



CORPORATE GOVERNANCE AND FIRM PERFORMANCE: THE SUSTAINABILITY EQUATION?

Gwenaël Roudaut

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THESE

Pour l'obtention du grade de Docteur de l'École Polytechnique
Mention : Sciences Économiques

Présentée et soutenue publiquement par

Gwenaël ROUDAUT

Le 14 décembre 2015

**CORPORATE GOVERNANCE AND FIRM PERFORMANCE:
THE SUSTAINABILITY EQUATION?**

**GOUVERNANCE ET PERFORMANCE D'ENTREPRISE:
QUELLE ÉQUATION DE DURABILITE ?**

Dirigée par Pr. Patricia CRIFO

École doctorale de l'École Polytechnique

Laboratoire EXCESS

Jury

Mme Renée ADAMS	Professor, University of New South Wales	Rapporteur
Mme Patricia CRIFO	Professeur, Université Paris Ouest Nanterre La Défense, Ecole Polytechnique et CIRANO	Directeur de thèse
M. Marc-Arthur DIAYE	Maitre de conférences, Université Paris-Saclay et Evry Val d'Essonne	Examineur
Mme Edith GINGLINGER	Professeur, Université Paris-Dauphine	Rapporteur
M. Bert SCHOLTENS	Professor, University of Groningen and Saint-Andrews	Examineur
M. Bernard SINCLAIR DESGAGNE	Professeur, HEC Montréal, CIRANO et Ecole Polytechnique	Examineur



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Préambule et Remerciements

Be the change that you wish to see in the world

Ghandi

La rédaction de la thèse et sa soutenance peuvent apparaître comme un achèvement en soi, l'aboutissement d'un parcours scolaire et universitaire. Ce manuscrit ouvre surtout de nombreuses perspectives excitantes et stimulantes, tant au niveau de la recherche avec son lot de sujets à explorer qu'au niveau de mes nouvelles activités professionnelles au sein du corps des ponts, des eaux et des forêts (IPEF). Je souhaite en effet mettre au service de la société et du développement durable ce parcours original. Néanmoins, dans les quelques lignes qui suivent, c'est le chemin parcouru que je souhaite décrire, porté par un sujet de thèse très personnel, des rencontres et amitiés exceptionnelles.

Le chemin initial

Ce sujet de thèse est d'une certaine manière l'aboutissement de ma formation dans les méandres de l'enseignement supérieur français. Mu par la conviction que la biologie est une science fondamentale pour comprendre les grands enjeux de notre société, je me suis lancé dans l'inconnu d'une classe préparatoire BCPST (Biologie, Chimie, Physique, Sciences de la Terre), dont la richesse est souvent sous-estimée. Porté par cette pluridisciplinarité, mon séjour à l'Ecole Normale Supérieure (ENS) aura permis d'allier rigueur scientifique, compréhension des systèmes complexes et ouverture vers les sciences humaines pour comprendre les enjeux environnementaux et les controverses associées. C'est par ce biais que j'ai été sensibilisé aux questions de prise de décisions et aux enjeux de gouvernance locale, nationale ou internationale. L'ENS aura aussi été l'occasion de sortir des sentiers battus, d'apprendre à construire mon cheminement de pensée et de porter des projets originaux et innovants. TALENS, projet éducatif à destination des lycéens à fort potentiel, aura été une des meilleures écoles pour laisser libre court à ma créativité, me frotter aux arcanes de la prise de décision, et m'investir dans la vie collective.

A la fin de ma scolarité à l'ENS, les fondamentaux de mon sujet de thèse étaient donc déjà plantés, même s'il a fallu plus de deux ans pour le faire éclore. Mon entrée au sein du corps des IPEF a concrétisé ce projet tant dans la formation, en particulier grâce au master d'économie du développement durable, de l'environnement et de l'énergie (EDDEE), que dans les perspectives professionnelles que ce choix m'offrait au sein de l'Etat et des organisations internationales. Fort de cette double formation, empli de motivations et aussi de questionnements, je me suis lancé dans ce doctorat il y a trois ans. Je n'avais pas imaginé que je prendrai autant de plaisir à le réaliser ! Même si je ne reste pas dans un parcours académique classique, je ne pense plus pouvoir abandonner maintenant la recherche et ses satisfactions et joies fugaces.

Pourquoi ce sujet ?

En premier, ce projet de thèse s'inscrit dans ma volonté d'améliorer la prise en compte des enjeux du développement durable par la société et ses parties prenantes. Dans ce contexte, les entreprises apparaissent comme un levier d'action important complémentaire de l'Etat pour lequel je vais travailler. Il me semblait donc stratégique d'acquérir cette expertise en Responsabilité Sociale et Environnementale (RSE). En second, il m'est apparu que la gouvernance était centrale dans la prise de décision et que sa qualité était déterminante pour atteindre des objectifs complexes sur les plans environnemental et social. En troisième, l'écologie m'a appris que certaines espèces sont indispensables à la survie d'un écosystème dans son ensemble : ce sont des espèces dites "clés de voûte". Je suis donc parti du postulat que la gouvernance était cette espèce clé de voûte du développement durable, particulièrement au sein des entreprises. La gouvernance peut autant être un facteur intégrateur d'objectifs parfois contradictoires qu'être à l'origine de crises et catastrophes environnementales et sociales. C'est pour tester cette hypothèse que j'ai choisi d'étudier dans ma thèse le rôle de la gouvernance dans la responsabilité sociale et environnementale des entreprises.

Voulant à la fois dépasser la vision compartimentée de la RSE adoptée par le monde financier (les facteurs Environnementaux, Sociaux et Gouvernance) et recentrer de manière explicite les objectifs RSE des entreprises au travers du prisme de la gouvernance, ce projet de thèse se retrouve à la confluence de plusieurs disciplines, visions et analyses de la relation Gouvernance-RSE. En outre, il repose essentiellement sur des approches quantitatives et statistiques. Ces deux choix conceptuels et méthodologiques font eux aussi écho aux fils conducteurs de ma formation.

Les personnes rencontrées

Sur le chemin parcouru, il y a eu des rencontres passionnantes et des amitiés nouées, elles ont aiguillé voire pimenté le chemin.

En premier lieu, je tiens à remercier Patricia Crifo pour m'avoir fait confiance dès le début alors que je n'étais pas encore armé pour affronter cette thèse d'économie. C'est cette confiance qui m'aura donné le courage et la volonté de mener ce travail à bien. J'ai aussi apprécié la liberté qui m'a été donnée dans mes projets de recherche tout comme la franchise dans les conseils et les remarques faites sur mon travail. Durant ces trois années, j'ai eu la chance d'être considéré comme un chercheur, d'enseigner, de participer à la plate-forme gouvernementale sur la RSE tout en partant 6 mois en échange à Sydney. J'en suis infiniment reconnaissant. Ce sont autant d'expériences qui m'ont grandement enrichi. Enfin, la réussite de cette thèse est intimement liée au sentiment d'être accepté dans le projet professionnel que je défendais, peut-être moins classique qu'à l'accoutumée, loin du milieu académique. J'espère que nos chemins continueront à se croiser et je serai toujours aussi motivé pour créer ensemble autour de l'économie et de la RSE dans les différents contextes institutionnels que nous connaissons.

En second lieu, je suis également très reconnaissant envers mes deux co-auteurs principaux qui ont été de formidables partenaires dans cette thèse, toujours bienveillants à mon égard et m'encourageant à me dépasser et à poursuivre mes idées. Je ne pourrai oublier les journées passées à coder, analyser et discuter les résultats ensemble, mais aussi leur sincérité à échanger sur la recherche et l'enseignement. J'aurai toujours un grand plaisir à travailler avec eux. Antoine Rebérioux, je te remercie pour ton écoute, ta volonté de co-construire et ton soutien infaillible dans toutes les étapes de cette thèse. J'ai beaucoup appris. Sandra Cavaco, j'ai beaucoup apprécié tes conseils, ton engagement dans mon comité de thèse, et ta très grande gentillesse pour m'aider dans mon doctorat.

En troisième lieu, Elena Escrig-Olmedo, Tristan Auvray et Edouard Challe, mes trois autres co-auteurs, vous avez aussi participé aux développements de mes réflexions sur la finance durable, même si nos travaux n'apparaissent pas dans cette thèse. Je vous en remercie.

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Renée Adams, I am really and deeply grateful that you welcomed me at UNSW (University of New South Wales) during one semester in 2014. It was a great opportunity and a wonderful research experience. I was really lucky that you gave me a chance to defend my work during the brown bag seminar and your workshops. I have appreciated all your comments and your advice. You have inspired a lot of my works and my ideas, especially my concerns about gender issue. I would like to thank you for your commitment and the value that you have added to this dissertation.

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Finally, Sydney was a wonderful research and life experience. I met some amazing people, especially people at the department of Banking and Finance (UNSW) and the swim team. I want to thank Ying, Thomas, Julianne and Jing for welcoming me at the department and for sharing their experience in this doctoral project. I would also like to thank Pr Masulis for providing many comments on my work. Paul, you have been a great support and I enjoyed the time we spent together. Masaki, my co-worker and swim mate, you are an amazing friend. You made me discover a lot about Japan and Australia. And I cannot forget the productive time we spent together at the State Library. Teresa and Brendan, you were two very nice roommates!

Comme souligné précédemment, cette thèse ne se limite pas au laboratoire et je tiens à remercier tous ceux qui se sont tenus à mes côtés. À toutes ces personnes, j'en serai éternellement reconnaissant.

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Au cours de ces années, enfin, j'ai eu la chance de rencontrer des personnes qui, à leur manière, ont modifié mon parcours, ma perception de la vie et mes engagements. Même si pour certains nos chemins se sont séparés il y a déjà plusieurs années, même si certains ne savent pas à quel point ils ont eu une influence décisive, il me semble important de les inclure et les associer à ce travail. Il s'agit sûrement d'une liste à la Prévert : Marie-Geneviève Ordonneau, Corinne Boulet, Jean-Christophe Clair, Bertrand Mora, Mme Block, M Champion, Gersende Baranger, Jay Lurashi, Muy-Cheng Peich, Robin Aguilée, Rainer Simader, Marc Guyot, Laurence Madieu...

Il ne reste plus qu'à aller découvrir les prochains sentiers qui s'ouvrent aujourd'hui. J'ai hâte de les partager avec vous.

Corporate Governance and Firm Performance: The Sustainability Equation?

Abstract

In order to achieve a sustainable growth and to respond to external pressures (regulation, society), firms take more and more frequently into account their social and environmental externalities in the decision-making process, through the development of their Corporate Social Responsibility policy (CSR). Corporate governance appears here as a way to integrate shareholders' and stakeholders' objectives. Is corporate governance a strategic mediator between CSR objectives and firm performance? Is corporate governance a key stone of CSR firm commitment? This dissertation provides both theoretical and empirical evidences in the French case where corporate governance is defined as a hybrid model between the shareholder and stakeholder models.

The two first chapters investigate the link between firm objectives and performance. From an INSEE national survey on sustainable development, chapter 2 shows how firm motivations (defensive, altruistic or strategic) is a key determinant of their social, societal and environmental CSR awareness. In particular, firms implementing strategic CSR commit more to the issues related to their strategic stakeholders. CSR motivations may therefore mediate the relationship between CSR commitment and financial performance. Integrating firm objectives, the decision-making process at the top is driven by the board of directors. Chapter 3 theoretically demonstrates how board composition may affect firm outcomes. In particular, the model determines the optimal board functioning (monitoring or advising) depending on the relative costs and benefits of board expertise and independence.

After highlighting that board composition is a key determinant of governance effectiveness, the three last chapters explore how corporate governance, and in particular board composition, may achieve some CSR demands from shareholders, stakeholders and society and affect firm outcomes. These chapters rely on empirical studies based on listed companies (SBF120) over the 2006-2014 period.

Chapter 4 studies the link between independent directors and operating performance in order to evaluate their efficiency. The independence of directors is indeed usually considered as an answer to shareholders' demands to reduce the conflict of interest with management. We show that in France, independent directors are better selected than affiliated directors in terms of intrinsic ability but suffer from an informational gap. However, this gap may be shortened by industry expertise and/or social connections. Chapter 5 investigates from the shareholder and stakeholder perspectives how board composition is related to CSR commitment. We show that CSR engagement is driven by the reduction of conflicts with stakeholders rather than the creation of private benefit for managers. Stakeholder representation inside the boardroom may therefore affect investment in the different CSR issues. Chapter 6 analyzes how firms comply with the French gender quota of women inside the boardroom in 2014. The quota has indeed broken the glass-ceiling experienced by female managers and increased the number of women in the director labor market. However, female directors earn 6% less in fees than their male counterparts, one third due to their characteristics (age, expertise, tenure..) and two thirds due to their positions (committees) inside the boardroom. Female directors have then experienced an inner glass-ceiling which may jeopardize the positive expected effects of board diversity on firm policy and performances.

In conclusion, the discussion provides the main new prospects and research avenues opened up by this dissertation. It focuses attention on the role of corporate governance in the development of CSR and the possible applications in terms of public policy and regulation.

Keywords: Corporate Social Responsibility, Corporate Governance, French Model, Stakeholder Theory, Agency Theory, Diversity

Gouvernance d'Entreprise et Performance : Quelle Equation de Durabilité ?

Resumé

Afin de participer à une croissance durable de la société, les entreprises développent leur Responsabilité Sociale et Environnementale (RSE). La gouvernance d'entreprise, et en particulier le conseil d'administration, jouent un rôle central en intégrant les objectifs environnementaux et sociaux dans la prise de décisions. La gouvernance est-elle un médiateur stratégique entre objectifs RSE et performances des entreprises ? Est-elle la clé de voûte de l'engagement RSE ? Cette thèse présente des arguments théoriques et empiriques dans le cas français défini comme un modèle hybride (actionnarial-partenarial) de gouvernance.

Les deux premiers chapitres analysent le lien entre objectifs et performances des entreprises. À partir d'une enquête INSEE sur le développement durable, le chapitre 2 montre que la motivation RSE (défensive, altruiste ou stratégique) détermine le niveau de prise en compte des enjeux sociaux et environnementaux. En particulier, les entreprises mettant en place une RSE stratégique investissent davantage dans les enjeux liés à leurs parties prenantes. Ces résultats suggèrent que la motivation RSE pourrait être un médiateur de la relation RSE-performance. Intégrant les objectifs de l'entreprise, le processus de décision au sommet de l'entreprise est contrôlé par le conseil d'administration. Le chapitre 3 démontre théoriquement comment la composition du conseil affecte les performances de l'entreprise. Le modèle prédit le fonctionnement optimal du conseil (surveillant ou conseiller) en fonction des coûts et bénéfices relatifs de l'expertise par rapport à l'indépendance.

Après avoir mis en exergue la composition du conseil d'administration comme facteur déterminant de l'efficacité de la gouvernance, les trois chapitres suivants analysent comment la composition du conseil d'administration peut répondre aux demandes RSE de la part des actionnaires, des parties prenantes et de la société, et affecter les performances de l'entreprise. Ces trois chapitres reposent sur des analyses empiriques fondées sur les entreprises cotées françaises (SBF120) sur la période 2006-2014.

Le chapitre 4 évalue l'efficacité des administrateurs indépendants. En effet, ce type d'administrateurs est une réponse aux pressions des actionnaires pour réduire les conflits d'intérêts avec le management. En France, les administrateurs indépendants sont mieux sélectionnés que les administrateurs affiliés mais ils souffrent d'un déficit informationnel. Ce déficit peut être réduit par de l'expertise et des relations sociales. Le chapitre 5 étudie le lien entre la composition du conseil et l'engagement RSE des entreprises. Les résultats montrent que cet engagement est davantage motivé par l'objectif de réduire les conflits avec les parties prenantes que de constituer des bénéfices privés pour le management. La représentation des parties prenantes au sein du conseil peut donc affecter l'engagement RSE des entreprises. Le chapitre 6 analyse comment les entreprises se mettent en conformité avec le quota de genre au sein des conseils d'administration en 2014. Le quota a cassé le plafond de verre en accroissant le nombre de femmes sur le marché des administrateurs. Cependant, elles gagnent 6% de moins que les hommes. Ce différentiel est dû pour un tiers aux caractéristiques (âge, ancienneté...) des administratrices et pour deux tiers aux positions qu'elles occupent au sein du conseil (comités). Les administratrices se heurtent donc à un plafond de verre interne, ce qui peut annihiler les bénéfices attendus de l'accroissement de la diversité au sein des conseils sur les choix stratégiques et les performances de l'entreprise.

En conclusion, la discussion décrit les nouvelles perspectives de recherche s'ouvrant à la suite de cette thèse. Elle met l'accent sur le rôle de la gouvernance dans le développement de la RSE et les potentiels enseignements en termes de politiques publiques et de régulations.

Mots clés: Responsabilité Sociale et Environnementales, Gouvernance d'Entreprises, Théories de l'Agence, Théorie des Parties Prenantes, Diversité

Synthèse

Depuis le rapport Brundtland (“Our Common Future”, 1987), les décideurs politiques ont recherché à définir un modèle durable de gestion de la société, c’est-à-dire un développement économique qui doit “répondre aux besoins du présent sans compromettre la capacité des générations futures de répondre aux leurs” (Brundtland, 1987). Le plan stratégique Europe 2020 renforce cet objectif en favorisant une “économie intelligente, durable et inclusive”. Au niveau macro-économique, les pays peuvent améliorer leur compétitivité en intégrant la protection de l’environnement et l’inclusion sociale. En particulier, les états jouent un rôle stratégique en stimulant le développement de la responsabilité sociale et environnementale des entreprises (RSE) (Albareda et al., 2007; Boulouta and Pitelis, 2014). La RSE est définie par la Commission européenne (2011) comme le fait pour les entreprises de mettre en place “un processus destiné à intégrer les préoccupations en matière sociale, environnementale, éthique, des droits de l’homme et des consommateurs dans les activités commerciales et la stratégie de base en étroite collaboration avec leurs parties prenantes” (European-Commission, 2011). Au niveau micro-économique, les entreprises doivent prendre en compte leurs externalités sur le plan économique et durable. La RSE englobe à la fois les pratiques volontaires et la conformité aux exigences légales envers les questions environnementales, sociales et sociétales (Liang and Renneboog, 2014).

D’un point de vue économique, l’engagement RSE est une réponse aux défaillances du marché et du gouvernement, dès lors qu’au moins une partie prenante de l’entreprise a des préférences environnementales et sociales et qu’elle exige de l’entreprise un comportement responsable (Crifo and Sinclair-Desgagne, 2014). Une partie prenante est, dans ce cas, tout groupe ou organisation qui affecte ou est affecté par les activités de l’entreprise (Freeman, 1984). Les parties prenantes sont, en premier lieu, les actionnaires, les dirigeants et les employés, mais aussi les clients et les fournisseurs, l’Etat, les organisations non gouvernementales ou la société dans son ensemble. Dans ce contexte, les entreprises acceptent, sur la base des préférences sociétales des parties prenantes, de supporter des surcoûts liés à la mise en oeuvre des actions RSE au-delà de ce que la loi exige (McWilliams and Siegel, 2000), dans le but de se conformer aux règles juridiques, morales et éthiques de la société (Hill et al., 2007), de conserver sa capacité à mener son activité (Post et al., 2002b), de produire du bien-être pour les parties prenantes (Freeman, 1984) ou de maximiser la richesse de long terme des actionnaires (Friedman, 1970). Les déterminants économiques de l’engagement RSE ont donc largement été étudiés par la communauté académique ces dernières décennies afin de comprendre les stratégies menées par les entreprises (Reinhardt et al., 2008; Benabou and Tirole, 2010; Kitzmueller and Shimshack, 2012; Hoepner et al., 2012). Les démarches RSE, comme une réponse aux imperfections du marché, peuvent être classées en fonction de trois principaux mécanismes économiques mis en jeu: la régulation, la concurrence ou les contrats (Crifo and Forget, 2015). Dans le dernier cas (notre intérêt ici), l’engagement RSE, comme faisant partie de l’espace discrétionnaire des dirigeants, peut répondre aux pressions internes des actionnaires, des administrateurs et des employés. Dans cette perspective, l’engagement RSE est une stratégie visant à maximiser la valeur partagée entre les actionnaires et les parties prenantes (Ferrell et al., 2014), sauf lorsque cette stratégie reflète un problème d’agence à l’intérieur de l’entreprise s’effectuant aux détriments des actionnaires (Friedman, 1970).

Du point de vue financier, les enjeux de RSE ont attiré l’attention des investisseurs, des gestionnaires d’actifs et des actionnaires. Les investisseurs, en particulier ceux socialement responsables, utilisent l’information extra-financière afin de déterminer la valeur d’une entreprise, de faire leurs investissements et de les surveiller au cours de la période d’investissement (Crifo and Mottis, 2013). L’investissement socialement responsable (ISR) a ainsi crû durant la dernière décennie (Crifo and Forget, 2013). Le développement des agences de notation extra-financière est le second signal révélant l’intérêt croissant envers ce type d’information. Dans le domaine financier, l’information extra-

financière analyse la RSE selon les facteurs ESG (Environnement, Social et Gouvernance). Le pilier “Environnement” couvre l’intégration des préoccupations environnementales dans l’entreprise, de la conception à l’utilisation en passant par la fabrication des produits ou des services. Les principaux enjeux sont la prévention de la pollution et la gestion des risques, la protection des ressources naturelles et de la biodiversité, la gestion des déchets ou le recyclage et l’écoconception. Le pilier “Social” comprend toutes les questions liées aux ressources humaines, tels que les conditions de travail, la formation et l’emploi ou la politique contre la discrimination, mais aussi les préoccupations plus vastes liées aux droits de l’homme, tels que la politique de lutte contre le travail des enfants. Le pilier “Gouvernance” analyse à la fois les relations avec les parties prenantes externes et la gouvernance d’entreprise. Tel que défini par Shleifer and Vishny (1997), la gouvernance d’entreprise correspond à la façon dont les investisseurs de capitaux s’assurent d’obtenir un retour sur leur investissement. Plus précisément, la gouvernance d’entreprise définit les relations entre actionnaires, administrateurs et dirigeants. Ce pilier concerne principalement la divulgation d’information sur l’entreprise, les droits des actionnaires, la rémunération des dirigeants et la composition du conseil d’administration. Les relations avec les parties prenantes externes portent sur les pratiques à l’égard des clients et des fournisseurs, tels que le contrat à long terme, l’intégration de la RSE au sein de la chaîne d’approvisionnement ou les pratiques anti-corruption. Il prend également en compte le rôle de l’entreprise dans la communauté tel que les partenariats avec des organisations non gouvernementales locales et nationales ou des universités, ou la philanthropie. Dans cette thèse, nous proposons que les relations avec les parties prenantes externes définissent le pilier “Sociétal” afin de différencier clairement les questions internes (gouvernance d’entreprise) des questions externes (questions de société). Ce choix se justifie également par la position très spécifique de la gouvernance d’entreprise dans le champ de la RSE comme cela sera démontré plus tard dans l’introduction.

La convergence de ces deux courants de la littérature (finances et économie) amène à la question la plus fréquente dans le domaine: quel est l’effet de l’engagement RSE sur les performances des entreprises ? Deux vues opposées sont intensément débattues : une stratégie rentable créatrice de valeur (“Doing good by doing well”) ou un coût d’agence (Ferrell et al., 2014). Dans le premier cas, les entreprises responsables en prenant en compte les questions de RSE maximisent la valeur pour les actionnaires et dans une certaine mesure pour les autres parties prenantes (Deng et al., 2013). Une relation positive entre l’engagement RSE et la performance de l’entreprise est donc espérée. Dans le cas contraire, suivant la perspective Friedman (1970) sur la responsabilité de l’entreprise à faire du profit, la théorie de l’agence suggère que l’investissement RSE est un signal d’enracinement managérial et de coût d’agence. Grâce à la RSE, les dirigeants sont en mesure de constituer des bénéfices privés aux dépens des actionnaires. Une corrélation négative entre l’engagement RSE et performance de l’entreprise est dans ce cas attendue. Pour résoudre ce débat théorique, la littérature empirique a été fertile, mais les résultats plutôt mitigés sur le lien entre la RSE et la performance (Orlitzky et al., 2003; Margolis and Walsh, 2003; Portney, 2008). Margolis et al. (2011) montrent, grâce à une méta-analyse sur 251 études empiriques, une relation légèrement positive. Néanmoins, les mécanismes à l’origine des décisions en matière de RSE, notamment pour prendre en compte la multi-dimensionnalité de ce concept, et les conséquences associées sur la stratégie de l’entreprise et les performances, restent flous (Chatterji et al., 2009, 2014).

Quelques études récentes tentent de comprendre la boîte noire autour des relations entre ces trois dimensions ESG et les performances de l’entreprise. En particulier, chaque dimension RSE peut affecter de manière différente les performances (Barcos et al., 2013). Certaines pratiques et stratégies en matière de RSE peuvent être liés positivement à la performance et d’autres négativement (Brammer and Millington, 2008; Mackey et al., 2007). Il peut enfin y avoir des compromis entre engagements dans les trois dimensions de la RSE ce qui affecte de manière différente les performances de l’entreprise. Par exemple, Crifo et al. (2014) analysent, sur des données d’entreprises françaises, le compromis quantitatif-qualitatif entre chaque dimension RSE. Les auteurs montrent en premier que l’engagement

dans chaque dimension est positivement liée à la performance, et en deuxième que la stratégie la plus rentable consiste à investir dans le domaine social et dans l'environnement. Cavaco and Crifo (2014) soulignent également sur des données européennes que les engagements sociaux et sociétaux sont complémentaires alors que les engagements environnementaux et sociaux sont substituables à l'égard de la performance financière. Les coûts et les avantages de chaque stratégie RSE sont donc dépendants de la combinaison de pratiques mises en oeuvre par les entreprises. Néanmoins, toutes ces études attirent l'attention sur les piliers ESS (Environnement, social et sociétal). La gouvernance d'entreprise, en tant que pilier spécifique des facteurs ESG, reste peu traitée dans cette littérature.

La gouvernance d'entreprise est toutefois apparue comme une clé de voûte de la gestion de l'entreprise et des performances financières, depuis l'article de Berle and Means (1932) au sujet de la séparation entre la propriété et le contrôle des entreprises. Elle focalise l'intérêt des investisseurs (par exemple CalPERS) ainsi que des régulateurs au travers différents codes de gouvernance (en France, code AFEP-MEDEF¹) et de lois spécifiques (en France, loi Zimmerman-Copé sur la diversité au sein des conseils d'administration votée en 2011, et loi de sécurisation de l'emploi en 2013 introduisant la représentation des employés à l'intérieur des conseils d'administration). Ces réglementations volontaires ou obligatoires visent à améliorer la qualité de la gouvernance d'entreprise pour protéger aux mieux les actionnaires (minoritaires), mais aussi à répondre aux nouvelles exigences de la société (égalité des genres) et des diverses parties prenantes comme les employés (codétermination en Allemagne). En outre, l'importance de la gouvernance d'entreprise a été mise en lumière par les scandales et les crises financières, environnementales et sociales que la société a connus ces dernières décennies. Par exemple, la crise financière, avec le cas emblématique de Lehman Brothers, montre la faiblesse du contrôle des organes de gouvernance sur les décisions des dirigeants pour construire des entreprises rentables et résilientes (Adams, 2012; Erkens et al., 2012; Van Essen et al., 2013). Du point de vue de l'environnement, la crise environnementale de British Petroleum (Deepwater Horizon) suggère un manque d'intégration des risques environnementaux dans le processus de prise de décisions (Osofsky, 2011; Lin-Hi and Blumberg, 2011). D'un point de vue social, les tensions sociales au sein de France Télécom (la vague de suicides liée à la restructuration des activités) montrent le difficile compromis entre la qualité des conditions de travail et la rentabilité des entreprises. La gouvernance est alors un mécanisme central pour comprendre les performances financières et extra-financières des entreprises.

D'un point de vue académique, le lien entre la gouvernance d'entreprise et les performances de l'entreprise a reçu une attention particulière pour déterminer les principaux facteurs de gouvernance externe et interne de l'entreprise (Gillan, 2006). En particulier, la structure de propriété, le conseil d'administration et les incitations des dirigeants sont les principaux déterminants de l'efficacité de la gouvernance interne des entreprises (Ang et al., 2000; Bedchuck and Fried, 2004; Adams et al., 2010; Goergen and Renneboog, 2011; Murphy, 2012). Cependant, la gouvernance est aussi un déterminant de l'engagement RSE (Jo and Harjoto, 2011). La RSE est ainsi une responsabilité déléguée des actionnaires, des administrateurs et des employés que les dirigeants doivent intégrer dans leurs prises de décisions (Crifo and Forget, 2015). En intégrant les intérêts des actionnaires et des parties prenantes, le processus de prise de décision est un mécanisme important pour comprendre l'engagement et la stratégie de RSE des entreprises, et l'incidence sur les performances de l'entreprise. Dans cette perspective, la gouvernance d'entreprise a une position spécifique dans le cadre de la RSE (Jamali et al., 2008). D'une part, la gouvernance d'entreprise est un enjeu RSE, en particulier du point de vue de l'investisseur. Quelques bonnes pratiques ont ainsi été promues pour créer une gouvernance plus responsable, tels que l'indépendance des membres du conseil, une rémunération incitative des dirigeants ou la transparence envers les actionnaires (Sparkes and Cowton, 2004; Cziraki et al., 2010; Rehbein et al., 2012). D'autre part, la gouvernance d'entreprise est la clé de voûte de la politique RSE au sein des entreprises. C'est pourquoi la gouvernance d'entreprise mérite un examen spécifique afin de

¹ AFEP-Association Française des Entreprises Privées - et MEDEF -Mouvement des Entreprises DE France- sont deux organisations représentatives du secteur privé. Le code est appliqué sur le marché de Paris (Euronext-Paris)

comprendre le lien entre la RSE et la gouvernance (Harjoto and Jo, 2011).

Une littérature émergente s'est donc intéressée aux liens entre la gouvernance d'entreprise, la RSE et performance de l'entreprise. Jo and Harjoto (2012) montrent même un lien de causalité de la gouvernance vers performance de l'entreprise, grâce à l'engagement RSE des entreprises. En particulier, la recherche a étudié les trois niveaux au sein de la gouvernance d'entreprise: les actionnaires (la structure de propriété), le conseil d'administration (composition) et les dirigeants (en particulier la rémunération des dirigeants). Dam and Scholtens (2012) montrent par exemple, dans une analyse multi-pays, que l'activisme actionnarial et les types d'actionnaires influencent l'engagement RSE des entreprises (voir aussi Oh et al., 2011; Dam and Scholtens, 2013; Ducassy and Montandrou, 2015, pour le cas français). D'après Harjoto and Jo (2011) (mais aussi Post et al., 2011; Ntim and Soobaroyen, 2013; Harjoto et al., 2014), la composition du conseil d'administration, qui reflète le pouvoir de négociation entre les dirigeants, les investisseurs et les autres parties prenantes, affecte fortement l'investissement dans les différentes dimensions de la RSE et les performances de l'entreprise. Enfin, la rémunération, en particulier l'horizon d'incitation (à court ou long terme), la part variable en fonction des performances et les critères ESG appliqués, déterminent les incitations des dirigeants à engager une stratégie RSE dont les effets pourront affecter en retour leur rémunération (Cai et al., 2011; Callan and Thomas, 2014; Francoeur et al., 2015).

Dans ce contexte, la gouvernance d'entreprise, qui correspond au processus de prise de décisions à l'intérieur de l'entreprise et au pouvoir de négociation entre les dirigeants, les actionnaires et les autres parties prenantes, semble être un facteur spécifique et stratégique pour atteindre à la fois les objectifs financiers et extra-financiers (Jo and Harjoto, 2012). Cette thèse se demande si la gouvernance d'entreprise, en particulier le conseil d'administration, est un médiateur entre la RSE et les performances de l'entreprise, et si la gouvernance d'entreprise est la clé de voûte de l'engagement RSE. Pour cela, cette thèse analyse dans le contexte français les mécanismes mises en place pour répondre aux demandes de RSE. Elle étudie de manière spécifique le conseil d'administration car il est le pivot de la gouvernance d'entreprise et un moyen d'intégrer à la fois les demandes des actionnaires et des autres parties prenantes. En outre, le conseil d'administration est régulé par des codes de gouvernance et des lois qu'il est pertinent d'évaluer d'un point de vue économique.

