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## Gender legislation in France: Empirical evidence from non-compliant firms

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### ABSTRACT

This paper studies non-compliant firms with gender legislation and why some businesses are taking the risk of not binding the gender quotas. It is conducted on firms listed on the SBF120 index, after the introduction of the gender law of Copé and Zimmermann, in 2011. Our findings show that gender diversity on advisory committees, unlike monitoring committees, is likely to decrease the non-compliance likelihood. Non-compliant firms have busy members, specifically among men and long-tenured CEOs who are serving in non-dual structures. Regarding women's profiles, non-compliant boards are prone to hire short-tenured and local female candidates. Finally, their financial and social performances are not damaged while their corporate risks are decreased. When penalties are not required against non-compliant firms, refractory businesses do not bear “real” costs.

### KEYWORDS

Gender Legislation; Quotas; Advisory Committees; Monitoring Committees; Multiple Directorships; Tenure

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## 1. Introduction

To better respond to stakeholders' expectations, many European countries have relied on regulation to increase diversity in top management positions. More specifically, the pioneering introduction of gender quota law in Norway has been considered as recognition of the urgent need to gender balance boardrooms. This initiative has been followed by Italy, France, The Netherlands, Spain and Germany, but it has also spread to non-European countries, such as India, and Argentina. It is going beyond the business sphere to achieve the political one (policymakers' positions and party's composition, Link, 2014<sup>1</sup>).

The gender quotas have not been able to completely remove barriers but they pushed them up: removing the glass ceiling (Kanter, 1977) has led to a glass cliff (Ryan and Haslam, 2005). It seems that there is a double glass-ceiling glass in boardrooms: one in the entrance and another one inside the board. When they become board directors, women are, most often, appointed to monitoring committees (such as audit, risk, compensation and finance committees) in charge of supervising the board at the expense of advisory committees (such as governance, nomination, and sustainable development committees). They are, therefore, not able to initiate real changes in the business. They cannot actively contribute to the development of the business strategy. Accordingly, in anti-regulation countries, policymakers rely on voluntary initiatives and governance recommendations to increase a gender diversity that is in line with the business culture and needs. This approach has been adopted in UK and most of USA States<sup>2</sup> where some recommendations on gender diversity have been introduced in their governance codes to help the firm identifying and attracting qualified women to their businesses.

Gender regulation has been able, however, to go beyond old boys' networks traditionally keeping women out of boardrooms, even in non-compliant firms. It has opened boardrooms to more diverse and heterogeneous women profiles and broadened, therefore, the pool of women candidates (Bennouri et al., 2020; Ferreira et al., 2020, Niederle et al., 2013). From a resource dependency perspective, this could be valuable for the business in many areas (Singh et al., 2008).

Pro and anti-regulation arguments make the debate on the efficiency of gender quota laws very intense (Greene et al., 2020; De Cabo et al., 2019; Reguera-Alvarado et al., 2017). Many papers have studied the costs and benefits of such legislation (Bennouri et al., 2020; Greene et al. 2020; Reguera-Alvarado et al., 2017; Wiersema and Mors, 2016; and Labelle et al., 2015). They conclude that governance and social features could also explain how firms are reacting to mandatory quotas. However, to the best of our knowledge, no study has examined how corporate governance, in particular board characteristics and directors' traits, could influence the firm ability and willingness to comply with specific laws such as the gender quota law. According to Gregoric et al. (2017), the likelihood compliance depends on shareholders' and current directors' perception or expectation of the economic consequences of increasing female presence in the boardroom.

The current paper contributes to this debate by answering these questions: Why some French Listed firms do not comply to gender quota law? Is this due to his style of governance or to the absence of non-compliance costs?

Hence, first, we identify corporate governance characteristics of non-compliant firms. Second, we analyze the non-compliance consequences in terms of performance and risks. To the best of our knowledge, this paper is the first to address these issues. This study is conducted on firms listed on the SBF120 index between 2011 and 2017.

Studying the French context is timely for at least two main reasons. First, unlike other countries such as Spain, Italy and Norway, France has introduced a two-step quota law, namely the Copé-Zimmermann law<sup>3</sup>. It applies to listed firms and firms with more than 500 fulltime employees, on average, for three successive years or with a yearly turnover (or a total assets) of at least 50 million euros. The law has short- and long-term effects on boardrooms. In

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<sup>1</sup> <https://www.osce.org/files/f/documents/e/f/120877.pdf>

<sup>2</sup> California has passed, in 2018, gender quotas for boards in public companies headquartered in the state.

<sup>3</sup> <https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000023487662&categorieLien=id>

the short term (between 2011 and 2013), all non-gender diverse boards, namely male-controlled ones, have to appoint at least a female director. In the long term, non-gender balanced boards have to achieve at least 20 % female directors in 2014 and at least 40 % in 2017. Refractory firms could face penalties. Specifically, new member appointments must be considered null if they are not consistent with the law. However, the decisions voted by the non-compliant boards, are not cancelled. To the best of our knowledge, despite that many SBF120 firms have not been compliant, none of these penalties has been publicly disclosed. Lately, gender legislation has been strengthened by the Pacte Law (2019)<sup>4</sup>: all firms with on average more than 250 fulltime employees have to gender-balance their boards since January 2020. Board's decisions must be cancelled if the board does not observe the quotas. Furthermore, the attendance fees must be deferred.

Second, the pool of directors in France comes from prestigious and selective institutions called *Grandes Ecoles*, such as *Ecole Polytechnique (X)*<sup>5</sup>, *Ecole Nationale d'Administration (ENA)*<sup>6</sup> and *SciencesPo*<sup>7</sup>. Most of top managers, public officers and policymakers in France have graduated from *Grandes Ecoles* (see Ferreira et al., 2020; Bertrand et al., 2019; Zenou et al., 2017; Dudouet and Joly, 2010). The percentage of women enrolled in *Grandes Ecoles* is historically too small (Larat, 2015, Albouy and Wanecq, 2003). In 2018, the statistics disclosed in the conference of *Grandes Ecoles*<sup>8</sup> show that the average gender quota varies significantly among these institutions. For instance, the percentage of women students enrolled in Business schools is 49% and 33% in engineering schools. Surprisingly, only 17% of Business schools' employees are women. In engineering schools, women represent 67% of their employees. Thus, strengthening gender regulation without increasing women representation in these institutions could not drive the expected effects.

This study provides some interesting findings. First, non-compliant businesses are less likely to appoint women to their advisory committees and long-tenured directors. Furthermore, their CEOs are entrenched with long tenures. However, they have non-dual structures (their CEOs are less likely to serve as chairpersons) and high percentages of multiple directorships, particularly among men members. Regarding women profile, non-compliant boards are prone to hire short-tenured and local female candidates. Finally, we find non-significant associations between the non-compliance likelihood and the financial and social performances. In fact, avoiding changing their board composition has decreased their corporate risk. Despite the fact that the gender quota law was introduced as a hard law in France, the non-compliance did expose to serious risks. For instance, to the best of our knowledge, no fines have been required against non-compliant firms and no male appointments have been cancelled in refractory boards.

The current paper is structured in the following. Section (1) presents the literature review and the hypotheses. Data and variables are in section (2). Section (3) discusses the results. Robustness tests are conducted in sections (4) and (5). The last section concludes the paper.

## 2. State of art and hypotheses

The adoption and the spread of new organizational structures and practices are, most often, explained by the institutional theory: organizations change their structure to meet external expectations and to gain legitimacy (DiMaggio and Powell, 1983; Meyer and Rowan, 1977). This legitimacy is required to enhance the market image of the business, in the eyes of the government, other regulatory institutions and stakeholders, among others. According to the institutional theory (Fligstein 1985; Tolbert and Zucker 1983), the perceived gains and costs of

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<sup>4</sup> The Pacte Law is a set of laws that have been introduced to set up more responsible practices in businesses:

<https://www.economie.gouv.fr/loi-pacte-redefinir-raison-etre-entreprises#h4>

<sup>5</sup> <https://www.polytechnique.edu/en>

<sup>6</sup> <https://www.ena.fr/eng/ENGLISH>

<sup>7</sup> <https://www.sciencespo.fr/en/home>

<sup>8</sup> <https://www.cge.asso.fr/liste-actualites/barometre-egalite-femmes-hommes-2018/>

complying with institutional pressures depend on organizations' characteristics, such as the size and visibility. In the following subsections, we present the relationships between some corporate governance: board diversity, Multiple directorships, board tenure and CEO power and the likelihood of the non-compliance of French firms.

