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# Board Faultlines and Resource Allocation: Effects on Women's Professional Development

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## ABSTRACT

**Research Question/Issue:** This paper examines how board faultlines, which divide boards into homogeneous subgroups based on multiple diversity attributes, impact the resources devoted to the professional development of women at lower levels of the firm.

**Research Findings/Insights:** Analyzing data from Belgian listed firms from 2009 to 2019, we investigate how disparity-based faultlines—divisions within boards arising from diversity attributes related to status and power—can significantly increase the proportion of the firm's education budget allocated to women. Disparity-based faultlines are linked to the formation of resource-based subgroups. When women directors form such cohesive subgroups, they can act as a unified bloc to gain greater decision-making power, thereby reshaping resource distribution within the organization to better benefit women. We indeed find empirical support for this end. Next, the resource dependency of a firm could strengthen a subgroup's ability to advocate for greater resource investment, amplifying the impact of disparity-based faultlines on resource allocation toward women. Our further analysis indicates that the main effect is indeed more pronounced in firms that are knowledge intensive, exhibit lower employment productivity, or have higher employment intensity.

**Theoretical/Academic Implications:** Our study contributes to the understanding of how board composition in terms of faultlines influences organizational strategies, specifically in the context of gender diversity and professional development. It highlights the importance of subgroup dynamics within boards and their role in shaping resource allocation decisions, thereby enriching the literature on board diversity, corporate governance, and organizational behavior.

**Practitioner/Policy Implications:** For practitioners and policymakers, these findings underscore the importance of recognizing and managing board faultlines to foster a more inclusive and supportive environment for women's professional growth. By acknowledging the positive impact of diverse subgroups on investment in women's education, firms can adopt strategies to enhance diversity and inclusion, ultimately benefiting from a more skilled and qualified female workforce.

## 1 | Introduction

Board composition has received considerable attention in recent years within corporate governance literature (e.g., Au et al. 2023; Ginglinger and Raskopf 2023; Joecks et al. 2023; Mateos de Cabo et al. 2024; Schoonjans et al. 2023; Tilbury and Sealy 2023; Yao 2023). Prior research has linked board composition in terms of the presence of women to various outcomes, including corporate financial performance (Joecks et al. 2023), firm's strategic choices (Askarzadeh et al. 2022), CEO turnover (Kim et al. 2020), firm risk (Maxfield and Wang 2023), or innovation (Cumming and Leung 2021), but it has paid less attention to how internal board dynamics associated with composition can shape decision-making processes.

While corporate governance research recognizes the board's critical role in resource allocation, it has yet to fully explore how the compositional dynamics of the board as a whole influence these decisions. This study addresses this gap by applying both faultline and subgroup theory to examine how board composition shapes organizational resource allocation decisions.

The concept of faultlines captures the interplay of multiple diversity characteristics within a group's composition and highlights how these attributes can shape group processes and outcomes through subgroup dynamics (Lau and Murnighan 1998, 2005). Group faultlines are defined as hypothetical dividing lines that separate a group into relatively homogeneous subgroups based on multiple diversity characteristics (Lau and Murnighan 1998). Faultlines strengthen when more attributes align along the same dimensions. For example, consider a board that consists of two men in their 60s and two women in their 40s. In this board, a strong faultline based on gender and age is present, dividing the board into two homogeneous subgroups of the same size. The initial theoretical framework explaining faultlines was grounded in social identity and social categorization theory (Ashforth and Mael 1989; Hogg and Terry 2000; Lau and Murnighan 1998; Tajfel and Turner 2004). These theories suggest that individuals naturally classify themselves and others into social categories and tend to identify more strongly with those they perceive as similar, which can intensify subgroup divisions when multiple attributes align. Later, Carton and Cummings (2012) expanded the faultline model with subgroup theory, proposing that different faultline types (separation-based, disparity-based, or variety-based) lead to distinct subgroups (identity-based, resource-based, knowledge-based), each influencing team outcomes differently.

In this study, we argue that disparity-based faultlines play a crucial role in resource allocation decisions. Disparity-based faultlines are based on traits that reflect status and decision power, and can lead to the formation of resource-based subgroups (Carton and Cummings 2012). Such subgroup formation can be explained through social dominance theory, which describes how the structure of resources reinforces a social hierarchy (Sidanius and Pratto 1999). Resource-based subgroups are differentiated along hierarchies according to differences in subgroups' abilities to claim resources (Ulmer 1965). Gender and age are especially relevant bases for such differentiation because they are visible, socially meaningful, and institutionally regulated in corporate governance. Gender norms often constrain women's authority (Edacherian et al. 2024), while age is closely tied to experience, seniority and legitimacy in decision-making (Carton and Cummings 2012), making both central to status hierarchies within boards. Therefore, we expect that groupings based on gender and age are related to resource allocation decisions toward women.

When women directors form cohesive subgroups, they can act as a unified bloc to gain greater decision-making power, thereby reshaping resource distribution within the organization to better benefit women. Our study finds that disparity-based faultlines within the board indeed exhibit a positive relationship with the resource allocation for women's professional development. However, as subgroup formation can have mixed effects depending on moderating factors (Carton and Cummings 2012), we also examined whether firms' resource dependency could affect this relationship. The strategic context of a firm could strengthen a subgroup's ability to advocate for greater resource investment, amplifying the impact of disparity-based faultlines on resource allocation toward women. Our further analysis indicates that the main effect is more pronounced in firms that are knowledge intensive, exhibit lower employment productivity, or have higher employment intensity.

Our paper makes novel and significant contributions to the corporate governance literature. While the concept of faultlines is increasingly being studied in the context of corporate boards (e.g., Antoons and Vandebeek 2024; Arena et al. 2024; Shin and You 2022; Vandebeek et al. 2024; Xue et al. 2024), these studies report mostly negative organizational and group consequences of group faultlines. Our study posits an alternative perspective, using both faultline as well as social dominance and subgroup theory to highlight a positive effect of disparity-based faultlines (Carton and Cummings 2012). We also contribute to the literature on gender diversity within corporate boards (e.g., Alam et al. 2023; Edacherian et al. 2024; Mateos de Cabo et al. 2024) by examining how the existence of faultlines can impact women's decision-making power. Additionally, we contribute to faultline research by theorizing on the effects of disparity-based faultlines and resource-based subgroups, applying the concept within a strategic management context and linking it to a unique outcome. Furthermore, we highlight the role of resource dependency as a boundary condition of the effects of these faultlines.

Finally, we contribute to the literature focused on achieving gender parity in the corporate world for which we provide a novel driver: board faultlines. While the majority of the literature in this domain focuses on the percentage of women (at the top level) in the corporate workforce to investigate the existence of glass ceilings (see, e.g., Nekhili and Gatfaoui 2013; Reguera-Alvarado et al. 2017), our detailed data allow us to perform a much more fine-grained analysis focusing on education levels and budgets. Our findings are also relevant for policymakers and practitioners, as they highlight how intergroup dynamics shape decision-making processes. By understanding these mechanisms, policymakers can become more aware of how financial resources could be allocated equitably, promoting inclusive decision-making processes.

## 2 | Literature Review and Hypothesis Development

### 2.1 | Board of Directors and Resource Allocation for Women's Professional Development

The board of directors is composed of influential individuals who play a pivotal role in directing the firm's strategy (Bezemer et al. 2022; Daily et al. 2003; Westphal and Bednar 2005). Furthermore, at the core of the board of directors' mandates lies resource allocation (McNulty and Pettigrew 1999), which has even been pointed out to be the essence of corporate governance

(Schmidt and Brauer 2006). Boards of directors are as such responsible for establishing an internal context that "shapes the preparation, championing, and approval of resource allocation decisions made by the executive management" (Schmidt and Brauer 2006, 17). Therefore, it can be expected that resource allocation to women's professional development is affected by the composition of the board.