Les chapitres 2 et 3 de cette thèse étudient le lien entre les objectifs et les performances des entreprises. à partir d'une enquête nationale de l'Institut National de la Statistique et des Etudes Economiques (INSEE) sur le développement durable, le chapitre 2 montre comment les motivations RSE (défensives, pro-sociales ou stratégiques) déterminent la prise en compte des enjeux sociaux, sociétaux et environnementaux. La motivation sous-tendant l'engagement RSE des entreprises peut en outre modifier les effets attendus de la RSE sur les performances financières. Pour comprendre comment les objectifs des entreprises peuvent influencer les performances, le processus de prise de décision doit être investigué, en particulier à la tête de l'entreprise. Dans ce cadre, le conseil d'administration est un organe central qui protège les intérêts des actionnaires, voire des autres parties prenantes vis-à-vis des décisions des dirigeants. Il surveille et conseille les dirigeants tout en validant la stratégie de l'entreprise. Il mérite donc un intérêt particulier pour analyser l'équation RSE-performance. Le chapitre 3 démontre théoriquement comment la composition du conseil peut influencer les résultats de l'entreprise. En particulier, le modèle détermine le mode de fonctionnement optimal ("surveillant" ou "conseillant") en fonction des coûts et des bénéfices de l'expertise et l'indépendance des administrateurs.

Après avoir souligné que la composition du conseil d'administration est un facteur déterminant de l'effectivité de la gouvernance, les trois chapitres suivants de cette thèse explorent comment la gouvernance d'entreprise, et en particulier la composition du conseil, peuvent répondre à certaines exigences en matière de RSE de la part des actionnaires, des parties prenantes et de la société. La figure 1 présente le cadre conceptuel soutenant l'analyse empirique. Trois types de RSE peuvent affecter la composition du conseil. Du point de vue de l'actionnaire, la qualité du conseil d'administration est

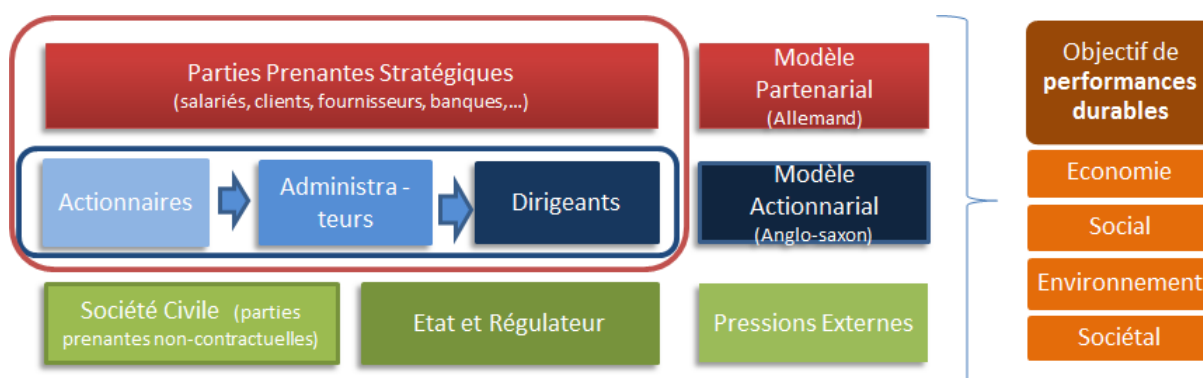


Figure 1: Cadre conceptuel développé dans la thèse

déterminée par l'indépendance du conseil. En effet, l'indépendance fait partie des bonnes pratiques de gouvernance promues par les codes comme une démarche volontaire pour l'entreprise. Elle devrait affecter positivement les performances financières. Du point de vue des parties prenantes, la composition du conseil d'administration détermine la représentation de leurs intérêts dans le processus de prise de décisions, et probablement l'engagement et les performances RSE de l'entreprise. Du point de vue de la société, la loi prévoit la composition "social" optimale du conseil : dans notre cas, la parité entre hommes et femmes, afin d'améliorer l'égalité des genres au sein des entreprises. Dans tous les cas, chaque prescription en termes de composition du conseil d'administration affecte potentiellement les performances financières et extra-financières de l'entreprise. Les études empiriques sont fondées sur les plus grandes sociétés cotées (indice SBF 120, les 120 plus grandes entreprises cotées en termes de capitalisation et / ou d'échanges sur Euronext-Bourse de Paris) sur la période 2006-2014, grâce à la fusion de plusieurs bases de données françaises (information du conseil d'administration, notation extra-financière, informations financières).

Plus précisément, le chapitre 4 étudie le lien entre les performances opérationnelles des entreprises et les administrateurs indépendants afin d'évaluer leur efficacité. L'indépendance des administrateurs est généralement considérée comme une réponse aux demandes des actionnaires, afin de réduire le conflit d'intérêts avec la direction. Nous montrons qu'en France, les administrateurs indépendants sont mieux choisis que les administrateurs affiliés en termes de capacité intrinsèque, mais qu'ils souffrent d'une forte asymétrie d'information. Cette asymétrie peut être réduite par l'expertise sectorielle et / ou les liens sociaux.

Le chapitre 5 analyse du point de vue des actionnaires et des parties prenantes le lien entre la composition du conseil et l'engagement RSE. Nous montrons que l'engagement RSE est motivé par la réduction des conflits avec les parties prenantes, plutôt que par la création d'avantages privés pour les dirigeants. La représentation des parties prenantes à l'intérieur du conseil d'administration peut donc affecter l'engagement des entreprises dans les différents enjeux de la RSE.

Le chapitre 6 analyse comment les entreprises se conforment au quota de genre à l'intérieur du conseil d'administration en 2014 (20%). Le quota a effectivement brisé le plafond de verre ressenti par les femmes cadres et augmenté le nombre de femmes sur le marché du travail des administrateurs. Cependant, nous montrons que les administratrices sont moins impliquées dans les activités du conseil, en partie en raison de leurs caractéristiques (âge, expertise, fonciers), et en partie en raison de leurs positions (comités). Les administratrices connaissent donc maintenant un plafond de verre interne, qui peut compromettre les effets positifs attendus de la diversité sur les décisions et les performances de l'entreprise.

En conclusion, la discussion présente les nouvelles perspectives et pistes de recherche ouvertes par cette thèse. Elle met l'accent sur le rôle de la gouvernance d'entreprise dans le développement de la RSE et les applications possibles en matière de politique publique et de régulation.

Les contributions de la thèse à la littérature économique peuvent se présenter en quatre points.

Tout d'abord, cette thèse est dédiée au modèle de gouvernance française qui est défini comme un modèle hybride entre le modèle actionnarial (anglo-saxon) qui met l'accent sur les intérêts des actionnaires et le modèle partenarial (Europe continentale) qui vise l'intérêt social de l'entreprise et qui implique plus largement les parties prenantes (les détenteurs de blocs, des banquiers, employés) (Aglietta and Reberlioux, 2005). Cependant, la majorité des travaux empiriques sont basés sur le modèle actionnarial américain, ce qui peut conduire à un biais dans la compréhension du lien de gouvernance-RSE. En supposant que la RSE est un moyen d'intégrer les intérêts des actionnaires et des parties prenantes, le modèle partenarial pourrait être plus efficace pour construire la stratégie de RSE créatrice de valeur que le modèle actionnarial pur. Le modèle français est donc un cas d'étude pertinent où les intérêts des actionnaires et des parties prenantes peuvent être directement pris en compte (Crifo and Reberlioux, 2015). De plus, le marché français fait partie du marché Euronext, le plus grand marché d'actions de la zone euro, et attire de plus en plus d'investisseurs étrangers, ce qui confère au cas français une audience internationale. En outre, la gouvernance d'entreprise française converge en partie vers le modèle anglo-saxon au travers des codes de gouvernance d'entreprise et de la loi. En particulier, l'indépendance des administrateurs a été promue depuis le rapport Vienot (équivalent du rapport Cadbury en 1995). Aujourd'hui, au moins 50% des administrateurs sont indépendants tel que recommandé par le code de gouvernance d'entreprise.

Toutefois, en dépit de ce processus de convergence en raison de la mondialisation de la finance, le modèle français conserve certaines caractéristiques intéressantes pour notre question de recherche (Martynova and Renneboog, 2011). En particulier, le contrôle de l'entreprise est basé principalement sur les mécanismes internes, que nous allons étudier, plutôt que sur les mécanismes externes. Le marché des actions et les OPA (Offre Publique d'Achat) sont moins développés que sur le marché américain. En termes de propriétés, les actionnaires majoritaires jouent un rôle important dans le processus de prise de décision, en particulier grâce à leurs droits de vote (renforcés parfois avec des droits de vote double) et à leur représentation directe au sein du conseil. En termes de conseil d'administration, l'organisation est plus souple que celle des Etats-Unis. Les entreprises peuvent choisir parmi 3 types: une structure duale avec conseil de surveillance et directoire, une structure uni-modale avec ou sans séparation des positions de président et de directeur général (Belot et al., 2014). En outre, les employés peuvent être représentés à l'intérieur du conseil, en particulier dans les anciennes entreprises d'état ou lorsque l'actionnariat employés dépasse 3%. Les représentants des employés permettent ainsi de mieux prendre en compte leurs intérêts sans être dans un système de codétermination, comme en Allemagne (Fauver and Fuerst, 2006). La loi à propos de la sécurisation de l'emploi en 2013 renforce cette tendance en imposant désormais des représentants des salariés pour les plus grandes entreprises (plus de 5000 employés en incluant les filiales). Au-delà de la représentation des actionnaires minoritaires, d'autres parties prenantes, telles que les clients ou les fournisseurs, peuvent aussi être représentées au sein du conseil. Enfin, le Parlement a voté la loi sur la parité au sein du conseil en 2011 ce qui crée une expérience quasi-naturelle pour analyser l'effet des quotas de femmes sur les décisions des entreprises. Toutes ces caractéristiques créent un cadre d'étude intéressant, même pour une audience internationale.

En ce qui concerne les questions de RSE, le contexte français fournit une étude de cas prometteuse. Depuis 2001 avec la loi NRE (Nouvelle Régulation Economique), les entreprises doivent divulguer des informations environnementales et sociales. En 2007, le Grenelle, qui est un processus de concertation entre les parties prenantes (Etat, les élus, les entreprises, le commerce de l'Union, la société civile et

des universitaires) sur les questions environnementales, a souligné l'importance d'avoir une économie durable et de développer une politique RSE. En 2013, la France a adopté une loi sur l'information ESG divulguée par les entreprises, prenant ainsi de l'avance sur la directive européenne (2014). Les entreprises françaises sont donc informées et sensibilisées aux enjeux de la RSE, et constituent un vivier intéressant d'entreprises pour étudier leur stratégie RSE.

Deuxièmement, cette thèse clarifie la relation entre gouvernance, RSE et performances de l'entreprise. Cette thèse analyse aussi la RSE comme un équilibre entre les parties prenantes et les intérêts des actionnaires. Cette vision converge vers la perspective Freeman de la RSE (ou la vue de Dodd), qui prend en charge la responsabilité de l'entreprise envers leurs parties prenantes, en opposition à la perspective Friedman (vue de Berle) qui se concentre sur le coût d'agence de la RSE (Macintosh, 1999; Ferrell et al., 2014). Par ailleurs, nous soutenons que la gouvernance d'entreprise est une dimension spécifique de la RSE qui devrait être considérée comme la pierre angulaire de l'engagement RSE (Jamali et al., 2008). Du point de vue mécanique, la gouvernance est impliquée dans la définition des objectifs et de la stratégie de l'entreprise, y compris vis-à-vis de la RSE. Un lien de causalité de la gouvernance d'entreprise vers la stratégie RSE a ainsi été démontré dans la littérature (Jo and Harjoto, 2012). Cependant, les bonnes pratiques de gouvernance d'entreprise sont plus complexes à définir que les bonnes pratiques en matière sociale ou environnementale. Elles impliquent dans de nombreux cas un certain nombre de rétroactions négatives. Le cas de l'indépendance est très éclairant de ce point de vue. Les coûts de l'asymétrie d'information compromettent les bénéfices liés aux administrateurs indépendants pour améliorer la gouvernance d'entreprise et la performance des entreprises.

En outre, cette thèse étudie le rôle du conseil d'administration au niveau individuel. L'objectif est de dépasser le paradigme de l'indépendance en enquêtant sur l'hétérogénéité des administrateurs au sein du conseil dans divers contextes: la représentation des actionnaires (chapitres 4 et 5), la représentation des parties prenantes (chapitre 5) ou la diversité (chapitre 6) (Anderson et al., 2011; Masulis and Mobbs, 2014). Ce niveau d'analyse est très prometteur pour surmonter le problème d'identification. Même les expériences quasi-naturelles visant à étudier la relation entre la composition du conseil et de performance de l'entreprise sont pour la plupart du temps entachées de certains biais liés notamment à des changements simultanés (Ferreira, 2015). Voilà pourquoi la compréhension des mécanismes de gouvernance d'entreprise au niveau individuel permettra de renouveler le débat sur la question du lien gouvernance, RSE et performance.

Troisièmement, cette thèse repose sur la collecte de données originales dans le cas français. Ethics & Boards, un observatoire international de la gouvernance, nous a fourni une première base de données sur la gouvernance d'entreprise couvrant les entreprises françaises sur la période 2009-2011 avec des informations individuelles (éducation, ...) et des informations sur les conseils d'administration (fonctions, indépendance...). Cette thèse a été l'occasion d'élargir cette base de données sur la période 2006-2014. Nous avons aussi été en mesure de recueillir des informations sur les comités ainsi que les jetons de présence, grâce aux rapports annuels. En 2002, Vigéo a été la première agence française de notation extra-financière. Elle nous permet d'avoir une couverture spécifique du marché français en termes d'information ESG. Comme le souligne la littérature sur la notation (Chatterji et al., 2014; Ferrell et al., 2014), il est important de tester la robustesse des résultats en utilisant plusieurs sources d'information ESG. Asset4 nous offre un échantillon complémentaire similaire sur les entreprises françaises. A la fin de cette thèse, une base de données complète sur les entreprises françaises couvrant les informations de gouvernance et les performances financières et extra-financières, a été construite. Enfin, l'INSEE a lancé en 2011 la première enquête sur les pratiques durables sur un échantillon représentatif des entreprises françaises. Il offre une des plus grandes bases de données sur le sujet couvrant à la fois les petites et moyennes entreprises et les grandes entreprises.

Quatrièmement, cette thèse applique de nouvelles méthodes pour le domaine de la gouvernance d'entreprise. Le chapitre 3 adapte un modèle micro-macro, généralement appliqué à des modèles de croissance, au conseil d'administration. En particulier, cette méthodologie permet d'avoir un choix entre deux types de fonctionnement du conseil (conseillant ou surveillant) en fonction de la composition du conseil d'administration (indépendance et expertise). Le modèle propose une analyse novatrice du compromis entre les fonctions de surveillance et de conseil ainsi que entre l'indépendance et l'expertise. Le chapitre 4 applique pour la première fois la méthodologie d'Abowd, Kramarz et Margolis, qui a été principalement développé pour l'analyse des salaires des employés. Elle permet de distinguer les effets fixes des entreprises et des administrateurs ainsi que les attributs dépendant de l'entreprise. Suite aux travaux de Bertrand and Schoar (2003) sur la question de style de management, cette thèse apporte un nouvel éclairage sur les mécanismes au sein du conseil (fonctionnement et de sélection des administrateurs) et sur les déterminants de l'effectivité des administrateurs indépendants. Le chapitre 6 utilise la décomposition d'Oaxaca des jetons de présence pour comprendre les facteurs qui peuvent réduire le rôle des administratrices après le quota. La décomposition de Oaxaca, développée initialement pour estimer la discrimination sur le marché du travail, explique l'écart homme-femme en fonction des caractéristiques individuelles observables, les positions au sein du conseil et les facteurs inobservables, afin de distinguer quelle partie est due à des différences entre hommes et femmes, et quelle partie est due à des mécanismes de discrimination.

Par la suite, chaque chapitre est brièvement résumé en le positionnant au sein de la littérature économique et financière et en précisant les principales contributions.

La motivation RSE des entreprises, influence-t-elle la prise en compte de ces enjeux ?

Dans la plupart des cas, l'engagement RSE couvre les actions et les pratiques volontaires réalisées par les entreprises pour répondre aux imperfections de marché et du gouvernement (Benabou and Tirole, 2010). Dans cette perspective, la politique de RSE peut être motivée soit par du greenwashing, soit par des objectifs défensifs, pro-sociaux, ou stratégiques (Baron, 2001). Premièrement, les entreprises peuvent s'attendre à certains avantages de réputation en mettant en oeuvre une politique de RSE tels que le ciblage de nouveaux consommateurs responsables, ou le développement de nouveaux marchés. Toutefois, les entreprises peuvent ne pas être prêtes à supporter les coûts supplémentaires liés à ces pratiques. Le greenwashing correspond alors au fait de revendiquer de mettre en oeuvre quelques pratiques responsables pour le bénéfice de réputation sans que les engagements ne dépassent le statu quo (Bazillier and Vauday, 2013). Deuxièmement, la RSE défensive repose sur la volonté d'atténuer les risques ESG et de garder sa capacité à mener ses activités Post et al. (2002b). La RSE est ici un moyen efficace pour assurer la survie des entreprises, sans qu'aucun bénéfice financier ne soit directement attendu. Troisièmement, la RSE pro-sociale est basée sur le fait que certains dirigeants ou actionnaires majoritaires ont des préférences sociales et environnementales qu'ils satisfont au travers de l'entreprise. La RSE pro-sociale reflète alors un coût d'agence, et peut nuire à la valeur financière (Barnea and Rubin, 2010; Ferrell et al., 2014). Quatrièmement, certaines entreprises peuvent utiliser la RSE afin de répondre aux exigences de certaines parties prenantes, notamment celles stratégiques tels que les travailleurs, les clients et les fournisseurs, et de maximiser la valeur des actionnaires et des parties prenantes (Deng et al., 2013). Il s'agit alors d'une stratégie créatrice de valeur (Ferrell et al., 2014).

Cependant, seuls quelques articles analysent de manière empirique le lien entre les motivations et l'intensité de prise en compte des enjeux RSE (McWilliams et Siegel, 2001). Cependant, il peut s'agir d'un médiateur crucial dans la relation entre la RSE et les performances (Tang et al., 2012). La littérature empirique sur le lien entre RSE-performance a été prolifique sans atteindre un consensus (Orlitzky et al., 2003). (Margolis et al., 2011) ont ainsi montré une corrélation positive entre la RSE et performance financière grâce à une méta-analyse. Des études récentes (Cavaco and Crifo, 2014; Crifo et al., 2014) suggèrent également certains effets complémentaires et de substitution entre les engagements

dans les différentes dimensions de la RSE vis-à-vis la performance financière. En particulier, ils montrent que les engagements sociaux et sociétaux liés avec les parties prenantes sont complémentaires, alors que s'engager dans l'environnement et le social sont des pratiques substituables. Cependant, cette dernière combinaison est la stratégie la plus profitable. Quels sont les déterminants de cette stratégie? Pour répondre à cette question de recherche, ce chapitre analyse le lien entre la motivation RSE et l'intensité de prise en compte des enjeux RSE.

À partir d'une enquête originale (enquête nationale sur le développement durable menée par l'INSEE) sur les pratiques en matière de RSE concernant l'environnement (gestion, changement climatique, ressources naturelles, déchets et biodiversité), le social (discrimination, conditions de travail, emploi et formation) et le sociétal (les relations avec les clients, les fournisseurs et les communautaires), ce chapitre définit des indicateurs de RSE sur un échantillon représentatif d'entreprises françaises, et détermine leur motivation à poursuivre de telles pratiques. Cette enquête a l'avantage de fournir des informations primaires et de cartographier les pratiques de RSE dans les petites, moyennes et grandes entreprises cotées et non cotées, alors que la plupart des études, en utilisant les données de notation extra-financière, se concentrent sur les grandes entreprises cotées (Chatterji et al., 2009, 2014; Crifo et al., 2014). Cette enquête permet d'éviter ainsi un biais de sélection dans l'identification de la relation entre motivation et intensité de prise en compte de la RSE.

Les analyses empiriques montrent que la motivation RSE (défensive, pro-sociale ou stratégique) est principalement déterminée par la taille de l'entreprise, le statut cotée et le profit. Certains secteurs controversés, comme ceux de l'énergie, de l'eau et des déchets, sont plus susceptibles d'avoir une stratégie RSE. Toutefois, le principal déterminant semble être un choix idiosyncrasique de l'entreprise. Il est également démontré que les entreprises qui prétendent faire certaines actions en matière de RSE sont plus conscientes des enjeux RSE dans toutes les dimensions (environnement, social et sociétal). Le greenwashing ne motive donc pas le choix de se présenter comme une entreprise responsable. Plus précisément, la RSE défensive définit le niveau minimal de prise de conscience de la RSE dans toutes les dimensions. Les entreprises engagées dans une RSE stratégique sont davantage engagées que les autres entreprises sur les questions environnementales, sociales et sociétales, en particulier celles liées aux parties prenantes stratégiques telles que les clients et les fournisseurs, au travers des pratiques concrètes (outils de suivi et labels) plutôt que des pratiques douces (politique générales liée à la RSE). La RSE pro-sociale est seulement corrélée à une meilleure connaissance des questions environnementales, notamment la biodiversité, et des questions sociétales liées à la communauté, à travers des pratiques douces (objectifs généraux et la politique).

Ce premier chapitre met en évidence que la motivation de l'entreprise en matière de politique RSE est déterminant pour le niveau de sensibilisation des entreprises. Le chapitre souligne également l'importance des facteurs prédictifs non observables de la motivation RSE, notamment le rôle de la direction. En intégrant les objectifs de l'entreprise dans le processus de prise de décision, le conseil d'administration apparaît alors comme un organe essentiel de la définition de la politique RSE de l'entreprise. Le conseil d'administration paraît donc comme un médiateur entre la RSE et les performances de l'entreprise. Les chapitres suivants analysent comment le conseil d'administration peut influencer les décisions de l'entreprise, et plus particulièrement la façon dont la composition du conseil d'administration impacte les performances (financières, environnementales, sociales et sociétales) de l'entreprise. La composition du conseil est en effet le principal déterminant de l'efficacité du conseil (Adams et al., 2010). Tout d'abord, l'approche théorique étudie le fonctionnement du conseil pour définir les bonnes pratiques de gouvernance d'entreprise dans l'intérêt des actionnaires (approche déductive).

Indépendance et le compromis surveillance et conseil au sein du conseil d'administration (Co-écrit avec P. Crifo)

Deux principales fonctions du conseil d'administration ont été mises en évidence dans la littérature: la surveillance et le conseil des dirigeants (Demb and Neubauer, 1992). Néanmoins, l'efficacité du conseil d'administration pour réaliser ses fonctions dépend de deux mécanismes: le pouvoir de négociation des dirigeants vis-à-vis des membres du conseil et l'asymétrie d'information entre les administrateurs externes et les dirigeants.

La littérature démontre que l'efficacité du conseil dépend de sa composition (Adams et al., 2010), en particulier de son indépendance. Les administrateurs indépendants sont ainsi promus pour réduire les conflits d'intérêt entre les propriétaires et les dirigeants et pour atténuer l'opportunisme du PDG. Les membres du conseil sont ainsi qualifiés de "surveillant" envers les dirigeants. Néanmoins, l'indépendance du conseil peut réduire l'incitation pour ces dirigeants de partager de l'information, afin de maintenir une forte asymétrie d'information avec les membres du conseil et de diminuer leur efficacité globale. Selon le modèle développé par Adams and Ferreira (2007), il peut être optimal d'adopter un conseil "conseillant ou amical", lorsque l'information spécifique à l'entreprise est crucial pour l'effectivité du conseil. Un conseil amical peut maximiser à la fois les bénéfices du conseil et de la surveillance. L'inconvénient d'un conseil "amical" est la latitude laissée aux dirigeants pour tirer des bénéfices privés de la gestion de l'entreprise aux frais des actionnaires.

Deux modes de fonctionnement du conseil d'administration (surveillant versus conseillant), déterminé par le niveau de l'indépendance du conseil d'administration, permet d'analyser différents compromis entre les fonctions de surveillance et de conseil (Baldenius et al., 2014). Néanmoins, une autre qualité de conseil, souvent négligée dans les approches théoriques, est aussi déterminant dans ce contexte: l'expertise. La littérature empirique montre l'effet positif des expertises sectorielle et financière sur les fonctions de conseil et de surveillance (Faleye et al., 2013; Wang et al., 2013). D'un point de vue théorique, l'expertise détermine la qualité du conseil et le coût de l'information pour les membres externes du conseil d'administration. Elle peut également influencer l'analyse bénéfice-coût des dirigeants concernant l'échange d'information spécifique de l'entreprise. Cependant, peu de papiers théoriques analysent clairement l'interaction entre l'indépendance et l'expertise sur le compromis entre les fonctions de surveillance et de conseil (Wagner, 2011).

Ce chapitre 3 propose donc d'analyser le compromis entre les fonctions de surveillance et de conseil afin de protéger au mieux les intérêts des actionnaires, en fonction de deux caractéristiques des administrateurs: l'indépendance et l'expertise. Ce chapitre décrit un modèle théorique où deux types de fonctionnement du conseil (surveillant vs conseillant) sont en concurrence, et où le choix endogène du type de fonctionnement est lié à l'analyse coût-bénéfice entre l'indépendance et l'expertise. Nous montrons que pour les faibles niveaux d'indépendance, les conseils sont plus susceptibles de choisir un comportement "conseillant", alors que pour les niveaux élevés d'indépendance, les conseils sont plus susceptibles d'être de type "surveillant". Entre les deux, le choix est plus hétérogène et dépend du niveau d'expertise. Il y a en effet une relation non linéaire entre le niveau d'expertise et le choix du type de conseil. Pour les niveaux moyens d'expertise, le type conseillant est plus efficace que le type surveillance. Pour les niveaux extrêmes d'expertise, le faible bénéfice du conseil ou le coût élevé de la surveillance réduisent l'efficacité de ce type de comportement par rapport à conseil surveillant.

Ce chapitre met en évidence le compromis entre les fonctions de surveillance et de conseil en fonction de la composition du conseil d'administration (indépendance et expertise) afin de protéger les intérêts des actionnaires. Il propose une nouvelle analyse de l'équation conseil-performance. Il montre en particulier que les conseils de type "surveillant" sont optimaux, lorsque le coût de l'asymétrie d'information est inférieur aux bénéfices liés à une meilleure surveillance. Les conseils "conseillant" sont optimaux

lorsque le bénéfice de conseiller est plus élevé que le coût de la surveillance faible (ie, quand il y a un petit avantage privé pour les dirigeants). En outre, le chapitre démontre que la composition du conseil définie par l'indépendance et l'expertise est le principal déterminant de la performance de l'entreprise.

Ce chapitre met en évidence principalement le lien entre la composition du conseil d'administration et la performance des entreprises. La composition du conseil est donc un levier intéressant pour encourager la RSE au sein des entreprises. Dans les chapitres suivants, nous proposons d'analyser trois exigences en matière de RSE provenant des actionnaires, des parties prenantes et de la société, et d'enquêter sur les conséquences qui en découlent sur les performances. Le chapitre 4 analyse l'efficacité des administrateurs indépendants. Le chapitre 5 étudie l'impact de la représentation des parties prenantes sur l'engagement RSE. Le chapitre 6 évalue la façon dont les entreprises se conforment aux quotas de femmes à sein des conseils.

Administrateurs indépendants: moins informés mais mieux sélectionnés que les administrateurs affiliés?

(co-écrit avec S. Cavaco, P. Crifo et A. Reberioux)

Les administrateurs indépendants ont été soutenus par les actionnaires, notamment les investisseurs institutionnels comme CalPERS (Gordon, 2007) depuis des décennies, dans le but d'améliorer la qualité de la gouvernance d'entreprise. L'indépendance a également été promue par de nombreux codes de gouvernance d'entreprise (Adams, 2012), surtout après les scandales et les crises financières. La France ne fait pas exception; le paradigme indépendant a été mis en évidence pour la première fois par les rapports Viénot (1995 et 1999) et renforcé par rapport Bouton (2002) et les codes de gouvernance d'entreprise successifs. Ce critère a finalement été utilisé par les agences de notations extra-financières pour mesurer l'adéquation de la composition du conseil d'administration avec les intérêts des actionnaires. L'indépendance du conseil est donc l'un des principaux dogmes des bonnes pratiques de gouvernance. Cependant, l'efficacité des administrateurs indépendants à l'intérieur du conseil est toujours un débat dans la littérature économique (Adams et al., 2010, pour une revue de littérature).

D'un point de vue théorique, les administrateurs indépendants devraient réduire le conflit d'intérêts entre les dirigeants et les actionnaires, et être liés à une amélioration de la performance de l'entreprise (Hermalin and Weisbach, 1998). Cependant, ils peuvent éprouver un déficit informationnel, mettant en péril cet avantage (Adams and Ferreira, 2007). L'efficacité globale des administrateurs indépendants est alors une question empirique. La littérature présente des résultats très mitigés: en utilisant des stratégies d'identification différentes, Bhagat and Bolton (2008) montrent une corrélation négative entre la proportion des administrateurs indépendants et les performances de l'entreprise sur la période 1990-2004 et une positive pour la période 2004-2007, alors que Wintoki et al. (2012) ne montrent aucun résultat significatif. Au niveau individuel, Nguyen and Nielsen (2010) rapportent une valeur positive des administrateurs indépendants sur les marchés. Cependant, Masulis and Mobbs (2014) nuancent ce résultat en montrant que les administrateurs indépendants sont hétérogènes entre entreprises et peuvent consacrer du temps et de l'énergie différemment en fonction de leur motivation spécifique à chaque entreprise.

Afin de renouveler le débat sur l'économie de l'indépendance, ce chapitre 4 propose d'évaluer l'efficacité des administrateurs indépendants relativement aux administrateurs affiliés dans les entreprises françaises. Nous soutenons ici que l'efficacité des administrateurs est déterminée par deux facteurs: l'un lié à la position d'indépendant et l'autre à la capacité individuelle à mener son travail. D'une part, le fonctionnement du conseil détermine le coût lié à l'asymétrie d'information par rapport au bénéfice de l'indépendance (Cai et al., 2015). Certains attributs, tels que l'expertise sectorielle et les relations sociales, pourraient modifier cet équilibre (Dass et al., 2014; Kramarz and Thesmar, 2013). Les administrateurs affiliés ne devraient toutefois pas souffrir d'une telle asymétrie du fait de leurs liens

étroits avec l'entreprise. D'autre part, la sélection des administrateurs indépendants peut mener à la sélection d'administrateurs soit de haute qualité pour satisfaire les intérêts des actionnaires, soit de basse qualité afin de minimiser leur capacité de surveillance dans l'intérêt des dirigeants. Les administrateurs affiliés sont en revanche nommés selon un principe de représentativité sans aucun rapport avec leur capacité intrinsèque. Les deux mécanismes peuvent alors entraver ou améliorer l'efficacité économique des administrateurs indépendants relativement à celle des administrateurs affiliés.