### 2.1. Gender diversity

Many studies show that gender diverse boards are likely to increase the percentage of female directors. It becomes easy to crack the ceiling glass that prevent them from achieving board positions. Zalata et al., (2019) and Green and Homroy (2018) conclude that female members and corporate performance are positively associated, particularly when women are appointed to strategic committees, such as monitoring committees. Zalata et al. (2019), Kolev et al. (2019), Zhu et al. (2014) argue that their presence is likely to improve the decision-making process. Stakeholders' pressure could drive firms to select more women directors, even in the absence of a gender legislation. In this regard, gender diversity is likely to improve the firm's involvement in corporate socially responsible CSR activities which enhances the social performance (Beji et al., 2021; Ferreira et al., 2020; Hafsi and Turgut, 2013). Beji et al. (2021) provide evidence that women are likely to be concerned about the governance quality and the protection of human rights. Their governance proxy depends on gender board diversity.

Ashforth and Mael (1989) argue that genders have different backgrounds, experiences and values. Women are, most often, more sensitive to CSR and social activities (Gull et al., 2022; Beji et al. 2021). In the same vein, Bear et al. (2010) find that after the appointment of women directors, boards are likely to increase their gender diversity the following years.

Knippen et al. (2019) drawn on US data, state that more women have been appointed to boardrooms in a response to external pressure. In male-controlled boards, women members are considered outsiders. Despite this gender bias, more seats have been added to boardrooms to avoid replacing existing male members with female ones (Zhu et al., 2014; McDonald and Westphal, 2013; Westphal and Stern, 2006, 2007).

In the light of the previous discussion, we state the following hypothesis:

Hypothesis (1): there is a negative association between the presence of female members and the likelihood of non-compliance.

### 2.2. Multiple directorships

Chou et al. (2019) highlight that when directors are serving in two or more boards, multiple directorships become a proxy for the directors' busyness and connections. The effects of multiple directorships on businesses have been analyzed in the literature, from two perspectives: the busyness hypothesis and the resource dependence hypothesis.

According to the first hypothesis, serving on many boards is likely to decrease the director's involvement and concern about the business issues. It may result, therefore, on the increase of agency costs.

The resource dependence theory, however, considers that multiple directorships could be a valuable trait of the director. When they serve in many boards, directors are likely to have more experiences and information about the firm's environment. In this regard, they could provide new perspectives and bring new external resources and connections that are valuable for the business (Pfeffer and Salancik, 1978).

The two hypotheses have been tested and studies are providing mixed results. On the one hand, multiple directorship is likely to enhance environmental disclosure (Rupley et al., 2012), corporate strategy (Dahya et al., 1996), innovation and R&D spending (Hillman and Dalziel, 2003), specific areas of social performance such as the environmental performance, business ethics and employees' conditions (Beji et al., 2021; Diaz et al., 2013; Ortiz-de-Mandojana et al., 2012). Also, earnings quality is improved in the presence of outside directorships due to their

knowledge and expertise (Saleh et al., 2005). On the other hand, many papers have tested the busyness assumption and analyzed the ability of busy directors to fulfil their duties. If directors have several directorships, board functioning and the firm performance are affected (Pathak and Sun, 2013; Haniffa and Hudaib, 2006). Jiraporn et al. (2009) find that many board tasks require the director's attention and time which are inevitably reduced when simultaneously serving many boards. In the same vein, they cannot attend all board meetings where details and critical information are discussed: they cannot play fully their monitoring role. In this regard, the board cannot take advantage of their expertise (Chiranga and Chiwira, 2014). Decreasing the directors' busyness is positively associated with profitability, market-to-book ratio and the board organization, specifically the memberships and attendance of board committees (Hauser, 2018). In France, outside directorships are negatively related to financial performance (Rouyer, 2016). One explanation could be the high percentage of multiple directorships in France, specifically among family firms. Chen et al. (2015); argue, however, that regulation, such as the Sarbanes-Oxley Act (2002) could decrease the negative effects of multiple directorships (Chen et al., 2015)

To explain the controversial findings, some studies argue that multiple directorships have positive effect on financial performance, when they are low. After a specific threshold, the resource-based theory is rejected and the busyness assumption prevails (Lopez Iturriaga and Morros Rodriguez, 2014). Another explanation could be the type of the business control, such as family-controlled firms (Rouyer, 2016; Kiel and Nicholson, 2006). Very few studies have, however, explored the traits of busy directors. Sarkar and Sarkar (2009) distinguished between inside and independent multiple directorships. They find that inside multiple directorships are negatively related to firm performance.

In the light of the previous studies, we state the following:

Hypothesis (2): there is a positive association between multiple directorships and the likelihood of non-compliance.

### 2.3. Directors' Tenure

In line with multiple directorships, there are two predominant rationales on the effects of directors' tenure, specifically board performance and functioning.

The first perspective assumes that long-tenured directors are less effective in monitoring and advising roles, than their lower counterparts. They are likely to be entrenched and lose touch with reality. They ended up by accepting the 'status quo'. This is the 'stale in the saddle' effect (Brown et al., 2017). In this regard, long serving directors could lead to agency costs. For instance, long tenure could comprise the monitoring role of independent members who become "friends" with inside directors and less willing to criticize the business management (Daily and Dalton, 1994).

The second rationale states that the longer is the director tenure, the more they will be familiar with the business challenges and everyday tasks (Kor and Sundaramurthy, 2009). Unlike the monitoring role, the advisory role is better performed by long-tenure members who are likely to provide relevant advice and resources to management (Hillman and Dalziel, 2003). When short serving directors attend the board, they are facing asymmetric information about the business challenges preventing them from using the relevant knowledge (Hambrick et al., 2015; Roberts et al., 2005). This informational gap is diminished with time (Reguera-Alvarado and Bravo; 2017; Adams and Ferreira, 2007).

To the best of our knowledge, there are no studies, nor regulation on the optimal length of a director tenure, after which there are no benefits of keeping the directors serving on the board (Elms and Pugliese, 2023; Huang and Hilary; 2018, Brown et al. 2017). The studies on the effects of directors' tenure provide heterogeneous findings (Elms and Pugliese, 2023; Mooney et al., 2021; Johnson et al., 2013). One explanation could be that director's tenure has been discussed most often, from a single theory, analyzing a specific task. It is driven by a biased exploration.

However, boards are not homogenous groups and their roles encompass a large variety of interconnected tasks. Also, the existing literature is marginalizing the cognitive and demographic traits of long and short serving directors (Elms and Pugliese, 2023).

Dou et al. (2015), Byrd et al. (2010), Sharma and Iselin (2012), highlight the positive effects of long-tenured members, combined with others features, on the management financial aspects such as the CEO remuneration, the financial misstatements and their occurrences. One of these features is the creation of advisory and monitoring board committees. Most of the existing studies, are drawn on monitoring committees, such as audit, compensation/remuneration, governance and nomination committees (Ararat and Yurtoglu 2021; Zalata et al., 2019; Faleye et al., 2011). In fact, regulations and corporate governance codes require all listed firms, at least to have an audit committee (Sarbanes–Oxley Act of 2002, Canada Business Corporations Act CBCA, Australian Stock Exchange Listing Rules, the Afep-Medef Code<sup>9</sup>). These committees aim at increasing transparency, governance quality, finance performance and compliance with regulation, codes and standards (see among others Jiraporn et al., 2009; Klien 2002; Bilimoria and Piderit, 1994). They consist mainly of independent members. Accordingly, long serving members on monitoring committees are likely to observe laws. We are expecting long tenured members to have a positive effect on the compliance with gender legislation.