Prior research has linked the composition of the board, and more specifically the presence of women, to numerous outcomes (e.g., Askarzadeh et al. 2022; Cumming and Leung 2021; Joecks et al. 2023; Kim et al. 2020; Maxfield and Wang 2023). However, an important overlooked aspect within this literature so far is the impact of the interconnection among similar board members and the compositional dynamics of the board as a whole on resource allocation decisions. To address this omission, we build on the concepts of faultlines and subgroups to further our understanding of the influence of directors' characteristics on resource allocation decisions within boards.

### 2.2 | The Role of Disparity-Based Faultlines and Resource-Based Subgroups

Faultlines provide a more nuanced view of board composition as they take into account the alignment of multiple attributes (Lau and Murnighan 1998). In this study, we focus on *disparity-based faultlines*, which are based on traits that reflect status and decision power (Carton and Cummings 2012). Particularly in our research context (i.e., regarding decisions that impact resource allocation for women's professional development), we expect that disparity-based faultlines based on gender and age can lead to resource-based subgroups. In this context, age and gender are particularly relevant because they are highly visible, legally regulated, and socially meaningful characteristics in corporate governance (Janahi et al. 2023; Terjesen et al. 2015). These attributes directly impact power distribution and subgroup identity regarding this particular decision, shaping how directors engage in collective decision-making (Carton and Cummings 2012; Lau and Murnighan 1998).

Boards often include older, more established male directors, while younger female directors may hold less institutional power unless supported by strong director alignment (Lewellyn and Muller-Kahle 2020). Gendered societal norms often limit women's authority in decision-making (Edacherian et al. 2024), while age is commonly associated with power and experience (Carton and Cummings 2012). Age is a particularly important basis of disparity in boards because it signals experience, seniority, and respect, which translate into decision-making authority and control over resources (Carton and Cummings 2012). Older, male directors can be viewed as more legitimate due to their gender, tenure and accumulated expertise. In this context, women of similar ages may act collectively to strengthen their position, because their individual authority may be constrained. This mechanism is less pronounced among men, who already benefit from default legitimacy and therefore have less incentive to rely on subgroup alignment (Hillman et al. 2007). Importantly, such collective dynamics are less likely to occur across age-divergent female directors, as subgroup identity weakens when members share fewer similarities, reducing the likelihood of acting collectively to influence decisions (Carton and Cummings 2012).

While we recognize that other characteristics—such as ethnicity, language, and functional expertise—could also contribute to faultline formation, they do not necessarily impact power distribution and subgroup identity, creating the same resource-based subgroup dynamics. For example, in the Belgian corporate context, ethnicity and language differences can be less salient in boardroom power struggles, as firms tend to accommodate linguistic diversity and ethnic representation remains limited at the board level (Apostolatos et al. 2022; Groutsis 2024). Additionally, task-related attributes such as education and functional expertise reflect cognitive diversity rather than disparity in resource control (Carton and Cummings 2012). These attributes do not necessarily segment directors into subgroups with systematically unequal access to power and resources, which is the key mechanism underlying disparity faultlines. In sum, we expect that when women directors share similar ages, they may act collectively rather than individually, strengthening their influence as a resource-based subgroup.

The formation of resource-based subgroups can be explained by social dominance theory, which describes how the structure of resources reinforces a social hierarchy (Sidanius and Pratto 1999). We argue that, in light of the particular decision of resource allocation toward women, disparity-based faultlines based on these attributes and resulting resource-based subgroups are most relevant and could have a positive impact. That is, if women's gender is aligned with age, a *strong* homogeneous resource-based subgroup is formed within the board that could provide the subgroup with more power and positive leverage on resource allocation decisions. Resource-based subgroups are also often viewed as *blocs*, as these subgroups emerge when team members align to gain greater power in team decision-making (Carton and Cummings 2012). Therefore, while critical mass theory indicates that increasing the number of women is sufficient to drive change (Alam et al. 2023; Biswas et al. 2023; Schoonjans et al. 2023; Tilbury and Sealy 2023), we argue that the overall compositional dynamics of the board matter more than merely the number of women present.

Consider our earlier example of a board comprising two men in their 60s and two women in their 40s. In this particular board, two strong homogeneous resource-based subgroups can be formed based on gender and age. In this case, it is highly likely that the existence of a strong subgroup including women in their 40s leads to increased attention for career prospects of women, as these women directors gain more power to act together as champions for all women in the workforce. Note that it does not matter whether these women *individually* are younger or older, but rather the *alignment* of their age with their gender will determine the strength of their resource-based subgroup and thus their subgroup influence. Such a subgroup can empower women in board decision-making (Carton and Cummings 2012) and provide psychological safety, enabling them to advocate equitable resource allocation for women in the workforce (Edmondson 1999). Therefore, we argue:

**Hypothesis 1.** Board faultlines based on gender and age will exhibit a positive relationship with the resource allocation for women's professional development.

## 2.3 | Firm-Specific Moderators

The effects of faultlines have been known to be context dependent (Kaczmarek et al. 2012; Thatcher and Patel 2012). Related, resource-based subgroup formation can yield varied outcomes, influenced by specific moderating factors (Carton and Cummings 2012). According to Resource Dependence Theory (RDT), organizations are influenced by their reliance on resources (Hillman et al. 2009). Indeed, the dependency of resources can play a pivotal role in determining the decision-making power of certain subgroups (Carton and Cummings 2012). In resource-dependent environments, cohesive subgroups containing women could more effectively advocate for increased investments toward women.

Conversely, in less resource-dependent settings, these subgroups may face challenges in securing additional support, potentially limiting their positive impact. Thus, the degree of resource dependence can significantly influence the capacity of subgroups to effect change within organizations. Therefore, the strategic context of a firm is crucial, as it can either amplify or diminish the influence of disparity-based faultlines on resource distribution decisions. We will consider three important contextual variables related to a firm's resource dependency: knowledge intensity, employment productivity, and employment intensity.

### 2.3.1 | Knowledge Intensity

Knowledge intensity means that a firm's production heavily depends on a significant amount of complex knowledge (Oehmichen et al. 2017; Von Nordenflycht 2010). This could include specialized expertise, intellectual property, or innovative capabilities that are crucial for the firm's operations and competitiveness. Because work in knowledge-intensive firms is highly intellectual in nature, the human capital needs are high as employees with specialized skills and knowledge are required (Swart and Kinnie 2003). Such firms are typically more innovative and adaptable, as their resource allocation strategies prioritize continuous learning and knowledge integration (Ben-Nasr and Goaied 2024).

Firms operating in knowledge-intensive industries heavily depend on specialized expertise and information, which are critical resources. As resource dependency increases with a firm's knowledge intensity, cohesive subgroups containing women could more effectively advocate for increased investments toward women (Carton and Cummings 2012). In sum, we expect that the relationship between disparity-based faultlines and resulting resource-based subgroups within the board and resource allocation decisions, particularly regarding investments in professional development initiatives for women within the organization, will be stronger in knowledge-intensive firms. Therefore, we argue:

**Hypothesis 2.** The positive relation between board faultlines and the resource allocation for women's professional development will be stronger in knowledge-intensive firms.

### 2.3.2 | Employment Productivity

Firms can also be heavily resource dependent on their workforce (Snell and Dean 1992). Such dependence is firstly reflected in both employees' productivity (i.e., the value added created by the employees; Sesil et al. 2002). Firms with lower workforce productivity often experience diminished cash flows (Beatty 1995). Therefore, firms with lower productivity are more reliant on external training and development resources to improve their workforce capabilities (Nda and Fard 2013). This increased dependency can empower cohesive subgroups including women to influence allocation decisions in their favor (Carton and Cummings 2012). Therefore, we expect that the positive relation between disparity-based faultlines and resulting resource-based subgroups and the resource allocation for women's professional development will be stronger in firms with lower employment productivity. Based on these arguments regarding employment productivity, we argue:

**Hypothesis 3.** The positive relation between board faultlines and the resource allocation for women's professional development will be stronger in firms with lower employment productivity.

