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Résumé de l'article

Cette étude analyse l'impact des traits du CEO et de son pouvoir sur la performance sociale. Elle porte sur les entreprises du SBF120. Les résultats montrent que le pouvoir du CEO impacte partiellement la démarche RSE. Par ailleurs, les CEO ayant un parcours académique scientifique et/ou en lien avec le monde des affaires semblent marginaliser la performance sociale. Dans les entreprises familiales, le pouvoir du CEO, quand ce dernier n'est pas très âgé, favorise la démarche RSE.

Powerful CEOs and CSR performance: Empirical evidence from France

Le pouvoir du CEO et la performance sociale : une étude du contexte français

El poder del CEO y el desempeño social: estudio del contexto francés

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ABSTRACT

This study analyses the impacts of CEO's traits on CSR performance. It is conducted on listed firms on the SBF120[1]. The major outcomes of the studies are as follows: First, powerful CEOs appear as having significant effects only on specific CSR areas. Second, CEOs who graduated business, science or engineering degrees decrease the firm's social performance. Also, powerful CEOs in family businesses are prone to increase the firm's commitment in CSR while senior CEOs are likely not to feel concerned by CSR.

Keywords: powerful CEO, CEO traits, education, social performance, family firms.

JEL Classification Codes: M14, G30, G39, J1

Résumé

Cette étude analyse l'impact des traits du CEO et de son pouvoir sur la performance sociale. Elle porte sur les entreprises du SBF120[2]. Les résultats montrent que le pouvoir du CEO impacte partiellement la démarche RSE. Par ailleurs, les CEO ayant un parcours académique scientifique et/ou en lien avec le monde des affaires semblent marginaliser la performance sociale. Dans les entreprises familiales, le pouvoir du CEO, quand ce dernier n'est pas très âgé, favorise la démarche RSE.

Mots-Clés : pouvoir du CEO, traits individuels du CEO, éducation, performance sociale, entreprises familiales.

JEL Classification Codes : M14, G30, G39, J1

Resumen

Este estudio analiza el impacto de los rasgos individuales del CEO y su poder en el desempeño social. Se trata de estudiar las empresas SBF120. Los resultados muestran que el poder del CEO impacta parcialmente el enfoque de RSE. Además, los directores ejecutivos con formación académica científica y/o vinculados al mundo empresarial parecen marginalizar el desempeño social. En las empresas familiares, el poder del CEO promueve el enfoque de RSE a condición de que este sea bastante joven.

Palabras Clave: Poder del CEO, rasgos individuales del CEO, educación, desempeño social, empresas familiares.

JEL Classification Codes: M14, G30, G39, J1

1. The SBF120 index consists of the largest 120 capitalizations listed on the French stock Exchange market (SBF: Société des Bourses Françaises).
2. L'indice SBF120 est composé des 120 plus grandes capitalisations cotées en Bourse française (SBF : Société des Bourses Françaises).

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The strong connections between corporate businesses and their environment and their perpetual evolution have shifted the interest towards leaders, more specifically their qualities, instead of focusing on supervisors (Vallejo, 2009). The CEO's essential role in terms of business performance and strategy, innovation and risks has been extensively analyzed (see among others, Adams *et al*, 2015; Brown and Sarma, 2007; Bertrand and Schoar, 2003). Studies provide evidence that CEOs and top executives have a powerful influence on corporate behaviour and performance: they could shape corporate decisions, especially when it comes to investment-related decisions (Bertrand and Schoar, 2003). Finkelstein (1992) was among the pioneers to focus on powerful CEOs, specifically CEOs who have capacities to achieve their goals. CEO power is a multidimensional concept that is likely to be strengthened in different ways and through different channels. According to Bebchuk and Fried (2005), CEO power is defined as the ability of the CEO to affect directors' decision-making in a significant manner, which therefore revokes the effectiveness of corporate governance mechanisms. Haleblian and Finkelstein (1993) consider CEO Power as the ability of the CEO to consistently influence the decision-making process of the firm and to overcome barriers. Accordingly, it shows how much decision-making power is concentrated in the CEOs' hands (Liu and Jiraporn, 2010). Finkelstein (1992) defines power as the ability of the CEO to tackle both internal and external sources of uncertainty. The CEO power is strengthened when the CEO also is chair of the board (the structural power), is skilful and has a board membership experience (the expert power), holds a share of capital (the ownership power), enjoys a good reputation and has powerful contacts in his/her connection network (the prestige power). The CEOs' power does not stem only from their formal position, ownership, expert, and prestige (Faccio *et al*, 2016; Farag and Mallin, 2016), it could also arise from their social, behavioural and psychological characteristics (Hambrick and Mason, 1984). Indeed, CEO-owners enjoy an ownership power as they are also shareholders. In dual structure, CEOs are board's chairs: they display a structural power. Being skilful and having a past board membership experience add an expert power. Finally, CEOs who have a good image/reputation in the marketplace and an extensive address book at their disposal could benefit from a prestige power. Besides, the CEOs' power and influence do not stem only from their formal position, ownership, expertise, and prestige (Faccio *et al*, 2016; Farag and Mallin, 2016; Bach and Smith, 2007), they could be closely related to cognitive factors such as their social, behavioural and psychological characteristics (Hambrick and Mason, 1984). For instance, Bach and Smith (2007) define the CEO power as the capacity to exert influence and to change the behaviour of a person or group in some intended way.

According to Yim (2013), and given the fact that CSR is a discretionary activity undertaken by the company's top management, CEOs may be considered as the main company executives. Thus, decisions on CSR investments might strongly rely on them.

CEO power has attracted a fair share of attention (Adams *et al*, 2015; Yim, 2013; Brown and Sarma, 2007). Indeed, the interaction between CEO power and a firm's performance has received a considerable attention in the literature in the past decades (Adams *et al*, 2005). Furthermore, the existing literature provides an extensive body of research on how powerful CEOs could influence risk preferences (Faccio *et al*, 2016; Farag and Mallin, 2016; Adams *et al*, 2015), the firm investments (i.e.: Rekker *et al*, 2014; Mahoney and Thorn, 2006, etc.), the choice of strategic relationships (Finkelstein, 1992), diversification (Miles and Cameron, 1982), and innovation (Loukil *et al*, 2020).

With regards to social performance, very few studies have analyzed how CEO's attributes could impact corporate social responsibility *CSR* (Cherian *et al*, 2020; Muttakin *et al*, 2018; Sheikh, 2019; Li *et al*, 2016; Fabrizi *et al*, 2014; Manner, 2010). Most of those rely on US and Asian data and use KLD ratings to assess the level of corporate social performance (CSP). To the best of our knowledge, there are no studies conducted on European countries examining specific areas of CSR. This paper is the first document which raises this question drawn on data of listed firms on SBF120 index. We rely on a European agency of CSR rating: Vigeo Eiris CSR scores to assess the global CSR performance and in particular CSR performances. In fact, in France, CEOs belong to the same networks and business fields as board members, many CEOs had a board membership experience while some board directors had a CEO experience. Many CEOs and directors have close relationships; it is therefore interesting to examine to which extent CEOs could be powerful over the decision-making process in such an environment. Also, CEOs have graduated from the same prestigious and selective institutions (*Grandes écoles*). Over the past years, their programs have been updated and they have

remained focused on social and environmental issues: they have introduced courses to promote entrepreneurship and CSR.

Despite the introduction of the New Economic Regulations (NER) law in 2001, which recommends the separation between the CEO and the chair board functions, surprisingly, more than 50% of our firm-year observations display a non-compliant structure where the CEO also is the chairperson. Furthermore, the increase of female representation after the introduction of the gender quota law in 2011 has a positive effect on the increase of the board sensitivity towards social and environmental insights. Many studies pointed out the fact that women in top positions are positively associated with CSR performance (Beji *et al*, 2020). However, the number of female CEOs remains too low (in 2021, 8% at Fortune 500 companies[3], only one female CEO in CAC40 firms[4]). Shedding light on CEOs role and specifically their traits could lead to a better understanding of CSR decisions.

Besides, the French socially responsible investing (SRI) market is very dynamic since the late 1990s (Crifo and Mottis, 2016). It is considered as the leading European SRI market both in terms of assets under management and number of funds (EUROSIF 2016). Indeed, France has become a world leader in ESG integration in recent years, with a total of €338 billion of assets including ESG in 2015 (EUROSIF 2016). Moreover, France is the first European country to have legislated on reporting on sustainable development. In fact, since 2001 onwards, the French government has been concerned about social and environmental impact of conventional investments. It has introduced many initiatives and laws to encourage CSR investments and increase transparency, such as, for instance, the New Economic Regulations (NER law, 2001), the Grenelle Environment Forum (2007 and 2010), the Energy Transition Act (2015), the France's Due Diligence Law (2017) and the PACTE Law (2019). This puts pressure on French firms, particularly listed ones, to regularly improve their CSR ratings.

Furthermore, according to the latest barometer, comparing the CSR commitments of French companies with those of the OECD and the BRICS, France is the third in the global ranking of CSR management after Sweden and Finland with an average score of 51 out of 100. In fact, almost 70% of SMEs companies and 75% of large companies now have a CSR management system adapted to exemplary, according to the same study.