We state the following hypothesis:

Hypothesis (3): Long-tenure is negatively associated with non-compliance.

## 2.4. Powerful CEOs

The concentration of power in dual structure increases the CEOs power as they are in charge of control and management functions (Surroca and Tribo, 2008). It could favor, therefore, the CEO entrenchment. CEO can adopt an opportunistic behavior serving their own interests at the expense of those of the shareholders. CEO-Chair person could be tempted to prevent board directors from perusing innovative and socially and environmentally responsible activities (De Villiers et al., 2011; Agrawal and Chadha, 2005). Many studies have argued that powerful CEOs tend to be entrenched and influence the business strategy (see among others Beji et al., 2021; Sheikh, 2019; Muttakin et al., 2018; Jiraporn et al., 2012). For instance, Beji et al. (2021) and Li et al. (2016) show a negative association between CEO power and CSR performance: they use the CEO's tenure and duality to measure the CEO power. In the same vein, Jiraporn and Chintrakarn (2013) conclude that powerful CEOs, unlike unentrenched ones, are reluctant to introduce changes in the business.

In light of the previous results, we attempt to test the following:

Hypothesis (4): Long-tenured CEO is positively associated with non-compliance.

Hypothesis (5): CEO-chair duality is positively associated with non-compliance.

## 3. Data and variables

### 3.1. Data

The current study is conducted on firms listed on the SBF120 index between 2011 and 2017. Data on board characteristics and ownership structure are hand-collected from annual reports. Financial, social and governance data are provided by FactSet-IODS, Bloomberg and Governance-IODS. (Table 1)

<sup>9</sup> [https://afep.com/wp-content/uploads/2020/01/Code-Afep\\_Medef-r%C3%A9vision-janvier-2020\\_-002.pdf](https://afep.com/wp-content/uploads/2020/01/Code-Afep_Medef-r%C3%A9vision-janvier-2020_-002.pdf)

**Table 1.** Sample composition

Industry Sector	Percentage
Industrials	25.51%
Basic Materials	5.96%
Financial	11.68%
Health Care	6.79%
Consumer Goods	28.25%
Technology	9.89%
Oil and Gaz	3%
Utilities	9.30%
Total	100%

### 3.2. Variables

#### 3.2.1. Non-Compliance measures

NC is a dummy variable that is equal to 1 when the board has no women director between 2011 and 2013, less than 20 % of female members between 2014 and 2016, and less than 40 % in 2017. Otherwise, it is equal to 0. It assesses the firms' non-compliance with Copé-Zimmermann gender quota law.

DC is the percentage of female directors that businesses are required to hire to achieve the law's quotas. It is a proxy for the distance to compliance in non-compliant businesses. It is given by:

$$DC_{i,t} = \begin{cases} \frac{1}{BSIZE_{i,t}} & \text{if } 2011 \leq t \leq 2013 \text{ and } PFD_{i,t} = 0 \\ 20\% - PFD_{i,t} & \text{if } 2014 \leq t \leq 2016 \text{ and } 20\% - PFD_{i,t} > 0 \\ 40\% - PFD_{i,t} & \text{if } t = 2017 \text{ and } 40\% - PFD_{i,t} > 0 \end{cases}$$

where  $BSIZE_{i,t}$  is the number of board directors and  $PFD_{i,t}$  is the percentage of female members of the firm  $i$ , at the year  $t$ .

#### 3.2.2. Corporate performance and risks measures

The financial performance assessed by the market proxy ROA return on asset ratio to capture the market valuation and a historical proxy MTB market to book value based on historical data.

The social performance measured by Vigeo-Eiris scores, specifically the overall score of corporate social responsibility (CSR)<sup>10</sup> and three CSR dimensions, namely the environmental ESG score (ESGENV), the social ESG score (ESGSOC), the governance ESG score (ESGGOV).

The risk-taking SDR measured by the standard deviation of returns.

#### 3.2.3. Board characteristics

Many studies have explored the influence of board characteristics on female directors' appointment (see among others, Nekhili and Gattfaoui, 2013; Brammer et al. 2007; Carter et al. 2003; Erhardt et al. 2003; Hyland and Marcellino 2002, and Johnson and Greening 1999).

BSIZE: Nekhili and Gattfaoui (2013), Brammer et al. (2007), and Hyland and Marcellino (2002) show that large boards are more likely to appoint more female members.

PIND is the percentage of independent directors in the boardroom. Carter et al. (2003), Erhardt et al. (2003),

<sup>10</sup> More details are provided in appendix A.

and Johnson and Greening (1999) among others, find that board independence is positively related to the appointment of female members. Grosvold (2011), however, provide evidence of negative association in France as well as in Belgium, Italy and Spain.

DUAL is a dummy variable equal to 1 if the CEO is also the board chairperson. Nekhili and Gattfaoui (2013) suggest that women directors are less likely to be appointed to boards with CEO-Chair duality.<sup>11</sup>

FPD1 is the percentage of female members appointed to the boardroom the last year. The larger the proportion of female directors on the board, the larger is the likelihood of increasing women representation in boardrooms. When there are more than two women directors, they are likely to support each other views and to increase the appointment of new female members (Gull et al., 2022; Beji et al., 2021; Singh and Vinnicombe, 2004). Accordingly, more gender diverse boards are likely to observe the law.

PFMON1 is the percentage of female directors appointed to monitoring committees the last year. Monitoring committees count audit, compensation, governance and nomination committees where only independent directors are sitting to monitor the board functioning. They are likely to have significant effects on board policies and the decision-making process (Zalata et al., 2019; Reeb and Upadhyay, 2010).

PFAD1 is the percentage of female directors appointed to advisory committees the last year. Advisory committees include finance, investment, strategy, corporate social responsibility, human resources management and production committees (Zalata et al. 2019; Kim et al., 2014; Faleye et al., 2013, 2011).

TENURE is the average directors' tenure.

CEOTENURE is the average CEO's tenure.

AGE is the average age of board members.

MAGE is the average age of male board members.

FAGE is the average age of female board members.

EDUC is the percentage of board members who have Master/MBA/PhD degrees.

MEDUC is the percentage of male board members who have Master/MBA/PhD degrees.<sup>12</sup>

BEDUC is the percentage of business-educated board members, specifically who have management/business/corporate law degrees.

MBEDUC is the percentage of business-educated male directors, specifically who have management/business/corporate law degrees.<sup>13</sup>

MULT is the percentage of board members with multiple-directorships.

MMULT is the percentage of men directors who have multiple-directorships.<sup>14</sup>

### 3.2.4. Ownership structure

SOWN is the State's share of capital. State-controlled firms are under increased pressure and are expected to comply with regulation to become a leading example for other companies (Grosvold, 2011).

INSOWN is the institutional investors' share of capital. Many studies show that institutional investors are likely to endorse good corporate governance practices (Dobbin and Jung 2011; Farrell and Hersch 2005; Westphal and Khanna 2003). Hence, they prefer to invest in businesses with gender diverse boards (Ben-Amar et al., 2013; Dobbin and Jung, 2011).

FOWN is the family's share of capital. Before the quota law, Nekhili and Gattfaoui (2013) provided evidence that the appointment of women directors was strongly related to family ownership in SBF120 listed firms.

<sup>11</sup> SBF120 statistics show only 0.79% of CEOs are women between 2011 and 2016.

<sup>12</sup> We also tested the percentage of female post-graduated directors FEDUC but MEDUC and FEDUC are significantly and positively correlated.

<sup>13</sup> The percentages of female and male business-educated directors are significantly and positively correlated.

<sup>14</sup> The percentages of female and male directors who have multiple directorships are significantly and positively correlated.