Il existe donc un défi empirique pour correctement distinguer, lors de l'examen de l'efficacité des administrateurs indépendants, ce qui est relatif à la position d'indépendant (fonctionnement du conseil) et ce qui est relatif à la capacité intrinsèque (sélection) (Withers et al., 2012). Notre stratégie est fondée sur la méthode d'Abowd, Kramarz, Margolis (Abowd et al., 1999), initialement développée en économie du travail. Cette méthodologie permet d'identifier les effets fixes entreprises, administrateurs ainsi que les attributs variant en fonction de l'entreprise comme la position d'indépendant. Nous estimons ainsi des effets fixes individuels pour un large échantillon d'administrateurs, faisant écho à l'approche développée par Bertrand and Schoar (2003) sur les styles de management des cadres dirigeants. Cela permet en comparant la répartition des capacités individuelles des différents groupes d'administrateurs, d'identifier le type de sélection qui s'opère. Il permet également d'examiner les relations entre les divers attributs individuels (par exemple l'indépendance, l'expertise, ou les relations informelles) et les performances, tout en contrôlant pour l'hétérogénéité des administrateurs. Ces estimations évaluent ainsi la valeur de l'indépendance et ses coûts associés.

Grâce à des données individuelles pour chaque administrateur (âge, nationalité, éducation, parcours professionnel, position au sein du conseil) et les données de performances, nous obtenons deux principaux résultats sur les entreprises cotées françaises (SBF120 sur la période 2006-2011). En premier lieu, les membres indépendants du conseil ont une capacité intrinsèque plus élevée que celles des administrateurs affiliés, compatibles avec un processus de sélection favorable aux actionnaires. Cependant, une fois nommés en tant que membres indépendants du conseil, ils peuvent éprouver une asymétrie d'informations forte qui l'emporte largement sur les autres avantages liés à leur capacité de surveillance. Le coût de cette asymétrie peut néanmoins être réduit par l'expertise sectorielle ou l'affiliation à un réseau de grande école partagée avec d'autres membres du conseil d'administration.

L'effet net de l'indépendance est proche de zéro dans le contexte français. Cependant, les résultats empiriques soulignent les différents mécanismes mis en jeu qui peuvent mettre en péril ou améliorer l'efficacité des administrateurs indépendants (fonctionnement du conseil et sélection des administrateurs). Il remet également en question la pertinence des critères d'indépendance pour améliorer les pratiques de gouvernance d'entreprise, et suggère de compléter les recommandations avec l'expertise sectorielle. Ce chapitre fournit aussi un nouveau cadre conceptuel pour analyser l'impact des administrateurs sur les décisions et les performances des entreprises.

La représentation des dirigeants, des actionnaires et des parties prenantes à l'intérieur des conseils d'administration: cela affecte-t-il l'engagement RSE des entreprises?

L'engagement RSE peut être considéré comme une délégation de responsabilité du conseil aux dirigeants (Crifo and Forget, 2015). Du point de vue de la gouvernance, deux motivations principales peuvent conduire l'engagement RSE de l'entreprise: l'enracinement et le comportement opportuniste des dirigeants et la résolution des conflits avec les divers parties prenantes (Harjoto and Jo, 2011; Ferrell et al., 2014). Du point de vue de la théorie de l'agence, les dirigeants peuvent en effet utiliser l'engagement RSE pour s'enraciner au sein de l'entreprise (Cespa and Cestone, 2007), ou se construire une réputation de bon citoyen (Barnea and Rubin, 2010) aux dépens des actionnaires. Ces deux objectifs révèlent un comportement opportuniste des dirigeants (hypothèse de comportement opportuniste). D'après la théorie des parties prenantes (Post et al., 2002b), l'antagonisme possible entre les intérêts

des dirigeants, des actionnaires et des autres parties prenantes peut être une source de conflits. Dans ce cas, les entreprises utilisent la politique RSE afin de répondre à certaines demandes des parties prenantes pour réduire ces conflits (Hypothèse de résolution des conflits, Harjoto and Jo, 2011). Cet engagement permet à l'entreprise de conserver sa capacité à mener son activité et de maximiser ses performances de long terme (stratégie créatrice de valeur, Ferrell et al., 2014).

La composition du conseil reflète le pouvoir de négociation des dirigeants, des actionnaires et des autres parties prenantes. Elle pourrait donc être un facteur déterminant de l'engagement RSE. Deux points de vue sur la composition du conseil d'administration ont été proposés dans la littérature: la perspective actionnariale sur la base du triptyque: indépendants, affiliés et dirigeants (Harjoto and Jo, 2011), et la perspective partenariale sur la base de la représentation des parties prenantes au sein du conseil (Hillman et al., 2001). Concernant cette deuxième vision, les administrateurs peuvent représenter directement les intérêts des parties prenantes dans le processus de prise de décision.

Afin de tester les deux hypothèses expliquant l'engagement RSE du point de vue de la gouvernance, le présent chapitre analyse de manière empirique la relation entre la composition du conseil et l'engagement RSE multidimensionnelle, selon les perspectives actionnariales et partenariales, dans le cas français (2006-2011 pour l'indice SBF120). L'engagement RSE est évalué grâce aux notations extra-financières de Vigéo et Asset4. Premièrement, nous proposons une nouvelle typologie des administrateurs fondée sur la représentation des parties prenantes: dirigeants, les représentants des salariés, des clients et fournisseurs, des banques et assurances et les administrateurs externes (d'autres parties prenantes). Deuxièmement, nous estimons l'effet de la composition du conseil d'administration sur les indices d'engagement en matière de RSE. Troisièmement, nous comparons les deux notations extra-financières et discutons le choix des fournisseurs d'information ESG dans la littérature RSE.

Conformément à l'hypothèse de résolutions des conflits avec les parties prenantes, du point de vue des actionnaires, les engagements social et sociétal sont liés positivement à la proportion des administrateurs indépendants pour Asset4 et négativement à la proportion des administrateurs dirigeants pour Vigéo. L'engagement environnemental n'est pas corrélé à la composition du conseil. En outre, les preuves empiriques sur données Vigéo suggèrent que les engagements en matière de RSE sont significativement corrélés avec la représentation des parties prenantes, en particulier la proportion de représentants des clients et fournisseurs, et des employés. L'engagement social peut être utilisé pour résoudre les conflits entre les dirigeants et l'ensemble des parties prenantes. La dimension sociétale peut aider à résoudre des conflits spécifiques à la chaîne d'approvisionnement (salariés, clients et fournisseurs). Cependant, l'engagement environnemental semble ne résoudre les conflits qu'avec les parties prenantes internes et les clients et fournisseurs, et exacerber les conflits avec les autres parties prenantes, en particulier avec les parties prenantes financières et externes. Néanmoins, les preuves empiriques sur les données d'Asset4 ne sont pas concluantes. En tout cas, l'hypothèse d'un comportement opportuniste des dirigeants est rejetée. L'hypothèse de résolution des conflits avec les parties prenantes est acceptée, en particulier pour les dimensions sociales et sociétales. Les résultats montrent également que Vigéo et Asset4 n'évaluent pas les pratiques de RSE de manière commensurable, même lorsque l'on tient compte de la différence en termes de couverture de l'échantillon et de la théorisation divergente entre les deux agences. Asset4 semble plus clément envers les pratiques RSE que Vigéo. Il faut souligner l'importance d'utiliser de multiples sources d'information ESG pour tester la robustesse des résultats.

En conclusion, l'engagement RSE est sous-tendu par l'objectif de réduire les conflits avec les parties prenantes afin de garder sa capacité à maintenir son activité, et de maximiser la performance de l'entreprise sur le long terme. Dans un modèle hybride de la gouvernance d'entreprise (cas français) où la représentation des parties prenantes est une question clé, la composition du conseil d'administration du point de vue partenarial ouvre une voie de recherche prometteuse.

Quota de genre au sein des conseils d'administration: les administratrices sont-elles les nouveaux acteurs clés ?

(Co-écrit avec A. Rebérioux)

La société, en particulier l'Union européenne, demande une meilleure égalité de genre dans les processus de prise de décision (European-Commission, 2012). La France ne fait pas exception, même si elle est classée 12ème en terme d'indice d'inégalité de genre (PNUD, 2013). Les femmes représentent seulement 12% des administrateurs et 4% des PDG dans les plus grandes entreprises françaises en 2009. Cependant, la plupart de la littérature empirique plaide pour une relation positive entre diversité et qualité de la gouvernance, notamment en termes de nouvelles ressources et compétences au sein du conseil, de nouvelles perspectives sur les questions stratégiques (Miller and Del Carmen Triana, 2009; Nielsen and Huse, 2010a) ainsi que d'une amélioration de la surveillance des dirigeants (Carter et al., 2003; Adams and Ferreira, 2009).

Deux arguments principaux ont été avancés pour expliquer la faible représentation des femmes au sein des conseils d'administration: la pénurie de candidates potentielles et le plafond de verre pour la nomination au sein des conseils (Terjesen et al., 2009; Ferreira, 2010; Adams et al., 2015). Dans le premier cas, le faible niveau d'administratrices est dû à l'étroitesse de l'offre. Dans le second cas, il y a une inefficacité du marché qu'une loi peut corriger. Les meilleures candidates pourraient en effet remplacer les administrateurs de sexe masculin de faible qualité (Smith, 2014). En tout cas, le consensus social exhorte un changement à la tête des entreprises afin d'améliorer l'égalité homme-femme. Deux approches sont en concurrence: l'approche volontaire à travers les codes de gouvernance d'entreprise ou l'approche législative au moyen de quotas. La France a choisi un quota de genre de 20% en 2014 et 40% en 2017, en suivant le chemin de la Norvège. Cependant, le quota peut mener à des coûts (Adams and Kirchmaier, 2015): la pénurie de candidates et les choix stratégiques fait par les entreprises pour respecter le quota (qui modulent le rôle des administratrices au sein des conseils). Si le coût lié au quota est plus grand que l'avantage lié à l'augmentation de la diversité, le quota n'aura pas l'effet positif escompté sur les décisions et les performances de l'entreprise. Fondée sur une expérience quasi-naturelle, ce chapitre évalue l'application du quota de genre en France (20% en 2014) dans des entreprises appartenant à l'indice SBF120. En particulier, nous concentrons l'attention sur les caractéristiques et le rôle des administratrices tant chevronnées que nouvelles sur le marché. Les administrateurs chevronnés ont été nommés au moins une fois dans un conseil du SBF120 avant le quota (2010). Les nouveaux administrateurs ont été nommés pour la première fois après le quota.

Tout d'abord, nous montrons que le quota a brisé le plafond de verre en augmentant le nombre de femmes sur le marché du travail des administrateurs. La hausse des mandats multiples des administrateurs féminins (directeurs occupés) est aussi restée limitée. Cependant, les nouveaux administrateurs entrés sur le marché viennent plus souvent de l'étranger et sont moins experts financiers. Comme dans le cas norvégien, les nouvelles administratrices sont également plus indépendantes. Les administratrices diffèrent donc de leurs collègues masculins en termes de caractéristiques individuelles.

Deuxièmement, en termes de position, les nouveaux administrateurs indépendants sont plus susceptibles de siéger dans les comités qui conseillent que dans ceux qui surveillent. En revanche, les administrateurs indépendants chevronnés sont plus susceptibles de siéger dans les comités de surveillance que dans ceux qui conseillent. En outre, les caractéristiques (expertise financière, ancienneté) positivement liées à la cooptation dans les comités de surveillance sont moins fréquentes dans la population des administratrices. Conjuguées, l'ensemble des caractéristiques qui définissent les administratrices, mène à une faible représentation de celle-ci dans les comités les plus importants (ceux de surveillance). Ce résultat suggère donc un plafond de verre interne vécu par les administratrices, en particulier les nouvelles sur le marché, pour atteindre ces comités stratégiques.

Troisièmement, les administratrices gagnent 6% de moins que leurs homologues masculins. En supposant que la rémunération des administrateurs est un bon indicateur des services rendus à l'entreprise, les administrateurs féminins semblent avoir finalement un plus petit rôle au sein des conseils. En utilisant un modèle de Oaxaca permettant de décomposer les salaires, l'écart de rémunération entre homme et femme est entièrement expliqué par les caractéristiques individuelles (pour un tiers) et par l'affectation au sein des comités (pour deux tiers). Les résultats confirment qu'il n'y a pas de discrimination intrinsèque des femmes par rapport aux hommes. Mais les administratrices, en particulier les nouvelles indépendantes, sont victimes d'un plafond de verre interne pour atteindre les principaux comités (audit et rémunération-nomination), et elles ne possèdent pas forcément les attributs les plus valorisés par les entreprises (comme l'âge). Malgré le quota, les administratrices ne sont pas devenues les nouveaux acteurs clés du conseil. Ce plafond de verre interne et les attributs spécifiques des nouvelles administratrices pourraient mettre en péril les bénéfices attendus de la diversité au sein des conseils. Cela serait aussi une explication pour la relation négative entre la diversité et la performance observée, dans le cas de la Norvège après le quota.

En conclusion, afin de répondre à la question de recherche large de cette thèse, la gouvernance d'entreprise peut influencer sur la production des entreprises en intégrant les intérêts des actionnaires et des parties prenantes dans le processus de prise de décision. Le premier niveau est la définition des objectifs en particulier en matière de RSE. La motivation RSE conduit en effet à la mise en oeuvre d'une stratégie et des pratiques de RSE spécifiques, avec divers impacts sur la performance des entreprises. En outre, la composition du conseil d'administration est un facteur déterminant de la capacité de l'entreprise à atteindre ses objectifs et de la manière de répondre aux demandes de certaines parties prenantes. L'indépendance des administrateurs, la représentation des parties prenantes ou la diversité modifient le visage du conseil dans le but d'améliorer la qualité de la gouvernance. Cependant, les conséquences sur les performances financières et extra-financières, mises en évidence dans cette thèse, sont contrastées. Les relations entre la composition du conseil d'administration et la performance des entreprises ne sont pas si simples. En particulier, les entreprises peuvent adapter leur structure et leur fonctionnement en réponse à ces exigences externes, conduisant à des effets ambigus sur la performance des entreprises. Dans cette perspective, il est vraiment difficile de définir de bonnes pratiques de gouvernance d'entreprise pour encourager la RSE et d'améliorer la performance des entreprises.

Du point de vue des politiques publiques

La gouvernance d'entreprise est un moyen pour les décideurs politiques de promouvoir la responsabilité sociale des entreprises et la compétitivité verte. La plupart des questions de gouvernance sont régies par la loi (approche législative) ou un code de gouvernance d'entreprise (approche volontaire). Cette thèse fournit des informations intéressantes pour les décideurs politiques concernant les pratiques de RSE et les questions de régulations associées.

En ce qui concerne le code de gouvernance d'entreprise, le paradigme de l'indépendance a été promu depuis 1995 et le rapport Viénot en France. Les chapitres 3 et 4 montrent que l'indépendance n'est pas le seul critère de qualité du conseil pour protéger les actionnaires minoritaires. Sans promouvoir un assouplissement des critères d'indépendance en ce qui concerne les relations sociales, le code de gouvernance d'entreprise pourrait de manière positive promouvoir l'expertise sectorielle comme deuxième critère de qualité du conseil d'administration. De nos jours, la littérature financière est promue au moins pour les administrateurs indépendants appartenant au comité d'audit. Dans l'avenir, l'expertise sectorielle pourrait améliorer l'efficacité des administrateurs indépendants. La limite principale concerne la frontière parfois fine entre un expert sectoriel indépendant et un administrateur affilié. Toutefois, l'intérêt croissant ces dernières années pour l'indépendance des administrateurs a eu une externalité positive sur la qualité de la gouvernance d'entreprise. En augmentant l'attention des

actionnaires sur la sélection des administrateurs, la qualité intrinsèque des administrateurs indépendants a été améliorée par rapport à celle des administrateurs affiliés. Au moins, il reflète un choix fait par les entreprises dans l'intérêt des actionnaires minoritaires. Du point de vue de la RSE, les administrateurs indépendants semblent être plus en mesure d'intégrer les demandes des parties prenantes que des dirigeants ou des administrateurs affiliés. Cependant, d'autres types d'administrateurs pourraient être promus tels que les administrateurs représentant les employées ou les clients et les fournisseurs si les décideurs souhaitent mieux intégrer les préoccupations environnementales, sociales et sociétales dans le processus de prise de décision.

En ce qui concerne les lois sur la gouvernance d'entreprise, la loi Zimmer-Copé exige la parité de genre au sein des conseils pour améliorer le processus de prise de décision et l'égalité homme-femme sur le lieu de travail. Le chapitre 6 démontre que cette loi a été couronnée de succès en ouvrant les portes des conseils à de nouvelles femmes sans aucune expérience antérieure. Toutefois, les administratrices éprouvent un plafond de verre interne qui constitue un nouvel obstacle pour atteindre les comités les plus importants (surveillance). Ce mécanisme peut compromettre à court terme les bénéfices attendus liés à l'amélioration de la diversité sur les décisions et les comportements des entreprises. En particulier, la diversité de genre devrait, au-delà de l'amélioration de la qualité du conseil, affecter l'engagement RSE, notamment en matière de discriminations (Bertrand et al., 2014) et d'environnement (Harjoto et al., 2014; Post et al., 2011). Les décideurs doivent donc faire attention à l'avenir à briser ce plafond de verre interne, soit en modifiant le code de gouvernance d'entreprise, soit en adaptant la loi sur la diversité. Sur le long terme, les décideurs politiques devraient aussi se préoccuper de l'évolution des trajectoires professionnelles des femmes, pour qu'elles puissent accéder aux postes de direction (Mohan, 2014). Aujourd'hui, seul 4% des dirigeants sont des femmes dans l'indice SBF120. En ce qui concerne la représentation des employés au sein du conseil, cette thèse ne fournit aucune évaluation directe de la loi sur la sécurisation de l'emploi qui requiert des représentants des salariées pour les plus grandes entreprises (au moins 5000 employés en incluant les filiales). Cependant, certains effets prometteurs pourraient être attendus, notamment concernant les objectifs en matière de RSE. Le chapitre 5 suggère en effet une relation positive entre les engagements environnementaux, sociaux et sociétaux et la représentation des employés.

En ce qui concerne les politiques publiques et l'information RSE, le chapitre 2 montre d'abord que toutes les entreprises prennent en compte au moins quelques pratiques RSE, mais la moitié d'entre elles ne l'étiquète pas comme une pratique RSE. En outre, la RSE est bien répandue dans les grandes entreprises, mais seulement quelques petites et moyennes entreprises (PME) sont au courant du concept. Ce résultat suggère donc la nécessité de l'éducation sur la RSE auprès des entreprises, des dirigeants et des investisseurs, en particulier dans les PME. En outre, les entreprises adoptant une RSE stratégique sont celles qui prennent le plus en compte les enjeux RSE dans leurs activités pour satisfaire leurs parties prenantes et créer de la valeur partagée. Les décideurs politiques peuvent donc promouvoir en même temps la RSE et la compétitivité des entreprises. En outre, l'INSEE devrait continuer à mener régulièrement son enquête nationale sur le développement durable, afin d'étudier la dynamique de pratiques de RSE sur un vaste échantillon représentatif d'entreprises ; au-delà du spectre classique des agences de notation extra-financières. Une meilleure compréhension des déterminants de l'engagement RSE peut aider en effet à concevoir la politique publique en matière de RSE. En ce qui concerne les agences de notation, le chapitre 5 démontre que le contenu informationnel de l'évaluation extra-financière de Vigéo et Asset4 est différent et peut conduire à des divergences de résultats. L'incohérence des notations extra-financières suggère la nécessité de collecter de manière directe les données et de développer des méthodes transparentes et robustes pour mesurer le comportement responsable des entreprises. Le processus de normalisation est alors une étape importante dans le processus de consolidation de ce secteur d'activité, en particulier en ce qui concerne les critères ESG et l'agrégation de données multidimensionnelles.

Pour les décideurs politiques, la gouvernance d'entreprise constitue un élément déclencheur pour favoriser la responsabilité sociale des entreprises dans les petites, moyennes et grandes entreprises. Les actions pourraient être à trois niveaux: la réglementation, le code de gouvernance d'entreprise et l'éducation au sujet des questions sociales, environnementales et sociétales.

Du point de vue de la recherche

Cette thèse apporte un nouvel éclairage sur les relations entre la gouvernance d'entreprise, la RSE et les performances de l'entreprise, mais souffre de quelques limites en raison du manque de données (chapitres 2 et 5) ou de la méthodologie appliquée (chapitres 4 et 6). En particulier, la question de l'endogénéité est la limite la plus importante de nombreux chapitres (chapitres 2, 4 et 5) en raison de l'absence de choc exogène. Cependant, cette thèse présente également de nouvelles méthodologies en provenance de l'économie du travail (AKM appliquée au conseil d'administration, la décomposition de Oaxaca pour mesurer la discrimination envers les femmes) pour surmonter le problème d'endogénéité en enquêtant sur les mécanismes de gouvernance et les conséquences sur les performances (chapitres 4 et 6) (Adams et al., 2010; Nguyen and Nielsen, 2010; Wintoki et al., 2012). Cette dernière partie de la thèse vise à tirer des nouvelles perspectives de recherche.

Cette thèse analyse comment la gouvernance d'entreprise peut encourager la RSE au sein des entreprises (Jamali et al., 2008). Cependant, la gouvernance d'entreprise est également une dimension RSE en soi. Une des caractéristiques spécifiques de cette dimension RSE est la difficulté de définir les bonnes pratiques, contrairement à l'environnement ou aux questions sociales. Cette thèse ne parvient donc pas à donner une définition de la gouvernance "responsable" (Van den Berghe and Louche). La plupart de nos résultats empiriques sont en effet mitigés et posent des questions sur la façon dont les entreprises se conforment aux recommandations de bonnes pratiques promues par le code de gouvernance d'entreprise ou la loi. La recherche future devrait donc se concentrer sur la compréhension des mécanismes de médiation entre la RSE et la performance, plutôt que de définir une gouvernance responsable. En outre, cette thèse analyse à la fois des approches législatives (le genre) et volontaires (l'indépendance) pour améliorer la qualité de la gouvernance d'entreprise. Nous montrons que dans les deux cas, la régulation de la gouvernance d'entreprise a un coût. Le choix entre les deux méthodes doit donc être soigneusement évalué (Terjesen et al., 2009; Adams and Kirchmaier, 2015). L'Union européenne fournira à l'avenir un excellent cadre empirique pour comparer les deux approches sur le cas de la diversité des genres. Chaque pays a en effet le choix entre les deux pour atteindre l'objectif européen de 40% d'administratrices en 2020.

Cette thèse met également en lumière la question cruciale de la mesure du comportement responsable de l'entreprise. Cette question est une limite claire des chapitres 2 et 5. Nous utilisons deux types de sources d'information: une enquête nationale (EnDD), qui fournit des données sur quelques pratiques RSE, et les évaluations extra-financières (deux fournisseurs indépendants, Vigéo et Asset4), qui analysent le comportement responsable des entreprises. D'une part, l'enquête INSEE recueille des données primaires pour cartographier les pratiques de RSE sur les territoires sur un large échantillon. Cependant, la matérialité des pratiques analysée dans l'enquête est invérifiable. Les recherches futures devront enquêter sur cette matérialité et sur la dynamique de la RSE en France. D'autre part, les agences de notation extra-financière concentrent leur attention sur un nombre limité d'entreprises (les plus grandes entreprises cotées), mais collectent un grand nombre de données pour analyser le comportement responsable de l'entreprise. Le petit nombre d'observations limite toutefois la robustesse de nos résultats. Pour résoudre ces problèmes de collecte et de données, des recherches pourraient avantageusement identifier quelques indicateurs clés en matière de RSE, semblables aux indices de développement humain ou E-index dans la gouvernance d'entreprise. Ces indicateurs clés en matière de RSE devront être facilement collectables et représentatifs de comportement responsable des entreprises.

En outre, le chapitre 5 montre que les différentes notations extra-financières divergent en ce qui concerne la théorisation et la commensurabilité de la RSE, ce qui occasionne des résultats incohérents (Chatterji et al., 2009, 2014). Ces observations remettent en question la notation extra-financière. Tout d'abord, la collecte d'informations robustes (quantitatives et indicateurs qualitatifs) semble être déterminante afin de rendre les évaluations plus fiables. Deuxièmement, la méthode d'agrégation des données doit être normalisée. La littérature met en évidence au moins deux méthodes: DEA (Data Envelopment Analysis) et l'analyse fuzzy logic pour produire des analyses multidimensionnelles et des agrégations robustes d'information en fonction des préférences des actionnaires ou des parties prenantes (Chen and Delmas, 2011; Escrig-Olmedo et al., 2010). La recherche future devra évaluer ces méthodes, notamment en matière de gouvernance d'entreprise.

En ce qui concerne le conseil d'administration, cette thèse souligne l'importance du compromis entre surveillance et conseil, et les deux principales questions connexes: le fonctionnement du conseil et la sélection des administrateurs (chapitres 3, 4 et 6). Le compromis entre surveillance et conseil détermine d'abord l'incitation des dirigeants à partager certaines informations spécifiques et le pouvoir de négociation de chaque membre du conseil d'administration (chapitre 3). Basée sur une application originale de la méthodologie AKM, cette thèse fournit la preuve des coûts et des avantages liés à l'indépendance en lien avec l'expertise et les réseaux sociaux. Dans la continuité, d'autres recherches devraient mieux évaluer l'asymétrie d'information vécue par les administrateurs indépendants et les conséquences pour la performance des entreprises. En outre, le chapitre 6 met en évidence une nouvelle problématique dans la littérature du conseil d'administration: le rôle des administrateurs. Les administratrices peuvent en effet être moins effectives à cause du plafond de verre interne (Nekhili and Gatfaoui, 2012). Cette dimension doit être intégrée dans les futures recherches empiriques. Ces résultats révèlent également le compromis entre surveillance et conseil dans l'organisation du conseil et l'allocation de l'effort des administrateurs. Les entreprises peuvent en effet décider des comités qu'elles mettent en place et comment elles allouent les administrateurs dans les comités et quel effort est consacré à ces fonctions par les administrateurs (nombre de réunions ...). L'impact de cette organisation sur les résultats de l'entreprise, comme la rémunération des PDG, sélection des administrateurs, de la stratégie (fusions et acquisitions) est une question encore sous-traitée (Guthrie et al., 2012; Deng et al., 2013). Comprendre les déterminants du fonctionnement du conseil aidera à résoudre l'équation conseil performance.

Le second déterminant du conseil est la sélection des administrateurs (Adams et al., 2010; Withers et al., 2012). Le chapitre 4 démontre que la sélection peut induire de l'hétérogénéité entre les administrateurs en termes de capacité intrinsèque. Le chapitre 6 montre que les administrateurs sont sélectionnés en fonction d'un ensemble de caractéristiques susceptibles de déterminer leur efficacité au sein du conseil. La sélection des administrateurs apparaît comme la première étape pour améliorer la gouvernance d'entreprise. Cependant, nos méthodologies ne parviennent pas à identifier les déterminants expliquant ce processus de sélection. Une enquête plus large, fondée sur la mise en oeuvre de quotas par exemple, pourrait apporter de nouveaux éclairages. En outre, une extension du modèle développé dans le chapitre 3 pourrait aider à comprendre le lien entre la contrainte sur la sélection des administrateurs (coûts d'embaucher un conseil d'expert ou un conseil indépendant) et le fonctionnement du conseil.

Pour résumer, l'un des principaux apports de cette thèse est de déplacer le centre d'intérêts du niveau du conseil à celui des administrateurs dans les analyses empiriques (chapitres 4, 5 et 6). L'hétérogénéité entre les administrateurs exhorte à se concentrer sur ce niveau. Les principales questions en suspens sont: comment les administrateurs sont choisis, pourquoi ils font leur travail, comment leurs positions à l'intérieur du conseil affectent leurs actions et décisions. En outre, cela suggère d'utiliser un modèle dynamique pour comprendre l'évolution temporelle de la gouvernance d'entreprise (chapitre 6). Il est hautement improbable que les entreprises adoptent le même comportement au fil du temps, alors

que la croyance des investisseurs et du monde financier, le contexte juridique et le changement de l'environnement spécifique à l'entreprise évoluent (Wintoki et al., 2012; Adams et al., 2010; Terjesen et al., 2015a).

Cette thèse met également en évidence l'importance du marché du travail des administrateurs. Le chapitre 6, et dans une certaine mesure le chapitre 4, montrent la nécessité de comprendre l'offre et la demande pour les administrateurs. En effet, l'une des questions cruciales sur le quota de genre est l'offre de nouvelles administratrices. Notre enquête démontre que les administratrices ont des caractéristiques spécifiques par rapport aux autres administrateurs, ce qui affectent leur efficacité au sein du conseil. Cependant, notre stratégie d'identification n'est pas en mesure de faire la distinction entre l'effet de la pénurie de l'offre (en raison d'un manque de candidats qualifiés potentiels) et le choix stratégique des entreprises pour sélectionner ces candidats spécifiques (pour remplacer les sortants). Cette question devrait être exacerbée par l'objectif d'atteindre 40% de femmes au sein des conseils en 2017. Une meilleure connaissance des candidats potentiels est alors nécessaire. Fait intéressant, 22% des administrateurs viennent d'un pays étrangers, même après le quota. Il suggère soit que le vivier français est limité, soit que les entreprises ont besoin d'une certaine visibilité internationale. Mais, quelle est l'incitation pour les étrangers à entrer dans un conseil français? Exacerbée par le quota de genre, cette internationalisation des administrateurs en France est donc une question de recherche prometteuse (Masulis et al., 2012). En ce qui concerne le côté de la demande, nous avons besoin de comprendre quel type d'administrateurs est remplacé au cours de la mise en oeuvre du quota et comment cela affecte le fonctionnement du conseil. Il est plus que probable que les administrateurs les moins impliqués sont les premiers à quitter le conseil. Les nouvelles administratrices sont alors justes en mesure d'atteindre les postes disponibles, et d'avoir un plus petit rôle que d'autres administrateurs. Un quota de genre est donc un cas d'étude intéressant pour modéliser et comprendre l'offre et la demande pour les administrateurs.

La dernière question par rapport aux administrateurs est de savoir comment ces mandats jouent un rôle sur leur trajectoire professionnelle. Les dirigeants peuvent obtenir d'autres mandats d'administrateurs comme une récompense pour leur expérience professionnelle accomplie (Masulis and Mobbs, 2011). En raison du plafond de verre, les femmes ont des difficultés à obtenir ces postes de direction dans les plus grandes entreprises. Les mandats d'administrateurs sont-ils une façon de montrer leur capacité, d'augmenter leur réseau et d'obtenir des postes de direction par la suite? Une analyse longitudinale des trajectoires professionnelles des hommes et des femmes pourrait aider à comprendre les marchés du travail à la fois des administrateurs et des dirigeants.

Enfin, le contexte français et son modèle de gouvernance d'entreprise constituent un cadre spécifique d'analyse du lien entre la gouvernance-RSE-performance. Tout d'abord, comme un modèle hybride de gouvernance d'entreprise, le système français pourrait être une alternative au modèle anglo-saxon et au modèle de cogestion allemande. En particulier, il pourrait équilibrer les intérêts des différentes parties prenantes. Le contexte français est également caractérisé par deux expériences quasi-naturelles: le quota de genre et la représentation obligatoire des salariés. Ces lois peuvent aider à comprendre les mécanismes de gouvernance et à étudier certaines interactions entre la gouvernance d'entreprise et les résultats. En particulier, il serait intéressant d'analyser l'effet de la mixité au sein du conseil sur l'égalité homme-femme sur le lieu de travail, sur l'engagement RSE et la rémunération des dirigeants. En ce qui concerne la représentation des employés, un changement majeur dans le dialogue social peut être attendu. Vis-à-vis des objectifs de RSE, l'entreprise pourra être plus amène de prendre en compte les enjeux environnementaux et sociaux. Toutes ces caractéristiques font du modèle de gouvernance d'entreprise français un cadre de recherche prometteur.