Accordingly, the choice of the French context complements the existing literature, which has mostly examined the association between CEOs and CSR performance in emerging economies (Khan *et al* 2013; Meng *et al*, 2013) and less often in advanced economies (Harjoto and Jo, 2011).

The current paper contributes to this emerging literature on the influence of CEO on social performance, and therefore on enhancing CSR performance. This literature mainly relies on two different theories. On the one hand, from an agency theory perspective, increasing the CEO power is more likely to increase investments in CSR activities to expropriate rents and increase personal benefits. Most of the time, over-powerful or entrenched CEOs indeed get involved in a personal building reputation to enhance their public image at the expense of shareholders' interests (Malmendier and Tale, 2005; and Friedman, 1970). This is the CSR-overinvestment hypothesis, according to which CSR investments are not likely to align the interests of managers and shareholders (Barnea and Rubin, 2010). However, Sheikh (2019) and Li *et al* (2016) provide evidence that powerful CEOs do not favor socially responsible investments. To assess the CEO power, they rely on various proxies such as the CEO's compensation, tenure and duality. Hong *et al* (2016) and Jo and Harjoto (2011) show that internal and external corporate governance processes, such as CEO's compensation, board leadership, board independence, institutional ownership, analyst following and anti-takeover provisions, are essential keys of managerial incentives for social performance. More recently, Cherian *et al* (2020) provide evidence that the separation between CEO and chair positions decreases agency conflicts and increases CSR disclosures. All these results are the exact opposite of what the agency assumption suggests. On the other hand, according to the upper echelon theory (Hambrick and Mason, 1984), the firm's decisions reflect the values and cognitive features of its powerful actors. CEOs characteristics, such as age, gender, education, past professional experience, could influence the decision-making process and the firm's outcomes.

3. https://www.statista.com/chart/13995/female-ceos-in-fortune-500-companies/#: ~: text=Only%208%20Percent%20of%20CEOs%20At%20Fortune%20500%20Companies%20Are%20Female,-Fortune%20500&text=As%20of%20June%2C%20there%20were,the%20country's%20biggest%20public%20businesses.

4. https://www.tradingsat.com/cac-40-FR0003500008/actualites/cac-40-ou-sont-les-patronnes-957375.html#: ~: text=Une%20seule%20femme%20%C3%A0%20la%20t%C3%AAte%20d'une%20entreprise%20du%20CAC%2040&text=Ce%20dernier%20a%20promu%20au,int%C3%A9rim%20assur%C3%A9%20par%20Claire%20Waysand.

Accordingly, if CEOs decide to invest in CSR activities, it is not to take advantage of the situation: they could be sensitive to the stakeholders' expectations and/or they believe that increasing the firm's value cannot be achieved without going beyond the shareholders' expectations. In this sense, Jiraporn and Chintrakarn (2013) have found out that engagement in CSR activities increases whenever the power of less-powerful CEOs increases. However, if they become entrenched and more powerful, investment in CSR consequently decreases.

The current paper provides the following results. First, we show that powerful CEOs have non-significant effects on the global social performance: They are likely to decrease specific areas such as the firms' commitment in community projects and concern about business ethics. Second, CEOs with business, science or engineering degrees are negatively associated with the global social performance and many specific areas of CSR activities. The higher their level of education, the most concerned about the global social performance they become. Also, we find that powerful CEOs in family businesses are prone to increase the firm's commitment in all CSR areas while old CEOs are negatively associated with global social performance. Finally, we provide evidence that the effects of CEOs' attributes on CSR performance depend on industry characteristics such as, for instance, the technological dimension.

This study is structured as follows. Section (1) provides the survey from the literature and the hypotheses. Data, variables and methodology are presented in section (2). Section (3) discusses the results. We test the robustness of our findings in section (4). The last section concludes the paper.

State of art and hypotheses

CEO power and CSR performance

According to the stakeholder theory and the resource-based view theory, CEOs invest in CSR to balance the interests of stakeholders, to increase the firm value, to create competitive edge and not to enhance their personal reputations (Jo and Harjoto, 2011). On the other hand, from a Jensen and Meckling's (1976) agency perspective, Barnea and Rubin (2010) point out that CEOs have an interest in over-investing in CSR to build their personal reputations as outstanding social citizens at the expense of shareholders. Prior research considers that powerful CEOs tend to be more entrenched than able managers (Jiraporn *et al* 2012). Hence, many studies have investigated how CEO power could impact the CSR performance (see among others, Francoeur *et al*, 2021; Sheikh, 2019, Muttakin *et al*, 2018; Li *et al*, 2016). Most of them are based on an agency approach and rely on US data. They provide evidence that powerful CEOs are reluctant to engage in social responsibility-related activities, which lead to lower CSR performance (Sheikh, 2019, Muttakin *et al*, 2018; Li *et al*, 2016). In the same vein, Sheikh (2019) stated that the structural and ownership dimensions of CEO power are negatively related to CSR performance, while the expert dimension has no significant effect. Using CEO pay slice (Bebchuk *et al*, 2011), CEO tenure and CEO duality to measure CEO power, Li *et al* (2016) pointed out a negative relation between CEO power and CSR. However, using the same measure, Jouber (2019) and Jiraporn and Chintrakarn (2013) provide mixed results. For instance, using a sample of US firms, Jiraporn and Chintrakarn (2013) found out that the CEO power-CSR combination is non-monotonic after consolidating their power to a certain point: less powerful CEOs are relatively more incited to engage on CSR while more powerful CEOs are relatively reluctant to engage on CSR. Jiraporn and Chintrakarn (2013) argue that, after consolidating their power to a certain extent, CEOs do not view CSR in a favourable manner, which reduces CSR investments. In a cross-country study (USA, Canada, France and Spain), Jouber (2019) shows that CEO power is positively related to firm's engagement in CSR and this relation is more prominent in countries with stronger investor protection, strict law enforcement, and higher corporate governance quality. Recently, Francoeur *et al* (2021) provide evidence that powerful CEOs may influence environmental performance in a positive way. This effect is more pronounced in profitable businesses. In light of the previous results, we attempted to test the following:

H1. CEO power has an impact on CSR performance

CEO age and CSR performance

It is highly argued that the CEO's age has a significant impact on CEO's decisions (Amran *et al*, 2014). There are two competing arguments in the literature about the relationship between CEO age and CSR performance. On the one hand, younger CEOs are more engaged in a reputation-building process than the senior ones: this is the career concerns' assumption (Holmström, 1999). Less experienced CEOs have a pressure to deliver a positive signal to the labor market. To gain legitimacy in the eyes of board members, they prefer focusing on short-term

profitable investments at the expense of long-term investments with less risky outcomes, such as R&D and CSR activities. In the same vein, Serfling (2014) shows that young CEOs are more risk tolerant and prefer growth opportunities. Fabrizi *et al* (2014) argue that, as CSR activities represent long-term investments, young CEOs are more incited to forego CSR investments. Senior CEOs, feeling less pressure from the market, are more concerned about stakeholders' interests. In addition, literature review shows that senior managers assign more importance to trust and honor than money and career concerns (Barnett and Karson, 1989, and England, 1978) and have more incentives to "give back" to their communities (McCuddy and Cavin, 2009). A possible explanation could be that, as CEOs get older, they accumulate social expertise and cultural intelligence (Ng and Sears, 2012). On the other hand, senior CEOs usually are more conservative by nature (Hambrick and Mason, 1984) and adopt more conventional and common management styles. Therefore, they take less transformational decisions (Bertrand and Schoar, 2003). In fact, senior CEOs, who are near retirement, are less likely to engage on long-term projects (Oh *et al*, 2016; Matta and Beamish, 2008). In line with the upper echelon theory, Oh *et al* (2016) provide evidence that young CEOs are more likely to take socially responsible decisions. According to these arguments, we have been testing the following assumption:

H2. CEO age significantly affects CSR performance

CEO education and CSR performance

Education shapes values (Frank *et al*, 1993). For instance, highly educated CEOs would be able to better understand complex decisions and absorb new ideas and technology (Li *et al*, 2017; Farag and Mallin, 2016; Barker and Mueller, 2002). Accordingly, post-graduated CEOs could have preferences for long-term and innovative projects (see among others Lewis *et al*, 2014). Also, Goll and Rasheed (2004) pointed out that a a significant and positive relationship exists between high-educational level and rational decision-making. In the same vein, Shahgholian (2017) put forward that high education is associated with a better knowledge of environmental issues. Accordingly, we are stating the following hypothesis:

H3. CEOs' education level is positively related to CSR performance.

Regarding the type of the academic background, business-educated CEOs have business competencies, in particular in areas such as finance and accounting. They are likely to achieve a better financial performance and to handle risks (Maraghni and Nekhili, 2014; Nekhili and Gatfaoui, 2013; and Gendron and Bedard, 2006). Empirical studies show that CEOs who graduated in human and social sciences do have the skills to get involved in CSR activities, and this increase social performance (Velte, 2019; and Manner, 2010[5]). According to Sleeper *et al*, (2006), there is a positive relationship between CSR and business education. In the same line, Lewis *et al* (2014) show that MBA degrees are positively related to carbon disclosure project participation.

H4. Business-educated CEOs are likely to increase CSR performance.

Science-educated CEOs, such as CEOs with Science and Engineering degrees have better skills when they have to take risky decisions (Tyler and Steensma, 1998). They could increase the probability of accepting and introducing new changes such as CSR activities.