FOROWN is the share of capital held by foreign investors. Foreign owners may bring good corporate governance practices from their countries. If they are familiar with gender legislation or sensitive to diversity in their native countries, they are likely to detain stakes in firms with gender-diverse boards. When they have a high power of control, they are more concerned about the regulatory requirements in their native country (Dyck, 2000).

The survey of the literature provides evidence that the likelihood of non-compliance depends on firm characteristics:

Emp is the number of employees, reflecting the firm's public visibility. Large companies are more likely to appoint female directors and to be compliant with institutional pressure (Gregoric et al. 2017; Udayasankar 2008; Brammer and Millington 2006; Goodstein 1994).

SDR is the standard deviation of returns. It is a proxy for the business risk.

LEV is the book value of debt to total assets ratio. External financing needs have all been shown to increase the probability of compliance with regulation and voluntarily disclosure (Bushee and Leuz, 2005; Healy and Palepu, 2001; Lang and Lundholm, 2000, 1993). Hence, firms with high leverage are expected to be more compliant than other firms.

USL is a dummy variable equal to 1 if the firm is listed on US markets. Firms non-listed on Euronext market could be less sensitive to domestic investors' pressure to be compliant with quota law: as many countries have no gender legislation. In US markets, companies are encouraged to disclose their gender diversity policies and set voluntary targets to achieve gender diverse boards. To the best of our knowledge, only California has passed, in 2018, gender quotas for boards in public companies headquartered in the state: they have to appoint, at least one woman on their board of directors by the end of 2019. In 2021, boards with five members must have two women, while those with six members must have three. Non-compliant firms could face fines of \$100,000 for a first violation and \$300,000 for a subsequent violation.

Descriptive statistics are presented in table 2. They show on average 12 members in boardrooms: 50% of them are independent and 23.94% are women (standard deviation is low). The average board tenure is almost 5 years (panel A). We report also that the percentage of women appointed to one of the monitoring committees (23.45%) is larger than the percentage of women sitting in advisory committees (13.38%). Multiple directorships are prominent in SBF120 boards: on average, 90.21% of directors are members of several boardrooms. Regarding directors' traits, panel (A) statistics show that, on average, board members are almost 60 years old with a low standard deviation. They are post-graduated directors: on average, 80.76% have a Master, or MBA or a Ph.D. degree. More than 60% of directors have attended at least one of the following programs: business, management or corporate law programs.

Despite the New Economic Regulation (NRE<sup>15</sup>) law passed in 2001 promoting the separation between management and control functions, 54% of boards display a CEO-Chair structure (panel B). Besides, the CEO tenure (7.21 years) is larger than directors' tenure (4.90 years).

Turning to ownership structure, statistics show that firms listed on the SBF120 index have attracted more institutional and foreign investors between 2011 and 2017. In fact, institutional investors hold the highest share of capital (on average 39.59%) while foreign investors have 11.92% on average. These results are not surprising since 55.49% of firms are listed also on US markets.

Regarding the non-compliance frequency, panel (B) reports that 25.12% of firm-year observations are non-compliant with the gender quota law between 2011 and 2017. The highest percentage of refractory firms was in the last stage of the law (2017): almost 61.29% of firms did not achieve the quota of 40 %, among them 14.47% have a state ownership (panel C). However, non-compliant firms have, significantly increased the number of women directors after 2014. In 2017: 30.67% of their directors are women (panel D).

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<sup>15</sup> <https://www.legifrance.gouv.fr/loda/id/JORFTEXT000000223114/>

**Table 2.** Descriptive statistics

Panel A Quantitative Variable	N	Mean	Std. Dev.	Min	Max
DC	868	1.83	4.59	0	28.24
AGE	717	57.56	4.50	42.6	69.92
MAGE	818	54.48	18.38	0	73.50
FAGE	818	42.35	23.14	0	74.00
EDUC	717	80.76	18.93	11.11	100.00
MEDUC	868	53.96	30.07	0	100.00
BEDUC	718	61.15	20.15	0	100.00
MBEDUC	868	38.92	25.08	0	100.00
MULT	718	90.21	10.75	33.33	100.00
MMULT	868	62.55	32.35	0	100.00
PIND	818	50.36	19.92	0	100.00
PFD	844	23.94	13.30	0	63.64
PFMON	718	23.45	20.20	0	100.00
PFAD	718	13.38	22.40	0	100.00
BSIZE	868	12.53	3.37	4	23
TENURE	546	4.90	2.41	0	13.07
CEOTENURE	788	7.21	8.14	0	43.00
INSOWN	789	39.59	24.59	0	100.00
LnSOWN	868	0.44	1.12	0	4.54
LnFOROWN	868	1.46	1.48	0	4.46
LnFOWN	868	0.89	1.49	0	4.39
LEV	848	0.25	0.16	0	0.85
SDR	788	5.74	2.75	1.733	28.43
LnEmp	748	9.91	1.83	4.025	13.07
Panel B Qualitative variables	Percentage				
DUAL		0		45.59	
		1		54.41	
USL		0		44.51	
		1		55.49	
NC		0		74.88	
		1		25.12	
Panel C Year	Non-compliant NC firms (%)		State-owned NC firms (%)		
2011		17.94		28.57	
2012		15.38		27.78	
2013		9.32		18.18	
2014		36.07		2.27	
2015		24.59		13.33	
2016		9.68		0	
2017		61.29		14.47	
Panel D	Percentage of female directors PFD				
Year	Total	Compliant firms		Non-compliant firms	
2011	13.05	15.90		0	
2012	15.25	18.03		0	
2013	19.21	21.19		0	
2014	22.61	29.30		10.76	
2015	27.16	31.63		13.43	
2016	32.67	34.54		15.24	
2017	36.32	45.27		30.67	

The correlation matrix does show some significant high coefficients. However, there are no multicollinearity

problems as the VIF values do not exceed 2.<sup>16</sup>

Table 3 provides the mean difference tests between compliant and non-compliant firms. We report only significant differences. Not surprisingly, non-compliant firms are prone to appoint fewer female members and independent directors to their boardrooms. They hire more post and business graduated directors than compliant firms. Also, they have busy male members as they display a higher level of multiple directorships on average.

Finally, statistics show that non-compliant firms are, on average, larger and riskier than compliant ones.

**Table 3.** Mean difference tests MDT between compliant and non-compliant firms with the gender quota law between 2011 and 2017

Quantitative Variables	Compliant firms	Non-Compliant firms	MDT
CEOTENURE	0.31	0.69	-0.38***
PFMON1	24.71	19.63	4.54***
EDUC	80.07	83.10	-3.03**
MEDUC	52.94	58.67	-5.73***
MMULT	61.91	66.04	-4.13**
PIND	49.45	53.06	-3.61**
PFD1	20.03	14.63	5.4***
SDR	5.85	5.43	0.42**
LEV	0.26	0.24	0.02
LnEmp	9.82	10.10	-0.28**
LnSOWN	0.46	0.32	0.14*
LnFOWN	0.85	1.02	-0.17*

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

#### 4. Method and Models

The study is divided into two parts: 1) First part aims to identify corporate governance characteristics of non-compliant firms; 2) the second part focus the consequences of non-compliance on corporate performance and risks.

##### 4.1 Firms non-compliance and corporate governance characteristics

We estimate the following models:

$$NC_{i,t} = \delta + \sum \beta_{i,t} \text{Governance variables} + \sum \alpha_{i,t} \text{Firm-variables} + \varepsilon_{i,t} \quad (1)$$

$$DC_{i,t} = \delta + \sum \beta_{i,t} \text{Governance variables} + \sum \alpha_{i,t} \text{Firm-variables} + \varepsilon_{i,t} \quad (2)$$

where  $NC_{i,t}$  is a binary variable that takes 1 if the firm  $i$  is non-compliant with the gender quota law, at the year  $t$  while  $DC_{i,t}$  is a proxy for the percentage of female members that non-compliant businesses need to hire to achieve the required quotas. *Governance variables* consist of the board characteristics and the ownership structure. Finally, the *Firm-variables* are the financial control variables, cross-listing variable and localization of the business headquarters.

