenges in achieving gender parity in governance structures.

In addition, 35.9% of the firms analyzed are predominantly controlled by families, indicating that family ownership remains a central feature of corporate governance in Brazil. Prior studies suggest that family control can affect strategic decisions, monitoring mechanisms, and even managerial discretion, all of which are factors likely to impact the degree of earnings management observed (Sampaio et al., 2014; Moura et al., 2018).

Table 2

Descriptive Statistics – Variable Model (1)

Variables	Observation	Mean	Standard Deviation	Minimum	Maximum
CFO	2084	0.06	0.15	0.00	6.84
PROD	2084	0.71	0.64	0.00	5.36
DISEXP	2084	0.29	0.42	-0.70	3.81
REM	2084	0.85	0.72	-0.18	5.68
Women	2084	1.23	1.46	0.00	12.5
Family	2084	0.36	0.48	0.00	1.00
Independence	2084	21.01	26.75	0.00	100
Board	2084	5.03	5.51	0.00	28
Age	2084	39.73	26.91	0.00	124
Size	2084	15.66	1.97	5.23	19.15
ROA	2084	0.005	0.57	-18.24	15.49
Leverage	2084	0.42	1.98	0.00	65.16
Tobin's Q	2084	1.88	36.32	0.00	2303.48

Notes: CFO = Operating Cash Flow; PROD = Production Costs; DISEXP = Discretionary Expenses; REM= Real Earning Management; Family = a dummy variable that takes the value 1 if the company is family-owned and 0 otherwise; Women_{it} representing the proportion of women on the boards; Board = Number of Board Members ; Independence = number of independent directors; Age = years of operation of the company; Size = natural logarithm of total assets; ROA = return on assets; Leverage = leverage; Tobin's Q= Proxy of growth opportunity. Source: Authors' elaboration.

Additionally, the board of directors, on average, comprise five members, with 21.01% being independent. The relatively low presence of independent members might reflect weaker monitoring capacity, which could enable greater latitude for managerial opportunism. Finally, the average firm age of approximately 39.73 years indicates a mature market presence, which may be associated with more stable performance but also with entrenched governance structures, potentially influencing the relationship between governance mechanisms and firm behavior. Table 3 below shows the Pearson correlation between the study variables. As can be seen, the correlation coefficients were lower than 0.5, indicating low correlation and absence of multicollinearity in the models. The Variance Inflation Factor test was performed, showing

an average VIF below 3, confirming that there was no problem of multicollinearity in the models.

Table 3
Correlation Matrix Pearson

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
REM (1)	1.00									
Women (2)	0.076	1.00								
Family (3)	-0.01	0.103*	1.00							
Independence (4)	0.16*	0.25*	0.11*	1.00						
Board (5)	0.06	-0.26*	-	0.59*	1.00					
Age (6)	0.44*	0.12*	0.22*	0.13*	0.12*	1.00				
Size (7)	-0.20*	-0.18*	0.03	0.27*	0.55*	-0.11*	1.00			
ROA (8)	0.079*	0.001	0.02	-0.03	-0.02	-0.006	0.17*	1.00		
Leverage (9)	-	-0.07*	0.07*	0.18*	0.17*	0.078*	-	-	1.00	
Tobin's Q (10)	-0.04	0.08*	-0.01	0.03	-	0.012	-	-0.02	0.067*	1.00
				1	0.028		0.07*			0

Source: Authors' elaboration

4.2. Model Analysis

In Table 4, the model does not support hypothesis 1, given the significant and negative effect of the Family variable on REM. The negative and statistically significant coefficient suggests that firms with a family control structure tend to exhibit, on average, lower levels of Real Earnings Management compared to non-family firms, holding other factors constant. This result indicates that family participation in corporate control may serve as a disciplining mechanism, discouraging managerial opportunism through real operational decisions, such as cutting discretionary expenses, accelerating sales, or manipulating production. Contrary to hypothesis H1, this behavior may reflect the stronger alignment between ownership and control in family firms, as well as a greater concern with long-term reputation and business continuity, which can reduce the incentives for aggressive REM practices, which contrasts with the findings of Holanda and Coelho (2016) for the Brazilian context.