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List of Abbreviations

AFEP: Association Françaises des Entreprises Priées
ANR: Agence Nationale de Recherche
AKM: Abowd, Kramarz, Margolis framework
CAE: Cumulative Abnormal Return
CEO : Chief Executive Officer
CSR: Corporate Social Responsibility
DEA: Data Envelopment Analysis
ENA: Ecole Nationale d'Administration
EnDD: Enquête nationale sur la Développement Durable
ESCP: Ecole Supérieure de Commerce de Paris
ESG: Environment, Social and Governance
ESS: Environment, Social and Societal
ESSEC: Ecole Supérieure des Sciences Economiques et Commerciales
HEC: Ecole des Hautes Etudes de Commerciales
IEP: Institut d'Etudes Politiques
INSEE: National Institutes for Statistics and Economics Studies
MEDEF: Mouvement des Entreprises DE France
MEDDE: Ministère de l'Écologie, du Développement Durable et l'Énergie
NGO: Non-Governmental Organization
OECD: Organisation for Economic Co-operation and Development
PME: Petites et Moyennes Entreprises
ROA: Return on Assets
ROE: Return on Equity
RSE: Responsabilité Sociale et Environnementale
SME: Small and Medium Enterprises

Introduction

Since the Brundtland report in 1987 ("Our Common Future"), policy makers have been interested by managing society in a sustainable way, meaning that economic development should "meet the needs of the present without compromising the ability of the future generations to meet their own needs" (Brundtland, 1987). The on-going Europe 2020 strategic plan reinforces this objective by fostering a "smart, sustainable and inclusive economy". At the macro-level, countries should be able to improve their competitiveness by taking into account environmental protection and social inclusion. In particular, states play a strategic role by stimulating the development of firms' Corporate Social Responsibility (CSR) policy (Albareda et al., 2007; Boulouta and Pitelis, 2014). The European Commission (2011) defines CSR as the fact that firms "have in place a process to integrate social, environmental, ethical, human rights and consumer concerns into their business operations and core strategy in close collaboration with their stakeholders" (European-Commission, 2011). At the micro-level, firms should therefore take into account their externalities on society from both economic and sustainable perspectives. CSR embraces here both firm engagement (voluntary practices) and compliance (legal requirement) towards the environmental, social and societal issues (Liang and Renneboog, 2014).

From the economic perspective, CSR engagement is an answer for market and government failures, as soon as at least one stakeholder values such commitment and requires that firms adopt a responsible behavior (Crifo and Sinclair-Desgagne, 2014). A stakeholder is, in that case, any group or organization which affects or is impacted by firm activities (Freeman, 1984). Stakeholders are, in the first place, shareholders, managers and employees, but also customers and suppliers, the state, non-governmental organizations or the overall society. Mostly, firms accept, based on the social preferences of stakeholders, to bear extra-costs to implement actions and practices beyond what the law requires (see McWilliams and Siegel, 2000), to comply with the legal, moral and ethical rules of the society (Hill et al., 2007), to keep the license to operate (Post et al., 2002b), to produce welfare for some stakeholders (Freeman, 1984) or to maximize shareholders' long-term wealth (Friedman, 1970). For the last decades, the academic community has focused its attention on the economic determinants of CSR engagement in order to understand firm strategy (Reinhardt et al., 2008; Benabou and Tirole, 2010; Kitzmueller and Shimshack, 2012; Hoepner et al., 2012). CSR, as an answer to market imperfections, can be classified depending on three main economic mechanisms at play: regulation, competition or contracts (Crifo and Forget, 2015). In the last case (the interest here), CSR engagement, as a part of managers' discretionary area, may be driven by internal pressures from shareholders, directors and employees. From this perspective, CSR commitment is in most cases a strategy to maximize the shared value between shareholders and stakeholders (Ferrell et al., 2014), except when such strategy reflects an agency problem inside the firm at the expense of the shareholders (Friedman, 1970).

From the finance perspective, CSR issues get attention from investors, asset managers and shareholders. Investors, especially the socially responsible ones, use extra-financial information in order to determine the value of firms, to make their investments and to monitor them over the investment period (Crifo and Mottis, 2013). The socially responsible investment (SRI) market has thus grown up for the last decade (Crifo and Forget, 2013). The development of extra-financial rating agencies is the second signal revealing an increasing interest towards extra-financial information. In the financial sphere, the extra-financial information analyzes CSR according to the ESG (Environment, Social and Governance) factors. The environment pillar covers the integration of environmental concerns in the firm business, from design to use through manufacturing of goods or services. The main issues are the pollution prevention and risk management, the protection of natural resources and biodiversity, the recycling and waste management or the eco-conception. The social pillar includes all issues related to human resources, such as working conditions, training and employment or the policy against discrimination, but also encompasses broader concerns associated with human rights, such as the policy against child labor. The governance pillar analyzes both the relationships with the external stakeholders and corporate governance. As defined by Shleifer and Vishny (1997), “corporate governance deals with the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment”. More precisely, corporate governance defines the relationships between shareholders, directors and managers. It mainly concerns firm disclosure, shareholders’s rights, executive compensation and board composition. The relationships with external stakeholders deal with the practices towards customers and suppliers, such as long-term contract, CSR integration and information within the supply chain or the anti-corruption practices. It also takes into account the role of firms in the community such as the partnerships with local and national non-governmental organizations and universities or philanthropy. In this dissertation, I argue that the relationships with external stakeholders define the societal pillar in order to clearly differentiate the internal issues (corporate governance) from the external issues (societal issues). This choice is also justified by the very specific position of corporate governance in this framework as demonstrated later in the introduction.

The convergence of these two strands of the literature (the finance perspective on the one hand and the economic one on the other hand) leads to the most frequent research question in the area: what is the effect of CSR commitment on firm performance? Two opposite views are still debated: the value-enhancing strategy (“doing good by doing well”) or the agency problem (Ferrell et al., 2014). The value-enhancing strategy suggests that, by taking into account CSR issues, responsible firms maximize the value for shareholders and at some extent, for the other stakeholders (Deng et al., 2013). A positive relationship between CSR and firm performance is expected. On the opposite, following the Friedman perspective on firm’s responsibility to make profit, the agency view argues that CSR investment is a signal of managerial entrenchment and agency cost (the agency view). The managers are able to create private benefits at the expense of shareholders. A negative correlation between CSR and firm performance is in this case expected. To solve this theoretical debate, the empirical literature has been fertile but rather mixed on the CSR-performance nexus (Orlitzky et al., 2003; Margolis and Walsh, 2003; Portney, 2008). Margolis et al. (2011) show, thanks to a meta-analysis on 251 empirical studies, a slightly positive relationship between CSR engagement and financial performance. Nevertheless, the mechanisms behind CSR decisions, especially the multi-dimensionality of such strategy, and the related effects on firm strategy and performance remain unclear (Chatterji et al., 2009, 2014).

A few recent studies try to understand the black box around the relationships between these three ESG pillars and firm performance. In particular, each CSR dimension can differently impact firm performance (Barcos et al., 2013). Some CSR practices may be positively related to firm performance, while others are not (Brammer and Millington, 2008; Mackey et al., 2007). There may also be some trade-offs between dimensions from the financial perspective. For example, Crifo et al. (2014) analyze the quantitative-qualitative trade-off between each CSR dimension on a large data set of French firms. The authors show first that the engagement in each dimension is positively related to performance, and second that the most profitable strategy consists in investing in both social and environment. Cavaco and Crifo (2014) highlight also on European data that the social and societal commitments are complementary whereas the environment and social engagements are substitute with respect to financial performance. The costs and benefits of each CSR investment are then dependent on the mix of practices implemented by firms. Nevertheless, all these studies focus attention on the ESS pillars (Environment, Social and Societal). Corporate governance, as a specific ESG pillar, remains less investigated in this literature.

The corporate governance has however appeared as a keystone of firm management and financial performance, since Berle and Means (1932) seminal papers about the separation between property and control. It has focused more and more attention from the investors (for example CalPERS) as well as from the regulators and politicians through various codes of governance (AFEP-MEDEF code¹) and laws (in France, Zimmerman-Cope law on gender diversity, 2011, or law for employment introducing the employees' representation inside the boardroom, 2013). The main objectives of improving corporate governance quality are to better protect (minority) shareholders, but also to better respond to the new demands from society (gender equality) and from various stakeholders like employees (co-determination in Germany). Furthermore, the importance of corporate governance has been highlighted by the major financial, environmental and social scandals and crises that the society has experienced for the last decades. For example, the financial crisis with the symbolic case of Lehman Brothers shows the weaknesses of corporate governance control over manager decisions to create resilient and long-term profitable firms (Adams, 2012; Erkens et al., 2012; Van Essen et al., 2013). From the environmental perspective, the BP Deepwater Horizon environmental crisis reveals the lack of integration of environmental risks in the decision-making process (Osofsky, 2011; Lin-Hi and Blumberg, 2011). From the social perspective, the human resources issues met by France Telecom (the wave of suicides after restructuring activities) show the difficult trade-off between the quality of working conditions and firm profitability. Corporate governance is then a central mechanism in order to understand the firm financial and extra-financial outputs.

From the academic perspective, the link between corporate governance and firm performance has received a lot of attention in order to determine the main drivers of external and internal corporate control (Gillan, 2006). In particular, ownership structure, board of directors and executive incentives are considered as the main determinants of corporate governance effectiveness (Ang et al., 2000; Bedchuck and Fried, 2004; Adams et al., 2010; Goergen and Renneboog, 2011; Murphy, 2012). However, corporate governance is also a trigger of CSR commitment and firm financial and extra-financial performances (Jo and Harjoto, 2011). CSR is indeed a delegated responsibility from shareholders,

¹AFEP (Association Française des Entreprises Privées) and MEDEF (Mouvement des Entreprises DE France) are two representative associations for private sector. They write the code of corporate governance applied on the Euronext Paris stock market.

directors and employees that the management should integrate in their decisions (Crifo and Forget, 2015). By integrating shareholders and stakeholders interests, the decision-making process is an important mechanism to understand CSR engagement and strategy, and the related impact on firm performance. From this perspective, corporate governance has a specific position in the CSR framework (Jamali et al., 2008). On the one hand, corporate governance is a CSR issue, especially from the investor perspective. Some good practices should be promoted to create a more responsible governance, such as the independence of board members, the incentivizing design of executive compensation or the transparency towards the shareholders (Sparkes and Cowton, 2004; Cziraki et al., 2010; Rehbein et al., 2012). On the other hand, corporate governance is the key stone of CSR policy inside firms. That is why corporate governance deserves a specific look in the CSR context in order to understand the CSR-Governance nexus (Harjoto and Jo, 2011).

An emerging stream of the literature has therefore started to analyze the link between corporate governance, CSR and firm performance. Jo and Harjoto (2012) even show a causal link from corporate governance to firm performance, through CSR investment. In particular, the research has investigated the three levels of corporate governance: shareholders (ownership), board of directors and CEO (executive compensation). For example, in a multi-country analysis, Dam and Scholtens (2012) show that shareholders' activism and types are important triggers of CSR engagement in Europe (see also Oh et al., 2011; Dam and Scholtens, 2013; Ducassy and Montandrou, 2015, for the French case). According to Harjoto and Jo (2011) (but also Post et al., 2011; Ntim and Soobaroyen, 2013; Harjoto et al., 2014), board composition, reflecting the bargaining power between managers, investors and other stakeholders, is significantly related to CSR firm investment and performance. Finally, the executive compensation scheme, especially the incentive horizon (short or long term), the pay to performance sensitivity and the applied ESG criteria, affect the incentives for CEO to engage in CSR, the CSR investment is then able by feedback to reduce or to increase the executive compensation (Cai et al., 2011; Callan and Thomas, 2014; Francoeur et al., 2015).

In this context, corporate governance, which refers to the decision-making process inside the firm and to the bargaining power between managers, shareholders and other stakeholders, seems to be a specific and critical trigger to achieve sustainable objectives at the crossroads between the financial and the extra-financial firm objectives (Jo and Harjoto, 2012). This dissertation asks whether corporate governance, especially the board of directors, is a mediator between CSR and firm performance, and whether corporate governance is the keystone of CSR commitment. This dissertation provides a new outlook on these questions by investigating the mechanisms behind the CSR demands as well as the CSR-performance nexus in the French context. It focuses attention on the board of directors as the pivot of corporate governance and as a way to integrate both shareholders and stakeholders demands. In addition, the board of directors has been regulated by codes of corporate governance (voluntary "comply or explain" approaches) and laws (legislative approaches) that are interesting to evaluate from an economic perspective.

The chapters 2 and 3 investigate the link between firm objectives and performance. From an INSEE (French National Institute National of Statistics and Economics Studies) national survey on sustainable development, Chapter 2 shows how the main firm motivation (defensive, pro-social or strategic) is a key determinant of its social, societal and environmental CSR awareness. CSR objectives and mo-

tivations may indeed mediate the relationship between CSR commitment and financial performance. To understand how firm objectives may affect firm outputs and performances, the decision-making process should be investigated, especially at the top. In particular, the board of directors, as an organ to protect shareholders' interests and at some extent stakeholders' interests regarding CEO decisions, monitors and advises the CEO as well as endorses firm strategy. It deserves therefore a specific interest to investigate the Governance-CSR-Performance nexus. Chapter 3 theoretically demonstrates how board composition may affect the firm outcomes. In particular, the model determines the optimal board functioning (monitoring or advising) depending on the relative costs and benefits of board expertise and independence.

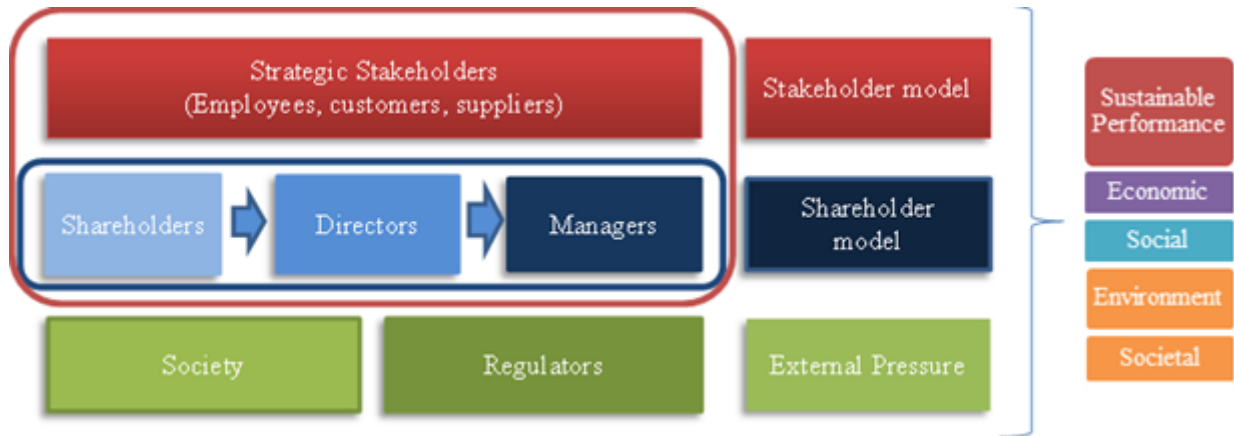


Figure 1.1: The conceptual framework developed in the dissertation

Figure 1.1 presents the conceptual framework supporting the empirical analysis. Three types of CSR may affect board composition. After highlighting that board composition is a key determinant of governance effectiveness, the next three chapters explore how corporate governance, and in particular board composition, may achieve some CSR demands from shareholders, stakeholders and society, and affect the firm outcomes. From the shareholder perspective, the quality of board of directors is proxied by board independence which should affect the firm financial performance. The independence of directors is indeed a good governance practices promoted by codes of corporate governance that firm may voluntarily apply inside their boardroom. From the stakeholder perspective, the board composition determines the representation of stakeholders' interests and then probably the firm's CSR commitment and performance. From the society perspective, the law prescribes the optimal "social" board composition, here the gender balance, in order to improve the firms' social outputs. In any case, each prescription in terms of board composition potentially affects firm performance from both economic and sustainable perspectives. These chapters provide an original perspective by investigating the French case. The empirical studies are based on large listed companies (SBF120 index, the 120 largest listed firms by market capitalization and/or trade on the Euronext-Paris Stock exchange) over the 2006-2014 period, thanks to the merge of multiple databases (board information, CSR extra-financial ratings, financial information).

More specifically, chapter 4 studies the link between operating performance and independent directors in order to evaluate their efficiency. The independence of directors is indeed usually considered as an answer to shareholders' demands to reduce the conflict of interest with the management. We show that in France, independents directors are better selected than affiliated directors in terms of intrinsic

ability but suffer from an informational gap. This gap may be shortened by industry expertise and/or social connections.

Chapter 5 investigates from the shareholder and stakeholder perspectives how board composition is related to CSR commitment. I show that CSR engagement is driven by the reduction of conflicts with stakeholders rather than the creation of private benefits for managers. Stakeholder representation inside the boardroom may therefore affect firm commitment in the different CSR issues.

Chapter 6 analyzes how firms comply with the French gender quota of women inside the boardroom in 2014. The quota has indeed broken the glass-ceiling experienced by female managers and increased the number of women in the director labor market. However, we show that female directors are less involved in the boardroom activities, partly due to their characteristics (age, expertise, tenure), but also due to their positions (committees) inside the boardroom. Female directors have experienced an inner glass-ceiling which may jeopardize the positive expected effects of board diversity on firm policy and performances.

In conclusion, the discussion provides the main new prospects and research avenues opened up by this dissertation. It focuses attention on the role of corporate governance in the development of CSR and the possible applications in terms of public policy and regulation.

The contributions of the dissertation to the economic literature are fourfold.

First, this dissertation is originally dedicated to the French corporate governance model, which is defined as a hybrid model between the shareholder and stakeholder models of corporate governance. Two alternative models may indeed characterize firms' corporate governance: the shareholder model (Anglo-Saxon) which emphasizes shareholders' interests, and the stakeholder (insider) model (Continental Europe) which targets the firm's social interests and involves more broadly the stakeholders (blockholders, bankers, employees...) in the decision-making process (Aglietta and Reberioux, 2005). However, most of the empirical research is based on the American shareholder model, which may lead to a bias in the understanding of the Governance-CSR nexus. Assuming that CSR is a way to integrate shareholders' and stakeholders' interests, the stakeholder model could be more efficient to build CSR value-enhancing strategy than the pure shareholder model. The French model is an interesting academic case study, defined as a hybrid model where both shareholders' and stakeholders' demands may be directly taken into account (Crifo and Reberioux, 2015). Furthermore, the French market also belongs to the Euronext market, the largest Eurozone stock market, and attracts more and more foreign investors, which gives to the French case an international audience. In addition, the French corporate governance is partly converging to the Anglo-Saxon model through the implementation of the code of corporate governance and laws. In particular, independent directors have been promoted since the Vienot report (equivalent of Cadbury report in 1995). Nowadays, at least 50% of the directors are independent on average as recommended by the code of corporate governance.

However, despite a convergence process due to the globalization of finance, the French model keeps some specific features of interest for my research question (Martynova and Renneboog, 2011). Especially, the corporate control is mainly based on internal mechanisms rather than on external mecha-

nisms. The stock market and the related take-over threat are less developed than in the US market. In terms of ownerships, significant blockholders play an important role in the decision-making process, especially thanks to their voting rights (reinforced sometimes with dual shares systems) and to their direct representation inside the boardroom. In terms of board of directors, the French organization is more flexible than the American one. Firms can choose among 3 types: a two-tier board splitting the supervisory and management boards, a one-tier board with or without duality of CEO and chairman position (Belot et al., 2014). Furthermore, employees can be represented inside the boardroom, in particular in the former state-owned firms or when the employees' ownership goes over 3%. The workers' representatives enable thus to better take into account their interests without being in a co-determination system, like in Germany (Fauver and Fuerst, 2006). The law about employment securization in 2013 even reinforces this trend by imposing now some employees' representatives for the largest firms (over 5000 employees). Beyond the traditional board representation of minority shareholders, other stakeholders, such as customers or suppliers, are also appointed inside the boardroom. Finally, in 2011, the Parliament has voted the law on gender parity inside the boardroom, which creates an original quasi-natural experiment to analyze the effects of gender quota on firms' decisions. All these characteristics create an interesting and up-to-date empirical framework, even for the international audience.

Regarding the CSR issues, the French context provides a promising case study. Since the 2001 with the NRE law (New Economic Regulation in 2001), firms have to disclose their environmental and social information. In 2007, the Grenelle, which is a negotiation process between stakeholders (the state, elected representatives, firms, union trade, civil society and academics) on the environmental issues, have highlighted the importance to have a sustainable economy and for the firms to be aware of CSR issues. In 2013, France passed a law on ESG information disclosure by firms, getting ahead the European directives (2014). The French firms are therefore informed and sensitized to CSR issues, and constitutes an interesting pool of firms to study CSR strategy.

Second, this dissertation clarifies the relationship between governance, CSR and firm performance. It analyzes the CSR policy as a balance between stakeholders' and shareholders' interests. It converges to the Freeman perspective on CSR (or the Dodd view), which supports the responsibility of the firm towards their stakeholders, relative to the Friedman (Berle view) perspective which focuses on the agency cost of CSR (Macintosh, 1999; Ferrell et al., 2014). Moreover, I argue that corporate governance is a specific pillar of CSR which should preferably be considered as a key stone of CSR commitment (Jamali et al., 2008). From the mechanistic perspective, corporate governance is a way to pursue firm's objectives, including the CSR ones, by defining and monitoring firm strategy. A causal link from corporate governance to CSR strategy is then expected (Jo and Harjoto, 2012). From the conceptual perspective, social and environmental best practices are easily defined by international standards, and reaching these best practices is just limited by the firms' willingness to commit and by the firms' financial constraints (economic contestability). However, the good corporate governance practices are less straightforward and imply in many cases some negative feedback. The case of independence paradigm is very highlighting from this point of view. The informational gap costs jeopardize the benefits of independent directors to improve corporate governance and firm performance.

In addition, the dissertation investigates the role of the board of directors at the individual level. The objective is to challenge the independence paradigm by investigating the heterogeneity of directors inside the boardroom in various contexts: the shareholder representation (chapters 4 and 5), the stakeholder representation (chapter 5) or women inside the boardroom (chapter 6) (Anderson et al., 2011; Masulis and Mobbs, 2014). This level of analysis is very promising to overcome the identification strategy issue related to the field of corporate governance. Even the quasi-natural experiments in corporate governance are most of the time not so clean to investigate the relationship between board composition and firm performance, due to early compliers or simultaneous changes (Ferreira, 2015). That is why understanding the corporate governance mechanisms at the individual level will move the governance-CSR-performance forward.

Third, this dissertation relies on the collection of new datasets, very up-to-date in the French case. Ethics & Boards, an international board watching agency, provides us a first database on corporate governance in the French firms over the 2009-2011 period with individual information (education, background) and board information (functions, board-related attributes such as independence). This thesis has been the occasion to expand the database over the 2006-2014 period. We have been able to collect director and board information, such as the committees' memberships and directors fees, thanks to annual reports. In 2002, Vigéo has been created as the first French extra-financial ratings agency. It enables us to have a specific coverage of the French market in terms of extra-financial information. As highlighted by the literature (Chatterji et al., 2014; Ferrell et al., 2014), it is important to test the robustness of the results in the CSR literature by using multi-sources of ESG information. Asset 4 provides us a complementary and useful dataset on a similar sample of French firms. At the end of this PhD, a comprehensive full database at the director and the firm levels, covering financial and extra-financial information as well as detailed director background, have been built. Finally, the French National Institute of Statistics and Economics Studies have launched in 2011 the first survey on the sustainable practices for a representative sample of French firms. To the best of my knowledge, it provides the largest data set on the topic covering both small and medium enterprises and large firms.

Fourth, this dissertation applies new methodologies to the corporate governance field. Chapter 3 adapts a micro-macro model, usually applied to growth model, to board of directors. In particular, the methodology enables us to have an endogenous choice between two board functionings (advising versus monitoring) depending on board composition (independence and expertise). The model proposes an innovative analysis of the trade-offs between monitoring and advising functions, as well as between independence and expertise. It could be extended by introducing the constraints on the director labor market to merge director selection and board functioning issues. Chapter 4 applies for the first time the Abowd, Kramarz and Margolis framework which was primarily developed to understand the wage of workers. It enables to differentiate and to estimate firm and directors fixed effects as well as board-related attributes. Following the work of Bertrand and Schoar (2003) on the management style question, this dissertation provides new insights on board mechanisms (board functioning and director selection) and on efficiency determinants of independent directors. Chapter 6 uses Oaxaca decomposition of director fees to understand which factors may impede the role of female directors after the quota. The Oaxaca decomposition, initially developed to investigate discrimination on the labor market, explains the gender fees gap depending on observable individual characteristics, positions inside the boardroom and unobservable predictors, in order to distinguish which part is due to

the difference between male and female directors and which part is due to discriminatory mechanisms. It provides a throughout way to analyze directors fees and the role of female directors controlling for individual characteristics and position heterogeneity.

The following sections will briefly sum up each chapter, the position inside the economic and financial literatures, and the main contributions.

Do firm motivations matter for CSR awareness?

In most cases, at least in the most interesting cases from an economic point of view, CSR commitment covers voluntary actions and practices to answer for market and government imperfections (Benabou and Tirole, 2010). From this perspective, CSR policy may be motivated by either greenwashing, pro-social, defensive or strategic objectives (Baron, 2001). First, firms may expect some reputation benefits by implementing a CSR policy such as targeting new responsible consumers, or developing new markets. However, firms may not be willing to support the costs of such practices. Greenwashing is then the fact to claim doing some CSR practices for the related reputation benefits without any further commitment than the business as usual (Bazillier and Vauday, 2013). Second, defensive CSR relies on the willingness to mitigate the ESG risks related to firm's activities and to keep the license to operate Post et al. (2002b). CSR is an effective way to ensure the survival of the firms, without any expected financial benefit. Third, pro-social objective is based on the fact that some managers and significant blockholders have some social and environmental preferences that they achieve throughout the firm. Pro-social CSR reflects then an agency cost and may hurt the financial value of the firm (Barnea and Rubin, 2010; Ferrell et al., 2014). Fourth, some firms may use CSR in order to answer some stakeholders' demands (especially demands from the strategic stakeholders such as workers, customers and suppliers) and to maximize the shareholder and stakeholder values (Deng et al., 2013). It is a value-enhancing strategy (Ferrell et al., 2014).

Theoretically well-grounded, the link between CSR motivations and awareness intensity has empirically been analyzed by only few papers (McWilliams and Siegel, 2001). However, it may be the crucial mediator of the relationship between CSR and firm performance (Tang et al., 2012). A large literature investigates the CSR-performance nexus without reaching a consensus (Orlitzky et al., 2003). Margolis et al. (2011) have already shown a positive correlation between CSR and financial performance thanks to a meta-analysis. Recent studies (Cavaco and Crifo, 2014; Crifo et al., 2014) also highlight some complementary and substitute effects between commitments in the different CSR dimensions and the firm's financial performance. In particular, they show that commitments in social and societal linked with strategic stakeholders are complementary whereas committing in social and environment are substitutes. However, engaging in both environment and social is the best strategy in terms of value enhancement. What are the determinants of such strategy? In order to answer this research question and understand CSR firm engagement strategy, the chapter 2 challenges the link between CSR motivation and awareness intensity, for the first time to my knowledge.

Chapter 2 is based on an original French cross-sectional survey about CSR practices in terms of environmental (management, climate change, natural resources and waste and biodiversity), social (discrimination, working conditions and employment and training) and societal (the relationship with

customers, suppliers and community) issues (2011 National Survey about Sustainable Development conducted by the French National Institute National of Statistics and Economics Studies -INSEE-). In this chapter, I use this comprehensive survey in order to define some indexes of firms' CSR awareness on a representative sample of French Firms, and to determine the firm objectives to pursue CSR practices. This survey has the advantage to provide comprehensive primary information and to map CSR practices in small, medium, and large, listed and unlisted enterprises, whereas most of studies, using extra-financial rating data, focus on large listed firms (Chatterji et al., 2009, 2014; Crifo et al., 2014). It avoids any selection and information bias in identifying the relationship between CSR motivation and awareness intensity.

I show that CSR motivation (defensive, pro-social or strategic) is mainly driven by firm size, listed status and profit. Some controversial industries, such as energy, water and waste ones, are more likely to have such CSR strategies. However, the main determinant seems to be an idiosyncratic choice from the management. I demonstrate also that firms claiming doing some CSR actions are significantly more likely to be aware of CSR issues in any dimension (environment, social and societal). Greenwashing purposes do not drive the average CSR awareness in the French firms. More specifically, defensive CSR defines the minimal firm awareness level in any CSR dimension. Firms engaging in strategic CSR policy are more likely than other firms to commit to environmental, social and societal issues, especially the ones related to strategic stakeholders such as customers and suppliers, by hard practices (relative to monitoring and specific tools) rather than soft practices (only being aware of the CSR issue). Pro-Social CSR is only more likely to be concerned by environmental, especially biodiversity, and community issues, throughout soft practices (relative to general objectives and policy).

This chapter 2 highlights that corporate motivation regarding the CSR policy is determinant for CSR awareness. The chapter also highlights the unobservable predictors of CSR motivation and questions the role of management in choosing CSR motivations and objectives. By integrating the firm objectives in the decision-making process and monitoring the managers, the board of directors appears as a crucial organ of corporate governance. The board of directors could then be a mediator between CSR and firm performance. The next chapters will analyze how the board of directors may affect firm decisions, and more specifically, how board composition is related to firm (financial, environmental, social and societal) performances. Board composition is indeed the main determinant of board effectiveness (see Adams et al., 2010, for a literature review). The following chapters contribute to the literature on the link between board composition, corporate governance efficiency and firm performance. The theoretical approach investigates the board functioning in order to define the good corporate governance practices for the shareholders (deductive approach).

Independence and the monitoring-advising trade-off

(Co-written with P. Crifo)

Two main functions of the board of directors have been highlighted in the literature: monitoring and advising the CEO (Demb and Neubauer, 1992). Nevertheless, board efficiency to achieve these functions depends on two mechanisms: the bargaining power of the managers relatively to board members and the natural information asymmetry between outside directors and managers who hold the firm specific information.

From this perspective, the literature demonstrates that board effectiveness depends on its composition (Adams et al., 2010), especially on its independence. Independent directors are then promoted to reduce conflicts of interest between owners and managers and to alleviate the CEOs' opportunism. The board members are in this case defined as "monitoring" towards the CEO. Nevertheless, the drawback of board independence is the incentive for the CEO to reduce information sharing in order to maintain a strong information asymmetry with board members and to decrease the overall board efficiency. According to the model of Adams and Ferreira (2007), the optimal board may not be an independent one (so called monitoring board) but an "advising or friendly" board, when the firm-specific information is detrimental to board efficiency. A friendly board may maximize both the advising and monitoring benefits. The drawback of an advising board is the CEO's latitude to derive a private benefit from managing the firm at the expenses of the shareholders.

Two main board functionings (monitoring versus advising boards), fixed by the independence level, highlight different trade-offs between monitoring and advising functions (Baldenius et al., 2014). This trade-off may affect the optimal board composition from the shareholders' perspective. However, board expertise is another key quality of the board, often neglected in the theoretical approaches, while proving determinant in this context. The empirical literature shows the positive relationship between board industry and financial expertise on the one hand and board decisions (monitoring and advising) on the other hand (Faleye et al., 2013; Wang et al., 2013). From the theoretical perspective, expertise determines the quality of board advice and the cost of information for board members. It may also influence CEO's trade-off regarding information sharing by increasing the benefits of board advice relatively to the costs of board monitoring. Nevertheless, no theoretical paper has already clearly taken into account both independence and expertise and their interaction to model board functioning and project selection (Wagner, 2011).

This chapter 3 proposes to analyze the monitoring-advising trade-off that a board experience to protect the shareholders' interests regarding its two main characteristics: independence and expertise. This theoretical chapter proposes a model where two types of board functioning (monitoring versus advising) are competing, and where the board's endogenous choice of functioning is related to the trade-off between the benefits and costs of independence and expertise. We show that for a low level of independence, boards are more likely to choose an advising behavior whereas for a high level of independence, boards are more likely to be a monitoring type. In-between, the board choice of behavior type is more heterogeneous and depends on the expertise level. There is indeed a non-linear relationship between the expertise level and the advising type board benefit. For the medium level of expertise, advising board is more efficient than monitoring board because it maximizes the trade-off between the benefit of advising and the cost of the low monitoring ability. For the low or high level of expertise, either the low benefit of board advising or the high cost of weak monitoring reduces the efficiency of advising board relatively to a monitoring board.