### 2.3.3 | Employment Intensity

Firms' dependence on the workforce is also reflected by the employment intensity of the firm (i.e., how much employees are employed relative to the capital used; Dube and Zhu 2021). As more capital-intensive firms substitute labor for capital, training employees will arguably be less effective in enhancing firm performance in capital-intensive firms relative to training implemented in more employment-intensive firms (Riley et al. 2017). Therefore, organizations with high employment intensity rely significantly on human labor. This reliance makes them dependent on the availability and stability of the workforce, prompting strategies to manage labor relations, recruitment, and retention to ensure a steady supply of this critical resource (Lin and Ye 2024).

As stated earlier, if resource dependency is high, cohesive subgroups containing women could more effectively advocate for increased investments toward women (Carton and Cummings 2012). Therefore, we expect that the positive relationship between disparity-based faultlines and resulting resource-based subgroups within the board on resource allocation decisions toward women's professional development is stronger in firms with higher employment intensity. Based on these arguments regarding employment intensity, we argue:

**Hypothesis 4.** The positive relation between board faultlines and the resource allocation for women's professional development will be stronger in firms with higher employment intensity.

# 3 | Data and Sample Description

## 3.1 | Data Collection

To investigate our hypotheses, we construct a sample of Belgian listed firms between 2009 and 2019.[1] We conducted measurements on two levels and across two phases. Initially, we

**TABLE 1** | Sample distribution.

| Year | Freq. | % | Cum. |
|---|---|---|---|
| 2009 | 77 | 10.75 | 10.75 |
| 2010 | 80 | 11.17 | 21.93 |
| 2011 | 78 | 10.89 | 32.82 |
| 2012 | 86 | 10.61 | 43.44 |
| 2013 | 72 | 10.06 | 53.49 |
| 2014 | 65 | 9.08 | 62.57 |
| 2015 | 62 | 8.66 | 71.23 |
| 2016 | 66 | 9.22 | 80.45 |
| 2017 | 70 | 9.78 | 90.22 |
| 2018 | 70 | 9.78 | 100.00 |
| Total | 716 | 100.00 | |

*Note:* This table shows the distribution of sample observations by year.

gathered individual-level director data from various sources such as financial reports, company websites, press archives, and social media platforms like LinkedIn. In cases where demographic director details were unavailable, we directly reached out to directors to acquire the necessary data. Subsequently, the individual director data was consolidated at the firm level, which coincided with our collection of information on general board and governance variables. We obtain financial data from the database Bel-first, established by Bureau Van Dijk.

The final sample covers unique data on 6557 individual board members at 86 listed firms, for a total of 716 firm-year observations.[2] Table 1 shows the sample distribution. The Belgian setting is especially well suited for our analyses as we can use the unique data that Belgian firms provide in this sample by analyzing detailed social balance sheets. Furthermore, Belgium provides a particularly suitable context in which to expect strong effects from our moderators because of its mix of high R&D investment and advanced human capital (Flanders Investment and Trade 2024).[3] The Belgian National Bank (NBB) imposes that the annual accounts of all Belgian companies employing staff contain a section on the company's social balance sheet. These unique reporting requirements in Belgium allow us to extract fine-grained data on the workforces' characteristics, which we will exploit when constructing our variables.

## 3.2 | Model and Variables

### 3.2.1 | Model and Dependent Variable

To test our main hypothesis, we estimate the following fixed effects: within estimator.

$$EDUCATION\ BUDGET\ WOMEN_{it} = \beta_0 + \beta_1 \times DISPARITY\ BASED\ FAULTLINE\ STRENGTH_{it-1} + \sum Controls_{it-1} + \alpha_i + \gamma_t + \varepsilon_{it}, \quad (1)$$

where the dependent variable EDUCATION BUDGET WOMEN represents the percentage of the firm's education budget that is used for the women in the workforce. The dependent variable was obtained from social balance sheet information, which is encompassed in the Bel-first database established by Bureau Van Dijk.[4]

### 3.2.2 | Independent Variable

Our main variable of interest represents board disparity-based faultlines (*DISPARITY-BASED FAULTLINE STRENGTH*). These faultlines were assessed using a cluster-based methodology known as average silhouette width (ASW) faultline clustering. This approach involves grouping team members into clusters or subgroups based on their similarities, aiming for high internal homogeneity within clusters and distinct heterogeneity between clusters. The ASW metric evaluates the effectiveness of this clustering by considering within-subgroup homogeneity, between-subgroup separation, and determining the optimal number of clusters. Unlike many faultline measures, ASW accommodates continuous variables like age alongside categorical attributes.

The ASW algorithm operates through several stages to identify subgroups and quantify faultline strength. Initially, it generates a range of potential subgroup partitions based on the distribution of team members' attributes. Each team member is initially assigned to a subgroup of one. Subsequently, these subgroups are iteratively merged, prioritizing the fusion of the most similar ones until a single cluster encompasses the entire team. Throughout this process, the algorithm stores all subgroup configurations and computes the ASW value, indicating how well team members align with their respective subgroups, ranging from −1 to 1. An ASW of zero suggests a lack of homogeneous subgroups, while an ASW of one indicates complete homogeneity within existing subgroups. Conversely, an ASW of −1 reflects inadequate subgroup formation, where members within the same subgroup are more dissimilar to each other than to those in different subgroups. The algorithm selects the subgroup configuration yielding the highest ASW value and therefore also the strongest faultlines. We utilized the asw.cluster package in R, as described by Meyer and Glenz (2013), to perform faultline calculations.

We employed the gender and age of board members as identifying variables. We specifically chose these attributes because they are particularly relevant in our specific research context regarding resource allocation toward women. Furthermore, these are highly visible, legally regulated, and socially meaningful characteristics in corporate governance (Janahi et al. 2023; Terjesen et al. 2015), and indicate power differences that can exist in the board (Carton and Cummings 2012; Lau and Murnighan 1998). By utilizing the ASW method, we were able to incorporate the numeric value of age directly, without the need for prior categorization. Furthermore, in line with the suggestions of Meyer et al. (2014), we standardized our numeric attribute (i.e., age). In this study, the average strength of faultlines is 0.616, supporting the existence of faultlines based on age and gender.

### 3.2.3 | Moderating Variables

We use three different variables to proxy for firms' knowledge intensity as discussed in Hypothesis 2. As such, we first introduce firms' selling, general and administrative expenses scaled by total sales (*SG&A*) (Chen and Kieschnick 2018). Second, we introduce an indicator variable equal to one if the industry is classified as (medium) high-technology or knowledge-intensive service by the European Commission at NACE REV2. Level (*HIGHTECH*) (Eurostat 2016). Third, we use the percentage of women in the workforce in full-time equivalents having a university degree (*UNIVERSITY WOMEN*) (Hansson 2007). With respect to Hypothesis 3, we examine value added per employee in line with Sesil et al. (2002), to which we apply an inverted decile rank to reduce the influence of outliers (Compagnie et al. 2023). As such, 1 denotes highest productivity and 10 the lowest productivity (*PRODUCTIVITY*). With respect to Hypothesis 4, we examine the firms' number of employees scaled by total assets (*EMPLOYMENT INTENSITY*) (Dutordoir and Struyfs 2024).