Regarding the control variables, leverage shows a positive association with REM, suggesting that firms with higher debt levels are more likely to engage in real earnings manipulation, possibly as a strategy to meet debt covenants or signal stronger financial performance to creditors. In contrast, ROA, Tobin's Q, and Firm Age exhibit negative coefficients, indicating that firms with higher profitability, greater market valuation, and longer operating history tend to engage less in REM. These results suggest that more profitable and mature firms with better market perception may rely less on manipulative practices, as their strong fundamentals reduce the incentives or need for earnings management. These findings are consistent with prior studies, such as Saona et al. (2019) and Alkebsse et al. (2021), which report a negative relationship between firm performance and real earnings management.

In Model (2), the variable representing female participation on the board of directors does not exhibit a statistically significant relationship with REM, which prevents the

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confirmation of hypothesis H2.a (The participation of women on the board of directors can decrease the level of Real Earnings Management). However, when the interaction term between female board participation and family ownership is introduced in Model (3), the relationship becomes statistically significant and negative. This indicates that the presence of women on the boards of family-controlled firms is associated with a lower level of REM, supporting hypothesis H2.b (In family businesses, female participation on the board of directors reduces Real Earnings Management practices).

These findings suggest that while female representation on boards may not independently constrain earnings management across all firms, it becomes particularly effective within family-controlled businesses. The significant negative coefficient of the Women × Family interaction term (at the 1% level) implies that women may enhance governance quality in firms where family ties often dominate decision-making, potentially offsetting agency problems or informal influence networks. Despite their low overall representation (as shown in Table 2), women in family firms may hold more influential roles, possibly due to trust, kinship, or proximity to ownership, which strengthens their ability to influence ethical and financial decisions, including limiting the use of manipulative real earnings practices.

When all variables are included in model (4), it is observed that the Family variable alters the effect on earnings management, showing a positive relationship with REM, which confirms the expectation of hypothesis H1 in the study, indicating that family-owned companies tend to engage in real earnings management practices. Additionally, the variation in women's participation on boards of directors becomes statistically significant. Moreover, the participation of women on the boards of family-owned companies maintains the same effects on real earnings management, reinforcing the finding proven in hypothesis H2.b.

Table 4
Estimation of the Model

Variables	MODEL (1)	MODEL (2)	MODEL (3)	MODEL (4)
Family	-0.0670* (0.0276)			0.0768** (0.0318)
Woman		0.0088 (0.0081)		0.0631*** (0.0212)
Woman*Family			-0.0106* (0.0060)	-0.0692*** (0.0214)
Board	-0.0031 (0.0039)	0.0048 (0.0034)	-0.0029 (0.0042)	-0.0001 (0.0042)
Independence	-0.0006 (0.0005)	0.0004 (0.0004)	-0.0008* (0.0004)	-0.0013*** (0.0005)
Size	0.0048 (0.0172)	0.0329 (0.0202)	0.0236 (0.0146)	0.0172 (0.0140)
Tobin's Q	-0.0112 (0.0087)	-0.0095 (0.0198)	-0.0099 (0.0088)	-0.0186** (0.0088)
Leverage	0.0387 (0.1128)	0.0201 (0.0943)	0.1117 (0.0942)	0.1124 (0.0844)
ROA	-0.4025*** (0.1360)	-0.6998*** (0.2691)	-0.4119*** (0.1543)	-0.3021** (0.1274)
Age	-0.0018** (0.0007)	-0.0010* (0.0005)	-0.0012*** (0.0005)	-0.0014*** (0.0005)
Constant	-0.7310** (0.2852)	-1.1721*** (0.3496)	-0.8961*** (0.2763)	-0.8549*** (0.2553)
Observations	2084	2084	1415	1415
VIF	1,43	1,29	1,40	1,52