This chapter highlights the trade-off between monitoring and advising functions depending on board composition (independence and expertise) in order to protect the shareholders' interests. It proposes a new insight on the board composition-firm performance question. It especially shows that monitoring board is the optimal functioning when the cost of information asymmetry is lower than the benefit of

strong board monitoring. Advising board is optimal when the benefit of advising is higher than the cost of weak monitoring (i.e., when there is a small potential private benefit for the CEO). In addition, the chapter demonstrates that board composition defined by independence and expertise may be the main determinant of firm performance.

This chapter mainly highlights the link between board composition and firm performance. Board composition is therefore an interesting trigger to foster CSR inside firms. In the following chapters, we propose to analyze three CSR demands in terms of board composition, respectively coming from shareholders, stakeholders and the society. Chapter 4 analyzes the efficiency of independent directors. Chapter 5 studies the impact of the stakeholder representation on CSR commitment. Chapter 6 evaluates how firm comply with gender quota inside the boardroom. We investigate the consequences of each of these characteristics of board composition on firm performance or board functioning.

Independent directors: Less informed but better selected than affiliated Directors?

(co-written with S. Cavaco, P. Crifo and A. Reberioux)

Independent directors have been supported by shareholders, especially institutional investors like CalPERS (Gordon, 2007) for decades in order to improve the quality of corporate governance. Independent boards have also been promoted by many codes of corporate governance (Adams, 2012) especially after the earnings management scandals and financial crises. France does not make an exception; independent paradigm has been highlighted for the first time by the Vienot reports (1995 and 1999) and reinforced by the Bouton report (2002) and the next code of corporate governance. This criterion has finally been used by extra-financial rating agencies to measure the adequacy of board composition with shareholders' interests. Independent board is then one of the major dogmas of the good corporate governance practices and the Governance factors. However, the efficiency of independent directors inside the boardroom is still highly debated in the economics literature (Adams et al., 2010, for a review).

From the theoretical perspective, independent directors should reduce the conflict of interests between managers and shareholders, and be related to the improvements of firm performance (Hermalin and Weisbach, 1998). However, they may experience a strong informational gap, jeopardizing the previous benefits (Adams and Ferreira, 2007). The overall efficiency of independent directors is then an empirical question. The empirical results, at the board level, are very mixed: using different identification strategies, Bhagat and Bolton (2008) show a negative correlation between the share of independent directors and firm performance over the 1990-2004 period and a positive over 2004-2007, whereas Wintoki et al. (2012) show no significant result. At the individual level, Nguyen and Nielsen (2010) report a positive shareholder value of independent directors. However, Masulis and Mobbs (2014) argue that independent directors are heterogeneous across firms and may dedicate time and energy differently depending on their relative incentive.

In order to renew the debate about the economics of independence, the chapter 4 proposes to evaluate the efficiency of independent directors relatively to affiliated directors in the French firms. We argue here that directors' efficiency is driven by both board functioning and director selection. We then claim that one part of the story is related to the position (independent versus affiliated) inside the

boardroom, while the other part is linked to the intrinsic ability of directors to perform their duties (ability fully transferable across directorships whatever the position). On the one hand, the board functioning determines the informational gap cost relative to the benefits of independence (Cai et al., 2015). Some board-related attributes of independent directors, such as industry-expertise and social connections, may influence this trade-off by coping with the informational gap (see e.g. Dass et al., 2014; Kramarz and Thesmar, 2013). Affiliated directors should however not experience such informational gap thanks to their business link with the firm. On the other hand, the selection of independent directors may be driven either by the willingness to please shareholders by appointing high ability directors or by the willingness of CEO to reduce the monitoring pressure by appointing low ability directors. Affiliated directors are appointed according to the representativeness principle without any relation with their intrinsic ability. Both mechanisms may then impede or improve the independent directors' economic efficiency relatively to affiliated directors.

There is an empirical challenge to properly distinguish, when examining independent directors' effectiveness, what is related to board functioning (independent position) and what is related to board selection (intrinsic ability) (Withers et al., 2012). Our strategy is based on the AKM (Abowd, Kramarz, Margolis) methodology (Abowd et al., 1999), initially developed in labor economics. This methodology enables to identify firm and director fixed effects as well as board-related attributes varying across firms over the period. Basically, we consistently estimate individual fixed effects for a comprehensive, large sample of directors - echoing the approach developed by Bertrand and Schoar (2003) for top executives. Doing so enables comparing individual ability distribution across different groups of directors, directly informing on selection process. It also allows examining the relationships between various board-related individual attributes (e.g. independence, expertise, or informal connections) and performance, netted out intrinsic individual ability heterogeneity issue. It informs on board functioning and informational gap.

Thanks to a director level data (age, nationality, education, professional background, position inside the boardroom) and firm performance data, we obtain two main results on the French listed firms (SBF120 over the 2006-2011 period). We first provide evidence that independent board members have higher intrinsic ability as compared to affiliated directors - consistent with a shareholder friendly-based selection process. However, we find that once appointed, independent board members may experience a strong informational gap in day-to-day board functioning that outweighs other monitoring benefits. The cost of the informational gap may be reduced by some industry expertise or educational network affiliation with other board members.

The net effect of independence is close to zero in the French context. However, the empirical results highlight the different mechanisms at play that may jeopardize or improve the independent directors' efficiency (board functioning and director selection). It also questions the adequacy of independence criteria to improve corporate governance practices, and suggests complementing the recommendations with industry expertise. This chapter provides a new framework and new insights to the increasing literature about the impact of directors on firm decisions and performance.

The representation of managers, shareholders and stakeholders inside the boardroom: Does it matter for CSR commitment?

CSR commitment may be viewed as a delegated responsibility from the board of directors to the managers (Crifo and Forget, 2015). From this governance perspective, two main motivations may drive the firm's CSR commitment: the entrenchment and opportunistic behavior from the managers and the resolution of conflicts with various stakeholders (to maintain the license to operate) (Harjoto and Jo, 2011; Ferrell et al., 2014). From the agency perspective, managers may use CSR commitment to entrench themselves inside the firm (Cespa and Cestone, 2007), or to build a good citizen reputation (Barnea and Rubin, 2010) at the expense of shareholders. Both objectives reveal the managers' opportunistic behavior towards CSR commitment (Opportunistic behavior hypothesis). From the stakeholder theory (Post et al., 2002b), the possible antagonism between managers', shareholders' and non-investing stakeholders' interests may be a source of conflicts. In this case, firms may use CSR policy and commitments in order to achieve some stakeholders' demands, and to reduce these conflicts (i.e. the stakeholders' conflicts resolution hypothesis, Harjoto and Jo, 2011). It may protect the firm license to operate and maximize the long-term firm performance (the value-enhancing strategy, Ferrell et al., 2014).

Board composition reflects the bargaining power of the CEO, shareholders and other stakeholders inside the boardroom and could be therefore a decisive driver of CSR commitment. Two perspectives on board composition have been proposed in the literature. The shareholder perspective is based on the tryptic: independent, affiliated and insider directors (Harjoto and Jo, 2011). The stakeholder perspective relies on the stakeholder representation inside the boardroom (Hillman et al., 2001). In this latter view, stakeholder directors improve the recognition of the stakeholders' interests in the decision-making process.

In order to test the two hypotheses explaining the CSR firm engagement from the governance point of view, this chapter empirically analyzes the relationship between board composition and multi-dimensional CSR commitment from the shareholder and stakeholder perspectives in the French case (2006-2011 for SBF120 index). CSR commitment is evaluated thanks to two extra-financial ratings from two ratings agencies, Vigéo and Asset4. First, I propose a new director typology based on the stakeholder representation: insiders, employees' representatives, business (customers and suppliers), support (banks and insurances), and extern directors (other stakeholders). Second, I estimate the effect of board composition on CSR commitment indexes. Third, I compare both extra-financial ratings and discuss the choice of the ESG information providers in the CSR literature.

Consistent with the stakeholders' conflict resolution hypothesis, from the shareholder perspective, social and societal commitments are positively related to the share of independent directors for Asset4 and negatively to the share of insiders for Vigéo. The environmental commitment is unrelated to the shareholder board composition. Moreover, the empirical evidence on Vigéo data suggests that CSR commitments are significantly correlated with the stakeholder board representation, especially the proportion of employees' representatives, business and support directors. The social commitment may be used to resolve conflicts between managers, and non-investing stakeholders (positively correlated with each stakeholder's representative). The societal dimension may help to resolve specific conflicts

within the supply chain (employees and business stakeholders). However, the environmental commitment seems to only resolve conflicts with internal and business stakeholders and exacerbate conflicts with other stakeholders, especially with support and external directors. Nevertheless, the empirical evidence on Asset4 data are inconsistent. In any case, the CEO's opportunistic behavior hypothesis is rejected. The stakeholders' conflict resolution hypothesis is mostly accepted, especially for the social and societal dimensions.

The results show also that Vigéo and Asset4 do not rate CSR practices in a commensurable way, even when taking into account the differences in terms of sample coverage and CSR theorization. Asset4 appears more lenient towards firm practices than Vigéo. It highlights the importance to use multiple sources of ESG information to test the robustness of the results.

In conclusion, CSR commitment is driven by the objective to reduce conflicts with the stakeholders in order to keep its license to operate and to maximize the long-term firm performance. In a hybrid model of corporate governance where the stakeholder representation is a key issue, the board composition from the stakeholder perspective opens a promising research avenue to understand firm decisions.

Gender quota inside the boardroom: Female directors as new key players?

(Co-written with A. Rebérioux)

Society, at least the European Union, asks for a better gender equality in the decision-making process (European-Commission, 2012). France does not make exception, even if it is the twelfth best country on the gender inequality index (UNDP, 2013). Women represent only 12% of directors and 4% of Chief Executive officers in the largest French firms in 2009. However, most of the empirical literature argues for a positive relationship between diversity and quality of governance, especially in terms of new resources and competences inside the boardroom, fresh perspectives on strategic issues (Miller and Del Carmen Triana, 2009; Nielsen and Huse, 2010a) as well as better monitoring (Carter et al., 2003; Adams and Ferreira, 2009).

Two main arguments have been put forward to explain the low representation of female directors: the shortage of female directors' supply and the glass-ceiling regarding the appointment inside the boardroom (Terjesen et al., 2009; Ferreira, 2010; Adams et al., 2015). In the first case, the low level of female directors is due to the narrowness of the female director market. In the second case, there is a market inefficiency that a regulation may resolve. Best female candidates could indeed replace low quality male directors (Smith, 2014). In any case, social consensus urges the change at the top of the firm in order to improve gender equality. Two approaches are competing: the voluntary approach through codes of corporate governance or the legislative approach through gender quota. France has applied a gender quota of 20% in 2014 and 40% in 2017, following the Norwegian path. However, the quota can come at a cost (Adams and Kirchmaier, 2015): the shortage of potential candidates and the strategic choice done by firms to comply with the quota (meaning the role of female directors inside the boardroom after the quota). If the cost related to the quota is larger than the benefit related to diversity increase, the quota would not have the expected positive effect on firm decisions and performance. Based on this quasi-natural experiment, this chapter evaluates the application of the French gender quota (20% enforceable in 2014) in firms belonging to SBF120 index. In particular,

we focus our attention on the characteristics and the role of seasoned and unseasoned female directors inside the boardroom. Seasoned directors have been appointed at least once in a SBF120 firm before the quota (2010). Unseasoned directors have been appointed for the first time after the quota (2010).

First, we provide evidence that the quota has broken the glass-ceiling by increasing the number of women on the director labor market. The rise of multi-directorships for female directors (busy directors) remains thus limited. However, the new directors entered in the labor market after the quota come more frequently from abroad and are less financial experts. Similar to the Norwegian case, unseasoned female directors are also more independent. The female directors differ therefore from the male counterparts.

Second, in terms of position, unseasoned independent directors are more likely to sit in advising committees and less likely to sit in monitoring committees. On the opposite, the seasoned independent directors are more likely to sit in the monitoring committees and less likely to sit in the advising committees. Moreover, the characteristics (financial expertise, seniority) positively related to monitoring committees' memberships are less frequent in the population of female directors. The bundle of characteristics that define the female directors may lead to a lower representation in those monitoring committees, as compared to male directors. This result suggests therefore an inner glass-ceiling experienced by female directors, and especially unseasoned female directors, to reach the monitoring committees. But this glass-ceiling is due to directors' characteristics rather than to the gender *per se*.

Third, female directors earn 6% less than their male counterparts. Assuming that the fees are a good proxy of directors' services, the female directors seem to ultimately have a smaller role inside the boardroom. Using an Oaxaca model of wage decomposition, the fees gap is fully explained by individual characteristics (for one third) and by committees' assignment (for two thirds). The results confirm that there is no intrinsic discrimination of women relatively to men. But female directors, especially the unseasoned independent ones, experience an inner glass ceiling to reach the major committees such as audit and compensation-nomination committees and do not possess the most valued attributes by firms (such as age). In particular, the short tenure and the younger age of unseasoned female directors are discriminant for accessing to monitoring committees and other important positions inside the boardroom.

Despite the quota, female directors would not become the new key players inside the boardroom. This inner glass ceiling and the specific female attributes relative to men may jeopardize the benefits of diversity inside the boardroom. That could also explain the negative relationship between diversity and performance observed in the Norwegian case after the quota. In any case, it indicates that expecting from a quota a quick remedy of gender unbalance is highly speculative.

The reminder of this dissertation is organized as follows. Chapter 2 analyzes the firm's CSR motivations and awareness intensity. Chapter 3 models board decisions, depending on the independence and expertise levels. Chapter 4 evaluates the economic effectiveness of independent directors. Chapter 5 studies the relationships between board composition and CSR commitment. Chapter 6 takes advantage of the quota quasi-natural experiment to investigate the role of female directors in the French boardroom. Chapter 7 discusses the main results and presents the main new prospects and research avenues. It focuses attention on the role of corporate governance in the development of CSR and the possible applications in terms of public policy and regulation. Each chapter is related to a working paper written during the PhD. Each chapter is self-sufficient.

Do firm motivations matter for CSR awareness?

Abstract

This chapter investigates the relationship between Corporate Social Responsibility (CSR) motivations (greenwashing, defensive, pro-social and strategic) and CSR awareness intensity about environmental, social and societal issues. Based on an original national French survey on sustainable development, I show on a representative sample of 8336 French firms that firms claiming to do some CSR actions are effectively more likely to be aware of any CSR issue than firms which do no CSR. The greenwashing hypothesis to explain firms' CSR awareness is therefore rejected. More specifically, firms which adopt a defensive CSR policy are related to the lowest level of CSR awareness in the sample. Firms which develop a pro-social CSR policy are additionally aware of the environmental management and biodiversity issues, reflecting their preference for environmental values, through soft CSR practices (policy and objectives). Firms which have a strategic CSR policy are more likely to invest through soft and hard (label, monitoring plan) practices in any CSR issue related to strategic stakeholders such as the relationships with customers, suppliers and community within the societal dimension, in the environmental management within the environmental dimension or in working conditions within the social dimension.

Key words: Corporate Social Responsibility, Firm motivation, Firm performance, Probit

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2.1 Introduction

The European Commission claims in its Europe 2020 policy¹ that Corporate Social Responsibility (CSR) is one of the main drivers of firm competitiveness and sustainable growth (Boulouta and Pitelis, 2014). According to the European commission of CSR (2011), firms should take into account the environmental, social and societal impacts of their activities in their decisions. The environment dimension covers firm negative externalities on ecosystems (e.g. pollution and biodiversity loss) as much as pro-active actions (e.g. eco-friendly design). The social dimension tackles human resource management practices (training, career development) as well as human rights protection (e.g. eliminating child labor). The societal dimension considers the relationships with outside stakeholders (business behavior) or community (e.g. local economic development). The increasing demand for developing CSR policy comes from regulators (through increasing legal environmental, social and governance -ESG- disclosure at the national and european levels²), shareholders (especially the socially responsible investors, see Crifo and Mottis, 2013; Arjalies, 2010) and other stakeholders such as customers, suppliers or non-governmental organizations (NGOs) (e.g. Arenas et al., 2009). From an economic point of view, firms go beyond what the law requires (McWilliams and Siegel, 2001) in order either to keep their license to operate and to mitigate ESG risks (Post et al., 2002a), to pursue some environmental or social preferences (Benabou and Tirole, 2010), to build new business strategy (Crifo and Sinclair-Desgagne, 2014), or to maximize shared value between shareholders and stakeholders (Porter and Kramer, 2011). CSR here targets firm engagement (voluntary practices) beyond the business as usual rather than firm compliance (legal requirement) towards the environmental, social and societal issues (Huang and Renneboog, 2014).

Nowadays, CSR is widely spread on corporate agenda at least in the OECD countries. In the industrialized countries, two thirds of the biggest firms publish some CSR information (KPMG, 2011). In France, 62% of firms know the concept of CSR and 52% claim to implement some CSR practices (Ernst and Honore-Rouge, 2012). However, the relationship between CSR commitment and firm performance remains a debated research question without any strong academic consensus (McWilliams and Siegel, 2000; Margolis and Walsh, 2003; Orlitzky et al., 2003). The remaining questions are whether claiming to implement a CSR policy changes the firm business behavior and whether it impacts firm performance. Margolis et al. (2011), thanks to a meta-analysis, show a slightly positive link between CSR investment and firm performances. Nevertheless, the lack of consensus among studies is explained by three reasons: some identification and measurement biases (Chatterji et al., 2009; Garcia-Castro et al., 2009), some trade-offs between CSR practices with mixed impacts on financial performances (Cavaco and Crifo, 2014; Crifo et al., 2014), and the ignorance of motivation behind CSR commitment (Dam et al., 2009; Baron et al., 2011).

Indeed, firms implement a set of CSR practices and commit to some specific CSR dimensions rather than others. Each CSR practice can differently impact firm performance (Barcos et al., 2013) and all CSR strategies do not have the same positive impact on firm performance (Brammer and Millington, 2008; Mackey et al., 2007). Wal-mart for example invests in energy efficiency through green building and waste reduction in order to cut costs and to improve its green reputation. But it does not pro-

¹Commission's 2011 communication: "A renewed EU strategy 2011-2014 for Corporate Social Responsibility"

²French law about CSR reporting in 2012 (art. 225, Grenelle II act), European directive on the same topic (2014/95/UE).

mote any social rights like the representation of workers through union trade within the firm, and is often criticized by NGOs for business practices (Lussier, 2015). Wal-mart decided then to specifically commit to environment without any concern for social and societal issues. The expected benefit in terms of financial performance could be mixed. Some recent empirical studies investigate the impact of commitment trade-offs between CSR dimensions on firm performance, as a mediating process to understand the relationship between CSR and performance. For example, Crifo et al. (2014) analyze the quantitative-qualitative trade-offs between each CSR dimension, on a large data set of French firms. The authors show that each dimension is differently related to firm performance, and that the most profitable strategy is investing in the social and environment dimensions. Cavaco and Crifo (2014) demonstrates complementarity effects between the social and societal dimensions, and substitute effects between the societal and environment dimensions on firm performance. The literature makes therefore clear that the mix of CSR practices determines the impact on firm performance. But only a few papers investigate why firms do not converge to the same commitment, and how firms motivation may modulate CSR commitment and, at some extent, firm performance (Baron, 2001; Benabou and Tirole, 2010; Dam et al., 2009). I argue here that CSR motivation is the missing link in the CSR-performance nexus.

Baron (2001) highlights three types of CSR motivation: defensive, altruistic (pro-social) and strategic. First, defensive CSR enables to reduce threats from external pressures like regulatory pressure (Maxwel et al., 2000; Lyon and Maxwell, 2008) or from other stakeholders which affect economic activity. Firms search to maintain their license to operate through CSR commitment (Post et al., 2002a). The relationship between CSR and firm performance is then neutral or mixed depending on the trade-off between the CSR costs and benefits. Second, altruistic or pro-social CSR is a way to meet individual preferences for social and environmental values (Baron, 2001; Dam et al., 2009; Baron, 2010). Firms provide public goods, voluntarily reduce firm negative externalities and engage in philanthropic activities. From this perspective, firms may reduce expected financial performance in the social interest (Benabou and Tirole, 2010). CSR is in this case an agency problem (Friedman, 1970; Ferrell et al., 2014). Third, strategic CSR is a revenue-maximization strategy for firms (Siegel and Vitaliano, 2007; Dam et al., 2009; Orlitzky et al., 2011; Ferrell et al., 2014). Firms enhance their reputation in terms of quality, or differentiate their products in a competitive market. Firms are also able to attract better employees and improve their productivity (see for example Brekke and Nyborg, 2008; Delmas and Pekovic, 2013). Strategic CSR is then a way to answer demands from strategic stakeholders in order to improve firm performance. These various CSR motivations most probably affect the set of CSR practices implemented by firms, and influence the trade-off between benefits and costs of CSR practices. The relationship between CSR motivation and CSR commitment intensity is therefore a crucial empirical question in order to understand the relationship between CSR and firm performance.

However, many NGOs or other stakeholders are skeptic about the materiality of firms' commitment towards CSR issues. BP environmental crisis is one of the most relevant examples. British Petroleum (BP) was well evaluated by the extra-financial rating agencies and advertised a lot about their environmental friendly practices, but the deep water horizon crisis revealed some caveats in its environmental management (Cherry and Sneirson, 2010). The discrepancy between firm discourse (mostly evaluated by rating agencies) and practices is the main weakness of CSR implementation (Bazillier and

Vaunday, 2013). From this perspective, greenwashing covers firm's behaviors or advertisement which are misleading towards consumers or customers with false claims about CSR practices and benefits (TerraChoice, 2010³). Greenwashing firms benefit from a positive CSR reputation effect without any improvement of product quality or responsible behavior (Benabou and Tirole, 2006). Academics should firstly investigate at a large scale whether claiming to do some CSR makes any difference about CSR commitments and awareness (Laufer, 2003).

This chapter investigates whether firms which claim to do some CSR actions are more aware of CSR issues than others, and whether CSR motivation affects CSR awareness intensity. Based on a national French Survey about sustainable development (EnDD) conducted by the French National Institute for Economic Studies and Statistics (INSEE) in 2011, I determine the CSR awareness intensity about the environmental, social and societal issues, as well as the firm motivation. I take advantage of the detailed self-administrated survey about firm CSR practices and objectives (38 questions). The CSR scores, based on the number of CSR practices implemented by firms, provides a comprehensive quantitative metrics of CSR commitment intensity in three CSR dimensions (societal, social and environment) and the 10 related sub-dimensions investigated by the survey. The CSR awareness indexes are dummy variables, equal to 1 if the firm's score is higher than the sample average score in the related CSR dimension or sub-dimension. The "CSR leaders" are firms whose the commitment intensity is above the average commitment intensity. The final sample is a representative sample of 8336 French firms with at least 10 employees across industries.

I show that when controlling for firm size, industry and other firm specific characteristics, firms claiming to do some CSR actions are more likely to be aware of CSR issues whatever the dimension. These results reject the greenwashing hypothesis to explain why firms claim to do some CSR practices. More specifically, defensive and pro-social CSR firms adopt the minimal level of CSR awareness (base line), whereas strategic CSR firms are more aware of CSR issues in the environment and societal dimensions. At the sub-dimension level, relative to the defensive CSR firms, pro-social CSR firms are additionally positively related to the environmental management and biodiversity awareness intensity, whereas strategic CSR firms are additionally positively correlated to the environmental management practices towards consumers (label and eco-product). Strategic CSR firms are also positively associated with the dimensions related to strategic stakeholders like customers, suppliers and community, as well as employees. To sum-up, firms implementing strategic CSR policy are more likely to be aware of hard CSR practices (monitoring tools, labels) related to strategic stakeholders, whereas pro-social CSR firms are more likely to be aware of soft CSR practices (policy, objectives) revealing some environmental preferences. Finally, doing some CSR actions is determined by firm size and revenue as well as listed status. However, the main determinants of firm specific motivation are firm age, debt level and industry.

This chapter contributes at least for three reasons to the CSR literature. First, it complements the literature on the CSR-performance nexus. Beyond the classical analysis on the direct link between CSR commitment and firm performance (Margolis et al., 2011), few studies investigate the relationship between CSR motivation and firm performance (Ferrell et al., 2014). Baron (2001) argues that

³TerraChoice. (2010). The sins of greenwashing: Home and family edition 2010: A report on environmental claims made in the North American consumer market. Retrieved December 18, 2011, from http://sinsofgreenwashing.org/?dl_id=102.

both motivation and performance should be investigated together in order to distinguish the strategic CSR in the interest of the shareholders and the altruistic CSR at the expense of the shareholders. In addition, McWilliams et al. (2006) analyze how strategic CSR affects firm management. However, this literature presents a caveat: how firm motivation affects CSR awareness in the different dimensions (Tang et al., 2012). This chapter investigates how firms are likely to modulate their CSR awareness depending on their motivation. Moreover, the chapter helps to understand why firms choose to implement a set of CSR practices and why CSR commitment may have mixed effect on firm performance (Crifo et al., 2014). Strategic CSR, as a value-enhancing strategy, should lead to better financial performance, whereas pro-social CSR, as an agency issue, should be related to lower firm performance (Ferrell et al., 2014). Defensive CSR should be neutral towards financial performance. However, at some extent, all these strategies are related to a better awareness of CSR issues. Only the intensity of firm awareness depends on the motivation. This chapter provides therefore new insights to investigate the relationship between CSR and performance.

Second, this chapter provides a comprehensive CSR metrics, directly related to firm CSR practices, thanks to the survey. The extra-financial rating agencies use a lot of public information to rate firms through scores, but they are often criticized for the lack of transparency of their methodologies (Chatterji et al., 2009). This approach therefore complements this approach by providing a repeatable method, especially regarding the investigated CSR practices and the aggregation of CSR dimensions scores. Furthermore, I am able to estimate a firm exogenous weighting scheme of the CSR practices. Capelle-Blancard and Petit (2014) argue that the weight of each CSR dimension can be estimated from the whole investigated population. In their case, they analyze the weight of each CSR dimension in the news. The CSR practices are weighted depending on their implementation in the whole population of the French firms. Moreover, the INSEE survey is compulsory for firms with at least 10 employees (if they are sampled). This avoids any respondent bias and any measurement bias due to an heterogeneity of information availability between firms doing some CSR and the others. It increases therefore the robustness of the findings. However, the survey has two limits. On the one hand, the number of questions is limited to increase the likelihood of response from firms. On the other hand, the survey is self-administrated, increasing the risk that some firms over-claim regarding their actual practices.

Third, the sample is representative of the French firms, and is broader than the usual spectrum of extra-financial rating agencies which rate only large listed firms. Oueghlissi (2013) shows that industry and firm size are two important determinants of CSR commitments on another large dataset of French Firms. This survey enables to investigate CSR motivation and awareness in small and medium enterprises (SME), as well as large firms in the same framework. Regarding the previous literature on SME (see for a review Kechiche and Soparnot, 2012), Berger-Douce (2008) provides evidence that profitable SMEs adopt similar CSR practices to larger firms. Santos (2011) also shows that CSR practices are taken into account by SME in the daily management, and are focused on eco-efficiency, social climate and the relationships with the community. However, Perrini et al. (2007) highlights that large firms are more able to identify relevant stakeholders and to implement related specific strategic CSR. Regarding industry, a few papers show that the controversial industries use CSR to reduce ESG risks, to keep their licenses to operate and to create some shared value (Lindgreen et al., 2012; Cai et al., 2012; Jo and Na, 2012). CSR motivations and awareness intensity may be therefore modu-

lated by firm size and industry. In order to determine the determinants of CSR awareness, the study investigates CSR practices accross industry for SME and large firms according to the same criteria. The chapter shows that large firms are more aware of CSR issues than SME, but the motivation are identically distributed in the large firms and the SME. SME do some defensive, pro-social or strategic CSR. Controversial industries are more likely to implement some CSR policy, especially pro-social and strategic CSR, as well as industry with a green premium (real estate).

The remainder of this chapter proceeds as follows. Section 2.2 presents the literature and the hypotheses on the link between CSR motivations and CSR awareness intensity. Section 2.3 presents the data and section 2.4 the results of the empirical analysis. Sections 2.5 and 2.6 test the robustness of the empirical results and conclude.

2.2 Literature review and hypotheses

CSR has focused an increasing attention from shareholders, employees, customers, consumers and society. In particular, the regulator develops some ESG disclosure requirements in order to sustain firm CSR engagement (Grenelle II law in France, European Directive). In response, firms put a lot of effort to appear as socially responsible. This signal may be indeed important for conducting business. Responsible firms have better access to capital, especially during financial crises, on stock and debt markets. Goss and Roberts (2011) show that responsible firms pay their debt between 7 and 18 points less than irresponsible firms in the US. El Ghouli et al. (2011) exhibit a cheaper cost of equity for responsible firms, especially if firms invest in employee or environmental-oriented practices. CSR investment can also be necessary to please the direct strategic stakeholders (Post et al., 2002b). Responsible shareholders may request environmental or social performances in order to invest in firms (Crifo and Mottis, 2013). Employees are sensitive to the status of responsible firm for choosing their employers and for committing at work (Brekke and Nyborg, 2008). Consumers may have some preferences for responsible products (Castaldo et al., 2008).

Firm motivations and objectives throughout CSR are however diverse and affect firm CSR awareness intensity (McWilliams and Siegel, 2001). The following literature review presents four main motivations behind CSR commitment: greenwashing, defensive, pro-social and strategic. Baron (2001) highlights the three latter motivations as the main drivers of CSR commitments if they are material. Frankental (2001) argues that CSR is only a communication tool without any related business change.

2.2.1 Greenwashing

Improving firm reputation is one of the key mechanisms to benefit from positive externalities of CSR involvement (Baron, 2001). Due to the information asymmetry between managers and the other stakeholders, and to the lack of hard (tangible) CSR information, actual CSR engagement is hardly observable (Chatterji et al., 2009). Firm may adopt an opportunistic behavior as a free-riding strategy: claiming to do some CSR actions without any real commitment and without bearing extra-costs (Mahoney et al., 2013). Greenwashing characterizes then the fact that some firms claim to be responsible, whereas their CSR commitment is not different from the other firms in the same industry (Blowfield and Murray, 2008). From this perspective, greenwashing firms spend more financial resources to advertise about their responsible behavior than to implement CSR practices (Bazillier and Vauday, 2013).

Empirically, some studies document the possibility for firms to adopt such greenwashing strategies. Kim and Lyon (2011) show for example that the American firms, voluntarily disclosing environmental information, report greenhouse gas emission reductions, whereas their total emissions increase over time. On the contrary, non-participant firms decrease their emissions. The voluntary disclosure program is used by firms as a greenwashing process. In the same perspective, Bazillier and Vauday (2013) investigate the relationships between green communication, external certification and CSR involvement. They show that at a given CSR level, there is a negative trade-off between the level of communication and the likelihood of being certified by an external organism, suggesting that communication hides the lack of tangible CSR investment. Moreover, there is a non-linear relationships between CSR communication and engagement, suggesting that firms which disclose the most regarding CSR issues adopt a greenwashing behavior. Theoretically, Lyon and Maxwell (2011) support this empirical literature by demonstrating a non-linear relationship between firm disclosure and environmental performance. The most environmental friendly firms are not the ones which disclose the most abundantly. The other firms, which are less environmentally efficient, are then able to adopt some greenwashing practices by disclosing more information.

Both empirical and theoretical literatures suggest that some firms, which claim to be responsible, are as much likely to commit to CSR than other “unresponsible” firms. Firms benefit thus from a reputation effect, without bearing any additional cost to strengthen their CSR policy. From this perspective, claiming to do some CSR actions should not have any consequence on the firm CSR awareness intensity. Firms which claim to do some CSR practices and the others would indeed have the same optimal level of CSR commitment (or awareness). The hypothesis is:

Hypothesis 1: If firms adopt a greenwashing behavior, firms claiming to do some CSR actions are as likely as to be aware of CSR issues as the other firms.