We estimate model (1) using logistic regression. For model (2), we use panel-corrected standard error (PCSE) methods to deal with fixed individual-specific effects, and heteroscedasticity and autocorrelation problems. We run models (1) and (2) first on 2001-2017 sample, then on 2014-2017 subsample.

<sup>16</sup> For the sake of space, the correlation matrix and VIF tests are available upon request.

## 4.2 Corporate performance of Firms non-compliance

We examine whether refractory firms are bearing specific costs for not observing the gender law. We analyze the association between the firms' performances, the total risk and the likelihood of being non-compliant.

We estimate the following regressions:

$$PER_{i,t} = \delta + \sum \beta_{i,t} \text{Governance Characteristics} + \sum \alpha_{i,t} \text{Firm-Characteristics} + \varepsilon_{i,t} \quad (3)$$

where  $PER_{i,t}$  is a proxy for:

The financial performance assessed by the market proxy ROA return on asset ratio to capture the market valuation and a historical proxy MTB market to book value based on historical data.

The social performance measured by Vigeo-Eiris scores, specifically the overall score of corporate social responsibility (CSR)<sup>17</sup> and three CSR dimensions, namely the environmental ESG score (ESGENV), the social ESG score (ESGSOC), the governance ESG score (ESGGOV).

The risk-taking SDR measured by the standard deviation of returns.

We run some tests that confirm the existence of fixed individual specific effects and the presence of heteroscedasticity and autocorrelation problems. To deal with these issues, we used panel-corrected standard error (PCSE) methods for linear cross-sectional time series models where the parameters are estimated by OLS. Hence, we take into account implicitly time effects.

## 5. Empirical Results:

### 5.1 Corporate governance of non-compliance firms

Estimates are reported in table 4. All regressions show negative and significant associations between the percentage of female members hired during the last year and both proxies of non-compliance (NC and DC). We accept, therefore the hypothesis H1. This is in line with Gull et al. (2022); and Singh and Vinnicombe (2004) documenting that companies with gender diverse boards are more likely to increase the appointment of new women to their boardrooms. They provide evidence, drawn on UK data, that in less diverse boards, women are less likely to influence board decisions introducing effective changes, such as in board composition and organization.

Also, powerful CEOs are likely to be appointed to non-compliant firms: CEOTENURE coefficients are positive but significant at the 10% level. Surprisingly, the appointment of female members to monitoring committees has controversial associations with non-compliance proxies but all these associations are non-significant. In fact, monitoring committees such as audit, compensation, governance and nomination committees, are standing committees hiring mainly independent members in charge of supervising board functioning (Zalata et al., 2019; Knippen et al., 2019; Zhu et al., 2014; McDonald and Westphal, 2013; Reeb and Upadhyay, 2010). Female monitoring members are supposed to be "tough monitors" (Adams and Ferreira, 2009) and are expected to decrease legal risks and ensure the business compliance with gender legislation. However, such legislation could drive firms to increase gender diversity in their boardrooms but instead of substituting male members for female ones, they may add board seats on major committees, to increase committee diversity. This strategy nevertheless, has marginal effects on countering the gender bias, in male dominated board. In fact, male members still consider women as outgroup members and prefer appointing men as ingroup members (McDonald and Westphal, 2013; Westphal and Stern, 2006, 2007; Zhu et al., 2014). Another explanation is that appointing "tough" female monitors

<sup>17</sup> More details are provided in appendix A.

could be harmful and counterproductive in well-governed firms, particularly when they are hired because of external pressure such as mandating gender quotas (Adams and Ferreira, 2009).

Turning to the appointment of women in advisory committees such as finance, investment, strategy, corporate social responsibility, human resources management and production committees (Zalata et al. 2019; Kim et al., 2014; Faleye et al., 2013, 2011) shows a negative and significant association of PFAD1 with the non-compliance likelihood NC but positive and non-significant association with DC. Advisory committees are ad-hoc and created for a specific task (advisory committees) that could be for a limited time. They hire a large number of executives and a small number of independent members (Zalata et al., 2019; Hsu and Hu, 2016, Adams, 2009).

According to (1), (2), (3) and (4) regressions, we are prone to conclude that the composition of monitoring and advisory committees has no effect on the firm compliance when we consider the overall period 2011-2017. This is no longer true when we run the estimates on the subsample 2014-2017 as the gender law requires to increase the quotas (20% in 2014 and 40% in 2017). Indeed, regressions (5), (6), (7) and (8) show that board composition has significant effects on the non-compliance likelihood. For instance, when women are appointed to advisory committees, businesses are likely to be compliant with Copé-Zimmermann law: PFAD1 coefficients are negative and significant at the 1% and 5% levels. Unlike PFAD, the appointment of women to monitoring committees has, surprisingly, a positive but non-significant effect on the non-compliance likelihood. In line with the previous discussion, PFMON1 coefficients are positive but non-significant in all regressions. This result could be linked to the fact that audit committee is compulsory in France since 2008 (the Afep-Medef Code<sup>18</sup>). The composition and roles of audit committee are regulated<sup>19</sup>. Regarding the other committees, the Afep-Medef recommends their establishment. One may think that under external pressure, mandating quotas may be counterproductive and does not drive the expected benefits in terms of gender diversity while relying on voluntary initiatives could be more effective on shaping the business strategy and changing the making-decision process. The significant effect of PFAD1 reported in (5), (6), (7) and (8) could be related to the creation of at least one advisory committee per board: multiple laws have been passed since 2010 such as the Grenelle II law introduced to increase firms concern about social and environmental issues.<sup>20</sup>

Unlike previous findings, in 2014-2017 subsample, the age of directors is negatively associated with the non-compliance likelihood. We notice however that only regressions (7) and (8) display significant AGE and MAGE coefficients. We are prone to think that old male members, could encourage the appointment of more women directors to board positions to achieve compliance.

Also, multiple directorships seem to have non-significant effects in some regressions. Accordingly, we reject H2. However, when male directors are sitting in many boards, they are likely to increase the non-compliance likelihood: male multiple directorships MMULT and non-compliance proxies are positively and significantly associated. They may have diverse experiences in compliant businesses and do not want to damage their reputation.

In the same vein, non-compliant businesses are prone to have short-tenured directors: TENURE coefficients are negative and significant at the 1% level only in regressions (5), (6), (7) and (8). We cannot, therefore, accept H3. Long-tenured members are prone to decrease the non-compliance likelihood and to drive firms to increase the percentage of women to achieve the 20% and 40% quotas between 2014 and 2017. In fact, they are concerned about their reputation in the marketplace and legal risks. There is a strong evidence in the literature that long tenure could improve the governance quality and the board functioning. For instance, Adams and Ferreira (2009) show that directors' tenure is negatively and significantly associated with attendance problems and could improve

<sup>18</sup> [https://afep.com/wp-content/uploads/2020/01/Code-Afep\\_Medef-r%C3%A9vision-janvier-2020\\_-002.pdf](https://afep.com/wp-content/uploads/2020/01/Code-Afep_Medef-r%C3%A9vision-janvier-2020_-002.pdf)

<sup>19</sup>

[https://www.legifrance.gouv.fr/codes/article\\_lc/LEGIARTI000032258754#:~:text=Un%20membre%20au%20moins%20du,administration%20ou%20de%20la%20surveillance.](https://www.legifrance.gouv.fr/codes/article_lc/LEGIARTI000032258754#:~:text=Un%20membre%20au%20moins%20du,administration%20ou%20de%20la%20surveillance.)

<sup>20</sup> More statistics are available upon request.

the business strategy and the decision-making process (Elms and Pugliese; 2023; James et al., 2021; Patro et al., 2018; Bonini et al., 2021; Dou et al., 2015; Kim et al.; 2014).