### 3.2.4 | Control Variables

We include control variables at the CEO, board, and firm level. At the CEO level, we control for the effects of the gender of the CEO (*CEO GENDER*), CEO tenure (*CEO TENURE*), and CEO age (*CEO AGE*). At the board level, we control for the size of the board (*BOARD SIZE*). In line with prior research (e.g., Vandebeek et al. 2021), we control for another type of faultlines, namely, variety-based faultlines (*VARIETY-BASED FAULTLINE STRENGTH*). At the firm level, we include variables reflecting the firm size (*SIZE*), profitability (*ROE*), capital structure (*LIABILITIES*), and fixed assets (*TANGIBILITY*) as well as the education levels of the female workforce, represented by the percentage that has obtained a university degree (*UNIVERSITY WOMEN*) and the percentage of women in the workforce (*PERCENTAGE WOMEN*). Finally, we also add firm ($\alpha_i$) and year ($\gamma_t$) fixed effects to our regression model. All independent and control variables are lagged by 1 year to alleviate endogeneity and reverse causality concerns. Detailed variable descriptions are also provided in Appendix A.

We discuss the most salient numbers from the descriptive statistics, reported in Table 2. A little less than half of the employees in our sample firms are women with a mean (median) of 41.3% (40%). We find that about 30% of the female workforce has obtained a university degree, with most of the average education budget of companies tending to go to men (63.9% relative to 36.1%). The majority of the firms in our sample are operating in high-tech industries (72%) and have a male CEO (95.4%). Large disparities in productivity exist as reflected in the big gap between mean (5598.971) and median (132.603) *PRODUCTIVITY*. Finally, our sample firms are on average profitable (*ROE* of 3.3%) with approximately twice as many liabilities as equity. Pairwise correlations between the variables, reported in Table 3, do not raise concerns of multicollinearity. Moreover, the largest variance inflation factor (VIF) across our estimated models equals 2.35 (Model 2 in Table 4), remaining below the traditional threshold of 5 and alleviating multicollinearity concerns.

## 4 | Empirical Results

### 4.1 | Main Results

We present the results of our estimation of Equation (1) in Table 4. In Model (1), we find a positive significant effect surrounding our variable of interest ($\beta = 0.239$, $p = 0.033$), supporting Hypothesis 1. That is, *DISPARITY-BASED FAULTLINE STRENGTH* is positively significantly associated with the percentage of the firm's education costs that is used for the women in the workforce (*EDUCATION BUDGET WOMEN*). This effect is also economically sizeable as a one standard deviation increase in *DISPARITY-BASED FAULTLINE STRENGTH* leads to a 5.6% increase in the budget allocated to the women in the workforce. Regarding the control variables, most of them are insignificant with *LIABILITIES* exerting a mild negatively significant influence on *EDUCATION BUDGET WOMEN*. The one variable that has a notably positively significant effect is *PERCENTAGE WOMEN*, exerting a positive influence on *EDUCATION BUDGET WOMEN*. This is not surprising as a larger percentage of women in the workforce is intuitively reflected in a larger percentage of education costs being attributed to them.

Model (2) in Table 4 shows that the coefficient of the interaction term *DISPARITY-BASED FAULTLINE STRENGTH*×*SG&A* is positively significant at the 1% level ($\beta = 0.614$, $p = 0.002$). As such, these faultlines have a more pronounced positive impact on the percentage of the firm's education costs that is used for the women in the workforce when the firms are engaged in more knowledge intensive activities. This provides us with initial support in favor of Hypothesis 2 that knowledge intensity strengthens the relation between faultlines and resource allocation for women's professional development. Similarly, Model (3) in Table 4 also provides evidence in favor of Hypothesis 2 at the industry-level as it shows that the positive impact of the faultlines is strengthened by being active in high-tech industries ($\beta = 0.458$, $p = 0.073$).

Finally, also when interacting with *DISPARITY-BASED FAULTLINE STRENGTH* and the variable reflecting the percentage of the women having a university degree (*UNIVERSITY WOMEN*) in Model (4), this third proxy of knowledge intensity also finds support in favor of Hypothesis 2 as the corresponding coefficient is again positively significant ($\beta = 0.949$, $p = 0.033$).[5] It is interesting to note the significantly negative direct association between *UNIVERSITY WOMEN* and *EDUCATION BUDGET WOMEN*, highlighting the importance of faultlines to ensure adequate attention is being paid to the development needs of highly educated women. Based on these three analyses, we can conclude that the positive relation between board faultlines and the resource allocation for women's professional development is stronger in knowledge-intensive firms (Hypothesis 2).

Next, we investigate our third hypothesis on whether the positive relation between board faultlines and the resource allocation for women's professional development is stronger in firms with lower employment productivity. Model (5) in Table 4 corroborates this hypothesis as the coefficient loading of the interaction of our inverse productivity measure (*PRODUCTIVITY*) and our board faultlines variable is indeed positively significant

**TABLE 2** | Descriptive statistics.

| | *N* | Mean | SD | Q1 | Median | Q3 |
|---|---|---|---|---|---|---|
| **Dependent variables** | | | | | | |
| EDUCATION BUDGET WOMEN | 592 | 0.356 | 0.233 | 0.175 | 0.321 | 0.494 |
| **Variable of interest** | | | | | | |
| DISPARITY-BASED FAULTLINE STRENGTH | 716 | 0.616 | 0.100 | 0.546 | 0.621 | 0.683 |
| **Moderators** | | | | | | |
| SG&A | 297 | 0.279 | 0.505 | 0.087 | 0.174 | 0.256 |
| HIGHTECH | 579 | 0.720 | 0.449 | 0.000 | 1.000 | 1.000 |
| UNIVERSITY WOMEN | 689 | 0.312 | 0.263 | 0.091 | 0.275 | 0.500 |
| PRODUCTIVITY | 579 | 5598.971 | 20567.970 | 76.034 | 132.603 | 272.030 |
| EMPLOYMENT INTENSITY | 579 | 0.904 | 1.393 | 0.041 | 0.333 | 1.299 |
| **Firm-level controls** | | | | | | |
| CEO GENDER | 716 | 0.954 | 0.210 | 1.000 | 1.000 | 1.000 |
| CEO TENURE | 716 | 8.391 | 7.104 | 3.000 | 7.000 | 11.000 |
| CEO AGE | 716 | 53.588 | 6.419 | 49.000 | 53.000 | 58.000 |
| BOARD SIZE | 716 | 9.158 | 2.949 | 7.000 | 9.000 | 10.500 |
| PERCENTAGE WOMEN | 716 | 0.413 | 0.235 | 0.223 | 0.400 | 0.523 |
| VARIETY-BASED FAULTLINE STRENGTH | 716 | 0.410 | 0.125 | 0.324 | 0.406 | 0.501 |
| SIZE | 716 | 12.683 | 1.920 | 11.287 | 12.523 | 14.059 |
| ROE | 716 | 0.033 | 0.303 | −0.015 | 0.045 | 0.132 |
| TANGIBILITY | 716 | 0.670 | 0.252 | 0.491 | 0.753 | 0.873 |
| LIABILITIES | 716 | 2.295 | 1.525 | 1.366 | 1.837 | 2.783 |

*Note:* The table shows the descriptive statistics of the main variables used in this study. All continuous variables are winsorized at the 2.5% level. We transform PRODUCTIVITY into an inverted decile rank to further minimize the influence of outliers in the regression analyses. *N* represents the number of firm-year observations. Variables are defined in the appendix, Table A1.

($\beta = 0.077$, $p = 0.027$). As such, Hypothesis 3 is supported. Finally, regarding our hypothesis on employment intensity, Model (6) in Table 4 supports Hypothesis 4 to this end and shows a positively significant coefficient ($\beta = 0.145$, $p = 0.051$) on the interaction term *DISPARITY-BASED FAULTLINE STRENGTH × EMPLOYMENT INTENSITY*. We can therefore conclude that the positive relation between board faultlines and the resource allocation for women's professional development is stronger in firms with higher employment intensity (Hypothesis 4).