2.2.2 Defensive CSR

If firms which claim to do some CSR actions are tangibly more committed than others, the first reason explaining the firm CSR commitment is the economic and social threats. The threats come from regulators, environmental activists, competitors or various stakeholders. In this case, CSR enables to privately provide some public goods in order to reduce ESG risks and to keep the firm’s license to operate (Post et al., 2002a; Crifo and Sinclair-Desgagne, 2014).

First, regulators use law and compulsory actions in order to reduce firm’s negative externalities. To avoid this potential regulation which could lead to new constraints and extra-costs, firms may commit to CSR. CSR engagement is then a way to preempt the regulation. Such preemption strategy is profitable for firms if the lobbying cost during the legislative debate is high (Maxwel et al., 2000). Based on the case study of the American metal-finishing industry, Brouhle et al. (2009) show empirically that firms under the threat of regulation reduce more their carbon emission and are more likely to integrate a EPA (Environmental Protection Agency) voluntary program than others.

Second, CSR is a way to answer social pressures in order to keep the firm’s license to operate and its competitive positions. According to the theory of contestability (Hommel and Godard, 2001), the

threats against firms can discipline their behavior, especially by reducing negative externalities. The economic contestability analyzes the threats from competitors, whereas social contestability reveals the pressure from outside stakeholders. On the one hand, CSR is a way to reduce economic contestability by managing efficiently the ESG risk. Firms can also reduce their costs through CSR to remain competitive in the market (Cottrill, 1990). On the other hand, CSR is a way to maintain the agreement of outside stakeholders regarding firm production and externalities (Post et al., 2002a). Van den Berghe and Louche (2005) underline the crucial role of the “new invisible hand” constituted by stakeholders such as NGOs, union trades or community. From this perspective, Sinclair-Desgagne and Gozlan (2003) show for example that when NGO threat is big enough, environmental friendly firms are more likely to report detailed CSR information in order to differentiate themselves from other firms. In addition, Sam et al. (2009) show that firms which are more likely to be targeted by boycott due to environmental policy are more willing to participate in voluntary disclosure program and in pollution reduction.

In this case, CSR policy is a defensive strategy to avoid any social contestability and to be able to maintain the long-term activity. However, the benefits from implementing such CSR practices should offset the costs associated with their implementations (Paul and Siegel, 2006). CSR awareness intensity should therefore be at the minimum level to balance the benefit from reducing the threat and the cost from implementing these practices whatever the CSR dimension. Defensive CSR firms should implement value neutral practices. The hypothesis is:

Hypothesis 2: Firms which adopt a defensive CSR policy are more likely to be aware of CSR issues than firms which do not do any CSR action.

2.2.3 Pro-social CSR

Firms may commit to CSR in order to fulfill the environmental and social preferences of individuals sustained by moral, altruistic or self-esteem concerns (Benabou and Tirole, 2010). CSR engagement is then a firm self-regulation process motivated by moral preferences or individual interests (Baron, 2010). In this case, CSR is qualified as “pro-social behavior” (or insider-initiated corporate philanthropy according to Benabou and Tirole (2010)). Pro-social CSR policy covers first the philanthropic activities and more generally the actions reducing negative externalities which are not directly linked with the firm core strategy, such as biodiversity protection, promotion of human rights or involvement with non-governmental organizations.

Firms bear then some social non-market costs, but do not expect any financial return (Heal, 2005; Dam et al., 2009). In line with the Friedman’s view about CSR activities, CSR is a value destroying strategy, consuming investors’ capital for individual motivated actions (Friedman, 1970). Pro-social CSR reveals therefore some agency problem and is related to managers’ discretionary areas and pre-requisites (Baron et al., 2011). Managers may indeed expect to build a “good citizen” reputation and to get some private benefits from such policy (Barnea and Rubin, 2010; Cespa and Cestone, 2007). Supporting this point of view, Masulis and Reza (2015) empirically show that the CEO’s orientation towards CSR leads to an increase of charity givings, and affects negatively firm value.

In order to obtain the social reward related to a pro-social CSR policy, firms which adopt such policy should appear more responsible (more aware of CSR issues) than others. These firms should then at least reach the minimal level of CSR awareness required by defensive goals and be more responsible in some specific dimensions, especially those related to common responsible (environment and social) values and unrelated to strategic stakeholders' demands. For example, firms which adopt a pro-social CSR policy should be more aware of biodiversity, climate change, human rights issues than other firms. The hypothesis is:

Hypothesis 3: Firms which adopt a pro-social CSR policy are more likely to be aware of CSR issues related to social and environmental issues than firms which adopt a defensive CSR policy.

2.2.4 Strategic CSR

Strategic CSR enables to respond to strategic stakeholders' demands (McWilliams and Siegel, 2001) in order to maximize firm revenue and shared value (Post et al., 2002a). Benabou and Tirole (2010) agree that this profit-maximizing CSR strategy is either a "win-win" strategy or a delegated philanthropy from consumers or investors.

On the one hand, CSR is a way to develop new products and to secure market positions (Baron, 2001). Firm may strategically engage to CSR to take the "responsible" market through a product differentiation strategy (Reinhardt and Stavins, 2010). This strategy enables to attract green consumers and their willingness to pay for a responsible product (Arora and Dharwadkar, 2011). CSR is also a signal of quality that help firms to build their reputation towards consumers (Fisman et al., 2006; Portney, 2008). Hines and Ames (2000) report that 68% of consumers claim buying products or services because the firm has a responsible reputation. Moreover, the Porter hypothesis (Porter and Van Der Linde, 1995) argues that firms develop new opportunity through CSR commitment and improve their efficiency. Derwall et al. (2005) and Guenster et al. (2011) support this hypothesis by showing a positive link between eco-efficiency technology and firm performance. Furthermore, CSR fosters also the innovation in terms of processes and products. Wagner (2008) shows in a cross-countries analysis that environmental management is related to process innovation, whereas labeling is related to product innovation. Finally, CSR may increase the entry cost inside the market for competitors, like the label for responsible goods (Chambolle and Giraud-Heraud, 2005). Reducing competition may lead to increase revenue as Lyon and Maxwell (2008) show for the cut pesticide-free flower market in Europe. From this perspective, strategic CSR enables to increase both firm performance and stakeholders' value.

On the other hand, CSR is a signal to attract the best employees and a way to improve firm productivity. A large literature suggests that employees are directly or indirectly one of the main targets of CSR policy. CSR is firstly a signal of firm value. Brekke and Nyborg (2008) argue that responsible firms are more able to attract employees looking for team work. Portney (2008) shows that CSR reduces a costly turnover among the employees. A few works highlight also that good, at least qualified, employees are more likely to work for responsible firms (Turban and Greening, 1997; Albinger and Freeman, 2000; Greening and Turban, 2000). Backhaus et al. (2002) show finally that environment, community relations and diversity issues are the most important CSR dimensions to define the attractiveness of

responsible firms. Beyond attracting better employees, CSR is a way to improve their productivity if firms invest in social and environmental dimensions. Delmas and Pekovic (2013) show for example on French data that firms compliant with environmental standard have a higher labor productivity. Employees feel their work more useful and are more willing to work extra-hours without any compensation if the firm is environmental friendly (Lanfranchi and Pekovic, 2014). In order to achieve the employees' demands, firms should invest in social and environmental management dimensions.

Strategic CSR is therefore a shared value enhancing strategy (Dam et al., 2009; Orlitzky et al., 2011; Ferrell et al., 2014). Strategic CSR is then related to business strategy and should target strategic stakeholders, especially consumers, customers and employees. Firms which adopt a strategic CSR policy should be more aware of CSR related to their strategic stakeholders. The hypothesis is:

Hypothesis 4: Firms which adopt a strategic CSR policy are more likely to be aware of CSR issues related to stakeholders' demands than firms which adopt a defensive CSR policy.

2.3 Data

2.3.1 The EnDD survey

The data come from the 2011 French Sustainable Development survey (EnDD). EnDD (2011) is the first national survey created by the National Institute for Statistics and Economic Studies (INSEE) and the Ministry of Ecology, Sustainable Development and Energy (MEDDE) in order to map corporate social responsibility firm practices in France⁴. This survey has been conducted on a representative sample of French enterprises with at least 10 employees from all industries, except agriculture and finance. 11235 firms have to answer the self-administrated questionnaire concerning their knowledge about CSR, their motivations to pursue such goals, their corporate governance (section 1, 11 questions) and their awareness about the societal (section 2, 13 questions), social (section 3, 17 questions) and environmental (section 4, 14 questions) issues (see Appendix 2.7.1 for more information about the survey). 8775 questionnaires are fully complete or usable after statistical corrections⁵. Some complementary data from other INSEE databases are additionally matched: debt ratio, revenue, number of business establishments, firm age, legal status and industry. I exclude observations with missing data. The final sample includes 8336 firms. Appendix 2.7.2 presents the definition of variables.

This survey presents several advantages in comparison with the data commonly used in the empirical CSR literature. First, most studies are based on international databases covering only the largest listed firms (Margolis et al., 2011). For example, some extra-financial rating agencies, like Vigeo (European leading extra-financial rating agency) or Asset4 (Thomson Reuters ESG Datastream), provide accurate and detailed ESG information to investors for around 200 French listed firms. The sample is representative of both listed and unlisted French firms. The INSEE samples the French firms with at least 10 employees based on two criteria: size and industry. The largest firms (over 500 employees) and listed firms are fully investigated. For the other strata, the number of randomly

⁴The survey has not been designed in the single purpose of this research.

⁵More information about the survey and the statistical methods is available on <http://www.insee.fr/fr/methodes/default.asp?page=sources/sou-enq-entreprises-devlpt-durable-enddd.htm>

selected firms depends on firm size. Thanks to this large sample, this chapter takes the opportunity to enlarge the contribution about the link between CSR motivation and commitments to small and medium enterprises (Perrini et al., 2007). Second, CSR is a multi-dimensional concept covering “social, environmental, ethical human rights and consumer concerns” according to the European commission definition (2011). Recent papers investigate the link between CSR multi-dimensional commitments and firm performance (Barcos et al., 2013; Cavaco and Crifo, 2014) or the link between corporate governance and multi-dimensional CSR performance (Jo and Harjoto, 2011). All studies are based on three main CSR pillars: environment, social and societal issues. This survey enables to cover all pillars and have a broad overview of CSR. Finally, the most similar dataset comes from another French national survey (COI, Organizational Changes and Computerization) used by Oueghlissi (2013) and Crifo et al. (2014) in order to have an overview about CSR in French firms and to study the link between CSR commitment and firm performance and the related quality-quantity trade-off. However, by design, the ENDD survey has the advantage to cover CSR issues more broadly and to add some questions about firm motivations regarding CSR commitment.

2.3.2 CSR motivations

The first objective is to analyze the firm CSR motivations thanks to the first section of the survey.

The question A4 asks if the firm thinks about implementing some CSR actions when conducting its business. The first variable “Doing CSR” takes then the value 1 if the answer for this question is positive, zero otherwise. In the sample, 51% of firms (4218 over 8336) answer positively to this question; they claim therefore doing at least some CSR actions. To investigate why firms do some CSR actions whatever the nature, the question A4a proposes 6 main reasons: cost reduction, risk management, respect of environment and human rights, reputation, employee motivation and new product. Due to the survey design, firms have to pick a maximum of two answers, which should be the main CSR drivers. I acknowledge that other reasons may motivate firms to engage in CSR. However, all firms which answer positively to the previous question gave at least one answer for this question. The different possible answers seem to cover well the firm motivations.

Table 2.1 presents the distribution of firm answers for the question: “why are you doing some CSR actions?”. The column “number of answers” gives the total number of firms which choose this answer. The rest of the table provides the number of firms by combination of answers. Firms which answer only one choice are counted on the diagonal. For example, most firms (662 over 4118 which claim doing some CSR actions) pursue some CSR objectives in order to motivate employees (reason 4) and to respect some environmental and social values (reason 6).

The combination of firm answers is therefore a proxy of firm motivation regarding CSR engagement. As described in the literature review section, CSR may be either defensive, pro-social or strategic.

Strategic CSR is defined by a value-enhancing strategy (Ferrell et al., 2014) taking into account the stakeholders’ interests. Strategic CSR is a way to either develop new green products and market or attract good employees and improve their productivity. Firms are then defined as doing some strategic CSR if they tick either green production or employee motivation. I assume here that the other reasons, that a firm chooses in addition, contribute to strategic objectives. Reputation effect

Table 2.1: CSR motivations

		Nb answers	1	2	3	4	5	6
1	Cost reduction	717	32					
2	Green production	440	91	25				
3	Risk management	1395	126	65	53			
4	Employee motivation	1313	75	52	215	42		
5	Reputation	1386	104	54	204	267	62	
6	Environmental and social values	2751	289	153	<i>732</i>	662	<i>695</i>	<i>220</i>
	Total	8002						

Notes: This table provides the number of firms which answer each reason to pursue some CSR objectives. Firms may tick a maximum of two answers. The second part gives the cross table of firm answers. If the firm ticks only one answer, it is counted on the diagonal. Bolt numbers represent the firms which do some strategic CSR. Strategic CSR covers firms which do CSR in order to maximize the shared-value. Italic numbers represent firms which do some pro-social CSR. Pro-social CSR characterizes firms which do CSR in order to achieve some social and environmental preferences. Classic numbers represent firms which do some defensive CSR. Defensive CSR enables firms to minimize ESG risks and to keep their license to operate.

or promoting environmental and social values are complementary tools to achieve the development of new green products and motivating employees. Cost reduction and risk management are also part of the economic strategy. Bolt numbers represent the strategic CSR firms in Table 2.1. In the sample, there are 1701 firms (around 20%) which claim to do some strategic CSR.

Pro-social CSR is defined by a managerial strategy to pursue some social and environmental preferences and to get some private benefit (the agency view) (Ferrell et al., 2014). Pro-social CSR promotes the respect of environment and human rights in order to appear as a responsible firm towards the community. Thus, firms do pro-social CSR if they tick “environmental and social values” with either “reputation” or “risk management”. The first motivation for pro-social CSR is indeed the environmental or social values in order to build a responsible reputation or to manage firm’s ESG risks. Risk management is included because reducing the ESG risks enables to protect firm reputation and to avoid irresponsible events by conducting firm business. However, pro-social CSR should not be related to any economic or strategic purpose like cost reduction, employee motivation or developing new product. Italic numbers represent the pro-social CSR firms in Table 2.1. In the sample, there are 1647 firms (around 20%) which claim to do some pro-social CSR.

Defensive CSR is defined by a protection strategy driven by the need to maintain firms’ license to operate (Post et al., 2002b) and to reduce economic, environmental and social contestability (Hommel and Godard, 2001). Firms do some defensive CSR if they tick “cost reduction” or “risk management” or “reputation” without any clear reference to the promotion of environmental or social values (except in the “cost reduction” case) or strategic (employee motivation, green production) objectives. All these reasons are related to the economic and societal contestability of the firm. Classic numbers represent the defensive CSR firms in Table 2.1. In the sample, there are 870 firms (around 10%) doing defensive CSR.

The first descriptive statistics show that half of the firms claim doing some CSR actions, but their motivations are really heterogeneous. That is why the determinants of these motivations are analyzed and how motivations are related to CSR awareness.

2.3.3 CSR awareness indexes

The three other sections of the survey question firm awareness about the environmental, social and societal CSR issues. Each CSR dimension (Environment, Social and Societal) is investigated around three or four main issues (sub-dimensions) by several qualitative questions. Most questions ask indeed either whether the firm is aware and takes into account some specific CSR issues (soft practices) or whether the firm has in place some policies or monitoring tools to tackle the issues (hard practices such as label, plan, training, ...). The questions investigating firm motivations or the involvement of the stakeholders in the decision-making process are not considered here.

From the questionnaire, I compute CSR awareness scores by sub-dimension and dimension to proxy the CSR firm commitment. The general principle of the CSR awareness index is counting the number of practices or issues tackled by the firm. More precisely, each binary question gives one point to the firm in case of a positive answer and zero otherwise. Some questions have multiple choices in order to quantify the CSR commitment intensity. One point is given for each achieved level. The most committed firms have therefore the maximum number of points for this question. The sub-dimension score is then equal to the sum of points (positive answers) earned by the firm from the questions related to the sub-dimension. The dimension score is equal to the sum of each sub-dimension score. The sum of each dimension score provides the CSR score. The items investigated and the weight per item have been decided by the INSEE and the MEDDE, and are exogenous from firms. It does not reflect any academic consensus about the importance of each CSR issue (Capelle-Blancard and Petit, 2014). I deal with this methodological issue through alternative CSR awareness index computation.

The CSR awareness indexes are dummy variables which take 1 if the firm's score is above the sample average score on the corresponding CSR dimension or sub-dimension (the so-called CSR leader). Alternative measures are also considered in the robustness check section. First, the soft and the hard CSR practices are distinguished. A soft CSR practice indicates that the firm is aware about the CSR issues. A hard CSR practice means that the firm adopts specific tools or actions to manage the CSR issue such as a label, training or monitoring process. The previous scores are then split in two scores: a hard score and a soft score at the dimension level. Second, I compute weighted CSR awareness indexes. Each CSR practice investigated in the survey does not have the same importance regarding the firm business and the potential responsible behavior. Capelle-Blancard and Petit (2014) highlight on CSR indicators from "news" in media that an endogenous weighting scheme is a solution to obtain an accurate and relevant aggregated CSR measure when there is no *ex ante* hierarchy among practices. The authors measure the weight of each CSR dimension by the share of ESG news published in various medias regarding this specific dimension. In this case, I assume that the most implemented CSR practices by firms in the sample are the most relevant and important. To calculate the weighted CSR awareness indexes, each question is weighted by the share of firms that answer positively for the given question. It enables us to have an endogenous weighting scheme. Third, the alternative is the three-level CSR awareness indexes which take the value -1 if the firm's score is in the 25% lowest scores of the sample, +1 if the firm's score is in the 25% highest scores in the sample and 0 otherwise.

Table 2.2, 2.3, 2.4 present the structure of the survey (the main investigated items), the maximal number of points for each item (each item can merge several questions), each sub-dimension and each dimension. Tables also provide also the weight applied in the weighted score calculation (i.e. the share of firms in the sample which tackle these CSR issues). The last column indicates if the item covers soft or hard CSR practices. Table 2.5 presents the descriptive statistics on the CSR awareness scores and indexes.

Table 2.2: The environment dimension: items, scores and weights

Item	Scores	Weight	Type
Environmental Management	3		
- Environmental management processes	1	0.44	Soft
- Developing eco-products	1	0.33	Hard
- Labels for green products (European labels,...)	1	0.20	Hard
Climate Change and Energy	4		
- Plan to improve energy efficiency and to reduce emissions	1	0.29	Soft
- Emission monitoring	1	0.22	Hard
- Plan to manage personal transportation	1	0.09	Soft
- Plan to manage environmental friendly logistics	1	0.12	Soft
Resource and Waste Management	5		
- Reduction of resource consumption	1	0.57	Soft
- Prevention against waste and recycling process	1	0.70	Soft
- Eco-conception of products	1	0.23	Soft
- Tools to monitor resource consumption	1	0.31	Hard
- Tools to reduce waste and to promote recycling	1	0.44	Hard
Biodiversity	4		
- Aware of biodiversity protection issue	1	0.14	Soft
- Measure against negative impacts on biodiversity	1	0.04	Hard
- Production system integrating biodiversity protection	1	0.07	Hard
- Philanthropy for biodiversity	1	0.04	Soft
Total Environment	16		

Notes: This table presents the items investigated by the survey regarding the environmental sub-dimensions (Management, Climate Change, Resources and Biodiversity). Bolt lines present the environmental sub-dimensions. The other lines are items belonging to the related sub-dimension. The second column gives the number of points (or questions) that firms may earn by implementing such practices according to the survey at the item and sub-dimension levels. The third column gives the weight of each item. The weight is calculated as the share of firms doing this practices over the whole sample. For example, 44% of firms claim that they implement some environmental management practices. The weight enables to calculate a weighted score of CSR awareness taking into account that some practices are more likely to be implemented by firms. The gross score of each item is indeed weighted by the share of firms doing such practices. The fourth column gives the nature of the CSR items, either soft or hard. Hard practices covers tools to monitor CSR issues and concrete results (measures, labels, reports), whereas soft practices cover policy and objectives. The last line is the sum of each sub-dimension in order to calculate the environmental score.

The environmental criteria (see Table 2.2) are split into 4 categories: environmental management (3 points), climate change and energy (4 points), resource and waste management (5 points) and biodiversity (4 points). Half of the items investigate soft CSR issues, whereas the other half cover hard practices. The maximum score that a firm may achieve is then 16. However, on table 2.5, the

average firm score is 4.29 points. Firms take into account on average only 4 environmental issues investigated by the survey. The resource management is the sub-dimension where firms are the most aware with an average score of 2.24. Firms are less aware in the other dimensions. At the item level, the share of firms that are aware varies from 4% (philanthropy for biodiversity) to 70% (prevention against waste and recycling). On average, there are 43% of environmental leaders in the sample. 58 % are leaders in environmental management but only 13 % in biodiversity. The environmental awareness indexes are then discriminating for firms that are the most committed in this dimension.

Table 2.3: The social dimension: items, scores and weights

Item	Score	Weight	Type
Discrimination Policy	12		
- Process to collect discrimination events	1	0.42	Soft
- Adopting diversity act	1	0.16	Hard
- Adopting diversity label (certification AFNOR)	1	0.04	Hard
- Policy against discrimination (age, ethnic, gender...)	5	0.40	Soft
- Annual report about gender equality	1	0.48	Hard
- Specific tool for senior employment	1	0.49	Soft
- Trainees program	1	0.69	Hard
- Training about discrimination	1	0.13	Hard
Working Conditions	6		
- Policy about workers' risk	1	0.76	Hard
- Prevention against psychosocial risks	1	0.42	Hard
- Prevention about addictions	1	0.32	Soft
- Protection of individual information	1	0.28	Soft
- Flexible working hours to help people to balance their professional and personal lives	1	0.49	Hard
- Amenities to help workers towards their family (child care center,...)	1	0.19	Hard
Employment and Training	6		
- Policy about future needs in terms of skills and employment	1	0.57	Soft
- Management of skills and competences	1	0.38	Hard
- Negotiation with union trade about employment	1	0.24	Hard
- Annual training plan	1	0.78	Soft
- Share of expenses for employees' training (low, medium, high)	2	0.68	Hard
Total Social	24		

Notes: This table presents the items investigated in the survey by the social sub-dimensions (discrimination, working conditions and employment& training). Bolt lines are the sub-dimensions of the social pillar. The other lines are items belonging to the related sub-dimension. The second column gives the number of points (or questions) that firms may earn by implementing such practices according to the survey at the item and sub-dimension levels. The third column gives the weight of each item. The weight is calculated as the share of firms doing these practices over the whole sample. For example, 42% of firms claim to collect discrimination event reports. The weight enables to calculate a weighted score of CSR awareness taking into account that some practices are more likely to be implemented by firms. The gross score of each item is indeed weighted by the share of firms doing such practices. The fourth column gives the nature of the CSR items, either soft or hard. Hard practices cover tools to monitor CSR issues and concrete results (measures, labels, reports), whereas soft practices cover policy and objectives. The last line is the sum of each sub-dimension in order to calculate the social score.

Table 2.3 presents the social dimension and its three sub-dimensions: diversity (12 points for 8 questions), working conditions (6 points) and employment and training (6 points for 5 questions). 11 items are soft social practices whereas 13 items are hard practices. The maximum achievable score is then 24. Social items are therefore more investigated by the survey than environmental ones. Table 2.5 highlights that, on average, firms are committed in around 10 items over 24 in the social area. The firm's awareness is therefore higher in social dimension than in the environmental pillar. Firms are also more likely to take into account employment and training issues (50 % of items), followed by working conditions issues (40 %) and then discrimination issues (34 %). At the item level, the share of firms taking into account the social issue varies from 4% (label) to 78% (training plan). In the sample, there are 49 % of social leaders but only 39 % of employment and training leaders.

Table 2.4: The societal dimension: items, scores and weights

Item	Score	Weight	Type
Relationship with Customers	4		
- Advising about the impact of goods and services on environment and welfare	1	0.41	Soft
- CSR specification in contracts	1	0.41	Hard
- Reducing hazardous products	1	0.39	Soft
- Avoiding customers who do not respect human rights	1	0.25	Soft
Relationship with Suppliers	10		
- CSR standards for suppliers like human rights (SA 8000*), health and safety (OHSAS 18001,ILO-OSH 2001*,...), and environment (EMAS*,ISO 14001*, label, ...)	3	0.20	Hard
- Control about suppliers' CSR policy (questionnaire or audit)	2	0.13	Hard
- Choice of suppliers based on CSR policy and long term contracts	2	0.23	Soft
- Help suppliers to implement CSR policy	1	0.11	Soft
- Suppliers employing disable workers	1	0.42	Hard
- Preference for local suppliers	1	0.82	Soft
Relationship with Community	6		
- Cooperation with other stakeholders	2	0.45	Soft
- Long term partnership with NGOs	1	0.29	Soft
- Philanthropy	1	0.40	Soft
- Help desocialized people to recover a job	1	0.27	Soft
- Partnership with university	1	0.39	Soft
Total Societal	20		

Notes: This table presents the items investigated in the survey by the societal sub-dimensions (relationships with customers, suppliers and community). Bolt lines are the sub-dimensions of the societal pillar. The other lines are items belonging to the related sub-dimension. The second column gives the number of points (or questions) that firms may earn by implementing such practices according to the survey at the item and sub-dimension levels. The third column gives the weight of each item. The weight is calculated as the share of firms doing these practices over the whole sample. For example, 41% of firms claim advising customers about the impact of goods and services on environment and welfare. The weight enables to calculate a weighted score of CSR awareness taking into account that some practices are more likely to be implemented by firms. The gross score of each item is indeed weighted by the share of firms doing such practices. The fourth column gives the nature of the CSR items, either soft or hard. Hard practices cover tools to monitor CSR issues and concrete results (measures, labels, reports), whereas soft practices cover policy and objectives. The last line is the sum of each sub-dimension in order to calculate the societal score.

The societal dimension (see Table 2.4) covers three main areas: the relationships with customers (4 points), with suppliers (10 points for 6 questions) and community (6 points) (see Table 2.4). 12 items are soft societal practices whereas 8 cover hard practices. The maximum score in the societal dimension is then 20 points. On average, firms achieve 4.4 points; that is only 25 % of the societal items surveyed by the questionnaire. Societal dimension is then the less important for firms in terms of responsible behavior. On average, firms commit in one or two items for their responsible relationships with customers, suppliers or the community. At the item level, the share of firms doing such practices varies from 11% (help suppliers to implement CSR policy) to 82% (preference for local suppliers). From 37 % to 46 % firms are in fact societal leaders depending on the sub-dimensions.

In conclusion, the average score per sub-dimension and dimension is always lower than the half of the related maximal score, suggesting that the survey investigates discriminating CSR issues across firms (the standard deviation of scores confirms this statement). The average total CSR score is only 30% of the maximal score. The CSR awareness seems also quantitatively more important in the social dimension than in others. However, it does not mean that firms are more involved in social dimension than the environmental or societal ones *per se*. The design of the survey does not reflect any objective weight of each dimension, but only investigates some CSR practices of interest. These descriptive statistics urge also the need to investigate each dimension separately. The correlation matrix confirms that all dimension scores are not fully collinear ⁶.

Table 2.5: CSR awareness scores and indexes

Variable	Scores			Indexes	
	Obs	Mean	Std. Dev.	Mean	Std. Dev.
CSR	8336	18.55	11.01	0.45	0.50
Environment	8336	4.29	3.59	0.43	0.50
<i>Environmental Management</i>	8336	0.97	1.00	0.58	0.49
<i>Climate Change</i>	8336	0.79	1.09	0.43	0.50
<i>Resources</i>	8336	2.24	1.72	0.45	0.50
<i>Biodiversity</i>	8336	0.29	0.79	0.13	0.34
Social	8336	9.87	5.61	0.49	0.50
<i>Discriminations</i>	8336	4.39	3.56	0.45	0.50
<i>Working Conditions</i>	8336	2.45	1.61	0.46	0.50
<i>Employment and Training</i>	8336	3.03	1.44	0.39	0.49
Societal	8336	4.38	3.48	0.43	0.50
<i>Customers</i>	8336	1.46	1.27	0.46	0.50
<i>Suppliers</i>	8336	2.70	2.38	0.37	0.48
<i>Community</i>	8336	1.68	1.76	0.44	0.50

Notes: This table provides scores and awareness indexes for each CSR sub-dimension or dimension. The maximal score for each indicator is available in tables 2.2, 2.3, 2.4. CSR awareness indexes are dummies variables which take 1 if the firm's score is above the average score in the sample.

⁶The correlation matrix is available upon request

2.3.4 Controls

In order to control for firm heterogeneity within the sample, according to the previous literature about CSR performances (Waddock and Graves, 1997; McWilliams and Siegel, 2000; Crifo et al., 2014), some firm and industry control variables are included: firm size, revenue, debt ratio, age, listed status, number of establishments and industry. Table 2.6 presents the descriptive statistics for those variables.

Table 2.6: Firm descriptive statistics

Variable	Obs	Mean
Size		
2 (10-19)	8336	0.15
3 (20-49)	8336	0.22
4 (50-249)	8336	0.32
5 (250-499)	8336	0.13
6 (> 500)	8336	0.19
Nb of unit	8336	11.15 (45.35)
Log of revenue	8336	9.84 (1.95)
Debt		
1 (< 50%)	8336	0.31
2 (50-75%)	8336	0.40
3 (75-100%)	8336	0.23
4 (> 100%)	8336	0.05
Listed	8336	0.04
Age	8336	29.23 (21.05)

Notes: This table provides the descriptive statistics for the control variables. Size variables are 5 dummy variables depending on firm size thresholds (10-20, 20-49, 50-249, 250-499 and over 500). The number of establishments is the number of establishments that the firm has under control. Log of revenue is the logarithm of firm revenue in 2011. Debt variables are 4 dummy variables for the different levels of debt (lower than 50%, between 50-75%, between 75% and 100% and over 100% of capital). Listed is a dummy variable which takes 1 if the firm is listed on the NYSE-Euronext Paris. Age is the firm age in years. Standard deviations are in parenthesis when it is relevant.

Firm size, proxied by the number of employees, is commonly positively correlated with CSR commitment and performance (see Waddock and Graves, 1997). A set of dummy variables indicates in which category the firm is among five: 10-19 employees (2), 20-49 employees (3), 50-249 employees (4), 250-499 employees (5) and over 500 employees (6). I prefer this set of dummies rather than the number of employees, because the sampling design (the likelihood to be in the sample depends on which category the firm belongs to) and the legal thresholds that determine the firm legal requirements (disclosure, taxes,...) are based on the same typology. Table 2.6 indicates a homogeneous distribution of firms in the previous categories.

The number of business establishments enables to proxy the coordination cost within the firm (Baumann-Pauly et al., 2013). The more establishments there are, the more difficult it is to coordinate actions. Udayasankar (2008) highlights a U-shaped relationship between CSR commitment and firm size, suggesting that larger firms are as well engaged as small firms. This variable enables us to take into account the spread of firm activity beyond the firm size. A negative correlation with CSR commitment may be predicted. On average, there are 11 establishments per firm but the standard deviation is high, suggesting a strong heterogeneity among firms of the sample. In the regression, this variable is orthogonalized by firm size to avoid any multi-collinearity issue.

Revenue is a proxy for firm performance. A large literature emphasizes the link between CSR performance and financial performance (Margolis et al., 2011). There may also have a reverse causality from good financial performance to CSR commitment, as suggested by the meta-analysis of Orlitzky et al. (2003). Firms with better firm performance are more able to invest some money in CSR actions for example (Ferrell et al., 2014). From this perspective, the regressions are controlled for firm performance in the regression in order to distinguish the firm performance effect from the firm motivation. Firms with better performance may indeed be more willing to engage in strategic CSR or Pro-social CSR. I use the logarithm of revenue to avoid that extreme values drive the results. In order to avoid any multi-correlation issue, revenue is orthogonalized by firm size.