Regarding CEO duality (DUAL) and CEO tenure (CEOTENURE), unlike Nekhili and Gattfaoui (2013), estimates show that powerful CEOs have non-significant effects. Indeed, their study has been conducted on the SBF120 firms between 2000 and 2004, before the introduction of the Copé-Zimmermann law: the appointment of female members had been, then, on a voluntary basis. In fact, more than 50% of year observations in our sample show a dual structure which is not compliant with the NRE law (2001) recommending the separation between the control and management functions. This is consistent with the entrenchment hypothesis accordingly to which powerful CEOs are less likely to be concerned about increasing gender diversity. We, therefore, cannot accept neither H4 nor H5.

Unlike Nekhili and Gattfaoui (2013), Brammer et al. (2007), and Hyland and Marcellino (2002), BSIZE coefficients have non-significant effects on NC. One explanation is the non-significant differences in terms of the board size between compliant and non-compliant firms (see table 3). Also, table (2) statistics are in line with Attia et al. (2020) and Beji et al. (2021) who find, on average, 12 directors in SBF120 boards between 2002 and 2013, and between 2003 and 2016. Furthermore, Beji et al. (2021) find non-significant differences on board size before and after 2011. This means that the Copé-Zimmermann law does not drive firms to increase the number of board directors to meet the quotas: they have actively changed their board composition and substitute male members for female ones.

Another interesting result is the non-significant association between the presence of independent members and the non-compliance proxies. In a seminar paper, Ferreira et al. (2020) provide evidence that the percentage of female independent members has increased because of the introduction of the gender legislation. However, in their study, they did not distinguish between compliant and non-compliant firms. Still, many other studies (see among others Grosvold, 2011; Carter et al., 2003; Erhardt et al., 2003; Johnson and Greening, 1999) provide evidence that the presence of independent members could be valuable to significantly increase gender diversity in boardrooms. In fact, their results are drawn on different countries where some countries have passed gender quotas, most often, targeting public companies (France, Italy among others) while other countries have set voluntary targets (like in USA and UK). Even in the presence of gender legislation, some gender quota laws are soft like in Spain<sup>21</sup> recommending all large public and private Spanish firms to appoint a target of 40 percent of each gender to serve as board directors by 2015. Despite the fact that gender legislation does provide some incentives to observe the law (such as the strong working relationship with the government), there are no penalties against refractory and powerful firms that do not need the government support (De Cabo et al., 2019).<sup>22</sup>

Another explanation could be that only in the absence of gender quota laws, the presence of independent members could be an alternative and valuable governance tool to increase diversity by bringing new perspectives and ideas on the board composition and functioning (Carter et al., 2003). Nevertheless, more studies should be conducted to scrutinize the influence of independent members' traits, particularly their age, gender, academic and professional backgrounds, multiple directorships, networks, nationality, etc. and how they changed over the years specifically after the introduction of laws that could influence the business strategy such as the Grenelle II law and Copé-Zimmermann law in 2011.

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21 The 2007 Spanish Gender Equality Act

22 Do 'soft law' board gender quotas work? Evidence from a natural experiment, European Management Journal Volume 37, Issue 5, October 2019, Pages 611-624

**Table 4.** Estimates of model (1) and model (2)

Variables	2011-2017				2014-2017			
	(1) NC	(2) NC	(3) DC	(4) DC	(5) NC	(6) NC	(7) DC	(8) DC
CEOTENURE	0.0838* (0.0479)	0.101* (0.0581)	0.0408 (0.0338)	0.0565* (0.0319)	0.0725 (0.0456)	0.0679 (0.0441)	0.00242 (0.0499)	0.0490 (0.0473)
PFMON1	-0.320 (1.767)	1.548 (2.035)	1.138 (1.255)	0.700 (1.192)	3.580* (1.991)	5.027** (2.497)	0.183 (2.252)	1.510 (2.216)
PFAD1	-4.906* (2.629)	-7.580** (3.584)	0.0824 (1.221)	0.0439 (1.145)	-8.548*** (3.106)	-8.373*** (3.122)	-5.372** (2.474)	-5.357** (2.406)
AGE	0.0259 (0.0832)		-0.0218 (0.0504)		-0.0236 (0.0717)		-0.175* (0.0923)	
MAGE		0.0782 (0.0481)		-0.0358 (0.0307)		-0.0594 (0.0512)		-0.145*** (0.0369)
FAGE		-0.0501** (0.0244)		0.0114 (0.0138)		0.0332 (0.0243)		0.0254 (0.0177)
EDUC	0.0157 (0.0220)		0.00538 (0.0127)		-0.0305 (0.0238)		-0.0157 (0.0207)	
MEDUC		0.0435 (0.0323)		-0.00657 (0.0142)		-0.0611* (0.0334)		-0.0292 (0.0266)
BEDUC	-0.0126 (0.0209)		-0.00152 (0.0135)		0.00745 (0.0204)		0.0269 (0.0210)	
MBEDUC		-9.96e-05 (0.0309)		0.00145 (0.0143)		0.0187 (0.0248)		0.0147 (0.0249)
MULT	-0.0285 (0.0337)		0.0453** (0.0203)		0.0147 (0.0420)		0.0960*** (0.0354)	
MMULT		-0.0492 (0.0338)		0.0166 (0.0160)		0.0679** (0.0343)		0.0658*** (0.0254)
PIND	-0.00691 (0.0180)	-0.00650 (0.0203)	0.0369** (0.0146)	0.0401*** (0.0144)	0.00568 (0.0257)	0.0202 (0.0257)	0.0307 (0.0245)	0.0283 (0.0214)
PFD1	-0.0519* (0.0276)	-0.0354 (0.0312)	-0.0544*** (0.0192)	-0.0578*** (0.0193)	-0.152*** (0.0353)	-0.174*** (0.0407)	-0.228*** (0.0407)	-0.243*** (0.0438)
BSIZE	0.213* (0.110)	0.288** (0.126)	0.0406 (0.0914)	0.109 (0.0842)	0.00895 (0.177)	0.0203 (0.168)	-0.0845 (0.164)	0.0715 (0.163)
TENURE	-0.140 (0.115)	-0.171 (0.128)	-0.0452 (0.102)	-0.0555 (0.102)	-0.587*** (0.186)	-0.609*** (0.170)	-0.402*** (0.130)	-0.554*** (0.136)
DUAL	-1.455** (0.705)	-1.166 (0.767)	-0.475 (0.577)	-0.394 (0.570)	-1.755** (0.886)	-1.710* (0.930)	-1.116 (0.903)	-0.948 (0.894)
INSOWN	0.00498 (0.0135)	0.00258 (0.0158)	-0.00750 (0.00918)	-0.0102 (0.00917)	0.0211 (0.0215)	0.0273 (0.0229)	0.00945 (0.0222)	0.0113 (0.0221)
LnSOWN	-0.612** (0.298)	-0.674** (0.326)	-0.235 (0.215)	-0.320 (0.210)	-0.528 (1.744)	-0.862 (1.446)	-3.081** (1.521)	-3.368* (1.770)
FOWN	-0.0249 (0.0220)	-0.0250 (0.0236)	0.0342* (0.0184)	0.0293* (0.0169)	0.0709** (0.0361)	0.0416 (0.0294)	0.0836** (0.0411)	0.0699** (0.0315)
FOROWN	0.00595 (0.0184)	0.0183 (0.0209)	0.0171 (0.0124)	0.0143 (0.0123)	0.00747 (0.0274)	-0.0101 (0.0260)	0.0308 (0.0260)	0.0195 (0.0259)
LEV	-1.484 (2.386)	-2.762 (2.727)	-1.417 (1.664)	-1.074 (1.629)	-4.905* (2.703)	-4.812* (2.614)	-3.342 (2.668)	-2.595 (2.437)
LnEmp	-0.0273 (0.176)	-0.0369 (0.198)	-0.0487 (0.123)	-0.0347 (0.120)	0.346 (0.272)	0.318 (0.283)	0.00901 (0.237)	0.112 (0.230)
SDR	-0.0925 (0.127)	0.0552 (0.146)	-0.112 (0.112)	-0.110 (0.109)	-0.112 (0.241)	-0.121 (0.250)	-0.131 (0.214)	0.000660 (0.204)
USL	-0.606 (0.717)	-0.795 (0.781)	-0.0179 (0.623)	-0.343 (0.579)	-3.593*** (1.304)	-4.173*** (1.321)	0.276 (1.302)	-0.138 (1.256)
Industry effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.480 (6.076)	-3.800 (3.700)	-1.459 (3.780)	1.600 (2.601)	5.958 (6.634)	4.278 (5.304)	11.69 (7.291)	11.76** (4.654)
N of observations	302	316	316	330	121	127	127	133
R-squared			0.146	0.139			0.458	0.444
N of firms	99	104	100	105	77	81	79	83

Standard errors are in parentheses, and \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , and \*  $p < 0.1$ .