Note: *, **, *** level of significance at the 10%, 5% and 1% respectively. The values indicated in parentheses correspond to the t-statistics. Family = a dummy variable that takes the value 1 if the company is family-owned and 0 otherwise; $Women_{it}$ representing the proportion of women on the boards; $Women*Family$ = interaction

between Woman and Family variables; Board = the size of the board of directors; Independence = a dummy variable for the presence of independent directors; Age = years of operation of the company; Size = the logarithm of total assets; ROA = return on assets; Leverage = leverage; Tobin's Q = Q-de-Tobin, a proxy for growth opportunities; Source: Compiled by the authors

This outcome may be explained by the strong influence of family culture in the governance structures of family-owned businesses. Although there is still a prevailing preference for male individuals in top leadership roles, selection processes in these firms often consider not only gender but also factors such as primogeniture, individual experience, and the member's perceived relevance within the family hierarchy (Aldamiz-Echevarría et al., 2017). Such internal dynamics demonstrate how family values and interpersonal relationships shape business decisions (Costa et al., 2019), potentially granting greater legitimacy and influence on the few women who do serve on these boards.

While prior literature suggests that family firms have a higher propensity to engage in earnings management to preserve socioemotional wealth or meet performance expectations (Chi et al., 2014), the presence of women on their boards appears to mitigate these tendencies. This may be attributed to the distinct leadership style and ethical orientation often associated with female executives, who tend to place greater emphasis on corporate responsibility, transparency, and long-term value creation (Haro-de-Rosario et al., 2017; Grzybowski et al., 2002). The statistically significant negative relationship observed between the Women \times Family interaction term and REM reinforces the idea that female directors may act as effective monitors, discouraging opportunistic managerial behavior in firms where familial ties can blur professional accountability.

Therefore, the findings suggest that female participation in the decision-making structures of family firms may serve as a moderating force against unethical financial practices, improving the quality of financial reporting and increasing the firm's informational transparency (Orazalin, 2020; Saona et al., 2019). This is particularly relevant in the Brazilian context, where a significant share of firms is family-controlled (Aldrighi & Postali, 2011; Sampaio et al., 2014), highlighting the strategic role women can play in strengthening governance and enhancing firm credibility in emerging markets.

It is worth noting that when estimating interaction models, there was a reduction in the number of expected observations due to the lack of data in one or more interactive variables. In our case, the interaction between family firm and female participation led to a smaller effective sample size, as observations with missing values in any of the involved variables are automatically omitted from the regression (Allison, 2002). Additionally, in the robustness analysis, we segmented the sample into firms with positive and negative Real Earnings Management (REM). Firms with REM equal to zero were excluded to allow for a clearer comparison of aggressive earnings management behaviors. As a result, the number of observations in the segmented models differs from the full-sample models, a standard outcome in empirical research using subsample analysis (Wooldridge, 2010).

4.3 Robustness Check

To enhance the robustness of the results, several tests were conducted to verify whether the findings from the main model were held under different scenarios. First, the direct relationship between the independent and dependent variables was tested. In the second model, companies were compared based on the direction of real earnings management (REM). Following Roychowdhury (2006), Cohen and Zarowin (2010), and Zang (2012), firms with positive REM values were considered to be engaging in upward earnings management practices, such as sales acceleration and overproduction to inflate reported earnings. Conversely, firms with negative REM values were interpreted as practicing downward earnings

management, typically through actions like reducing discretionary expenses or delaying sales. Thus, the sample was split into two groups, REM (+) and REM (-), to analyze potential asymmetries in the determinants and effects of these distinct REM strategies.