H5. CEOs with a science or engineering degree will increase CSR performance.

TABLE 1
Sample composition

Sectors	Percentage (%)
Utilities	15.96
Consumer goods	22.47
Basic Materials	2.29
Financial	16.12
Health care	5.82
Industrials	22.73
Oil and Gas	2.77
Technology	11.85

5. Manner (2010) finds that proactive corporate social performance is negatively associated with CEOs who graduated a bachelor's in economics and their level of short-term compensation.

Variables, data and methodology

Data

We have based our analysis on companies listed on the SBF120 index between 2002 and 2013. We consider CSR scores (see appendix A) provided by VigeoEiris[6] as proxies for social performance[7]. VigeoEiris is a CSR rating agency and a global provider of environmental, social and governance (ESG) research to investors and public and private corporates in 41 different sectors. CSR scores vary from 0 to 100. Also, they cover specific CSR areas such as environment, human resources, business ethics, corporate governance, community involvement, and human rights. Financial data are provided by FactSet-IODS, and Bloomberg, while governance and ownership structure data are hand-collected from annual reports and provided by Governance-IODS[8]. R&D data are provided by SIES surveys conducted by the INSEE[9].[10] The empirical study is carried out on all firms listed on the SBF120 index, end of the year 2013. However, when we filter out firms with missing data on CSR scores and CEO compensation, the final sample consists of 55 firms (182 firm-year observations).

Variables

According to prior literature, the CEO power is a multidimensional concept with a structural power, ownership power, expert power, and prestige power (Sheikh, 2019; Sariol and Abebe, 2017; Bebchuk *et al*, 2011; Finkelstein, 1992). Accordingly, we calculate a proxy for CEO power as follows: (1) The CEO structural power which is the sum of the following variables: a dummy variable equal to 1 when the CEO is the business founder, and a dummy variable equal to 1 when the CEO is the chairperson. (2) The ownership power given by the CEO share of ownership standardized (Sariol and Abebe, 2017). (3) The expertise power measured by the CEO tenure standardized (Sariol and Abebe, 2017). (4) The prestige power measured by the sum of the following variables: a dummy variable equal to 1 when the CEO has a political connection, and a dummy variable equal to 1 when the CEO has board membership experiences. Then, we sum up these proxies to calculate a measure of CEO power (CEOP).

Descriptive statistics

Descriptive statistics (Table 3, Panel A) show that the average global CSR score is of 44.18 with a low standard deviation (12.51). Regarding CSR sub-scores, all average scores are lower than 50. The highest average grade corresponds to the human rights score (49.14), which assesses the employees' well-being and quality of protection. The community involvement score (CIN) that measures the firm's involvement in projects serving communities' interests, displays the highest volatility (18.48) while the less variable sub-score is the corporate governance score (CG). Also, Panel (A) shows that the CEOP index is equal, on average, to 2.09 (the standard deviation is of 1.77). On average, the CEO is 55 years old with a low standard deviation (6 years). Panel (B) summarizes some qualitative CEO traits and shows that most of the CEOs are post-graduated (87.3%): 51% of them are business-educated, while 49% are science-educated. Surprisingly, despite the social pressure calling for the appointment of a greater proportion of women on top management positions and the introduction of gender legislation on board composition, we found out that only 1.19% of CEOs were women.

TABLE 2
Variables' definitions and measures

Code	Proxies
Dependent variables	
CSR	VigeoEiris Global Corporate social responsibility score
CG	VigeoEiris corporate governance
CIN	VigeoEiris community involvement score
HR	VigeoEiris human resources score
ENV	VigeoEiris environmental score
HRts	VigeoEiris human rights score
BB	VigeoEiris business ethics score

6. http://vigeo-eiris.com
7. See appendix A for some further information.
8. This data access was funded by CTE-Gestion, University of Montpellier.
9. Project Governance and Innovation in France GOUINFR (SIES data, INSEE2016).
10. This work is supported by a public grant overseen by the French National Research Agency (ANR) as part of the *"Investissements d'avenir"* program, specifically Governance and Innovation in France GOUINFR, 2016 (reference: ANR-10-EQPX-17 – Centre d'accès sécurisé aux données – CASD (*"Protected Data Access Center"*)).

TABLE 2
Variables' definitions and measures

Code	Proxies
Independent variables	
PCEO	A multidimensional CEO power index measured by the sum of: • Structural power: when the CEO is: - The business founder=1 if the CEO is the business founder and 0 otherwise; and/or - The chair of the board=1 if the CEO is also the chair of the board and 0 otherwise • Ownership power is the CEO ownership standardized. • Expert power measured by the CEO tenure standardized. • Prestige power, measured by: - Political connections=1 if the CEO has political connections in France and 0 otherwise. - Past board experiences=1 if the CEO has at least one board experience and 0 otherwise
CEOAGE	The CEO age
EDU	If the CEO has a Master, MBA or PhD degree, EDU=1, 0 otherwise
SEDU	If the CEO has a science or an engineering degree, SEDU=1, 0 otherwise
BEDU	If the CEO has a business/management/corporate law education. BEDU=1, 0 otherwise
FCEO	If the CEO is a woman, FCEO=1, 0 otherwise
LnSal	The logarithm of variable CEO compensation
BSIZE	The number of directors in the boardroom
PIND	The percentage of independent directors in the boardroom
PFD	The percentage of female directors
S-OWN	The State share of capital
INS-OWN	The institutional investors' share of capital
F-OWN	The family share of capital
ROA	The return on asset ratio
FAge	The firm age
CFTA	The cash-flows to total assets ratio
RD	The ratio of R&D expenses to total assets
LEV	The book value of debt to total assets ratio
LnEmp	The firm size given by the number of employees
Industry-effect	Dummy variable to control for industry effects

TABLE 3
Descriptive statistics

Panel (A) Quantitative variables

Variable	N	Mean	Std. Dev.	Min	Max
CSR	612	44,185	12,509	8,000	73,000
HR	612	46,351	16,974	0.000	81,000
ENV	612	41,595	16,965	0.000	86,000
BB	612	42,990	14,371	0.000	81,000
CIN	612	46376	18484	0,000	90000
CG	612	43,206	11,748	0.000	72,000
HRts	612	49,142	14,865	14,000	84,000
CEOP	1060	2.0945	1,774	-1,120	13,085
CEOAGE	1333	55,582	6,993	26,000	76,000
LnSal	489	13,282	0.872	9,473	15,384
FOWN	1268	9,104	18,207	0.000	80,480
INSOWN	1270	23,033	23,417	0.000	98,510
SOWN	1269	2,696	11,361	0.000	89,200
PIND	1254	47,845	20,596	0.000	100,000
PFD	1334	11,993	11,099	0.000	50,000
PFOR	1044	17,158	17,206	0.000	77,780
BSIZE	1334	11,997	3,768	3,000	24,000
RD	1402	5,102	25,718	0.000	530,113
CFTA	1189	0.002	0.013	-0.010	0.293
FAge	1394	3,757	1,062	0.000	5,852
ROA	1244	3,958	6,520	-43,014	55,472
LEV	1320	0.574	0.230	-0.253	2,011
LnEmp	1237	9778	1789	3178	13113

TABLE 3
Descriptive statistics

Panel (B) Qualitative variables: table of frequencies

		N	Percentage
FCEO	**0**	1324	98,81
	1	16	1,19
EDU	**0**	169	12,7
	1	1162	87,3
BEDU	**0**	645	48,39
	1	688	51,61
SEDU	**0**	671	50.38
	1	661	49.62

Models and results

Model

We are assessing the following model:

$$\text{CSR Score}_{i,t} = \delta + \sum \beta_i * \textit{CEO-traits} + \sum \alpha_i * \textit{Board-Charact} + \sum \mu_i * \textit{Firm-Charact} + \varepsilon_{i,t} \quad (1)$$

where *CSR Score*$_{i,t}$ is a proxy for CSR performance given by VigeoEiris CSR scores of the firm i at the year t. *CEO-traits* are proxies for the CEO power PCEO, the CEO age CEOAGE, the CEO education (EDU, BEDU, and SEDU).[11] *Board-characteristics* are the board size BSIZE, the percentage of female directors on the board PFD, the percentage of independent directors PIND, the percentage of foreign directors PFOR, and the percentage of foreign directors PFD. *Firm-characteristics* are the firm size LnEmp, the firm age FAGE, the cash-flows to total assets ratio CFTA, the book value of debt to total assets ratio LEV, R&D intensity and ROA.