Figure 1 represents the visualization of the moderating effect of two of the knowledge intensity proxies, the productivity proxy and the employment intensity proxy.[6] While the graphs representing employee productivity and employee intensity indeed show lower productivity and higher intensity acting as moderators strengthening the baseline relation, and we find that female university degrees also strengthen this baseline; the graph with regard to our knowledge intensity proxy *SG&A* even shows the relationship to become negative for the lowest levels of *SG&A*. This suggests that in extremely low resource-dependent environments in terms of *SG&A*, strong disparity-based faultlines could lead to less resource allocation toward women, highlighting the importance of resource dependency as a boundary condition explaining our results.

## 4.2 | Robustness Tests

We implement various robustness tests to ensure the validity of our findings. First, we ensure that our results are not subject to endogeneity issues. To this end, we implement a dynamic panel data model, using a system Generalized Method of Moments (GMM) approach as suggested by Arellano and Bover (1995). System GMM helps address endogeneity by using instruments (lagged values of the explanatory variables) to capture the unobserved factors that might be correlated with the explanatory variables. We instrument our endogenous variables by using lags at $t-2$ and $t-3$. Additionally, we perform various tests to ensure that our system GMM is correctly estimated. That is, we first test the null hypothesis of no second-order serial correlation in the first-differenced residuals through the Arellano-Bond test (AR(2)), which we do not reject. Second, the Hansen *J* test of overidentifying restrictions to test the validity of the instruments is also insignificant, again supporting the estimation validity.

**TABLE 3** | Pearson correlation matrix.

| Variables | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) | (17) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (1) EDUCATION BUDGET WOMEN | 1.000 | | | | | | | | | | | | | | | | |
| (2) DISPARITY-BASED FAULTLINE STRENGTH | −0.014 | 1.000 | | | | | | | | | | | | | | | |
| (3) SG&A | 0.163* | 0.078 | 1.000 | | | | | | | | | | | | | | |
| (4) HIGHTECH | 0.103* | −0.013 | 0.097 | 1.000 | | | | | | | | | | | | | |
| (5) PRODUCTIVITY | −0.100* | 0.033 | −0.066 | 0.028 | 1.000 | | | | | | | | | | | | |
| (6) EMPLOYMENT INTENSITY | 0.022 | −0.015 | 0.138* | −0.158* | −0.116* | 1.000 | | | | | | | | | | | |
| (7) CEO GENDER | 0.076 | 0.088 | 0.090 | −0.013 | 0.054 | −0.018 | 1.000 | | | | | | | | | | |
| (8) CEO TENURE | 0.144* | 0.054 | −0.147* | −0.042 | −0.070 | −0.083 | −0.100* | 1.000 | | | | | | | | | |
| (9) CEO AGE | 0.029 | 0.035 | −0.136* | 0.031 | 0.048 | 0.064 | 0.119* | 0.232* | 1.000 | | | | | | | | |
| (10) BOARD SIZE | −0.046 | 0.132* | −0.128 | −0.085 | 0.118* | −0.133* | 0.012 | −0.020 | 0.203* | 1.000 | | | | | | | |
| (11) PERCENTAGE WOMEN | 0.520* | 0.050 | 0.161* | 0.111* | −0.056 | −0.041 | 0.160* | 0.077 | 0.103* | 0.089 | 1.000 | | | | | | |
| (12) VARIETY-BASED FAULTLINE STRENGTH | 0.052 | 0.024 | −0.070 | −0.059 | 0.064 | 0.059 | −0.086 | 0.128* | 0.048 | 0.261* | 0.030 | 1.000 | | | | | |
| (13) UNIVERSITY WOMEN | 0.114* | −0.079 | 0.217* | 0.124* | −0.026 | −0.213* | 0.098* | −0.181* | −0.019 | 0.193* | 0.036 | 0.127* | 1.000 | | | | |
| (14) SIZE | −0.078 | −0.019 | −0.287* | 0.202* | 0.226* | −0.240* | −0.007 | −0.037 | 0.232* | 0.647* | −0.061 | 0.239* | 0.314* | 1.000 | | | |
| (15) ROE | −0.072 | −0.010 | −0.231* | −0.059* | 0.054 | 0.027 | −0.099* | 0.073 | 0.003 | 0.107* | −0.081* | 0.069 | −0.038 | 0.055 | 1.000 | | |
| (16) TANGIBILITY | −0.114* | 0.019 | −0.130* | 0.095* | 0.108* | −0.316* | −0.022 | 0.042 | 0.080 | 0.220* | 0.016 | −0.087 | −0.024 | 0.376* | 0.051 | 1.000 | |
| (17) LIABILITIES | −0.033 | −0.061 | −0.157* | −0.104* | 0.077* | 0.050 | −0.167* | −0.066 | −0.001 | 0.151* | −0.001 | 0.095* | −0.095* | −0.066* | −0.092* | −0.106* | 1.000 |

*Note:* The table shows the Pearson correlations of the main variables used in this study. * represents significance at the 1% level. Variables are defined in the appendix, Table A1.

**TABLE 4** | Main results.

| Variables | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| DISPARITY-BASED FAULTLINE STRENGTH | 0.239** | −0.229 | −0.076 | −0.052 | −0.088 | 0.087 |
| | (0.112) | (0.162) | (0.219) | (0.176) | (0.180) | (0.136) |
| SG&A | | −0.384*** | | | | |
| | | (0.119) | | | | |
| PRODUCTIVITY | | | | | −0.027 | |
| | | | | | (0.022) | |
| EMPLOYMENT INTENSITY | | | | | | −0.091* |
| | | | | | | (0.049) |
| DISPARITY-BASED FAULTLINE STRENGTH × SG&A | | 0.614*** | | | | |
| | | (0.193) | | | | |
| DISPARITY-BASED FAULTLINE STRENGTH × HIGHTECH | | | 0.428* | | | |
| | | | (0.256) | | | |
| DISPARITY-BASED FAULTLINE STRENGTH × UNIVERSITY WOMEN | | | | 0.949** | | |
| | | | | (0.444) | | |
| DISPARITY-BASED FAULTLINE STRENGTH × PRODUCTIVITY | | | | | 0.077** | |
| | | | | | (0.035) | |
| DISPARITY-BASED FAULTLINE STRENGTH × EMPLOYMENT INTENSITY | | | | | | 0.145* |
| | | | | | | (0.074) |
| CEO GENDER | −0.074 | −0.060 | −0.066 | −0.077 | −0.069 | −0.080 |
| | (0.079) | (0.079) | (0.079) | (0.079) | (0.077) | (0.079) |
| CEO TENURE | 0.002 | 0.002 | 0.001 | 0.002 | 0.002 | 0.002 |
| | (0.002) | (0.002) | (0.002) | (0.002) | (0.002) | (0.002) |
| CEO AGE | −0.001 | −0.001 | −0.001 | −0.001 | −0.001 | −0.002 |
| | (0.002) | (0.002) | (0.002) | (0.002) | (0.002) | (0.002) |
| BOARD SIZE | −0.001 | 0.004 | −0.002 | −0.000 | −0.002 | −0.002 |
| | (0.007) | (0.008) | (0.007) | (0.007) | (0.006) | (0.007) |
| PERCENTAGE WOMEN | 0.149*** | 0.028 | 0.148*** | 0.144*** | 0.209*** | 0.153*** |
| | (0.052) | (0.061) | (0.052) | (0.052) | (0.052) | (0.053) |
| VARIETY-BASED FAULTLINE STRENGTH | 0.114 | 0.106 | 0.122 | 0.116 | 0.128 | 0.111 |
| | (0.082) | (0.113) | (0.082) | (0.082) | (0.081) | (0.082) |
| UNIVERSITY WOMEN | 0.070 | 0.152 | 0.066 | −0.520* | 0.085 | 0.070 |
| | (0.071) | (0.093) | (0.070) | (0.285) | (0.069) | (0.070) |
| SIZE | −0.000 | −0.032 | −0.002 | −0.001 | 0.011 | 0.000 |
| | (0.024) | (0.031) | (0.024) | (0.023) | (0.023) | (0.025) |
| ROE | 0.004 | 0.049 | 0.006 | −0.001 | 0.023 | 0.006 |
| | (0.035) | (0.040) | (0.035) | (0.035) | (0.034) | (0.035) |
| TANGIBILITY | −0.104 | −0.130 | −0.105 | −0.124* | −0.102 | −0.087 |
| | (0.070) | (0.080) | (0.070) | (0.071) | (0.069) | (0.071) |