Table 5 presents the results of the direct effects and interaction tests among the key explanatory variables. The findings indicate that family ownership exhibits a statistically significant and positive relationship with Real Earnings Management (REM), suggesting that family-controlled firms are more prone to engaging in earnings manipulation through operational decisions. This supports prior literature emphasizing the potential for opportunistic behavior in family firms aimed at preserving socioemotional wealth or meeting internal performance expectations (Chi et al., 2014).

Moreover, the presence of women on the board becomes statistically significant in this model, indicating a noteworthy influence on reducing REM practices. Importantly, the interaction term between female board participation and family ownership remains statistically significant at the 5% level, reinforcing the moderating effect identified in previous models. This suggests that women in governance roles play a crucial role in constraining earnings management in family firms, even after controlling for other firm-specific characteristics.

These results underscore the governance value added by gender diversity, particularly in environments where concentrated ownership and family dynamics may weaken traditional oversight mechanisms. The consistent significance of the interaction term implies that women directors in family firms may strengthen monitoring functions, promote ethical decision-making, and act as internal safeguards against manipulative financial practices. Thus, the findings in Table 5 further validate the hypothesis that female participation on the board mitigates the positive association between family ownership and REM, highlighting the importance of gender-inclusive governance in improving financial transparency and accountability.

Table 5
Direct Relation between Family, diversity and Real Earning Management

Variables	MODEL (1)	MODEL (2)	MODEL (3)	MODEL (4)
Family	0.1588*** (0.0518)			0.0684* (0.0393)
Women		-0.0073* (0.0084)		0.0361* (0.0219)
Women*Family			-0.0292*** (0.0064)	-0.0491** (0.0216)
Constant	-1.0579*** (0.1168)	-0.6378*** (0.0882)	-0.6218*** (0.0839)	-0.8417*** (0.0887)
Observations	2084	2084	1515	1495
VIF	1.15	1.15	1.15	1.19

Note: *, **, *** level of significance at the 10%, 5% and 1% respectively. Values indicated in parentheses correspond to the t-statistics. Family = a dummy variable that takes the value 1 if the company is family-owned and 0 otherwise; $Women_{it}$ representing the proportion of women on the boards; Women*Family = interaction between Woman and Family variables. Source: Compiled by the authors

Table 6 shows the results of the relationship between the variables, in which the sample was segregated into companies with positive and negative earnings management. The results

indicate that the presence of women on the board of directors and the family-owned nature of the firm are positively associated with real earnings management (REM) in companies that adopt practices to increase reported earnings (positive REM).

This finding can be interpreted in the context of corporate governance and decision-making dynamics in boards of directors. Boards with greater gender diversity, especially in family-owned firms, may be more inclined to make strategic decisions that favor short-term financial performance, possibly due to internal or external pressures for more attractive results. In family-owned businesses, the strong connection between ownership and management may amplify this effect, as families often seek to protect or enhance the perceived value of the company in the market.

Table 6

Comparison between companies with positive and negative Real Earning Management.

	REM +	REM -	REM +	REM -	REM +	REM -
Women	0.0107* (0.0089)	-0.0239* (0.0129)				
Family			0.1799*** (0.0479)	0.1922*** (0.0500)		
Women*Family					-1.0456*** (0.2139)	0.1050*** (0.0221)
Board	0.0004 (0.0039)	-0.0186*** (0.0072)	-0.0118** (0.0048)	-0.0099* (0.0053)	-0.0132** (0.0067)	-0.0124* (0.0067)
Independence	-0.0010** (0.0005)	0.0037*** (0.0008)	0.0017** (0.0007)	0.0021*** (0.0007)	0.0028*** (0.0008)	0.0032*** (0.0008)
Size	0.0156 (0.0159)	0.0833*** (0.0295)	0.0734*** (0.0239)	0.0641** (0.0265)	0.0920*** (0.0282)	0.0741** (0.0303)
Tobin's Q	-0.0212* (0.0118)	-0.0317 (0.0340)	0.0330** (0.0142)	-0.0239** (0.0114)	0.0289 (0.0205)	-0.034 (0.0357)
Leverage	0.0831 (0.0906)	-0.0592 (0.0649)	-0.0400 (0.0298)	-0.0652 (0.0696)	-0.0297 (0.031)	-0.0617 (0.0663)
ROA	-0.5237*** (0.1754)	0.9450* (0.5698)	1.2506*** 0.3056)	1.0009** (0.5038)	1.0164*** (0.3789)	0.9735 (0.5943)
Age	-0.0016*** (0.0004)	0.0082*** (0.0010)	0.0064*** (0.0008)	0.0069*** (0.0008)	0.0069*** (0.0009)	0.0074*** (0.0010)
Constant	-1.6219*** (0.0699)	-0.8958*** (0.0900)	-0.9207*** (0.4147)	-0.9114*** (0.0621)	-0.8930*** (0.0831)	-0.8963*** (0.0897)
N	845	997	845	997	748	562
VIF	1,42	1,56	1,41	1,58	1,35	1,57