Results

Initially, we have run some tests that confirm the absence of multi-collinearity[12], the existence of fixed individual specific effects and the presence of heteroscedasticity and autocorrelation problems. To deal with such issues, we used panel-corrected standard error (PCSE) methods for linear cross-sectional time series models where the parameters are estimated by OLS [13]. Hence, this model considers implicitly time effects. Estimates presented in table 5 show a negative and significant correlation between CEOP and some CSR sub scores (BB and CIN). We are tempted to conclude that powerful CEOs are less concerned about social performance: they are less involved in activities related to the employees' safety and conditions, environmental issues and communities' interests. Unlike Francoeur *et al* (2021), our results show a negative correlation between the ENV score and CEOP. One possible explanation is that their study includes US companies, in which CEOs have more heterogeneous traits and different backgrounds. Another explanation is the assessment of CEO power: they adopt Bebchuk *et al* (2011) approach and use the ratio of CEO compensation to the aggregate compensation of the top five most highly paid executives, while our measure captures many dimensions of CEO power such as the structural, expertise and prestige powers. Furthermore, some laws have been introduced in France, such as the Grenelle Law II (2010) to foster the firm's involvement in environmentally responsible projects. Accordingly, we are likely to conclude that powerful CEOs tend to be more entrenched and would prefer more conventional investment decisions. In fact, as explained by Kaplan and Minton (2006), CEOs are often submitted to short-term financial pressure which leads them to focus on projects with immediate returns at the expense of long-term profitable actions, specifically risky ones (R&D projects), more sustainable and less profitable ones (CSR projects). As powerful CEOs have more discretion, they could invest in socially responsible actions in order to have private benefits serving their personal interests. This could be at the expense of activities that serve the interests of stakeholders, such as employees and local communities. This strategy could worsen CSR performance (Sheikh, 2019, Muttkin *et al* 2018; and Li *et al* 2016). However, as this association is non-significant in CSR, HR, ENV, CG and HRts regressions, we cannot accept H1.

Regarding the influence of the CEO age, results show a non-significant correlation between CEOAGE and CSR scores. Hence, hypothesis H2 is rejected. In line with Fabrizi *et al* (2014), we found out that the CEO age does not influence the CSR engagement. One explanation could be that, in our sample, most of the CEOs are middle-aged: CEOAGE standard deviation is low (see table 3, panel A). They are more concerned about financial issues than social ones.

Through our focused study on CEOs' education, we found out that: First, post-graduated CEOs have influential effects only in specific areas of CSR, such as human resources and the preservation of human rights. However, we noticed non-significant associations in ENV, BB, CIN, and CG regressions. Accordingly, we could not accept H3. In line with the findings of Beji *et al* (2020), Li *et al*, (2017), Farag and Mallin, (2016) and Barker and Mueller (2002), who show that highly educated CEOs could understand complex decisions and absorb new ideas, our results provide evidence that highly educated directors are more likely to invest in sustainable projects. Another explanation is that CEOs would have a better

11. Because of the very small percentage of female CEOs in our sample, we decided not to consider the gender attribute and dropped FCEO from the list of independent variables in our regressions..

12. Correlation matrix available upon request

13. We suspected endogeneity problems between on the one side CEO traits and CSR scores and on the other side governance characteristics and CSR scores. We used system GMM method to estimate model (1). However, the results are non-conclusive.

TABLE 4

Pairwise Correlation Matrix

	CSR	HR	ENV	BB	CIN	CG	HRts	CEOP	CEOAGE	EDU	BEDU	SEDU
CSR	1,000											
HR	0.8744***	1,000										
	0.000											
ENV	0.8656***	0.7706***	1 000									
	0,000	0,000										
BB	0.8224***	0.7044***	0.6912***	1,000								
	0.000	0.000	0.000									
CIN	0.7027***	0.6009***	0.6059***	0.6198***	1 000							
	0,000	0,000	0,000	0,000								
CG	0.5699***	0.4086***	0.4036***	0.4228***	0.3177***	1 000						
	0,000	0,000	0,000	0,000	0,000							
HRts	0.8297***	0.8030***	0.7127***	0.7032***	0.6649***	0.3438***	1.000					
	0.000	0.000	0.000	0.000	0.000	0.000						
CEOP	-0.2412***	-0.2038***	-0.1601***	-0.1799***	-0.1606***	-0.2338***	-0.2062***	1.000				
	0.000	0.000	0.000	0.000	0.000	0.000	0.000					
CEOAGE	0.0869*	0.0715*	0.1053***	0.043	0.1438***	-0.0750*	0.0741*	0.3013***	1.000			
	0.033	0.079	0.010	0.293	0.000	0.065	0.069	0.000				
EDU	0.1377***	0.1667***	0.1259***	0.1249***	0,057	0.1195***	0.1443***	-0.1772***	-0.1604***	1 000		
	0,001	0,000	0,002	0,002	0,159	0,003	0,000	0,000	0,000			
BEDU	0.031	-0.052	-0.013	0.0713*	-0.030	0.1666***	-0.011	-0.1233***	-0.1073***	-0.0619**	1,000	
	0.442	0.206	0.744	0.080	0.463	0.000	0.788	0.001	0.000	0.024		
SEDU	-0.022	0.018	-0.012	0.021	0.051	-0.1199***	0.021	-0.0950*	0.003	0.2163***	-0.5417***	1,000
	0.588	0.657	0.771	0.608	0.213	0.003	0.610	0.020	0.908	0.000	0.000	
LnSal	0.1518***	0.1279*	0.1406*	0.2393***	0.1052*	-0.1077*	0.1166*	-0.0621***	0.1051**	-0.039	-0.005	0.1358***
	0.009	0.027	0.015	0.000	0.069	0.063	0.044	0.2174	0.020	0.393	0.916	0.003
FOWN	-0.1797***	-0.1627***	-0.1300***	-0.1275***	-0.0853*	-0.1961***	-0.1166***	0.1909***	0.0507*	0.020	0.0816***	-0.0719**
	0.000	0.000	0.002	0.002	0.038	0.000	0.005	0.000	0.073	0.474	0.004	0.011
INSOWN	0.1029*	0.0871*	0.1758***	0.0756*	-0.016	0.1589***	-0.009	-0.0043	-0.014	0.0616**	0.0916***	0.011
	0.012	0.034	0.000	0.066	0.699	0.000	0.828	0.8911	0.627	0.029	0.001	0.699
SOWN	0.1368***	0.1795***	0.1668***	0.055	0.1894***	-0.043	0.2189***	-0.0174**	0.0587**	0.0825***	-0.030	0.0649**
	0.001	0.000	0.000	0.182	0.000	0.292	0.000	0.5814	0.038	0.004	0.295	0.022
PIND	0.2382***	0.1391***	0.1670***	0.1520***	0.065	0.4465***	0.034	-0.1861***	-0.015	0.0966***	0.0912***	0.006
	0.000	0.001	0.000	0.000	0.114	0.000	0.405	0.000	0.593	0.001	0.001	0.847
PFD	0.021	-0.044	0.0706*	-0.013	0.014	0.007	-0.010	0.0157*	0.1113***	-0.0566**	0.026	-0.0868***
	0.598	0.277	0.082	0.751	0.740	0.873	0.814	0.6106	0.000	0.039	0.342	0.002

TABLE 4
Pairwise Correlation Matrix

	CSR	HR	ENV	BB	CIN	CG	HRts	CEOP	CEOAGE	EDU	BEDU	SEDU
PFOR	0.1365***	0.0706*	0.1461***	0.1378***	0.052	0.2515***	0.017	-0.145***	-0.033	0.1670***	-0.023	0.1105***
	0.001	0.099	0.001	0.001	0.221	0.000	0.692	0.000	0.298	0.000	0.460	0.000
BSIZE	0.3639***	0.3932***	0.3403***	0.2726***	0.3205***	0.0706*	0.3347***	0.0451	0.1187***	0.033	0.007	0.0609**
	0.000	0.000	0.000	0.000	0.000	0.083	0.000	0.1435	0.000	0.225	0.806	0.027
RD	0.024	0.014	0.0700*	0.065	-0.041	-0.006	0.025	0.0011	-0.044	0.0556**	0.015	0.0716***
	0.548	0.738	0.085	0.111	0.311	0.874	0.535	0.9720	0.113	0.043	0.595	0.009
CFTA	-0.2831***	-0.2346***	-0.2091***	-0.2122***	-0.2687***	-0.1922***	-0.2503***	0.0036	-0.039	0.020	0.0584**	-0.0651**
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.9126	0.186	0.508	0.048	0.027
FAge	0.0780*	0.0931**	0.1558***	0.029	0.0884*	0.033	0.060	-0.0874***	0.0895***	-0.011	0.0994***	-0.0680**
	0.054	0.021	0.000	0.478	0.029	0.409	0.136	0.0045	0.001	0.683	0.000	0.013
ROA	-0.1592***	-0.1298***	-0.0751*	-0.1491***	-0.1018*	-0.1297***	-0.1333***	0.0082	0.0624**	-0.011	0.0670**	-0.047
	0.000	0.002	0.074	0.000	0.015	0.002	0.002	0.7989	0.031	0.708	0.020	0.101
LEV	0.1156***	0.1750***	0.0717*	0.1340***	-0.007	0.054	0.0887**	-0.0367	0.015	0.1583***	-0.010	0.0629**
	0.005	0.000	0.084	0.001	0.866	0.193	0.032	0.044	0.604	0.000	0.720	0.026
LnEmp	0.4837***	0.4574***	0.4008***	0.4158***	0.4739***	0.1454***	0.4710***	0.0005	0.1019***	0.037	-0.1678***	0.1247***
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.9855	0.000	0.209	0.000	0.000

*, **, *** significant respectively at the level 10%, 5%, 1%

capacity to benefit from opportunities (Beji *et al*, 2020; Geletkanycz and Black, 2001). Turning to the non-significant impact of CEOs' education on ENV, BB, CIN, and CG, one explanation could be that most of CEOs are post-graduated (87,3%, table 1, panel A) and are middle aged (55 years old, table 1, panel A): they belong to "old-fashioned management schools", in which performance is reduced to its only and unique financial dimension and no strong connections are established between the firm and its environment. Furthermore, most of top executives, public officers and policymakers in France have quite similar education as they have graduated from *Grandes Ecoles:* (see Ferreira *et al*, 2020). Besides, the concepts of sustainable investments and social performance have recently emerged. They have been gradually integrated in Universities curricula and become as important as financial performance.