(Continues)

**TABLE 4** | (Continued)

| Variables | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| LIABILITIES | −0.012* | 0.007 | −0.012* | −0.011 | −0.010 | −0.012* |
| | (0.007) | (0.008) | (0.007) | (0.007) | (0.007) | (0.007) |
| CONSTANT | 0.286 | 0.891* | 0.296 | 0.483 | 0.223 | 0.391 |
| | (0.342) | (0.478) | (0.341) | (0.352) | (0.355) | (0.366) |
| YEAR FE | Yes | Yes | Yes | Yes | Yes | Yes |
| FIRM FE | Yes | Yes | Yes | Yes | Yes | Yes |
| $R^2$ | 0.166 | 0.130 | 0.062 | 0.146 | 0.105 | 0.164 |
| VIF | 2.12 | 2.35 | 2.12 | 2.12 | 2.14 | 2.24 |
| *N* | 579 | 297 | 579 | 579 | 579 | 579 |

*Note:* The table presents the regression results on the relation between faultlines (DISPARITY-BASED FAULTLINE STRENGTH) and women's education budgets (EDUCATION BUDGET WOMEN). Model 1 examines the direct relation, while Models 2–4 focus on the moderating influence of knowledge intensity through the firms' intangible assets (2), high tech industry classification (3), and percentage of the female workforce with a university degree (4). Models 5 and 6 examine the moderating influence of the workforce impact on the business model and cash flows through employee productivity (5) and employee intensity (6). *N* represents the number of firm-year observations. *, **, and *** represent significance at the 10%, 5%, and 1% level, respectively. Variables are defined in the appendix, Table A1.

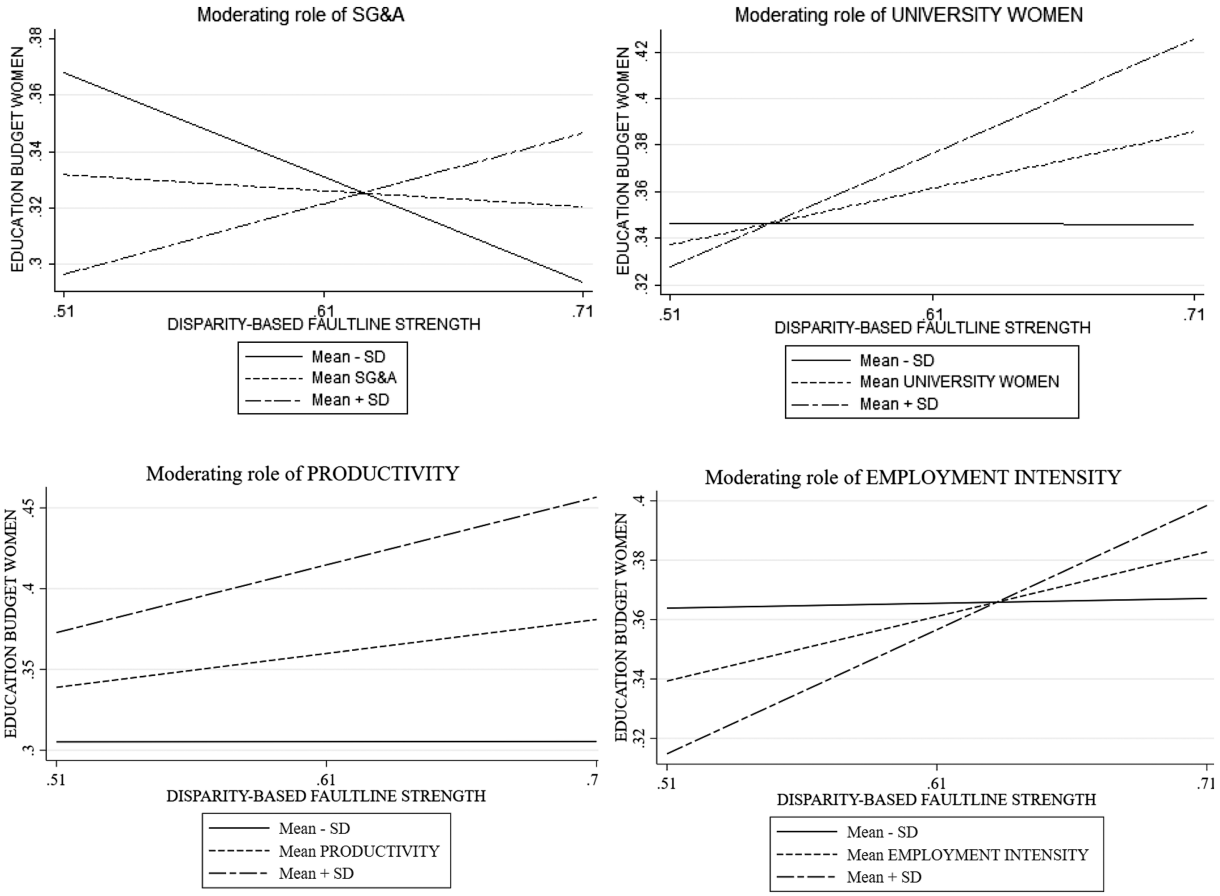


**FIGURE 1** | Visualization of the moderators. Figure 1 represents the visualization of the moderating effect of the two knowledge intensity proxies (SG&A top left and UNIVERSITY WOMEN top right), productivity proxy (PRODUCTIVITY, bottom left), and employment intensity proxy (EMPLOYMENT INTENSITY).

In our system GMM, Windmeijer-corrected robust standard errors are used to control for autocorrelation problems, heteroscedasticity and downward bias in the estimator (Roodman 2006).

The results reported in Model (1) of Table 5 show that the coefficient of *DISPARITY-BASED FAULTLINE STRENGTH* remains positively significant at the 5% level.