Debt level is a way to measure the financial pressure on the firm and the firms slackness (Waddock and Graves, 1997; Udayasankar, 2008). This financial pressure may reduce the money that firms are able to invest in CSR practices. On the opposite, a low level of debt may be favorable for implementing a CSR policy. In the model, a set of four dummies revealing the firm debt level⁷ is introduced. 31% of firms have a debt rate lower than 50% of capital and 40 % between 50 and 75%. The other firms have a debt rate higher than 75%.

Listed firms are traded on the French stock market (NYSE Euronext-Paris). These firms are more sensitive than others to external corporate governance pressure due to the ability of the shareholders to vote with their feet (Gillan, 2006). Depending on the market preferences regarding CSR, firms may be more likely to commit in specific CSR dimensions or to implement only some types of CSR (defensive or strategic). Pro-social CSR could be analyzed as an agency cost coming from managers' opportunistic behavior, disciplined by market pressure (Barnea and Rubin, 2010; Ferrell et al., 2014). Moreover, listed firms have stronger requirements in terms of reporting, especially ESG reporting (the French law Grenelle II). In the sample, there are only 4% of listed firms.

Age enables to take into account the firm heterogeneity in terms of ability to manage CSR issues and the stage of firm development (Cabagnols and Le Bas, 2008). New businesses have been more aware about CSR issues and more able to integrate it since the beginning of their business plan. In particular, some new business target the emerging green market. However, the young firms may also be more focused on the core strategy and less able to manage broader perspectives. Older firms could be less aware about CSR issues but more enclined to integrate more complex issues in the strategy. On average, firms were created 30 years ago. In the regression, I introduce the logarithm of age to avoid any bias from outliers.

⁷I do not have more precise measure of debt ratio.

Finally, industry is one of the main determinant of CSR issues, as well as business characteristics, such as competitive intensity and international standards (McWilliams and Siegel, 2000; Oueghlissi, 2013). The regressions include 13 industry dummies based on the NAF1 (2008) classification from the French National Institute for Statistics and Economic Studies: mining and quarrying (B), Manufacturing (C), Electricity, gas stream and air conditioning supply (D), Water supply, sewerage, waste management and remediation activities (E), Construction (F), Wholesale and retail trade (G), Transportation and storage (H), Accommodation and food service activities (I), Information and Communication (J), Real Estate (L), Professional, scientific and technical activities (M), Administrative and support service activities (N), other services (S) and food (X). Appendix 2.7.3 provides the average score for each CSR issue per industry. The table 2.20 confirms the important heterogeneity across industry in terms of CSR awareness: Electricity and water supply industry have the best average score, whereas the services business have the lowest scores. The legal and societal pressures against controversial industries may explain the better awareness of electricity sector (Lindgreen et al., 2012; Jo and Na, 2012; Cai et al., 2012).

2.4 Empirical analysis and results

2.4.1 What are the determinants of CSR motivation?

Even if the firm objectives are primarily an idiosyncratic choice, some firm characteristics could be significant determinants of CSR motivation. Table 2.7 presents some firm descriptive statistics depending on the CSR type (no CSR, defensive, pro-social or strategic).

Firm size is an important trigger of CSR integration. 79% of small firms (less than 20 employees) do not know the CSR concept but only 15% of largest (above 500 employees) firms do not implement any CSR action. The largest the firms are, the more likely they implement the strategic or pro-social CSR policy. Defensive CSR motivation seems to be less sensitive to firm size. Listed firms are also more likely either to do some pro-social or strategic CSR, or not to implement any CSR action. The low debt level (level 1) is more related to strategic CSR than the high level (level 4). Finally, firm motivations are very heterogeneous across industry. Electricity industry are more likely to implement strategic or pro-social CSR, as well as mining and water supply industry. The controversial industries are then willing to manage their externalities by implementing CSR actions. On the opposite, construction, wholesale, accommodation or other services are less likely to take into account CSR issues.

In order to identify more clearly the determinants of firm choice, a multinomial logit regression with 4 levels, no CSR policy (reference), defensive CSR, pro-social CSR and strategic CSR, is estimated. The multinomial logit analysis enables to assume no *ex ante* relationship between the different motivations. Table 2.8 presents the estimates for firm specific characteristics (Table 2.22, on Appendix 2.7.3, gives the industry fixed effects). The reference group includes firms which do not claim any CSR policy.

For any CSR motivation, there is an increasing likelihood to be engaged in CSR practices with firm size and revenue. The results are consistent with previous studies (Waddock and Graves, 1997; McWilliams and Siegel, 2001; Orlitzky et al., 2003). However, the differences between motivations are small. Defensive CSR is slightly more likely in small businesses and less sensitive to revenue than other CSR

Table 2.7: Firm characteristics and CSR motivations

Variables	obs		No CSR	Defensive	Pro-Social	Strategic
Firm characteristics						
Listed	330	%	32	11	27	30
Size	1,230	%	79	4	8	9
3	1,818	%	68	7	13	12
4	2,634	%	51	10	19	20
5	1,079	%	30	16	29	26
6	1,575	%	15	16	32	37
Nb of establishments	8336	Mean	6	13	18	17
Revenue	8336	Mean	33342	167400	269809	357525
Age	8336	Mean	28	32	31	31
Debt level 1 (<50%)	2,610	%	47	11	22	20
Debt level 2 (50-70%)	3,363	%	49	10	20	21
Debt level 3 (75-100%)	1,957	%	51	10	19	20
Debt level 4 (>100%)	406	%	58	11	15	16
Industry						
Mining	30	%		47	37	17
Manufacturing	1971	%	46	12	20	21
Electricity	35	%		20	37	43
Water supply	112	%	22	15	39	23
Construction	838	%	57	8	18	17
Wholesale	1711	%	58	7	18	16
Transportation	579	%	45	15	24	17
Accommodation	302	%	56	10	15	19
Information	431	%	46	7	19	29
Real Estate	125	%	42	9	22	26
Scientific Activities	697	%	43	8	19	29
Administrative Activities	581	%	46	9	22	23
Other services	62	%	55	18	16	11
Foods	862	%	47	16	18	19
Obs	8336		4118	870	1647	1701

Notes: This table displays the firm characteristics (listed status, size, revenue, number of establishments, age, debt levels) and industry (14 categories) distribution depending on the CSR motivations pursued by firms. No CSR means that the firm does not claim doing some CSR practices. Defensive CSR means that the firm does some CSR practices to reduce ESG risks and to keep its license to operate. Pro-Social CSR means that the firm does some CSR practices to achieve some social and environmental preferences. Strategic CSR means that the firm does some CSR practices to achieve some demands from stakeholders. On Appendix 2.7.2, Table 2.19 provides the definition of all variables. The last line gives the number of firms by CSR motivation type. Due to statistic confidentiality criteria, two CSR types are merged if one of the type does not reach the minimal number of firms (5). For example, “no CSR” and “defensive CSR” are merged for mining and electricity because one category has a lower number of observations than 5.

Table 2.8: Multi-logit explaining CSR motivations thanks to firms' characteristics

Variables	(1) Defensive	(2) Pro-social	(3) Strategic
Size 3 (20-49)	0.786*** (0.169)	0.651*** (0.126)	0.568*** (0.129)
Size 4 (50-249)	1.360*** (0.166)	1.328*** (0.124)	1.407*** (0.117)
Size 5 (250-499)	2.417*** (0.184)	2.347*** (0.132)	2.263*** (0.137)
Size 6 (>500)	3.174*** (0.194)	3.180*** (0.167)	3.342*** (0.156)
Orth Log(Revenue)	0.265*** (0.0522)	0.358*** (0.0495)	0.353*** (0.0498)
Orth Nb establishments	-0.00426 (0.0572)	-0.0490 (0.0509)	-0.0297 (0.0697)
Log(Age)	0.0358 (0.0702)	-0.105** (0.0461)	-0.145*** (0.0556)
Listed	0.453*** (0.0718)	0.516*** (0.0735)	0.452*** (0.0762)
Debt 2 (50-75%)	-0.207** (0.105)	-0.228*** (0.0837)	-0.0460 (0.0750)
Debt 3 (75-100%)	-0.113 (0.103)	-0.309*** (0.0865)	-0.127 (0.0890)
Debt 4 (>100%)	0.0879 (0.201)	-0.415** (0.182)	-0.214 (0.146)
Constant	-2.587*** (0.285)	-1.966*** (0.231)	-1.919*** (0.248)
Observations	8,336	8,336	8,336
Industry Fixed Effects	Yes	Yes	Yes
Pseudo R2	0.107	0.107	0.107

Notes: This table gives the multi-logit analysis explaining CSR motivations. (1) The dependent variable has 4 levels: no CSR (the reference), defensive CSR, pro-social CSR and strategic CSR. (2) The independent variables are firm size (4 dummy variables), orthogonalized logarithm of revenue and number of establishments, debt level (3 dummy variables), firm age (log) and listed dummy. (3) The multi-logit model includes industry fixed effects. (4) The standard errors are clustered at the strata level (interactions between industry and firm size groups). (5) The significant levels are *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

motivations. Strategic CSR is more likely in large businesses (>500 employees). The number of establishments is not significantly related to any CSR motivation. The number of establishments as a proxy for firm complexity does not play any role for the CSR type. Listed firms are also more likely to integrate CSR issues but there is no significant difference between CSR motivations. Listed firms have higher disclosure standards, especially in terms of ESG factors. It could lead to a better awareness. The market could also have a disciplinary effect on firms to integrate CSR issues and stakeholders' demands in order to reduce the ESG risks. However, it has no effect on the CSR motivation (Gillan, 2006).

Firm age is negatively related to strategic and pro-social CSR. Younger firms are more able to integrate CSR issues in their business. Finally, debt level as a proxy of financial pressure is negatively related with pro-social CSR. The higher the debt rate is, the lower the likelihood to do some pro-social CSR is. Pro-social CSR is the reflect of managers' preferences and the financial pressure may discipline this opportunistic behavior (Masulis and Reza, 2015). Among firms which do some CSR, only the age and debt level are significantly different between motivations. However, there could be some heterogeneity across industries.

Table 2.22 provides the estimated fixed effects for each industry with the food industry as reference. Recent papers highlight how controversial industry may use CSR as a way to compensate the negative externalities of their activities (Cai et al., 2012). On Table 2.22, industry dummies are differently related with each CSR type. Controversial industries such as electricity, gas stream and air conditioning supply (D), water supply, sewerage, waste management and remediation activities (E) are more likely to do pro-social and strategic CSR than food industry (X). Mining and quarrying (B) and transportation and storage (H) are only more likely to commit in pro-social CSR. These results confirm the importance of CSR in some specific industries beyond the minimal defensive purpose. Other industries for which they may have a price premium to be engaged in CSR are also positively related to pro-social and strategic CSR. These industries are accommodation and food service activities (I), real estate (L) and administrative and support service activities (N). Only wholesale and retail trade (G) are less likely to commit in any CSR motivation. This industry is one of the largest groups of firms in the sample. The negative correlation may reflect that CSR is not a well spread concept within the industry. Concentrated industries adopt more homogeneous practices than dispersed industries, and are more likely to be engaged in CSR. Two strategies (pro-social or strategic) are also adopted by firms from controversial industries and industries with a green premium in which CSR is an intangible asset.

To sum up, CSR motivations depend on industry practices and standards but also on the potential trade-off between costs and benefits. However, the pseudo R square is relatively small, suggesting that the idiosyncratic component of the CSR motivation choice is important.

2.4.2 Are firms claiming to do some CSR actions more likely to be aware of CSR issues?

This second section tests if greenwashing is the main goal when firms claim to do some CSR actions. If the greenwashing hypothesis is valid, firms which claim to do some CSR actions and the others are as well as likely to be aware of CSR issues, whatever the dimension. To test this hypothesis, I estimate the propensity for a firm to be a CSR leader (more aware than the average about the related CSR issues) depending on firm characteristics and to the binary answer of the question: “Are you doing some CSR practices?”. The probit model is written as follows:

$$P(CSR_i = 1 | Doing\ CSR_i, X_i, \delta_i) = \alpha + \beta Doing\ CSR_i + \zeta X_{i,t} + \delta_i + \epsilon_{i,t} \quad (2.1)$$

Where CSR_i is a generic dummy equal to 1 if the firms i 's score in the specific CSR dimension is above the sample average score and 0 otherwise, $Doing\ CSR_i$ is a dummy variable which takes 1 if the firm claims to do some CSR practices (positive answer to the question), $X_{i,t}$ are firm control variables (size, log of revenue, number of establishments, debt, firm age, listed status), δ_i the industry fixed effect and $\epsilon_{i,t}$ is the error term. Errors terms are clustered at the strata level (combination of firm size and industry related to the sampling design). In order to avoid any multi-collinearity problem, the revenue and the number of establishments are orthogonalized with firm size. An alternative empirical strategy would be to regress a two-step approach in order to take into account, in the same model, the determinants of CSR motivations on the one hand and the awareness intensity on the other hand. However, I do not have any specific variable which explains the choice of CSR motivations without impacting the CSR awareness. This is why this empirical approach has then been rejected.

Table 2.9 shows clearly a positive correlation between claiming to do some CSR actions and being aware of CSR issues above the average at the global level or for any CSR dimension. The average marginal effect of claiming to do some CSR actions on the propensity to be a leader is in the sample 28 % for CSR, 24% for environment, 17% for the social and 29 % for the societal. On average, firms which know the CSR issue and claim to deal with them are quantitatively more aware about CSR practices than others. Claiming doing some CSR actions increases the chance by one quarter to belong to the most aware firms in the sample. The effect is then economically significant. The results reject the greenwashing hypothesis because firms which claim to do some CSR actions are effectively more committed to CSR issues than the other firms. This results is opposite to Kim and Lyon (2011) who show that firms disclosing environmental information do not have a lower environmental impact than others.

For control variables, firm size is positively related with CSR awareness intensity. The larger firms are more visible on the market and are more likely to be CSR leaders. It is consistent with previous literature (Waddock and Graves, 1997; McWilliams and Siegel, 2001). If firms have higher revenue, they are also more likely to commit to any CSR dimension, consistently with the main previous findings (Orlitzky et al., 2003). The number of business establishments is negatively related with the propensity to be the environmental and CSR leader. It may reflect an increasing cost of coordination or investment across establishments. Finally, firm age is negatively related to the social dimension. Younger firms may be more aware about the social concerns. There is no significant difference between listed and unlisted firms. Debt level variables are not significant at a 5% level. The financial slackness does not seem to be the main driver of the CSR awareness intensity.

Table 2.9: Propensity to be committed to CSR and the three ESS dimensions

Variables	(1) CSR	(2) Environment	(3) Social	(4) Societal
Doing CSR	0.999*** (0.0344)	0.808*** (0.0365)	0.668*** (0.0336)	0.966*** (0.0407)
Size 3 (20-49)	0.370*** (0.0790)	0.267*** (0.0780)	0.381*** (0.0627)	0.206*** (0.0576)
Size 4 (50-249)	0.998*** (0.0741)	0.597*** (0.0718)	1.137*** (0.0607)	0.523*** (0.0607)
Size 5 (250-499)	1.652*** (0.0881)	1.034*** (0.0788)	1.843*** (0.0730)	0.842*** (0.0779)
Size 6 (>500)	2.183*** (0.0852)	1.351*** (0.0835)	2.296*** (0.0804)	1.293*** (0.0659)
Log(revenue)	0.206*** (0.0203)	0.181*** (0.0212)	0.153*** (0.0206)	0.131*** (0.0185)
Nb Establishments	-0.0419** (0.0214)	-0.112*** (0.0201)	-0.00422 (0.0145)	-0.0242 (0.0182)
Debt (<50%)	-0.0253 (0.0363)	-0.0365 (0.0380)	-0.0602* (0.0324)	0.0103 (0.0407)
Debt (50-75%)	-0.0504 (0.0449)	0.0169 (0.0488)	-0.00203 (0.0464)	-0.0543 (0.0455)
Debt (75-100%)	0.0198 (0.0698)	-0.0784 (0.0895)	-0.0878 (0.0814)	0.0813 (0.0763)
Log(Age)	-0.0388 (0.0246)	0.0430 (0.0265)	-0.0706*** (0.0267)	-0.0210 (0.0228)
Listed	0.0113 (0.0318)	0.0547 (0.0379)	-0.0422 (0.0344)	0.0424 (0.0346)
Observations	8,336	8,336	8,336	8,336
Nb Firms	8336	8336	8336	8336
Pseudo R2	0.36	0.243	0.317	0.235

Notes: This table gives the probit analysis to be a CSR leader or a environmental, social or societal leader. Being a CSR leader means that the firm's score in the related dimension is above the sample average. (1) The dependent variables are therefore dummies which takes 1 if the firm score is above the average score in the sample. (2) The independent variables are: doing CSR which takes 1 if the firm claims to do some CSR practices, firm size (4 dummy variables), orthogonalized logarithm of revenue and number of establishments, debt level (3 dummy variables), firm age (log) and listed dummy. (3) The model includes industry fixed effects. (4) The standard errors are clustered at the strata level (interactions between industry and firm size groups). (5) The significant levels are *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

This first analysis demonstrates that there is a clear relationship between claiming to do some CSR and CSR awareness intensity. The greenwashing hypothesis is rejected. The intensity across dimensions is however different. The societal and environmental issues are the most sensitive to the fact that firms are effectively taking into account CSR issues. The social dimension is related to the lower marginal effect. In France, the social dimension is highly regulated and the power of union trade is significant. That could undermine the needs and interests for firms to differentiate themselves regarding the social dimension. The second step is then analyzing the relationship between CSR motivations and awareness indexes.

2.4.3 Is there a link between CSR motivation and CSR awareness intensity?

Different motivations (defensive, pro-social or strategic) may explain CSR commitment and objectives and affect CSR awareness intensity. This second part analyzes how each CSR motivation is related to CSR awareness intensity. The model estimates the propensity for a firm to be a CSR leader (being aware about CSR issues above the sample average), depending on firm's characteristics and CSR motivations. In order to make the difference between CSR motivations clearer, the defensive CSR is taken as the reference CSR motivation. Indeed, I expect that defensive CSR leads to the lowest CSR awareness to mitigate the ESG risks and to keep the firm's license to operate. The regressions introduce "doing CSR" as the reference level and the two other dummy variables: pro-social and strategic CSR. Doing CSR dummy measures the common effect of having some CSR objectives. The two other variables estimate the additive effects of respectively pro-social and strategic CSR.

On table 2.10, the results show the significant positive correlation between doing CSR and being a CSR leader, confirming a better awareness of firms which claim to do some CSR actions. Implementing a defensive CSR, which enables to mitigate the ESG risk and to keep the firm's license to operate, therefore leads firms to have a higher propensity to be a CSR leader in any dimension. The hypothesis 2 is then accepted. Pro-social CSR dummy, which reflects the willingness of firms to promote social and environmental preferences, is not significantly different from zero for any CSR variable. At this level of analysis, firms doing some defensive and pro-social CSR exhibit the same propensity to be a CSR leader whatever the dimension. The hypothesis 3 is rejected at this aggregated level. I indeed expect an over-commitment in social and environmental dimensions for pro-social CSR firms.

However, strategic CSR, which targets the demands of strategic stakeholders in order to maximize the shared value, presents a different pattern. At the global CSR level (model 1), strategic CSR is additionally positively related to being a CSR leader. The related marginal effect is equal to 30 %, whereas for defensive and pro-social motivations, the marginal effect is 26%. Models 2 and 4 show that strategic CSR firms are more likely to take into account the environment and societal dimensions than the other firms claiming doing some CSR actions (defensive or pro-social). But there is no significant difference across motivations for the social dimension (Model 3). Strategic CSR firms are therefore more aware about the societal issues which are related to strategic stakeholders (customers, suppliers,...), and about the environmental issues which are not directly associated to strategic stakeholders' interests. Nevertheless the environmental over-awareness from strategic CSR firms may partly answer consumers' demands (eco-production) (Portney, 2008) or employee's demands (Delmas and Pekovic, 2013; Lanfranchi and Pekovic, 2014). The results for the societal and environmental dimensions are consistent with the hypothesis 4.

Table 2.10: Propensity to be a CSR leader depending on CSR motivations

Variables	(1) CSR	(2) Environment	(3) Social	(4) Societal
Doing CSR	0.951*** (0.0543)	0.707*** (0.0558)	0.658*** (0.0492)	0.920*** (0.0535)
Pro-social CSR	-0.0192 (0.0596)	0.0875 (0.0566)	-0.0544 (0.0571)	-0.0276 (0.0496)
Strategic CSR	0.142** (0.0650)	0.170*** (0.0532)	0.0794 (0.0604)	0.145** (0.0589)
Observations	8,336	8,336	8,336	8,336
Pseudo R2	0.399	0.244	0.317	0.236

Notes: This table gives the probit analysis to be a CSR leader, an environmental, social or societal leader. Being a CSR leader means that firm's score in the related dimension is above the sample average. (1) The dependent variables are therefore dummies which takes 1 if the firm's score is above the average score in the sample (CSR for model 1, Environment for model 2, Social for model 3 and Societal for model 4). (2) The independent variables are: doing CSR which takes 1 if the firm claims to do some CSR practices, pro-social CSR which takes 1 if the firm is doing pro-social CSR, and strategic CSR which takes 1 if the firm is doing strategic CSR. Doing CSR represents the defensive CSR level of commitment. The other control variables are firm size (4 dummy variables), orthogonalized logarithm of revenue and number of establishments, debt level (3 dummy variables), firm age (log) and listed dummy. (3) Models include industry fixed effects. (4) The standard errors are clustered at the strata level (interactions between industry and firm size groups). (5) The significant levels are *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Regarding the previous results, I would also expect that strategic CSR firms would be more aware of the social issues directly related to employees (inside strategic stakeholders) than other firms. But the strategic CSR estimate is not significantly different from zero. Three reasons could explain this result. First, the legal requirements in social area are strong and firms may consequently be more sensitive to the social issues when they start to develop their CSR strategy. Second, all CSR firms are perhaps more concerned by the social issues because they are related to the internal firm functioning. Third, the aggregate measure of awareness at the dimension level may hide some trade-off effects among sub-dimensions of the social awareness (Crifo et al., 2014). This latter argument can also apply to the insignificant results for pro-social firms. The lack of over-awareness for such firms in the environment or social dimensions, as suggested by the hypothesis, may be a consequence of mixed awareness levels in the various sub-dimensions. These firms may, in fact, only invest in specific sub-dimensions of the social or environmental dimensions. The three following sections investigate therefore each sub-dimension of CSR dimensions in order to better analyze the link between CSR motivations and the firm CSR awareness.

2.4.3.1 The environment dimension

The environment dimension is divided in 4 sub-dimensions: environmental management, climate change and energy, resources and waste management, and biodiversity. The first sub-dimension is related to consumers' demands for environmental friendly products (label, eco-production,...) and is a signal for environmental friendly behavior. The second and third dimensions reflect two concerns: on the one hand, the protection of environment and on the other hand, the economic objective and production efficiency. The last one largely reflects the concerns for environmental protection and value. Table 2.11 presents the model for each sub-dimension of the environmental dimension.

Table 2.11: Propensity to be an environmental leader depending on CSR motivations

Variables	(1) Environment	(2) Env. man- agement	(3) Climate Change	(4) Resources	(5) Biodiversity
Doing CSR	0.707*** (0.0558)	0.624*** (0.0527)	0.718*** (0.0564)	0.674*** (0.0507)	0.533*** (0.0620)
Pro-social CSR	0.0875 (0.0566)	0.136** (0.0615)	0.0790 (0.0534)	0.0269 (0.0524)	0.126** (0.0636)
Strategic CSR	0.170*** (0.0532)	0.146** (0.0591)	0.0982* (0.0589)	0.107* (0.0586)	0.108* (0.0639)
Observations	8,336	8,336	8,336	8,336	8,336
Pseudo R2	0.244	0.178	0.235	0.210	0.152

Notes: This table gives the probit analysis to be a CSR leader in environmental management, climate change and energy, resource and waste management, and biodiversity. Being an environmental leader means that the firm's score in the related sub-dimension is above the sample average. (1) The dependent variables are therefore dummies which takes 1 if the firm score is above the average score in the sample. (2) The independent variables are: doing CSR which takes 1 if the firm claims to do some CSR practices, pro-social CSR which takes 1 if the firm is doing pro-social CSR and strategic CSR which takes 1 if the firm is doing some strategic CSR. Doing CSR represents the defensive CSR. The other control variables are firm size (4 dummy variables), orthogonalized logarithm of revenue and number of establishments, debt level (3 dummy variables), firm age (log) and listed dummy. (3) Models include industry fixed effects. (4) The standard errors are clustered at the strata level (groups defined by industry and firm size). (5) The significant levels are *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

The positive and significant relationship between doing CSR and firm environmental awareness index is robust to any sub-dimension. Defensive CSR firms are more likely to be aware about any environmental issue than firms which do not do any CSR action. The related average marginal effect of defensive CSR goes from 10% to 21%. The hypothesis 2 is then accepted. There is no significant difference between pro-social CSR and defensive CSR for climate change and energy and resources and waste management, two environmental sub-dimensions related to economic objectives. However, pro-social CSR firms are additionally positively correlated with environmental management and biodiversity at a 5% level (models 2 and 5). These results are consistent with the hypothesis 3, assuming that pro-social CSR firms are more likely to commit in dimensions unrelated to strategic stakeholders and without any economic objective, like biodiversity. The environmental management, as a signal

for environmental awareness, reflects the interest to appear as socially responsible through label and eco-processes. The average marginal effects of pro-social CSR on the propensity to be environmental management or biodiversity leaders are then 5% and 3% higher than for defensive CSR.

Strategic CSR firms are additionally positively related to all environmental sub-dimensions at a 10% level, except to the environmental management at a 5% level. The average marginal effect of strategic CSR is around 24% for any sub-dimension, except 19% for biodiversity. The additional marginal effect is around 4% for any sub-dimension in comparison with defensive CSR. Even if strategic CSR firms are more prone to commit to environment, the awareness seems to be very heterogeneous across sub-dimensions. Strategic CSR firms are more likely to implement an environmental management in order to answer to some demands from customers who are strategic stakeholders. The other estimates of strategic CSR are weakly significant and suggest some additional interests for long-term issues, such as climate change, resource shortage and biodiversity.

In conclusion, defensive CSR is positively correlated with any environmental sub-dimension, rejecting the greenwashing hypothesis. Pro-social CSR is additionally positively related to two sub-dimensions which reflect some environmental preferences. Strategic CSR is significantly related to environmental management which may be a strong request from consumers. Strategic CSR is then related to demands from outside strategic stakeholders. Hypotheses 2, 3 and 4 are accepted at the sub-dimension level for environment.

2.4.3.2 The social dimension

The social dimension is characterized by 3 sub-dimensions: discrimination, working conditions and employment & training. The first dimension reveals a social preference for equality. Working conditions reflect some demands from employees. Employment and training issues reveal the concern for along-term management of work forces.

On Table 2.12, firms doing some CSR practices, representing the defensive CSR level, are positively related to social awareness, whatever the sub-dimension. The average marginal effects of doing some defensive CSR on the propensity to be a social leader varies from 12% to 15%, slightly lower than for environment. Pro-social firms are as likely as to be social leaders as defensive CSR firms; the estimated coefficients for pro-social CSR are not significantly different from zero. However, strategic CSR firms are positively related with working conditions at a 5 % significance level and discrimination at a 10% significance level. Strategic CSR firms are therefore more likely to commit towards their employees by implementing better working conditions. The marginal effect of strategic CSR is around 19 %, 40 points higher than for defensive CSR and 20 points higher than for pro-social CSR. Only the employment and training commitments are not significantly different between defensive CSR and strategic CSR.

Pro-social and defensive CSR are more aware about social issues than firms which do not do some CSR practices. The hypothesis of greenwashing (H1) is then rejected for any social sub-dimension. Hypothesis 2 is accepted but hypothesis 3 is rejected. The social dimension may be less important than the environment one for pro-social CSR firms, reflecting either a lower preference for social commitment than for the environmental one, or a lower return of social awareness to achieve pro-social

Table 2.12: Propensity to be a social leader depending on CSR motivations

Variables	(1) Social	(2) Discrimination	(3) Working Conditions	(4) Employment & Training
Doing CSR	0.658*** (0.0492)	0.523*** (0.0474)	0.494*** (0.0470)	0.409*** (0.0528)
Pro-social CSR	-0.0544 (0.0571)	-0.0144 (0.0576)	0.0581 (0.0581)	-0.0551 (0.0589)
Strategic CSR	0.0794 (0.0604)	0.104* (0.0602)	0.125** (0.0540)	-0.0117 (0.0558)
Observations	8,336	8,336	8,336	8,336
Pseudo R2	0.317	0.216	0.198	0.215

Notes: This table gives the probit analysis to be a social leader in discrimination, working conditions, and employment and training. Being a social leader means that firm's score in the related sub-dimension is above the sample average. (1) The dependent variables are therefore dummies which takes 1 if the firm score is above the average score in the sample. (2) The independent variables are: doing CSR which takes 1 if the firm claim to do some CSR practices, pro-social CSR which takes 1 if the firm is doing pro-social CSR and strategic CSR which takes 1 if the firm is doing some strategic CSR. Doing CSR represents the minimal CSR commitment, defensive CSR. The other control variables are firm size (4 dummy variables), orthogonalized logarithm of revenue and number of establishments, debt level (3 dummy variables), firm age (log) and listed dummy. (3) Models include industry fixed effects. (4) The standard errors are clustered at the strata level (interactions between industry and firm size groups). (5) The significant levels are *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

CSR objectives. An alternative explanation is a survey bias. The survey focuses on the social issues directly related to employees and firm productivity and does not deal with general social preferences, such as human rights or child labor. These issues might be more promoted by pro-social CSR firms. Finally, strategic CSR firms seem to be more sensitive than other CSR firms towards demands from employees by being more aware about the the working conditions issues. Hypothesis 4 is accepted for working condition sub-dimension.

2.4.3.3 The societal dimensions

The societal dimension analyzes the relationships with outside strategic stakeholders: customers, suppliers and community. I expect that strategic CSR firms would be related to the largest awareness about any societal sub-dimension, whereas defensive and pro-social CSR firms should be related to a lighter awareness, but still stronger than “No CSR” firms. Table 2.13 shows the results for the three societal sub-dimensions.

Defensive and pro-social CSR are not significantly different behaviors; the estimated coefficient for pro-social CSR is not significantly different from zero. However, they are positively related to being a societal leader. The average marginal effect of doing some defensive or pro-social CSR is economically significant, around 21% and 24%. The greenwashing hypothesis is then rejected for any societal

Table 2.13: Propensity to be a societal leader depending on CSR motivations

Variables	(1) Societal	(2) Customers	(3) Suppliers	(4) Community
Doing CSR	0.920*** (0.0535)	0.636*** (0.0410)	0.751*** (0.0518)	0.668*** (0.0639)
Pro-social CSR	-0.0276 (0.0496)	0.0229 (0.0515)	0.0549 (0.0515)	0.0760 (0.0557)
Strategic CSR	0.145** (0.0589)	0.140*** (0.0503)	0.205*** (0.0546)	0.188*** (0.0566)
Observations	8,336	8,336	8,336	8,336
Pseudo R2	0.236	0.136	0.212	0.163

Notes: This table gives the probit analysis to be a societal leader in relationships with customers, suppliers or community. Being a societal leader means that the firm's score in the related sub-dimension is above the sample average. (1) The dependent variables are therefore dummies which takes 1 if the firm score is above the average score in the sample. (2) The independent variables are: doing CSR which takes 1 if the firm claim to do some CSR practices, pro-social CSR which takes 1 if the firm is doing pro-social CSR and strategic CSR which takes 1 if the firm is doing some strategic CSR. Doing CSR represents the minimal CSR commitment, defensive CSR. The other control variables are firm size (4 dummy variables), orthogonalized logarithm of revenue and number of establishments, debt level (3 dummy variables), firm age (log) and listed dummy. (3) Models include industry fixed effects. (4) The standard errors are clustered at the strata level (interactions between industry and firm size groups). (5) The significant levels are *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

sub-dimension. Both hypotheses 2 and 3 are accepted. Strategic CSR is additionally positively correlated with each societal sub-dimension awareness index. The average marginal effects of doing some strategic CSR are around 27%, at least 5% higher than pro-social and defensive CSR marginal effects. Strategic CSR firms are more aware about their relationships with their strategic stakeholders. These results fully support hypothesis 4.