Turning to ownership variables shows some interesting findings. First, we find negative associations between state ownership and both dependent variables NC and DC. However, some coefficients are non-significant. In the presence of a state ownership, the business is expected to be compliant and increase the women quota in boardrooms. Also, there are non-significant associations with institutional and foreign ownerships. One may think that institutional and foreign investors are not concerned about gender diversity issues and are less likely to select firms actively in line with their board composition.

Turning to family ownership shows negative and significant associations with non-compliance. This result is consistent with Nekhili and Gattfaoui (2013) arguing that family shareholders may interfere in the board composition and prefer family-affiliated women and female directors with specific qualifications. After 2011, all of the SBF120 firms have been forced to extend the pool of female candidates in order to comply with the law: they hire independent, foreign and business-educated women directors (Attia et al., 2020; Beji et al. 2021) which is not in line with family shareholders' preferences.

## 5.2 What is the cost of non-compliance?

The estimates are presented in table (5). They show that all performance measures are not significantly associated with the likelihood of non-compliance. First, the financial performance does not depend on the business non-compliance. This result is robust with both proxies for financial performance (ROA and MTB).

These results are consistent with institutional theory (Fligstein 1985, and Tolbert and Zucker 1983) as the costs of complying with the regulatory framework are not effective. Firms do not have to actively change their organizations and functioning routines. However, these findings are not in line with neither the legitimacy theory (DiMaggio and Powell, 1983; Meyer and Rowan, 1977) nor the resource dependency theory (Pfeffer and Salancik, 1978) according to which businesses could appoint new members to their boards to decrease uncertainty, target more and diverse external resources (Hillman et al., 2009) and enhance the market image of the business (De Cabo et al., 2019).

Surprisingly, all specific proxies for social performance (ENV, SOC, and GOV) are positive but non-significantly associated with the non-compliance likelihood. The overall CSR score is, therefore, non-significantly associated with NC. This result is consistent with Beji et al. (2021) showing that the presence of female members has limited effects on CSR performance. Specifically, women directors are positively and significantly associated only with the governance quality and the protection of human rights. In the same vein, we find that PFD displays a positive and significant coefficient, at the 10% level, in ESGGOV regression.

Table 5 provides evidence of a negative and significant association between NC and SDR which means that refractory firms are not observing the law to avoid increasing their total risk, specifically when none of the non-compliant firms' risk fines.

**Table 5.** The Estimates of The Regression (2)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Variables	ROA	MTB	SDR	CSR	ESGENV	ESGSOC	ESGGOV
NC	0.004 (-0.009)	0.205 (-0.210)	-0.674** (-0.272)	1.054 (-0.955)	0.376 (-1.392)	0.939 (-1.038)	1.202 (-1.035)
PIND	0.000 (0.000)	0.011 (-0.007)	-0.010 (-0.007)	0.07** (-0.033)	0.034 (-0.049)	0.048 (-0.037)	0.126*** (-0.034)
PFD	0.000 (0.000)	0.002 (-0.009)	-0.004 (-0.010)	0.056 (-0.042)	0.101 (-0.064)	0.040 (-0.048)	0.0781* (-0.043)
BSIZE	0.001 (-0.001)	-0.002 (-0.035)	-0.012 (-0.044)	0.528*** (-0.191)	0.427 (-0.271)	0.473** (-0.226)	0.458** (-0.204)
TENURE	0.001	-0.052	0.022	-0.518**	-0.894**	-0.267	-0.713***



	-(0.002)	-(0.047)	-(0.050)	-(0.255)	-(0.369)	-(0.291)	-(0.237)
DUAL	-0.025***	-0.408	0.118	-0.799	-0.851	-0.993	0.046
	-(0.008)	-(0.267)	-(0.284)	-(1.266)	-(1.807)	-(1.417)	-(1.300)
INSOWN	0.000	0.000	-0.002	-0.004	0.015	-0.015	0.004
	(0.000)	-(0.003)	-(0.005)	-(0.019)	-(0.030)	-(0.022)	-(0.020)
LnSOWN	-0.005	0.108	0.158	1.069	1.807*	1.811**	-0.156
	-(0.006)	-(0.161)	-(0.160)	-(0.680)	-(0.978)	-(0.770)	-(0.521)
FOWN	-0.001***	-0.004	0.002	-0.028	-0.035	-0.021	0.008
	(0.000)	-(0.007)	-(0.007)	-(0.044)	-(0.062)	-(0.050)	-(0.046)
FOROWN	0.000	-0.003	-0.002	0.074**	0.085**	0.094***	0.034
	(0.000)	-(0.009)	-(0.007)	-(0.029)	-(0.043)	-(0.034)	-(0.030)
LEV	-0.092***	-1.553**	-0.043	7.854*	7.370	8.321*	10.97**
	-(0.025)	-(0.671)	-(0.958)	-(4.182)	-(5.985)	-(4.800)	-(4.453)
LnEmp	-0.010*	-0.310***	-0.088	2.278***	2.890***	3.071***	0.892***
	-(0.005)	-(0.115)	-(0.090)	-(0.381)	-(0.560)	-(0.474)	-(0.346)
NonLhead	0.061	1.314	2.534**	-3.331	-9.587*	-4.691	5.161
	-(0.045)	-(1.499)	-(0.984)	-(4.080)	-(5.346)	-(4.430)	-(4.246)
USL	-0.027**	-0.383	0.891***	0.670	1.736	0.176	0.341
	-(0.012)	-(0.341)	-(0.309)	-(1.462)	-(2.250)	-(1.736)	-(1.360)
Industry effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.177***	5.780***	6.400***	9.200*	4.985	2.756	19.10***
	-(0.052)	-(1.226)	-(1.155)	-(5.378)	-(7.960)	-(6.446)	-(5.383)
Number of observations	434	409	425	353	353	353	353
R-squared	0.213	0.227	0.214	0.574	0.337	0.553	0.533
Number of Firms	81	75	79	76	76	76	76

Standard errors are in parentheses, and \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , and \*  $p < 0.1$ .

## 6. Robustness section: Are non-compliant-firms looking for specific female candidates?

As highlighted in panel D of table 2, most non-compliant firms have gender diverse boardrooms but they have not been able to observe the law quotas. One may raise the following questions: are these businesses refractory because they are looking for specific director's profiles? Is the existing pool of women candidates not suitable for their boardrooms?

In order to address this question, we examine, hereafter, the traits of their board members and consider the following variables:

- FPIND is the percentage of female independent directors in the boardroom.
- PPFOR is the percentage of female foreign directors.
- FTENURE is the average tenure of female members.
- FAGE is the average age of female board members.
- FEDUC is the percentage of high-educated female directors who have Master/MBA/ Ph.D. degree.
- FBEDUC is the percentage of female directors who have graduated from management, business and corporate law institutions.

- FMULT is the percentage of women members with multiple directorships.

Statistics in table 6 show, first, that there are differences in female directors' attributes serving on non-compliant and compliant firms, in particular in terms of tenure, independence, multi-directorship, nationality, and educational level. The mean difference tests are significant, at the 1% and 5% levels. Specifically, in non-compliant firms, female directors are more long-tenured, high-educated and serving on many boards. Also, they are likely to be independent and foreigners.