Note: *, **, *** level of significance at the 10%, 5% and 1% respectively. Source: Compiled by the authors

Conversely, in companies that adopt practices to reduce reported earnings (negative REM), the inverse relationship suggests that the presence of women on the board and the family-owned nature of the firm may be associated with greater prudence or accounting conservatism. This behavior could reflect risk aversion and a concern for long-term financial sustainability, traits often attributed to family businesses and more diverse boards.

The negative moderation of the interaction between these variables in this context reinforces the hypothesis that the combination of gender diversity and family governance may act as a restraint mechanism in decisions that could compromise financial stability. These findings highlight the complexity of the dynamics between diversity, ownership structure, and earnings management practices, revealing that their impacts depend on the context and strategic objectives of the companies.

5 FINAL CONSIDERATIONS

This study investigated the association between female participation on the Board of Directors and the level of Real Earnings Management (REM) in Brazilian firms listed on the Brazil Stock Exchange - B3 from 2010 to 2024. The research specifically delved into family firms, examining how this element might influence the relationship between female board participation and REM.

The results show that when analyzing the presence of women on boards together with family control, a significant negative association with earnings management was observed. The confirmation of hypothesis H2.b highlights the relevance of women on the boards of family-owned firms. In this context, where family and corporate dynamics intertwine, women exert a positive influence on decision-making processes, especially regarding ethical matters and transparency. The findings reveal that the presence of women on the board and the family-owned nature of the firm are positively associated with real earnings management practices aimed at increasing reported earnings, while showing an inverse relationship in cases of earnings reduction. This highlights the nuanced role of gender diversity and family governance, suggesting they can act either as facilitators of strategic financial adjustments or as mechanisms for greater prudence, depending on the direction of earnings management.

To the best of the authors' knowledge, no previous study in Brazil has identified the unique interaction effect between the presence of women on the board and the family-owned nature of firms in reducing earnings management. This finding provides a novel contribution to the existing literature by highlighting the specific role that female board members in family firms play in enhancing the quality of accounting information. This study thus offers fresh insights into the interplay between gender diversity, family ownership, and accounting practices within the Brazilian corporate context. This finding highlights the important role of women on the boards of family firms, demonstrating that the presence of women in leadership and decision-making positions contributes to the reduction of such practices, thereby promoting greater transparency and credibility.

Governments and regulators can promote a more active participation of female representatives in the corporate sector like resulting in policies that promote family harmonization and reduce gender discrimination. These measures could remove the "glass ceiling" in senior positions referred as the artificial barriers that prevent women from advancing. Regulation regarding gender quotas has proven efficient in constraining earnings management. In conclusion, this research contributes to a deeper understanding of the landscape of Brazilian companies concerning gender diversity and its effects on corporate governance metrics, particularly regarding the transparency of financial information. Future studies could benefit from enlarging the sample size and exploring new proxies to gauge regional disparities in Brazil.

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