**TABLE 5** | Robustness checks.

| Variables | (1) SYSTEM GMM EDUCATION BUDGET WOMEN | (2) First stage IV DISPARITY-BASED FAULTLINE STRENGTH | (3) Second stage IV EDUCATION BUDGET WOMEN | (4) TOTAL EDUCATION BUDGET |
|---|---|---|---|---|
| DISPARITY-BASED FAULTLINE STRENGTH | 0.597** | | 0.740* | 0.066 |
| | (0.275) | | (0.418) | (0.550) |
| INDGENDER DIVERSITY | | 0.346*** | | |
| | | (0.057) | | |
| Control variables | Yes | Yes | Yes | Yes |
| YEAR FE | Yes | Yes | Yes | Yes |
| FIRM FE | No | Yes | Yes | Yes |
| *N* | 580 | 574 | 574 | 579 |
| $\chi^2/R^2$ | 498.63 | | | 0.467 |
| AR(1) test | 0.001 | | | |
| AR(2) test | 0.719 | | | |
| Hansen *J* test | 0.839 | | | |

| Variables | (5) PERCENTAGE WOMEN | (6) UNIVERSITY WOMEN | (7) EDUCATION BUDGET WOMEN | (8) EDUCATION BUDGET WOMEN |
|---|---|---|---|---|
| DISPARITY-BASED FAULTLINE STRENGTH | 0.074 | 0.124 | | |
| | (0.091) | (0.075) | | |
| GENDER DIVERSITY | | | −0.040 | |
| | | | (0.106) | |
| AGE DIVERSITY | | | | 0.118 |
| | | | | (0.300) |
| Control variables | Yes | Yes | Yes | Yes |
| YEAR FE | Yes | Yes | Yes | Yes |
| FIRM FE | Yes | Yes | Yes | Yes |
| $R^2$ | 0.004 | 0.013 | 0.197 | 0.199 |
| *N* | 716 | 689 | 579 | 579 |

*Note:* The table presents the regression results of the robustness checks on the relation between faultlines (DISPARITY-BASED FAULTLINE STRENGTH) and women's education budgets (EDUCATION BUDGET WOMEN). Model 1 presents the results of a system GMM model. We instrument endogenous variables by lags at $t-2$ and $t-3$. AR(1) and AR(2) are tests of first and second order serial correlation in first differenced residuals. The Hansen *J* test of overidentifying restrictions is reported as well. Models (2) and (3) provide the first and second stage instrumental variables, respectively, in which the industry median of board gender diversity (INDGENDER DIVERSITY) is used as instrument. The Model (4) used the natural logarithm of the total education budget as dependent variable (TOTAL EDUCATION BUDGET). Models (5) and (6) examine the percentage of women in the workforce and the percentage of the female workforce that has a university degree as alternative dependent variables. Models (7) and (8) use age and gender diversity as independent variables, respectively. *N* represents the number of firm-year observations. *, **, and *** represent significance at the 10%, 5%, and 1% level respectively. Variables are defined in the appendix, Table A1.

To further mitigate endogeneity concerns, we perform an IV estimation using the industry levels of board gender diversity as an exogenous instrument suggested by Nadeem (2020). Specifically, we use the industry median of our *GENDER DIVERSITY* variable to this end, which represents the percentage of male members relative to the total number of board members. The results of both stages of our instrumental variable approach are reported in Models (2) and (3). First, Model (2) shows the results of the first stage regression, in which our instrument exerts a significant impact on the faultline measure, giving a first indication of its appropriateness. Second, Model (3) shows the second stage results, in which our faultline measure keeps its significant positive impact on the education budget attributed to women, suggesting the robustness of our initial results. Additionally, we also checked whether the FE-IV estimations in this paper pass the tests for weak instruments (Stock and

Yogo 2005), which is the case ($F$ statistic of 36.58). Interestingly, when we apply the Hausman test (Hausman 1978) for endogeneity to empirically test its existence, we find that the results are statistically insignificant ($\chi^2 = 1.55$, $p = 0.2139$), further mitigating endogeneity concerns.

Second, we now know that a larger percentage of the education costs is directed toward the women in the workforce when faultlines increase. However, if the total educational costs in the firms where strong faultlines are present were smaller, the actual impact on women's careers would still be limited. To this end, we investigate the total educational budget, proxied by the natural logarithm of total educational costs, as an alternative dependent variable in Model (4) of Table 5. We find that faultlines are not significantly associated with education budgets, suggesting no differences in budget sizes between firms with stronger and less severe faultlines. Additionally, we examine two alternative dependent variables that could be influenced by the existence of board faultlines. In Model (5), we investigate whether board faultlines are associated with the percentage of women in the workforce. However, as the coefficient of *DISPARITY-BASED FAULTLINE STRENGTH* is insignificant, we find no evidence of a direct association between these two variables. Similarly, in Model (6) where we investigate the association between faultlines and the education levels of the women, we find no significant relation between the two variables.

Finally, we check whether the observed significant effect regarding the proportion of the educational budget attributed to women is driven by faultlines instead of overall diversity. That is, we verify whether the distinct effect of faultlines and resulting subgroups and social dynamics is what is driving our results instead of mere increased diversity levels. To this end, we examine both gender and age diversity separately. In terms of gender diversity, we use the percentage of male members relative to the total number of board members as an alternative independent variable (*GENDER DIVERSITY*). In terms of age diversity, we use the standard deviation of all board members' ages, divided by the average board age (*AGE DIVERSITY*). Models (7) and (8) show that neither gender nor age exerts a significant influence. This corroborates the importance of treating faultlines as a separate construct relative to diversity in general. We also conduct two additional robustness checks by examining age and gender separately using Blau's index as a measure of diversity (Blau 1977).[7] The results of these analyses also indicate that the direct effects of age diversity and gender diversity, when considered in isolation, are statistically insignificant. These results are available upon request.

## 5 | Discussion

The impact of women's representation on boards on corporate decision-making has garnered significant attention in recent times. Using a sample of Belgian listed firms between 2009 and 2019, we find that disparity-based faultlines on corporate boards are positively associated with a higher percentage of the educational budget being directed toward women. This is in line with our argumentation that when it comes to decisions on resource allocation, disparity-based faultlines are most important, as they lead to resource-based subgroups (Carton and Cummings 2012). Furthermore, we find this effect to depend on the knowledge intensity of the firm, their employment productivity, and employment intensity.

### 5.1 | Theoretical Contributions

These findings make significant contributions to several areas of academic literature. Firstly, by shedding light on how board faultlines can impact women's professional development, our study adds to the growing body of research on corporate governance, particularly concerning the phenomenon of faultlines within corporate boards (Arena et al. 2024; Barroso-Castro et al. 2020; Crucke and Knockaert 2016; Shin and You 2022; Van Peteghem et al. 2018; Vandebeek et al. 2021, 2024; Vandebeek et al. 2016; Wu et al. 2021). We also contribute to the literature on gender diversity within corporate boards (e.g., Alam et al. 2023; Edacherian et al. 2024; Mateos de Cabo et al. 2024) by examining how the existence of faultlines can impact women's decision-making power. More specifically, while critical mass theory indicates that increasing the number of women is sufficient to drive change (Alam et al. 2023; Biswas et al. 2023; Schoonjans et al. 2023; Tilbury and Sealy 2023), we find that director alignment (e.g., shared age and gender) enables collective agency, moving beyond mere numeric representation.

Secondly, we contribute to the faultline literature by theorizing on disparity-based faultlines and resource-based subgroups in a different team context, namely, the setting of boards of directors (Murnighan and Lau 2017). While previous studies have predominantly highlighted the negative effects of separation-based faultlines on organizational dynamics and group cohesion (Arena et al. 2024; Thatcher and Patel 2012; Vandebeek et al. 2021), this research shows a positive impact of disparity-based faultlines on the professional development of women.

Furthermore, by incorporating knowledge intensity, employment productivity, and employment intensity, we extend faultline research into the domain of resource dependence, showing that the strength of subgroup influence within boards depends on the extent to which firms rely on particular types of resources. Prior research has primarily treated faultlines as internal board dynamics, but our arguments highlight that their effects are contingent on the firm's external and internal resource environment, thereby linking board subgroup dynamics more explicitly to strategic resource allocation. Furthermore, we theorize that the ability of women's subgroups to influence board-level decisions is not uniform, but rather shaped by structural firm characteristics that heighten or diminish resource dependencies. This adds a boundary condition to existing work, showing that women's collective influence is most potent where firms cannot easily substitute away from the resources they advocate for. Finally, we broaden the application of RDT by showing how intra-board subgroup dynamics can serve as micro-level mechanisms through which firms respond to resource pressures. In doing so, we bridge micro-level theories of faultlines with macro-level theories of firm resource dependencies (Hillman et al. 2009), offering a novel integration that enhances our understanding of when and why diversity-based subgroups matter for strategic outcomes.