Considering the type of academic background enables to point out that business and science-graduated CEOs are likely to marginalize socially responsible activities. According to the coefficients' sign, business-educated CEOs significantly decrease all CSR components except BB and CG, which leads to a significant influence on the overall score. Due to their academic background, management-graduated CEOs in fact have assimilated specific skills and knowledge to increase financial performance and decrease risks (Maraghni and Nekhili, 2014; Nekhili and Gatfaoui, 2013, Gendron and Bedard, 2006). Indeed, Klassen and Whybark (1999) argue that firms focusing on improving social performance cannot improve competitiveness. Hence, findings show that business-educated CEOs prefer investing firms"resources and management efforts to increase profits. Also, CEOs who have sciences or engineering degree significantly decrease the global social performance. SEDU has a negative and significant association with almost all CSR sub scores. Accordingly, science-graduated CEOs are likely to be not concerned about all CSR areas. Also, the correlation matrix (table 4, appendix A) shows a negative and significant (at the 5% level) EDU/BEDU correlation coefficient (-0.06) while EDU-SEDU coefficient is positive and significant at the 1% level (0.22). In other words, most of the science-educated CEOs, are likely to graduate a Master/MBA/PhD degree. This implies that CEOs in our sample have advanced degree in science and are negatively associated with social performance. This is consistent with Tyler and Steensma (1998) who find that CEOs who have a science or engineering degree are risk-tolerant: they are prone to increase the probability of accepting and introducing risky and short-term profitable changes at the expense of long-term ones. In the light of the previous mixed findings, we are herewith rejecting the hypotheses H4 and H5.

TABLE 5
OLS regression of CEO attributes on CSR performance

Variables	CSR	HR	ENV	BB	CIN	CG	HRts
CEOP	-0.685	-0.976	-0.776	-1,066*	-1,668**	-0.446	-0.927
	(0.450)	(0.624)	(0.606)	(0.562)	(0.712)	(0.457)	(0.576)
CEOAGE	-0.0624	-0.153	-0.0350	-0.149	-0.192	-0.0481	-0.0927
	(0.0942)	(0.131)	(0.127)	(0.118)	(0.149)	(0.0957)	(0.121)
EDU	3,384*	5,842**	2,211	2,793	2,523	1,265	6,943***
	(1,801)	(2,499)	(2,429)	(2,253)	(2,850)	(1,831)	(2,308)
BEDU	-2,579*	-7,739***	-4,912***	0.853	-5,728***	2,141	-3,074*
	(1,331)	(1,847)	(1,795)	(1,665)	(2,106)	(1,353)	(1,706)
SEDU	-5,518***	-10.93***	-5,664***	-3,377**	-5,223**	-2,128	-5,399***
	(1,317)	(1,827)	(1,776)	(1,647)	(2,084)	(1,338)	(1,688)
FOWN	0.0165	0.0783	0.0126	-0.0233	-0.00383	-0.0332	0.0136
	(0.0369)	(0.0512)	(0.0498)	(0.0462)	(0.0584)	(0.0375)	(0.0473)
INSOWN	0.0135	0.00766	0.0661*	0.0168	-0.0995**	0.0412	-0.0607*
	(0.0266)	(0.0369)	(0.0359)	(0.0333)	(0.0421)	(0.0271)	(0.0341)
SOWN	0.129***	0.201***	0.209***	-0.0397	0.189***	0.0799*	0.151***
	(0.0445)	(0.0618)	(0.0600)	(0.0557)	(0.0705)	(0.0453)	(0.0571)
PIND	0.132***	0.103**	0.149***	0.0324	0.0707	0.199***	0.00434
	(0.0304)	(0.0421)	(0.0409)	(0.0380)	(0.0480)	(0.0309)	(0.0389)
PFD	-0.0455	-0.0888	-0.0106	-0.0149	0.131	-0.0725	-0.0469
	(0.0509)	(0.0707)	(0.0687)	(0.0637)	(0.0806)	(0.0518)	(0.0653)
PFOR	0.113***	0.168***	0.184***	0.0878*	0.157***	0.148***	0.100**
	(0.0381)	(0.0529)	(0.0514)	(0.0477)	(0.0603)	(0.0387)	(0.0488)
BSIZE	0.635***	0.720***	0.975***	0.967***	1,283***	0.0793	0.499**
	(0.193)	(0.268)	(0.260)	(0.241)	(0.306)	(0.196)	(0.247)
RD	0.128**	0.0903	0.213***	0.129*	0.0766	0.0368	0.186***
	(0.0525)	(0.0728)	(0.0708)	(0.0657)	(0.0831)	(0.0534)	(0.0673)
CFTA	171.4	714.4	1,195*	847.2	994.4	-98.37	-28.04
	(512.4)	(710.8)	(691.0)	(640.9)	(810.8)	(520.8)	(656.7)
FAge	-0.374	-1,139	1,259	0.130	0.802	0.446	-0.234
	(0.645)	(0.894)	(0.869)	(0.806)	(1,020)	(0.655)	(0.826)

TABLE 5
OLS regression of CEO attributes on CSR performance

Variables	CSR	HR	ENV	BB	CIN	CG	HRts
ROA	-0.0961	-0.258*	0.0352	-0.229*	-0.167	-0.145	-0.0916
	(0.0980)	(0.136)	(0.132)	(0.123)	(0.155)	(0.0996)	(0.126)
LEV	0.770	5,590	1,103	1,435	-2,626	0.140	-2,487
	(2,932)	(4,067)	(3,953)	(3,666)	(4,639)	(2,980)	(3,757)
LnEmp	3,481***	4,991***	3,585***	3,416***	4,104***	1,346***	4,452***
	(0.394)	(0.547)	(0.532)	(0.493)	(0.624)	(0.401)	(0.505)
Industry effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.875	-3,458	-17.35*	3,753	1,945	16.71**	8,748
	(7,401)	(10.27)	(9,981)	(9,257)	(11.71)	(7,523)	(9,485)
Observations	364	364	364	364	364	364	364
R-squared	0.519	0.492	0.459	0.385	0.454	0.400	0.473

Standard errors in parentheses *** p<0.01, ** p<0.05, *p<0.1

Robustness analysis

CEO attributes and CSR performance in Family and non-family firms

Almost two thirds of the French firms are family-owned businesses (Nekhili *et al*, 2017; Boubaker and Labégorre, 2008; Sraer and Thesmar, 2007, and Faccio and Lang, 2002). Studies on the association between family firms and CSR activities provide mixed results. On the one hand, many studies argue that family firms have strong social beliefs and care more about social values than non-family firms (Le Breton-Miller and Miller, 2016; Berrone *et al* 2012; Flören and Wijers, 1996). In family firms, the decision-making process relies on complying with business values, protecting human resources, community involvement, management integrity, showing concern for reputation, long-term orientation, respect for tradition and family values (Miller and Le Breton-Miller, 2003 and Neubauer and Lank, 1998). In fact, the firm appears as a heritage for the family future generations. Accordingly, there is a greater personal commitment to the

firm's success. There are strong incentives to care about personal relationships, and employees" welfare (Argandoña, 2008). This could drive them to meet customers' expectations (Flören and Wijers, 1996). On the other hand, opportunistic behaviour could emerge when family firms have a significant market share. Therefore, they neglect CSR projects (Berrone *et al*, 2012). They could also face more obstacles if they got involved in socially responsible projects; in particular as they challenge the existing organization and leadership style (Berger-Douce, 2008). Furthermore, they could be reluctant to adopt a transformational leadership and prefer a more conventional one, particularly when they are financially constrained (Berrone *et al*, 2012; Berger-Douce, 2008).

To test the robustness of our previous findings, we divided the initial sample into two subsamples: family versus non-family-owned businesses. A family-owned firm is a firm where (1) the founder or a member of the founder's family is a blockholder of the company and (2) where this blockholder owes more than 20% of the voting rights (Sraer and Thesmar, 2007). The number of firm-year observations in our sample (68) is reduced in comparison with previous studies. One explanation is that authors focus on either all French listed firms appearing in the World scope database (Boubaker and Labégorre, 2008), or small and medium-sized corporations (Faccio and Lang, 2002), or non-financial listed firms (Nekhili *et al*, 2017). Then, we estimate the model (1) in family and non-family firms to contribute to this debate.

Table 6 shows no significant difference between non-family firms and family firms in terms of the overall CSR score. However, non-family firms have better CG score than family ones: the mean difference test is significant at the 1% level. Also, we find that CEOs appointed to family firms are less powerful and older than CEOs in non-family firms.

Finally, focusing on the CEO academic background shows that family businesses appoint less post-graduated CEOs and more CEOs with management degrees than non-family ones. In fact, business-educated CEOs have financial and accounting competencies enabling them to handle risks and achieve better financial performance (table 6). Estimates of model (1) are in tables 7 and 8.[14] Results show that family and non-family firms display different features.