**Table 6.** Mean difference tests MDT between compliant and non-compliant firms with the gender quota law between 2011 and 2017

Quantitative Variables	Compliant firms	Non-Compliant firms	MDT
FTENURE	2.62	3.11	-0.49***
FAGE	53.85	55.01	-1.16**
FMULT	21.32	23.61	-2.29**
FPIND	18.93	23.34	-4.41***
PPFOR	7.65	9.69	-2.04***
FEDUC	22.05	23.94	-1.89**

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

We estimate the following logistic regression model using panel data:

$$NC_{i,t} = \delta + \sum \beta_{i,t} \text{Governance variables} + \sum \beta_{i,t} \text{Women traits} + \sum \alpha_{i,t} \text{Firm-variables} + \varepsilon_{i,t} \quad (4)$$

where Women traits consist of the variables listed above. Estimates are presented in table 7.

**Table 7.** The estimates of the regression (3)

Variables	2011-2017		2014-2017	
	NC (1)	DC (2)	NC (3)	DC (4)
DUAL	0.949 (0.700)	0.621 (0.605)	-1.405** (0.654)	-1.648 (1.188)
BSIZE	-0.0503 (0.107)	-0.0433 (0.0952)	0.0398 (0.130)	0.174 (0.202)
FPIND	-0.00713 (0.0419)	-0.0309 (0.0362)	0.0281 (0.0201)	0.0444 (0.0436)
FTENURE	-0.0562 (0.0843)	-0.0611** (0.0306)	-0.224* (0.119)	-0.435** (0.187)
PPFOR	5.095 (6.797)	11.01* (6.426)	-10.55** (4.242)	-18.09*** (6.545)
FEDUC	-0.0219 (0.0557)	0.0638 (0.0535)	-0.0273 (0.0398)	-0.0761 (0.0737)
FBEDUC	-0.00419 (0.0539)	-0.0452 (0.0402)	0.0253 (0.0404)	0.122** (0.0585)
FMULT	0.0421 (0.0486)	-0.00903 (0.0330)	0.0579 (0.0401)	0.0350 (0.0688)
FAGE	-0.0172 (0.0203)	0.0128 (0.0137)	0.00496 (0.0148)	0.00491 (0.0236)
LEV	-1.051 (2.173)	-2.263 (1.711)	-2.812 (1.915)	-2.984 (3.624)
SDR	0.0769 (0.149)	-0.102 (0.124)	-0.136 (0.172)	-0.114 (0.217)
INSOWN	-0.0238 (0.0147)	-0.0159 (0.0124)	0.00107 (0.0141)	-0.0306 (0.0231)
LnSOWN	0.0571 (0.271)	-0.142 (0.243)	-0.493 (0.613)	-2.644*** (0.877)
FOWN	0.0313 (0.0251)	0.0137 (0.0169)	0.0320 (0.0200)	0.139*** (0.0531)
FOROWN	0.0331* (0.0183)	0.0193 (0.0139)	-9.34e-05 (0.0165)	0.0558* (0.0338)
USL	-0.479 (0.705)	-0.100 (0.825)	-2.196** (1.043)	1.027 (1.715)
LnEmp	0.0506	0.0431	0.509***	0.870**

	(0.169)	(0.159)	(0.181)	(0.342)
Industry effect	Yes	Yes	Yes	Yes
Year effect	Yes	Yes	Yes	Yes
Constant	-1.070	2.789	-2.705	-4.846
	(2.605)	(2.362)	(3.227)	(5.339)
Number of Observations	215	236	126	133
R-squared		0.123		0.285
Number of firms	53	54		81

Standard errors are in parentheses, and \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , and \*  $p < 0.1$ .

They show that the average tenure of female members is negatively and significantly associated with non-compliant proxies, in almost all regressions, particularly between 2014-2017. Also, there is a negative and significant relation between the percentage of foreign female directors and NC and DC proxies, specifically in the 20%-40% period. We are tempted to think that non-compliant firms are likely to appoint short serving and non-foreign women directors. One could think of the gender bias women candidates are facing, in these firms, during the selection process, and the attractiveness of these no- or low-gender diverse boards.

## 7. Conclusion

Gender legislation has been considered in many countries as an effective tool to favor equality between men and women, specifically to increase gender diversity in top management positions. France passed in 2011, the Copé-Zimmermann law to force listed firms to gradually gender-balance their boardrooms by reaching at least 40% of female directors in 2017.

Surprisingly, many firms have been non-compliant with the gender quota law between 2011 and 2017: 36.07% in 2014 have less than 20% and 61.29% in 2017 have less than 40%. Despite the fact that it is introduced as a hard gender law, the non-compliant board appointments have not been cancelled and non-fines have been required.

This study examines the determinants of non-compliance likelihood. Particularly, we focus on their governance, financial and ownership characteristics. It shows that the demographic and cognitive traits of board members, as well as the board features are likely to be associated with the non-compliance likelihood. For instance, powerful CEOs and busy directors, specifically among men directors are not likely to favor board gender diversity. Long serving members and female members on advisory committees are concerned about the law and legal risks. We find that non-compliant firms are likely to hire short-tenured and non-foreigner female members.

Finally, when the refractory firms do not face sanctions, they are not taking the risk of changing their board composition, specifically when their financial and social performances are not significantly damaged.

The current paper contributes to the debate on the effect of the institutional environment achieving legitimacy. It shows that institutional theories cannot explain resistance to bringing changes in organizations. One explanation could be that legitimacy cannot be achieved by only complying with laws and rules but also by alignment with cognitive frameworks. Constraining processes, such as gender legislation, cannot be enough to « force one unit in a population to resemble other units that face the same set of environmental conditions » (DiMaggio and Powell, 1983), particularly when the coercive pressures brought by governmental actions are not efficient in introducing effective changes. They should be supported by more normative pressures such as education, and focusing on different background experiences.

The current study displays several limitations. In the future research, it would be interesting to analyze the compliance with gender legislation from many perspectives as directors are assuming interlinked tasks, like in board committees. Also, comparing the female profiles in compliant and non-compliant businesses is likely to help better understanding the complexity of board tasks, and their effects on business strategy.

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## Conflict of interest

The author claims that the manuscript is completely original. The author also declares no conflict of interest.

## Author contributions

Conceptualization: Ouidad YOUSFI, Nadia LOUKIL; Investigation: Ouidad YOUSFI, Nadia LOUKIL; Methodology: Ouidad YOUSFI, Nadia LOUKIL; Formal analysis: Ouidad YOUSFI, Nadia LOUKIL; Writing – original draft: Ouidad YOUSFI, Nadia LOUKIL; Writing – review & editing: Ouidad YOUSFI, Nadia LOUKIL.

## Appendix

### A1. A brief summary of VigeoEiris CSR scores

(Kindly refer to the final page.)

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A1. A brief summary of VigeoEiris CSR scores

CSR scores					
Human Resources (HR)	Environment (ENV)	Business Behavior (BB)	Corporate Governance (CG)	Community Involvement (CIN)	Human Rights (HRs)
Social dialogue	Environmental strategy	Product safety	Board of directors	Local social and economic development	Fundamental rights
Employee participation	Pollution prevention and control	Information to customers	Audit and internal controls	Societal impact of products and services	Fundamental labour rights
Responsible organizations	Green products and services	Responsible customer relations	Shareholders	Philanthropic contributions	Nondiscrimination and diversity
Career development	Biodiversity	Supply chain management (Contractual Standards)	Executive remuneration		Forced labour and child Labour
Responsible remuneration systems	Water	Supply chain management (Environmental standards)			
Health and safety	Energy	Supply chain management (Labour standards)			
Responsible hours	working	Corruption			
	Atmospheric emissions	Competition			
	Waste management (noise/vibration) Transportation	Lobbying			
	Impacts of product use and disposal				