Lastly, our research enriches the literature on gender parity in corporate environments by introducing a novel driver, namely, board faultlines. While the majority of the literature in this domain focuses on the percentage of women (at the top level) in the corporate workforce to investigate the existence of glass ceilings (see, e.g., Nekhili and Gatfaoui 2013; Reguera-Alvarado et al. 2017), our approach offers insight into the structure and interaction of demographic attributes, enabling the identification and impact of resource-based subgroups, which traditional diversity measures cannot capture.

### 5.2 | Practical Implications

Our findings also have practical implications for policymakers, shareholders, and company owners as our results show that certain board compositions can advance the cause of women at other levels of the company. By understanding these mechanisms, policymakers can become more aware of how financial resources could be allocated equitably, promoting inclusive decision-making processes. Corporations can be encouraged to diversify their boards in a way that can harness the benefits for women in the workforce, namely, by taking into account the presence of faultlines and subgroup dynamics. Integrating women into all levels of decision-making can thus improve governance and policy outcomes, further advancing gender equality. Regulators and industry leaders can use these insights to design more inclusive leadership development programs, ensuring that women in executive roles are less dependent on collective influence.

### 5.3 | Limitations and Future Research Directions

Our study also has some limitations that can provide avenues for further research. Firstly, while our study offers a novel perspective by examining unique data of a sample of listed firms in Belgium from 2009 to 2019, our findings may be particularly relevant for countries employing a one-tier Continental European board system similar to Belgium's. Belgium offers a distinctive institutional setting that contributes valuable insights to the global theory of corporate governance. Unlike the Anglo–Saxon market–control model that dominates much of the existing literature, the Belgian context is shaped by a civil law legal system. This system leads to different regulatory and legal enforcement mechanisms than the common law systems in Anglo-Saxon countries. Since July 28, 2011, Belgian law requires that at least one-third of directors must be of the other gender compared to the majority on the board.

By examining board dynamics within this context, our study contributes to a more pluralistic and globally relevant understanding of corporate governance. Furthermore, during our sample period, Belgian firms operated under a one-tier system, where a single board of directors held both strategic oversight and executive decision-making responsibilities. However, Belgium recently introduced the hybrid board model for listed companies, which allows companies to choose between a one-tier (monistic) or two-tier (dualistic) board structure. While the adoption of the two-tier model remains relatively limited in practice, this new regulatory flexibility presents an interesting opportunity for future research. Examining how different governance structures and evolving legal constraints shape the effects of board diversity and faultlines on decision-making could yield theoretical and practical insights.

Secondly, while we utilize established measures of faultlines to assess their presence and impact, our study does not capture the full complexity of social relationships within boards. Future research should further explore the boardroom dynamics to explore how faultlines manifest and evolve over time, employing more nuanced research methods and sophisticated measures to capture all specific relationships. Microlevel studies focusing on subgroup processes within boards could offer valuable insights into the psychological underpinnings of faultlines and subgroup formation.

Finally, while our study identifies a stronger relationship between board faultlines and resource allocation toward women for resource-dependent firms, there could be other important moderating factors that impact the relationship. Future studies could explore factors at the board level as well, such as chairman leadership style (Banerjee et al. 2020), or board conflict climate (Engbers and Khapova 2023). Further exploration in future studies could look into these potential moderating effects. However, to accurately measure these mechanisms, comprehensive survey data may be necessary, which can be challenging in a board context.

## 6 | Conclusion

This study demonstrates that disparity-based board faultlines—divisions within boards arising from diversity attributes related to status and power—can positively influence the allocation of professional development resources for women within organizations. Drawing on data from Belgian listed firms, we show that when women directors form cohesive subgroups, they can act as a unified bloc to gain greater decision-making power, thereby reshaping resource distribution within the organization to better benefit women. This effect is especially pronounced in firms that are knowledge intensive, exhibit lower employment productivity, or have higher employment intensity. Our findings advance board diversity and governance research by highlighting the role of subgroup dynamics within boards and their potential to drive meaningful organizational change. For both scholars and practitioners, these insights emphasize the strategic value of understanding and leveraging board faultlines to foster gender equity in resource investment and professional development.

#### Acknowledgments

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#### Conflicts of Interest

The authors declare no conflicts of interest.

#### Data Availability Statement

Research data are not shared.

## Endnotes

[1] Although we include year fixed effects in all our regression specifications, this sample period (2009–2019) minimizes distortions from the Global Financial Crisis as well as the Covid pandemic. In addition, legislative reforms introduced through the 2019 Belgian Corporate Governance Code and the revised Company Code that allow listed firms to adopt a two-tier structure with a supervisory board overseeing a separate management board had not yet taken effect. Therefore, firms in our sample operated under a one-tier system (i.e., where a single board of directors held both strategic oversight and executive decision-making responsibilities).

[2] The total count of board members reflects the total number of data points attributed to board members. For every board, a faultline strength was then computed.

[3] In Belgium, R&D intensity is high, especially in business enterprise sectors, and many firms are active in high-technology or knowledge-intensive service industries (European Commission 2025). In addition, labor costs in Belgium are among the highest in Europe (Eurostat 2025), reflecting the centrality of skilled employees in firm competitiveness.

[4] Specifically, the dependent variable is measured as code 5813 (Net costs of continued formal education for women), scaled by the sum of codes 5813 and code 5803 (Net costs of continued formal education for men).

[5] The significantly positive interaction is corroborated when focusing on the overall percentage of employees that have a university degree ($\beta = 0.993$, $p = 0.023$). Detailed results are available upon request.

[6] Due to the absorption of our moderating variable HIGHTECH by the fixed effects, we are unable to provide a graph for this proxy.

[7] The Blau index is a measure of diversity that computes the probability that two randomly selected group members belong to different categories, using the formula (1) minus the sum of the squared proportions of each group member in a category ($1 - \sum p_i^2$). For age, we applied the same logic across five categories (under 25, 25–35, 36–45, 46–55, and 56 and older), again summing the squared proportions of each age group and subtracting that sum from one.

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## Appendix A

**TABLE A1** | Variable definitions.

| Variable | Definition | Source |
|---|---|---|
| EDUCATION BUDGET WOMEN | Percentage of the firm's education costs that is used for the women in the workforce | Bel-first |
| DISPARITY-BASED FAULTLINE STRENGTH | Disparity-based faultline strength, based on gender and age | Own calculation |
| SG&A | Selling, general and administrative expenses scaled by total assets | Bel-first |
| HIGHTECH | Indicator variable if the industry is classified as (medium) high-technology or knowledge intensive service by the European Commission at NACE REV2. level | Eurostat |
| UNIVERSITY WOMEN | Percentage of women in the workforce in full time equivalents having a university degree | Bel-first |
| PRODUCTIVITY | Inverted decile rank of value added per employee | Bel-first |
| EMPLOYMENT INTENSITY | Number of employees scaled by total assets | Bel-first |
| CEO GENDER | Indicator variable equal to one if the CEO is male | Hand-collected |
| CEO TENURE | Length of the CEO tenure in years | Hand-collected |
| CEO AGE | Age of the CEO in years | Hand-collected |
| BOARD SIZE | Number of people in the board of directors | Hand-collected |
| PERCENTAGE WOMEN | Percentage of women in the workforce in full-time equivalents | Bel-first |
| VARIETY-BASED FAULTLINE STRENGTH | Variety-based faultline strength, based on type of directorship, board tenure, educational level and educational specialization | Own calculation |
| SIZE | Natural logarithm of total assets | Bel-first |
| ROE | Return on equity | Bel-first |
| TANGIBILITY | Fixed assets scaled by total assets | Bel-first |
| LIABILITIES | Total liabilities scaled by equity | Bel-first |