14. To avoid over specification problems, in a small sample such as family sample, we drop some variables from the initial models, particularly variables with consequent missing data such as LnSal. Specifically, we drop SWON, LEV, RD, CFTA and LnSal from the regressions.

TABLE 6

Proportion and Difference mean tests (MDT) between family and non-family-controlled firms

Quantitative Variables	Family firms	Non-Family firms	MDT
CSR	43,772	44,258	0.486
HR	47,348	46,175	-1,173
ENV	42,641	41,410	-1,232
BB	43,402	42,917	-0.485
CIN	45,304	46,565	1,261
CG	39,446	43,871	4,426***
HRts	49,707	49,042	-0.664
CEOP	12,146	18,072	5,926***
CEOAGE	56,393	55,376	-1,016**
INSOWN	15,537	24,816	9,279***
PIND	42,710	49,072	1.3016***
PFD	14,069	11,469	-2,599***
PFOR	12,146	18,072	5.9256***
BSIZE	11,030	12,248	1,218***
FAge	4,137	3,665	-0.473***
ROA	4,538	3,806	-0.733
LnEmp	9,940	9,743	-0.197*

Qualitative Variables	Family firms	Non-Family firms	MDT
EDU	82.59%	88.50%	-0.059***
BEDU	59.26%	49.67%	0.096***
SEDU	38.52%	52.45%	-0.139***

*, **, *** significant respectively at the level 10%, 5%, 1%

TABLE 7

OLS Regression of CEO attributes on CSR performance in Family Firms

Variables	CSR	HR	ENV	BB	CIN	CG	HRts
CEOP	7,172***	7,125***	10.52***	7,660***	5,344***	4,621***	6,678***
	(1,263)	(1,534)	(1,577)	(1,608)	(1,841)	(0.962)	(1,845)
CEOAGE	-1,637***	-2,604***	-2,802***	-1,669***	-0.908	-0.959***	-2,041***
	(0.434)	(0.527)	(0.543)	(0.553)	(0.633)	(0.331)	(0.635)
EDU	-11.38**	-11.92**	-18.06***	1,023	-13.66**	-14.74***	-4,684
	(4,438)	(5,390)	(5,543)	(5,653)	(6,470)	(3,383)	(6,485)
BEDU	4,981	-6,278	-7,102	15.30***	23.99***	13.57***	0.717
	(4,025)	(4,888)	(5,027)	(5,126)	(5,867)	(3,067)	(5,881)
SEDU	13.94***	16.36***	20.20***	9,228	20.54***	12.02***	13.05**
	(4,443)	(5,396)	(5,549)	(5,659)	(6,477)	(3,386)	(6,492)
INSOWN	-0.153**	-0.204**	-0.0799	-0.303***	-0.0518	0.0197	-0.230**
	(0.0700)	(0.0850)	(0.0874)	(0.0892)	(0.102)	(0.0533)	(0.102)
PIND	0.325**	0.231	0.242	0.256	0.242	0.157	0.367
	(0.150)	(0.182)	(0.187)	(0.191)	(0.219)	(0.114)	(0.219)
PFD	-0.0297	0.109	0.267	0.203	-0.422	-0.0501	0.0306
	(0.198)	(0.241)	(0.248)	(0.252)	(0.289)	(0.151)	(0.290)
PFOR	-0.00914	-0.0384	0.110	-0.0516	-0.0868	-0.213	-0.127
	(0.185)	(0.224)	(0.231)	(0.235)	(0.269)	(0.141)	(0.270)
BSIZE	0.656	1,158	0.454	2,938***	0.817	-1,447***	1,094
	(0.608)	(0.739)	(0.760)	(0.775)	(0.887)	(0.464)	(0.889)
FAge	13.43***	16.57***	21.54***	15.95***	9,542*	-0.912	16.37***
	(3,490)	(4,239)	(4,360)	(4,446)	(5,088)	(2,660)	(5,100)
ROA	0.127	-0.0229	0.205	0.209	-0.0622	-0.0413	0.196
	(0.157)	(0.191)	(0.196)	(0.200)	(0.229)	(0.120)	(0.230)
LnEmp	3,665***	2,657	0.359	3,255*	8,436***	2,624**	5,100**
	(1,330)	(1,616)	(1,662)	(1,694)	(1,939)	(1,014)	(1,944)
Industry effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	11.54	72.98	81.45	-33.07	-66.35	73.41**	10.10
	(40.30)	(48.94)	(50.33)	(51.33)	(58.74)	(30.71)	(58.88)
Observations	68	68	68	68	68	68	68
R-squared	0.779	0.798	0.787	0.739	0.739	0.725	0.749

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Specifically, our findings show that EDU is significantly and positively associated with the global social performance. This is in line with Li *et al.* (2017), and Lewis *et al.* (2014): they provide evidence that highly-educated CEOs are likely to be less risk-averse, more open to new ideas and are better informed about their external environment.

Regarding the type of the CEO academic degree, unlike in family-controlled businesses, we show that management and science-graduated CEOs are negatively and significantly associated with social performance and specific dimensions of CSR performance. One explanation could be that management-graduated CEOs are willing to take more risks (Beber and Fabbri, 2012) while CEOs with science or engineering degrees are less risk-averse, or better risk-takers (Barker and Muller, 2002; Tyler and Steensma, 1998). Finally, the comparison of tables (7) and (8) provides evidence that powerful CEOs and some traits such as the academic background influence differently the business involvement in social activities. One explanation could be that family firms may be looking for CEOs not challenging the management style of the firm: they appoint CEOs who could increase returns and save the business image, most often, based on trust, and family values. They are looking for CEO's traits that are "compliant" with their business values.

Unlike the previous findings, CEOs in family-controlled businesses seem to have a more significant influence over the CSR decision-making process (table 7). CEOP coefficient is positive and significant (at the 1% level) in all CSR regressions. These results are consistent with a large brand of the literature showing that family-controlled firms have stronger incentives to be concerned about social and environmental issues and to get involved in socially responsible projects (Le Breton-Miller and Miller, 2016; Berrone *et al* 2012; Flören and Wijers, 1996), specifically to meet communities expectations and gain their trust (see among others Miller and Le Breton-Miller, 2003; Neubauer and Lank, 1998; and Flören and Wijers, 1996).

Another interesting result is the negative and significant correlation between CEO age and almost all CSR proxies. This finding could be consistent with the conservative assumption of senior CEOs towards more recent concepts such as social performance (Oh *et al*, 2016; Bertrand and Schoar, 2003; Hambrick and Mason, 1984) according to which senior CEOs are likely to adopt a more conventional leadership. In fact, table (6) shows that CEOs in family businesses are, on average, older than in non-family ones. They prefer to undertake profitable activities with high returns during their mandate, at the expense of long-term profitable ones (Oh *et al*, 2016; Matta and Beamish, 2008). In the same vein, it provides evidence that young CEOs are more sensitive to environmental and social issues as they, most often, have attended more courses on CSR and sustainable development than senior CEOs (Oh *et al*, 2016). Regarding the academic background, estimates show that highly educated CEOs are negatively and significantly associated with the global CSR performance in family businesses; while business educated CEOs do not influence CSR scores. SEDU, however, displays a positive and significant coefficient in many regressions. One may think that science-educated CEOs are likely to increase the firm's involvement in many social and environmental areas, specifically related to the environment, business ethics, and also business organization, such as the employees' conditions in the marketplace, and the quality of governance, the involvement in local community's issues.

Turning to non-family firms, CEO power has non-significant effects on CSR areas (see appendix B). Unlike family firms, in non-family ones, powerful CEOs are not concerned about social and environmental issues and are more involved in other kinds of projects. Also, the effects of CEOs' attributes, such as EDU, BEDU and SEDU are likely to have a more pronounced effect in non-family firms.[15]

15. More details are provided in appendix B.

CEO attributes and CSR performance in high tech and non-high-tech firms

Finally, as the paper findings show a positive and significant association between R&D ratio and the overall CSR score, robust in almost all regressions, we run an additional robustness test on high tech and low-tech firms (see appendix C). The results show the effects of CEOs' attributes on CSR performance depend on industry characteristics, such as, in particular, the level of technology.

Conclusion

This study examines the influence of CEOs' attributes on the global social performance and specific areas of CSR. It has been conducted on firms listed on the SBF120 index between 2002 and 2013. Our findings provide evidence that powerful CEOs are likely to prove less concerned about the social performance. In fact, they decrease the business involvement level in ethical and community-related projects. Accordingly, we cannot support the agency assumption, specifically the CSR overinvestment hypothesis, stating that powerful CEOs could be entrenched and take advantage of CSR projects to enjoy some private benefits. Surprisingly, CEOs with business, science or engineering degrees are negatively associated with the global social performance and many specific CSR areas. In fact, many business and science programs have been updated and have entrepreneurship, CSR and sustainable development courses. Besides, most of the Grandes Ecoles where many CEOs have graduated have sustainable business programs. One explanation could be that most of the CEOs in our sample are middle-aged (55 years old on average with a low standard deviation), and adopt a less-transformational leadership, prioritizing projects with short-term returns. However, we should notice that highly educated CEOs in our sample are very sensitive to CSR activities in all tested areas. Also, family-controlled businesses display very interesting features. For instance, powerful CEOs are more likely to increase the global social performance through their impact on all areas of CSR while old and highly educated CEOs have strong incentives to increase the business performance at the expense of the social one.

This study contributes to the debate focusing on the reasons why businesses should pay attention to the psychological and cognitive traits of top managers to achieve their objective instead of focusing on disciplinary mechanisms.

For instance, the proportion of female CEOs is too low despite the debate on the urgent need to increase gender diversity in top management positions, which is a social requirement of stakeholders. There is evidence that the presence of women in boards is likely to increase social performance (see among others Beji *et al*, 2020 and Boulouta, 2013). However, the evidence on the influence of female CEO is scarce. For instance, Manner (2010) and Bernardi *et al* (2009)

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APPENDIX A

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 (HRts)
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 re-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 working hours	Atmospheric emissions	Corruption			
	Waste management	Competition			
	Local pollution (noise/ vibration)	Lobbying			
	Transportation				
	Impacts of product use and disposal				

APPENDIX B

CEO attributes and CSR performance in Family and non-family firms

Turning to non-family firms, CEO power has no significant effects on CSR areas (see appendix B). Unlike family firms, in non-family ones, powerful CEOs are not concerned about social and environmental issues and are more involved in other kind of projects. Also the effects of CEO's attributes, such as EDU, BEDU and SEDU are likely to be more pronounced in non-family firms.[16]

16. More details are provided in appendix B.

TABLE 8

OLS Regression of CEO attributes on CSR performance in non-Family Firms

Variables	CSR	HR	ENV	BB	CIN	CG	HRts
CEOP	0.142	0.712	-0.332	-0.161	-0.441	-0.471	0.103
	(0.506)	(0.731)	(0.721)	(0.664)	(0.869)	(0.553)	(0.681)
CEOAGE	-0.0303	-0.112	0.0567	-0.0698	-0.0941	-0.0272	-0.0365
	(0.0847)	(0.122)	(0.121)	(0.111)	(0.146)	(0.0926)	(0.114)
EDU	7,888***	13.14***	7,386***	6,496***	-3,896	5,357***	9,060***
	(1,865)	(2,696)	(2,658)	(2,449)	(3,204)	(2,038)	(2,512)
BEDU	-3,223**	-7,342***	-4,450**	-1,226	-8,978***	0.202	-3,211*
	(1,244)	(1,798)	(1,773)	(1,633)	(2,137)	(1,359)	(1,675)
SEDU	-5,726***	-10.45***	-5,066***	-2,832*	-7,541***	-2,356*	-5,800***
	(1,224)	(1,769)	(1,744)	(1,607)	(2,102)	(1,337)	(1,648)
INSOWN	0.0701***	0.0822**	0.127***	0.0987***	-0.113**	0.0724**	-0.0120
	(0.0260)	(0.0376)	(0.0371)	(0.0341)	(0.0447)	(0.0284)	(0.0350)
PIND	0.120***	0.0743**	0.120***	0.0801**	0.0774*	0.206***	-0.0139
	(0.0261)	(0.0377)	(0.0372)	(0.0342)	(0.0448)	(0.0285)	(0.0351)
PFD	-0.0509	-0.0641	0.000646	-0.0531	0.136*	-0.104**	-0.0333
	(0.0468)	(0.0676)	(0.0666)	(0.0614)	(0.0803)	(0.0511)	(0.0630)
PFOR	0.0493	0.106**	0.0882*	-0.00812	0.0500	0.111***	0.0461
	(0.0344)	(0.0497)	(0.0490)	(0.0452)	(0.0591)	(0.0376)	(0.0463)
BSIZE	0.889***	1,003***	1,330***	0.741***	1,947***	0.255	0.808***
	(0.181)	(0.261)	(0.258)	(0.237)	(0.311)	(0.198)	(0.243)
LnFAge	-0.594	-1,354*	0.833	-0.560	1,200	0.274	-0.371
	(0.564)	(0.814)	(0.803)	(0.740)	(0.968)	(0.616)	(0.759)
ROA	-0.223**	-0.424***	-0.0547	-0.288**	-0.341*	-0.325***	-0.0850
	(0.103)	(0.149)	(0.147)	(0.136)	(0.178)	(0.113)	(0.139)
LnEmp	3,713***	5,452***	3,733***	3,276***	4,075***	1,296***	4,714***
	(0.380)	(0.549)	(0.541)	(0.499)	(0.653)	(0.415)	(0.512)
Industry effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-9,849	-19.89**	-30.32***	0.326	-5,304	13.30*	-5,819
	(6,701)	(9,685)	(9,547)	(8,796)	(11.51)	(7,321)	(9,022)
Observations	317	317	317	317	317	317	317
R-squared	0.585	0.545	0.504	0.414	0.472	0.444	0.473

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

APPENDIX C

CEO attributes and CSR performance in high tech and low and non-high tech firms

The paper findings show a positive and significant association between R&D ratio and the overall CSR score, robust in almost all regressions. Accordingly, we run an additional robustness test on high tech and low tech firms. We estimate model (1) in the two sub-samples: (1) high-technology (hereafter high-tech) firms; and (2) low-technology and non-technology (hereafter low-tech) firms. The distinction between high and low tech firms is based on the technological intensity of the statistical classification of economic activities in the European Community (NACE) at 2-digit level[17]: 1) high-technology (hereafter high-tech) firms; and 2) low-technology and non-technology (hereafter low-tech) firms.

The high-tech sample consists of all the firms implemented in Manufacture of basic pharmaceutical products and pharmaceutical preparations; and Manufacture of computer, electronic and optical products.

The low-tech subsample consists of businesses in the following sectors: manufacture of food products, beverages, tobacco products, textile, wearing apparel, leather and related products, wood and of products of wood, paper and paper products, printing and reproduction of recorded media; manufacture of furniture and other manufacturing.

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The high-tech sample consists of all the firms implemented in Manufacture of basic pharmaceutical products and pharmaceutical preparations; and Manufacture of computer, electronic and optical products.

The low-tech subsample consists of businesses in the following sectors: manufacture of food products, beverages, tobacco products, textile, wearing apparel, leather and related products, wood and of products of wood, paper and paper products, printing and reproduction of recorded media; manufacture of furniture and other manufacturing.

Unlike our previous findings, table (9) shows that CEO education maters in social performance. Specifically, highly-educated CEOs are positively and significantly associated with all CSR areas. However, whether they are business or science-graduated CEOs, they are prone to significantly decrease the global social performance. These results could be explained by their ability to decrease the firm involvement in some specific CSR areas, like for example the degree of involvement in community activities, and the protection of human rights.

Furthermore, our findings show that powerful CEOs increase significantly the quality of corporate governance and have mixed but non-significant effects in most regressions. Also, old CEOs seem to significantly lessen corporate governance performance and investments serving the community's interests. Estimates show that the increase of the variable component of the CEO salary in high-tech firms is likely to significantly decrease the firm involvement in corporate socially responsible projects, specifically projects related to the protection of employees' interests and human rights. One could explain that compensation incentives such as aligning the CEO compensation with financial performance, is more likely to increase investment decisions that firstly lead to higher returns and therefore higher salaries. Furthermore, in very competitive industries, such as high-tech industries, "old school" CEOs prefer short-term profitable activities at the expense of less profitable and more sustainable ones.

17. https://ec.europa.eu/eurostat/cache/metadata/Annexes/htec_esms_an3.pdf
18. https://ec.europa.eu/eurostat/cache/metadata/Annexes/htec_esms_an3.pdf

TABLE 9

OLS Regression of CEO attributes on CSR performance in high-tech Firms

Variables	CSR	HR	ENV	BB	CIN	CG	HRts
CEOP	0.391	-1,994	-0.878	-1,725	-1,313	5,145***	-2,125
	(1,076)	(1,664)	(1,817)	(1,532)	(1,976)	(1,050)	(1,770)
CEOAGE	-0.0715	0.402	0.277	-0.224	-0.934**	-0.442**	-0.223
	(0.224)	(0.347)	(0.378)	(0.319)	(0.412)	(0.219)	(0.369)
EDU	18.76***	9,716	16.74**	15.61**	47.72***	6,654	33.26***
	(4,532)	(7,006)	(7,652)	(6,450)	(8,321)	(4,422)	(7,455)
BEDU	-7,150***	-6,260	-6,272	-6,016	-36.00***	-2,700	-13.25***
	(2,544)	(3,933)	(4,296)	(3,621)	(4,671)	(2,482)	(4,185)
SEDU	-15.65***	-22.60***	-15.47***	-11.67***	-31.24***	-1,982	-17.38***
	(2,482)	(3,838)	(4,191)	(3,533)	(4,558)	(2,422)	(4,083)
LnSal	-2,393*	-4,511**	-2,390	-2,140	-3,183	-0.285	-4,251*
	(1,404)	(2,171)	(2,372)	(1,999)	(2,579)	(1,370)	(2,310)
FOWN	-0.0616	0.197	-0.0821	-0.00777	-0.376**	-0.382***	0.144
	(0.0838)	(0.130)	(0.142)	(0.119)	(0.154)	(0.0818)	(0.138)
INSOWN	0.0294	0.0910	0.0201	0.101*	-0.220***	0.133***	-0.0505
	(0.0415)	(0.0641)	(0.0701)	(0.0591)	(0.0762)	(0.0405)	(0.0683)
SOWN	0.100	0.211*	0.168	-0.187	0.335**	0.232***	-0.0305
	(0.0803)	(0.124)	(0.136)	(0.114)	(0.148)	(0.0784)	(0.132)
PIND	0.0713	0.184**	0.0426	-0.0277	0.111	0.173***	-0.136
	(0.0558)	(0.0863)	(0.0942)	(0.0794)	(0.102)	(0.0544)	(0.0918)
PFD	0.00528	-0.169	0.290*	-0.0192	0.399**	-0.167*	0.183
	(0.0873)	(0.135)	(0.147)	(0.124)	(0.160)	(0.0852)	(0.144)
PFOR	0.123*	0.120	0.271**	-0.0700	0.195*	0.0722	0.176*
	(0.0624)	(0.0965)	(0.105)	(0.0888)	(0.115)	(0.0609)	(0.103)
BSIZE	1,185**	1,977**	2,068**	2,063***	1,964**	-1,564***	1,263
	(0.528)	(0.816)	(0.891)	(0.751)	(0.969)	(0.515)	(0.868)
RD	0.155*	0.145	0.264*	0.108	0.309**	0.168**	0.134
	(0.0810)	(0.125)	(0.137)	(0.115)	(0.149)	(0.0790)	(0.133)
CFTA	-3,929*	-11,890***	-2,692	1,189	9,470**	-5,019**	-1,686
	(1,973)	(3,050)	(3,332)	(2,808)	(3,623)	(1,925)	(3,246)

TABLE 9

OLS Regression of CEO attributes on CSR performance in high-tech Firms

Variables	CSR	HR	ENV	BB	CIN	CG	HRts
FAge	-0.567	-0.418	3,042	-2,834	-5,655**	-0.0159	-4,230*
	(1,360)	(2,103)	(2,297)	(1,936)	(2,498)	(1,327)	(2,238)
ROA	-0.365	-0.204	-0.408	-0.678*	-0.660	-0.407	-0.523
	(0.264)	(0.408)	(0.446)	(0.376)	(0.485)	(0.257)	(0.434)
LEV	-0.423	19.53*	1,926	-16.64*	-18.05	4,958	-23.02**
	(6,586)	(10.18)	(11.12)	(9,374)	(12.09)	(6,426)	(10.83)
LnEmp	4,327***	4,232***	5,790***	3,671***	8,046***	0.835	6,720***
	(0.812)	(1,255)	(1,370)	(1,155)	(1,490)	(0.792)	(1,335)
Industry effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	17.07	20.96	-48.22	49.90*	6,960	60.71***	49.01
	(19.48)	(30.11)	(32.89)	(27.72)	(35.77)	(19.00)	(32.04)
Observations	95	95	95	95	95	95	95
R-squared	0.747	0.694	0.628	0.639	0.756	0.741	0.656

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Unlike our previous findings, powerful CEOs in low-tech industries increase significantly global social performance (table 10). The CEO power coefficient is significant in all regressions except for CIN and CG. Hence, powerful CEOs in low tech industries are more sensitive to investing in socially responsible projects. Also, CEOAGE coefficient is significant in almost all regressions. In line with Oh *et al.* (2016), we show that young CEOs have stronger incentives than old ones, to raise capital in socially responsible and sustainable activities. However, they influence only specific areas of CSR: they take decisions serving the interests of employees and communities. They also are likely to get involved in more ethical activities and are concerned about the protection of human rights. This negative association between CEO age and CSR could be amplified by the high levels of industry-level discretion and blockholder ownership (Oh *et al.*, 2016). Another explanation, consistent with Holmström (1999), is that young CEOs have an urgent need to deliver a positive signal on their CEO-type to the market. The market suffers a lack of information regarding their abilities as they are most often newly appointed to the CEO position. Furthermore, young CEOs are more sensitive to sustainable development and business ethics as they have attended more courses than old ones on social performance and sustainable development.

Unlike the main results, estimates show that business-graduated CEOs increase significantly the global social performance through their positive and significant effect on specific areas of CSR, such as choosing more ethical (BB) and environmental (ENV) projects and taking into account the employees' interests (HR) and human rights (HRts) as universities curricula have sustainable development and CSR programs. Furthermore, markets are less competitive in low tech industries than in high-tech ones: the CEOs are not submitted to the same short-term financial pressure. Also, science-graduated CEOs significantly increase the overall CSR score and all subscores except ethical (BB) and environmental (ENV) scores. Surprisingly, taking decisions aligning the business, employees and communities' interests is not a priority for post-graduated CEOs: EDU displays a negative and significant coefficient in all regressions. This leads to a significant decrease in the overall CSR score. To conclude, industry characteristics, specifically the technology intensity, seem to moderate the effects of CEO attributes on corporate social performance.

TABLE 10

OLS Regression of CEO attributes on CSR performance in low and no-tech Firms

Variables	CSR	HR	ENV	BB	CIN	CG	HRts
CEOP	3,022***	5,693***	3,982***	2,403**	-2,196	0.504	2,941**
	(0.971)	(1,355)	(1,250)	(1,144)	(1,697)	(1,179)	(1,433)
CEOAGE	-0.843***	-1,435***	-0.672**	-0.886***	-1,446***	-0.425	-0.837**
	(0.256)	(0.358)	(0.330)	(0.302)	(0.448)	(0.311)	(0.378)
EDU	-18.23***	-35.87***	-17.78***	-13.61**	-16.56**	-12.08**	-16.19**
	(4,635)	(6,467)	(5,966)	(5,464)	(8,104)	(5,629)	(6,842)
BEDU	9,316***	13.76***	6,123*	12.52***	3,370	5,328	8,662**
	(2,636)	(3,678)	(3,393)	(3,107)	(4,609)	(3,202)	(3,892)
SEDU	9,531**	21.39***	6,423	6,231	19.17***	8,546*	11.84**
	(3,989)	(5,566)	(5,135)	(4,703)	(6,975)	(4,845)	(5,889)
LnSal	0.242	1,296	0.0225	5,808***	-2,260	0.0119	0.310
	(1,466)	(2,045)	(1,887)	(1,728)	(2,563)	(1,780)	(2,164)
FOWN	-0.225***	-0.348***	-0.280***	-0.224***	-0.0950	-0.239***	-0.136
	(0.0560)	(0.0782)	(0.0721)	(0.0660)	(0.0980)	(0.0680)	(0.0827)
INSOWN	-0.0323	-0.00982	-0.0412	-0.172***	0.111	0.0850	-0.0722
	(0.0437)	(0.0609)	(0.0562)	(0.0515)	(0.0764)	(0.0530)	(0.0645)
SOWN	0.128	0.0452	0.216	-0.295	-0.112	0.337	0.484*
	(0.175)	(0.245)	(0.226)	(0.207)	(0.307)	(0.213)	(0.259)
PIND	0.0554	-0.0337	0.136	0.116	-0.316**	0.0218	-0.0684
	(0.0804)	(0.112)	(0.103)	(0.0947)	(0.140)	(0.0976)	(0.119)
PFD	0.0450	-0.0207	0.0710	0.203*	0.205	-0.182	0.101
	(0.0913)	(0.127)	(0.118)	(0.108)	(0.160)	(0.111)	(0.135)
PFOR	0.122	0.259**	0.286***	0.0880	-0.0526	0.0797	0.0430
	(0.0742)	(0.104)	(0.0956)	(0.0875)	(0.130)	(0.0902)	(0.110)
BSIZE	0.360	0.687	0.422	0.811	1,978**	-2,210***	-0.347
	(0.478)	(0.667)	(0.615)	(0.563)	(0.836)	(0.580)	(0.706)

TABLE 10

OLS Regression of CEO attributes on CSR performance in low and no-tech Firms

Variables	CSR	HR	ENV	BB	CIN	CG	HRts
RD	-0.0795	-0.0695	-0.0145	-0.0748	-0.284	-0.0940	0.0594
	(0.140)	(0.196)	(0.180)	(0.165)	(0.245)	(0.170)	(0.207)
CFTA	-2,826	-961.5	2,062	-4,525**	-1,951	-1,526	-7,565***
	(1,714)	(2,392)	(2,207)	(2,021)	(2,998)	(2,082)	(2,531)
LnFAge	-1,481	-2,055	-2,021	-2,958**	2,704	-1,094	-0.300
	(1,002)	(1,398)	(1,290)	(1,181)	(1,752)	(1,217)	(1,479)
ROA	0.0427	0.0257	0.185	-0.153	-0.233	-0.164	0.0159
	(0.179)	(0.249)	(0.230)	(0.211)	(0.312)	(0.217)	(0.264)
LEV	2,184	2,123	-4,039	3,435	7,142	5,696	-1,860
	(3,711)	(5,178)	(4,777)	(4,375)	(6,489)	(4,507)	(5,479)
LnEmp	1,018	0.800	1,896*	1,412	0.490	0.331	2,330*
	(0.831)	(1,160)	(1,070)	(0.980)	(1,454)	(1,010)	(1,227)
Industry effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	59.80**	77.65**	42.57	-11.01	109.9**	95.22***	74.71*
	(25.67)	(35.82)	(33.05)	(30.26)	(44.89)	(31.18)	(37.90)
Observations	86	86	86	86	86	86	86
R-squared	0.789	0.824	0.731	0.811	0.691	0.641	0.706

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1