In conclusion, defensive CSR firms adopt the lowest level of CSR awareness among firms doing some CSR practices. Strategic CSR firms are more aware about the CSR issues related to strategic stakeholders (societal, working conditions and environmental management). Pro-social CSR is more related to some environmental sub-dimensions (environmental management and biodiversity) but not to the social issues, as predicted by the hypothesis 3. The social dimension is only slightly discriminating across firms doing some CSR practices. These results mainly support the tested hypotheses about the link between CSR motivations and CSR awareness intensity. Whereas motivations to pursue some CSR objectives determine the intensity of CSR commitments, they may also affect the impact of CSR awareness and commitment on firm performance.

2.5 Robustness checks

2.5.1 Soft and hard practices

CSR practices investigated by the survey are very heterogeneous. In particular, some questions reflect the firms' policy and objectives about some specific CSR issues, whereas some others reveal the firms' practices to monitor CSR issues such as the eco-management or labels. In the second case, firm awareness are more likely to change the firm output. I therefore split each item surveyed between soft and hard practices by CSR dimensions. Tables 2.2, 2.3 and 2.4 give the nature of each item. Table 2.14 provides the descriptive statistics of CSR awareness scores and indexes depending on hard or soft practices.

Table 2.14: Hard and soft CSR practices: awareness scores and indexes

Variable	Obs	Scores		Index	
		Mean	Std. Dev.	Mean	Std. Dev.
CSR	8336	19.90	12.51	0.45	0.50
<i>Hard CSR</i>	<i>8336</i>	<i>6.62</i>	<i>4.79</i>	<i>0.44</i>	<i>0.50</i>
<i>Soft CSR</i>	<i>8336</i>	<i>11.93</i>	<i>6.75</i>	<i>0.49</i>	<i>0.50</i>
Environment	8336	4.29	3.59	0.43	0.50
<i>Hard Environment</i>	<i>8336</i>	<i>1.53</i>	<i>1.66</i>	<i>0.51</i>	<i>0.50</i>
<i>Soft Environment</i>	<i>8336</i>	<i>2.77</i>	<i>2.22</i>	<i>0.41</i>	<i>0.49</i>
Social	8336	9.87	5.61	0.49	0.50
<i>Hard Social</i>	<i>8336</i>	<i>3.56</i>	<i>2.44</i>	<i>0.47</i>	<i>0.50</i>
<i>Soft Social</i>	<i>8336</i>	<i>6.32</i>	<i>3.62</i>	<i>0.45</i>	<i>0.50</i>
Societal	8336	4.38	3.48	0.43	0.50
<i>Hard Societal</i>	<i>8336</i>	<i>1.54</i>	<i>1.70</i>	<i>0.38</i>	<i>0.49</i>
<i>Soft Societal</i>	<i>8336</i>	<i>2.85</i>	<i>2.35</i>	<i>0.49</i>	<i>0.50</i>

Notes: This tables displays scores and the performances for the different CSR dimensions. The hard practices refer to the items relative to the tools to monitor the CSR issues and concrete results (measures, labels, reports). The soft practices cover policy and objectives. Tables 2.2, 2.3 and 2.4 give the distribution of items between hard and soft practices. Scores are the sum of practices that firms implement per dimension (global, hard and soft). CSR awareness indexes are dummies equal to 1 if the firm score is higher than average sample score.

For the environmental dimension, on average, firms implement one third of hard practices and two thirds of soft practices. This balance is the same for the social and societal dimensions. The statistics confirm that even if the questionnaire surveys soft practices slightly more than hard practices, firms are clearly more aware about soft practices than hard practices. What are the consequences on the relationship between CSR motivations and CSR awareness? Defensive and pro-social CSR are strategies to manage the firm reputation and contestability. CSR is then a signal towards the external pressure. In this case, I expect that defensive and pro-social CSR are more related to soft practices than to hard practices. However, strategic CSR which aims to answer stakeholders' demands should

be more related to hard and tangible practices. Table 2.15 presents the propensity to be a CSR leader (aware of CSR practices above the average) for each type of practices depending on CSR motivations and firm characteristics.

Regarding general CSR awareness index, strategic CSR is positively related to hard practices at a 5% level as expected, but only slightly positively related to soft practices. This result confirms that strategic CSR may target hard practices. Regarding the environment, strategic CSR is similarly related to soft and hard practices. However, pro-social CSR is now positively and significantly related to soft environmental practices. This result validates the hypothesis 3. Pro-social CSR firms are more concerned by environmental issues than defensive firms but do not specifically implement hard practices. It confirms the signaling objective. Regarding the social issues, strategic CSR firms are positively related to hard social awareness index, whereas there is no significant correlation with the social and soft social awareness indexes. This result supports the idea that strategic CSR firms are more likely to commit to CSR through hard practices. Regarding the societal issues, strategic CSR is positively related to each (hard or soft) awareness index, confirming the results at the dimension level.

In conclusion, strategic CSR are more likely to commit to CSR by hard than soft practices, relatively to other firms doing some CSR actions. In addition, pro-social CSR firms seem to use soft practices to signal their environmental concerns. The results are also consistent with the hypotheses developed in the literature review.

Table 2.15: Propensity to be CSR leader depending on CSR motivation - Hard and soft CSR awareness indexes

Variables	CSR			Environment			Social			Societal		
	(1) All	(2) Hard	(3) Soft	(4) All	(5) Hard	(6) Soft	(7) All	(8) Hard	(9) Soft	(10) All	(11) Hard	(12) Soft
Doing CSR	1.148*** (0.0543)	0.917*** (0.0601)	0.851*** (0.0520)	0.707*** (0.0558)	0.751*** (0.0502)	0.616*** (0.0612)	0.658*** (0.0492)	0.566*** (0.0516)	0.543*** (0.0469)	0.920*** (0.0535)	0.846*** (0.0554)	0.726*** (0.0467)
Pro-Social CSR	-0.005 (0.0591)	0.046 (0.0625)	-0.004 (0.0574)	0.0875 (0.0566)	0.061 (0.0555)	0.124** (0.0630)	-0.0544 (0.0571)	0.05 (0.0540)	-0.015 (0.0571)	-0.0276 (0.0496)	0.048 (0.0465)	0.039 (0.0454)
Strategic CSR	0.164*** (0.0577)	0.237*** (0.0656)	0.114* (0.0596)	0.170*** (0.0532)	0.136** (0.0551)	0.147** (0.0597)	0.0794 (0.0604)	0.236*** (0.0573)	0.0429 (0.0563)	0.145** (0.0589)	0.157*** (0.0585)	0.178*** (0.0432)
Observations	8,336	8,336	8,336	8,336	8,336	8,336	8,336	8,336	8,336	8,336	8,336	8,336
Pseudo R2	0.399	0.401	0.287	0.244	0.246	0.177	0.317	0.375	0.210	0.236	0.239	0.155

Notes: This table gives the probit analysis to be a CSR leader or a environmental, social or societal leader based on the whole practices, the only hard ones or the only soft ones. Being a CSR leader means that the firm's score in the related dimension is above the sample average. (1) The dependent variables are therefore dummies which takes 1 if the firm's score is above the average score in the sample. (2) The independent variables are: doing CSR which takes 1 if the firm claims to do some CSR practices, pro-social CSR which takes 1 if the firm is doing pro-social CSR and strategic CSR which takes 1 if the firm is doing some strategic CSR. Doing CSR represents the defensive CSR level of commitment. The other control variables are firm size (4 dummy variables), orthogonalized logarithm of revenue and number of establishments, debt level (3 dummy variables), firm age (log) and listed dummy. (3) The model includes industry fixed effects. (4) The standard errors are clustered at the strata level (interactions between industry and firm size groups). (5) The significant levels are *** p<0.01, ** p<0.05, * p<0.1

2.5.2 Weighted awareness indexes

Another issue relative to the survey is the weight of each item in the calculation of the CSR awareness indexes. Indeed, the number of questions has been chosen depending on administrative interests, and does not reflect the actual weight of each CSR concern. There is an important literature discussing the weighting issues in CSR scoring and rating (Chatterji et al., 2014). Some methodologies, such as fuzzy logic, analyses enable to estimate endogenous weights depending on stakeholders' preferences (Escrig-Olmedo et al., 2014). Waddock and Graves (1997) estimate the weight of each practice from a survey. Capelle-Blancard and Petit (2014) estimate the ESG weighting scheme from the number of ESG news that are published within industry. The weight is equal to the share of news relative to the specific dimension among all publications. In this case, I argue that the most important issues are the most tackled by firms in the whole population. Each item score is weighted by the share of firms in the sample which answer positively to the question. It creates a weighting scheme that is consistently applied across dimensions, and that is exogenous to the answer of each single firm. The weighting scheme is indeed very unlikely to be driven by the CSR practices of a single firm. Tables 2.2, 2.3 and 2.4 present the weighting scheme. Table 2.16 gives the descriptive statistics for the weighted score and CSR awareness indexes. As expected, the weighted CSR awareness scores are lower than the unweighted.

Table 2.16: Weighted CSR awareness scores and indexes

Variables	Obs	Scores		Index	
		Mean	Std. Dev.	Mean	Std. Dev.
CSR	8336	9.01	4.46	0.48	0.50
Environment	8336	1.63	1.20	0.51	0.50
Social	8336	5.03	2.44	0.50	0.50
Societal	8336	2.37	1.55	0.43	0.50

Notes: This table provides the weighted score and performances for CSR, environmental, social and societal issues. The weighted score is based on practices that firms implement (positive answers in the survey) weighted by the share of firms doing the same in the whole population. It enables to put more weight on common practices and to reduce the weight in the score on very singular practices. CSR awareness indexes are dummies equal to 1 if the firm score is higher than the average sample score.

Table 2.17 presents the estimation of the propensity to be a CSR leader depending to CSR motivations according to the weighted CSR awareness indexes. The results are consistent with the unweighted measures, except for the social dimension. Strategic CSR is positively related to the weighted social index, whereas it is unrelated to the unweighted social indexes. First, this result confirms the hypothesis 4. Strategic CSR firms commit more to dimensions related to strategic stakeholders. Second, this difference suggests that strategic CSR focuses on the most common CSR practices.

In conclusion, the results are pretty consistent between weighted and unweighted CSR awareness indexes and validate hypotheses 2, 3 and 4. Strategic CSR firms are also more frequently aware of common CSR practices. Eventually, the weighting scheme and the index calculation do not drive the results.

Table 2.17: Propensity to be CSR leader depending on CSR motivations - Weighted CSR awareness indexes

Variables	(1) CSR	(2) Environment	(3) Social	(4) Societal
Doing CSR	0.918*** (0.0510)	0.727*** (0.0517)	0.627*** (0.0477)	0.921*** (0.0497)
Pro-Social CSR	-0.00242 (0.0534)	0.0775 (0.0532)	-0.0281 (0.0624)	0.0123 -0.0448
Strategic CSR	0.149** (0.0661)	0.166*** (0.0566)	0.124** (0.0590)	0.162*** (0.0520)
Observations	8,336	8,336	8,336	8,336
Pseudo R2	0.366	0.240	0.329	0.229

Notes: This table gives the probit analysis to be a CSR leader or a environmental, social or societal leader according to the weighted scores. Being a CSR leader means that the firm's weighted score in the related dimension is above the sample average. (1) The dependent variables are therefore dummies which takes 1 if the firm's weighted score is above the average weighted score in the sample. (2) The independent variables are: doing CSR which takes 1 if firm claims to do some CSR practices, pro-social CSR which takes 1 if the firm is doing pro-social CSR and strategic CSR which takes 1 if the firm is doing some strategic CSR. Doing CSR represents the defensive CSR level of commitment. The other control variables are firm size (4 dummy variables), orthogonalized logarithm of revenue and number of establishments, debt level (3 dummy variables), firm age (log) and listed dummy. (3) The models include industry fixed effects. (4) The standard errors are clustered at the strata level (interactions between industry and firm size groups). (5) The significant levels are *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

2.5.3 The three-level CSR awareness indexes

The last robustness check relies on more discriminating CSR awareness indexes. The dummy variable may induce an estimation bias due to firms which adopt an average behavior. These firms may be on the one side or on the other side of the cut-off score, without exhibiting different characteristics including CSR motivation. I create a three-level CSR awareness index for weighted and unweighted scores. The variables take the value 1 if the firms' score is in the 25% best scores in the sample, the value -1 if the firms' score is in the 25% lowest scores in the sample and zero otherwise. The ordered logit analysis enables to explain the three-level CSR awareness indexes by CSR motivations and firm characteristics. Table 2.18 presents the results.

For any CSR dimension, doing CSR is positively related to CSR awareness indexes, consistently with the probit analysis. Defensive CSR firms are more aware of the CSR issues than firms which do not do any CSR in any dimension. The greenwashing hypothesis is rejected and the hypothesis 2 is validated. For pro-social CSR, the main difference with the probit analysis is the significant positive correlation with the societal (weighted and unweighted) awareness indexes. It is surprising because the societal

issues do not classically belong to the pro-social spectrum (environment and social). However, these results are mainly driven by the awareness towards the community⁸, which is also a dimension related to social preferences (such as philanthropy, volunteering,...). This may explain why pro-social CSR firms are positively related to the societal issues. The other awareness indexes are not additionally significantly related to pro-social CSR at a 5% level. Defensive and pro-social CSR firms are as much aware of the environmental and societal issues, whatever the weighting scheme. Regarding strategic CSR, the results are consistent with the hypothesis 4. Firms which adopt a strategic CSR policy are more aware of CSR issues than any other firm in any dimension. In comparison to the probit analysis, the results are consistent, except for the social dimension. The ordered logit analysis shows, in addition, a positive correlation between strategic CSR and the social weighted and unweighted awareness indexes. Strategic CSR is then more discriminating for the social issues than for the environmental and societal issues. Strategic CSR firms are more likely to be on the top 25% in the social dimension.

In conclusion, the results are robust to the three-level awareness indexes. However, the difference between probit and ordered logit analyses suggests that strategic CSR is concentrated on the best awareness group (top 25%), especially in the social dimension.

⁸Results upon request

Table 2.18: Ordered logit model

Variables	CSR		Environment		Social		Societal	
	(1) Gross	(2) Weighted	(3) Gross	(4) Weighted	(5) Gross	(6) Weighted	(7) Gross	(8) Weighted
Doing CSR	1.696*** (0.0748)	1.708*** (0.0812)	1.367*** (0.0876)	1.310*** (0.0857)	1.008*** (0.0768)	0.988*** (0.0786)	1.431*** (0.0760)	1.396*** (0.0829)
Pro-Social CSR	0.100 (0.0891)	0.112 (0.0812)	0.0818 (0.0876)	0.0614 (0.0804)	0.143* (0.0792)	0.142* (0.0862)	0.191*** (0.0689)	0.207*** (0.0671)
Strategic CSR	0.273*** (0.0851)	0.352*** (0.0855)	0.286*** (0.0871)	0.236*** (0.0988)	0.294*** (0.0874)	0.287*** (0.0949)	0.391*** (0.0721)	0.433*** (0.0688)
Observations	8,336	8,336	8,336	8,336	8,336	8,336	8,336	8,336
Pseudo R2	0.324	0.312	0.193	0.195	0.267	0.264	0.189	0.184

Notes: This table gives the ordered logit analysis explaining the CSR performances (gross and weighted). (1) The dependent variables are therefore three level factor variables which takes 1 if the firm's score is in the top 25% of the score distribution (Good behavior), -1 if the firm's score is in the bottom 25% of the score distribution (Bad behavior) and 0 otherwise (average). Columns 1, 3 and 5 use the gross scores to calculate the dependent variables. Columns 2, 4 and 6 use the weighted scores. (2) The independent variables are: doing CSR which takes 1 if the firm claims to do some CSR practices, pro-social CSR which takes 1 if the firm is doing pro-social CSR and strategic CSR which takes 1 if the firm is doing some strategic CSR. Doing CSR represents the defensive CSR level of commitment. The other control variables are firm size (4 dummy variables), orthogonalized logarithm of revenue and number of establishments, debt level (3 dummy variables), firm age (log) and listed dummy. (3) The models include industry fixed effects. (4) The standard errors are clustered at the strata level (interactions between industry and firm size groups). (5) The significant levels are *** p<0.01, ** p<0.05, * p<0.1

2.6 Conclusion

For the last decades, the empirical literature has focused attention on the link between CSR commitment and firm performance without reaching a strong consensus (Margolis et al., 2011). New perspectives have been opened by investigating the complementary and substitute effects between commitments in the various CSR dimensions. In particular, a set of practices in the social and environment dimensions could be the most profitable CSR strategy for firms (Crifo et al., 2014). But the environmental and social commitments are substitute, whereas the social and societal engagements are complementary (Cavaco and Crifo, 2014). The current objective of this literature is to identify the determinants of such CSR strategies. One of these determinants could be the firm motivations to pursue CSR policy (Baron, 2001; Benabou and Tirole, 2010). Most of the papers focus either on the strategic CSR to highlight the positive link between CSR engagement and firm performance (Siegel and Vitaliano, 2007; McWilliams and Siegel, 2011; Delmas and Pekovic, 2013), or on the pro-social, altruistic CSR, to demonstrate a negative relationship between CSR and firm performance (Masulis and Reza, 2015). Finally, some papers discuss both latter strategies to empirically show what kind of CSR practices firms choose (Dam et al., 2009; Ferrell et al., 2014). Less papers investigate the defensive CSR as a value-neutral strategy. A complementary literature analyzes whether firms implement a greenwashing strategy, meaning they claim to do some CSR actions while their behavior is similar to the others firms (Kim and Lyon, 2011; Bazillier and Vauday, 2013). In this case, a positive relationship is expected with firm performance. The heterogeneity of CSR motivations may therefore explain part of the lack of convergence among the empirical results on the relationships between CSR engagement and firm performance. This chapter contributes to this literature by investigating the missing link between CSR motivations and awareness intensity, as a milestone to understand the CSR-performance nexus.

This chapter first shows that firms, claiming to do some CSR actions, are effectively more aware of CSR issues whatever the dimension than the other firms. These empirical results reject the greenwashing hypothesis to explain why firms disclose about their CSR engagement. However, the intensity of awareness is different across CSR dimensions. The social dimension is more homogeneous among firms than the environment and societal dimensions. The second objective of the chapter is to highlight differences in terms of CSR commitment driven by CSR motivations. This chapter shows that, consistent with the expectation, defensive CSR strategy leads to the minimal awareness of CSR issues among firms which do some CSR actions. However, the pro-social CSR firms are more likely to be committed to the environmental management and the biodiversity than defensive CSR firms. The pro-social CSR firms focus therefore their attention only on environmental sub-dimensions through soft CSR practices (objectives and policy). The strategic CSR firms are more likely to be aware of any dimension related to strategic stakeholders, thanks to hard practices (label, monitoring tools): in social with the working conditions, in environment with the environmental management and in societal with the relationships with customers, suppliers and community. These results are also robust to the alternative CSR measures: weighted CSR awareness indexes and the more discriminating indexes between good and bad behaviors. Finally, the chapter investigates how firm's characteristics and industry determine CSR motivations. Firm size and revenue are important determinants of doing some CSR actions but are not significant discriminating factors across motivations. However, industry and debt levels are more important to explain the choice of CSR motivations.

Regarding the CSR-performance equation, this chapter provides interesting insights. Assuming that defensive CSR is a value-neutral strategy (the cost of implementing CSR is outweighed by their benefit), the results suggest a lack of any significant relationship between CSR engagement and firm performance below the minimal commitment of defensive CSR firms. Assuming that pro-social CSR is an agency cost and a value-destroying strategy, the results are consistent with a negative relationship between firm performance and the single commitment in environment above the defensive CSR level (especially in soft practices). Assuming that strategic CSR is a value-enhancing strategy by responding to stakeholders' demands, the results predict a positive relationship between firm performance and commitment above the defensive CSR level in the working conditions, environment and societal dimensions. This prediction is consistent with Crifo et al. (2014) who show that any commitment above the average CSR level is positively related to performance. Those firms may implement a strategic CSR.

From the policy-maker perspective, the chapter highlights a strong heterogeneity of firms doing some CSR actions. Even if CSR issues are better taken into account by firms which claim to do some CSR actions, the intensity of commitments varies according to their motivations to pursue some CSR objectives. Strategic CSR is the most integrative and efficient orientation. In order to achieve a sustainable economic growth, the regulator may promote strategic CSR, especially towards small and medium enterprises (SME) which are less likely to invest in CSR.

The findings open new research questions. First, most of the previous studies do not take into account the variety of CSR motivations when investigating the relationships between CSR and financial performance. CSR motivation could be the missing link in the model. Furthermore, referring to CSR motivation as a key factor of CSR effectiveness stresses the importance of corporate governance mechanisms and of the decision-making process to achieve the sustainable objectives (Jo and Harjoto, 2012). In particular, CSR decisions are more likely to be taken by top management and board of directors. Recent works demonstrate the link between board composition and CSR commitment, such as Harjoto and Jo (2011) or the link between CEO's orientation and CSR strategy such as Mazutis (2013) and Huang (2013b). Investigating the relationship between corporate governance and CSR motivation is then necessary to improve the knowledge about the determinants of CSR motivations. However, the actual survey does not question about corporate governance.

Second, this work gives an overview about the CSR practices in the French SME and large firms similarly to Perrini et al. (2007) in the Italian firms. It highlights that SME are less likely to be aware of CSR, but that is no significant difference in terms of motivation diversity. SME may have a lack of knowledge about the CSR, explaining a lower commitment. Further research should focus on the specific triggers of SME's engagement. The data are not detailed enough to draw any conclusion on this specific point.

Third, the study is based on a self-administrated survey which reveals firm discourse and disclosure, but the materiality of firm CSR practices is not testable. Following the debate about the informational content of extra-financial ratings (Chatterji and Levine, 2005; Chatterji et al., 2009, 2014), future research should evaluate how the CSR awareness indexes correctly reveal the firm responsible behavior and CSR concrete practices integrated in the business activities. Moreover, the study demonstrates the

contemporaneous link between CSR motivation and commitment intensity. However, the methodology does not identify a causal link due to endogeneity issues. Unfortunately, the data and the framework do not provide any instrument variable to clear the relationship. Moreover, applying a matching strategy between firms doing some CSR actions and the other ones would provide better results. Indeed the control and the treated groups would be endogenously determined. An unobservable characteristic could drive the results. Finally, the next investigation could interestingly analyze how the commitment intensity will change in the future, depending on the CSR motivations. Using the next survey, on the same firm sample, will help to understand the dynamic relationship between motivation and commitment, when taking into account firm heterogeneity.

2.7 Appendix

2.7.1 EnDD Survey

The ENDD survey has been conducted by the French National Institute for Statistics and Economic Studies (INSEE) in 2011 for the first time. The goal is mapping CSR practices in the French firms through a compulsory survey. The survey is based on 4 sections of several questions: general issue and corporate governance, societal, social and environment. The questions are mostly qualitative. They enable to measure CSR awareness and at some extent some CSR practices such as monitoring plan or training. The survey has been designed by INSEE and the French Ministry of Sustainable development. It has not been written for the purpose of this research. The database of firm answers is confidential. Researchers have access to the database, only after the agreement from the council for statistical confidentiality, through CASD (distant access to confidential data).

Nom du correspondant :
Service, Titre, Fonction :
Téléphone :
Télécopie :
Courriel :

INSEE - Service de Statistiques Nationales d'Entreprises
5, rue Claude Bloch
BP 95137
14024 CAEN CEDEX

Vu l'avis favorable du Conseil national de l'information statistique, cette enquête, reconnue d'intérêt général et de qualité statistique, est **obligatoire**.

[Visa](#) n°2011X102EC du Ministre de l'économie, des finances et de l'industrie, et du Ministre de l'écologie, du développement durable, des transports et du logement valable pour l'année 2011.

Aux termes de l'article 6 de la [loi n° 51-711 du 7 juin 1951](#) modifiée sur l'obligation, la coordination et le secret en matière de statistiques, les renseignements transmis en réponse au présent questionnaire ne sauraient en aucun cas être utilisés à des fins de contrôle fiscal ou de répression économique.

L'article 7 de la loi précitée stipule d'autre part que tout défaut de réponse ou une réponse sciemment inexacte peut entraîner l'application d'une amende administrative.

Questionnaire confidentiel destiné à l'INSEE.

Merci de répondre à ce questionnaire pour votre entreprise uniquement.

Cette enquête est réalisée pour mesurer l'implication des entreprises en matière de développement durable.

A - Pilier « transversal » et « gouvernance d'entreprise »

La place de la RSE dans la stratégie d'entreprise

A1 Avez-vous déjà entendu parler de la Responsabilité Sociale (ou Sociétale) des Entreprises (RSE)? OUI ☐ NON ☐

Si **NON**, passer à **B1**

A2 Avez-vous déjà entendu parler de la « Global Reporting Initiative » (GRI*) ou de la norme ISO 26000 ? OUI ☐ NON ☐

A3 Pour vous, la RSE, c'est avant tout (cochez une seule case) :

une opportunité ☐ une conviction ☐ une contrainte ☐ un axe de communication ☐

A4 Avez-vous le sentiment de mener des actions dans une perspective RSE ?

OUI ☐

NON ☐

A4a Si **OUI**, quels en sont les résultats espérés ?

(2 réponses maximum)

Réduction des coûts de production ☐
Développement de nouveaux produits ☐
Gestion des risques ☐
Adhésion, motivation des employés ☐
Amélioration de l'image externe de l'entreprise ☐
Respect de l'homme et de l'environnement ☐

passer à A5

A4b Si **NON**, quelles sont les raisons pour lesquelles vous ne menez pas d'action dans une perspective RSE ? (plusieurs réponses possibles)

Pas de bénéfice à en attendre ou risque économique trop important ☐
Manque de temps à y consacrer ☐
Manque d'information et d'appui public ☐

passer à B1

A5 Votre entreprise a-t-elle des pratiques rendant compte de ses performances RSE (rapport, questionnaire ISR*, plaquettes, ...) ?

OUI ☐ NON ☐
NE SAIT PAS ☐

A6 Pour évaluer les performances RSE de votre entreprise, avez-vous :

A6a fait appel à un organisme externe ?

OUI ☐ NON ☐

A6b mis en place une procédure d'audit interne ou d'auto-évaluation ?

OUI ☐ NON ☐

Gouvernance d'entreprise / Organisation interne

A7 Y a-t-il eu des concertations pour la mise en place d'actions dans une perspective RSE avec :

A7a les représentants du personnel ?

OUI ☐ NON ☐

A7b les parties prenantes* externes ?

OUI ☐ NON ☐

A8 Avez-vous mis en place un système d'information et/ou de pilotage ?

OUI ☐ NON ☐

A9 Votre entreprise dispose-t-elle de service(s) totalement dédié(s) au développement durable ou à la RSE ?

OUI ☐ NON ☐
SI **NON**, passer à **A11**

A10 Ce service est-il rattaché à l'une des directions suivantes ?

Directions techniques : hygiène-sécurité, environnement, achat, ... ☐

Direction des ressources humaines ☐

Direction de la communication, du marketing ou commerciale ☐

Direction de la stratégie ☐

Autre, précisez : ☐

* cf. lexique

Réf :

A11 Votre entreprise a-t-elle mis en place, dans une perspective RSE :

A11a une charte, un code de bonne conduite ou un cahier des charges?

OUI ☐ NON ☐

A11b une feuille de route ?

OUI ☐ NON ☐

A11c des programmes de sensibilisation pour ses salariés (formations, expositions, conférences, ...) ?

OUI ☐ NON ☐

B - Pilier « Sociétal »

Avertissement : Pour ceux qui ont répondu NON à la question A1 : dans les questions suivantes, le terme de **RSE** (Responsabilité Sociale des Entreprises) sera utilisé par convention pour représenter les initiatives des entreprises pour prendre en compte les impacts sociaux, sociétaux et environnementaux de leur activité à travers par exemple la formation professionnelle, la lutte contre les discriminations, le bien-être des salariés, la prévention de l'environnement, ...

Relations avec les clients

B1 Quels sont les principaux clients de votre entreprise ? (plusieurs réponses possibles)
entreprises ☐ administrations publiques ☐ particuliers ☐

B2 Donnez-vous des conseils à vos clients pour les sensibiliser aux impacts de leurs choix de biens ou services sur l'environnement et leur bien-être?

OUI ☐ NON ☐
Non concerné ☐

B3 Une partie de vos clients exige-t-elle la satisfaction d'un cahier des charges dont certaines clauses relèvent de la RSE ?

OUI ☐ NON ☐
Non concerné ☐

B4 Prenez-vous des mesures, au-delà des exigences réglementaires, pour limiter l'utilisation de produits dangereux pour la santé dans l'élaboration de vos produits ?

OUI ☐ NON ☐
Non concerné ☐

B5 Votre entreprise fait-elle des démarches pour vérifier qu'elle ne vend pas des biens ou services à des entités qui ne respectent pas les droits de l'homme ?

OUI ☐ NON ☐
Non concerné ☐

Relations avec les fournisseurs (y compris sous-traitants)

B6 Demandez-vous à certains de vos fournisseurs de s'engager à respecter un cahier des charges dont certaines clauses relèvent de la RSE ?

OUI ☐ NON ☐
Non concerné ☐

SI **NON** ou **Non concerné** passer à **B8**

B6a Quels critères leur demandez-vous de remplir (plusieurs réponses possibles) ?

Respect des droits des travailleurs (standard SA 8000*, ...) ☐

Santé et sécurité au travail (norme OHSAS 18001*, référentiel ILO-OSH 2001*, ...) ☐

Performance environnementale (règlement EMAS*, norme ISO 14001*, produits labellisés...) ☐

B7 Faites-vous les démarches suivantes pour évaluer les engagements sociaux et/ou environnementaux de vos fournisseurs ?

B7a envoi d'un questionnaire

OUI ☐ NON ☐

B7b contrôles, inspections ou évaluations par des tierces personnes, audits sociaux

OUI ☐ NON ☐

B8 Votre entreprise a-t-elle modifié sa gestion des achats en :

B8a mettant en place des contrats de plus longue durée avec ses fournisseurs ?

OUI ☐ NON ☐

B8b valorisant les critères de RSE dans les choix d'appels d'offre et de contrats ?

OUI ☐ NON ☐

B9 Aidez-vous vos fournisseurs à mettre en place au moins une démarche de développement durable (formation, accompagnement, conseils, aide à l'autodiagnostic ...) ?

OUI ☐ NON ☐

B10 Avez-vous des fournisseurs des secteurs protégés et adaptés, ou de l'insertion par l'activité économique ?

OUI ☐ NON ☐
SI **NON** passer à **B11**

B10a Quelle est la part des achats à ces secteurs dans la totalité de vos achats ?

moins de 0,1% ☐

entre 0,1% et 1% ☐

entre 1% et 10% ☐

plus de 10% ☐

B11 A prestations égales, privilégiez-vous les relations avec les fournisseurs locaux ?

OUI ☐ NON ☐

Relations avec la société civile

B12 Votre entreprise coopère-t-elle avec d'autres entreprises ou organismes pour des actions de RSE ?

OUI ☐ NON ☐

B12a Avec qui ? (plusieurs réponses possibles)

SI **NON** passer à **B13**

Administrations nationales ou internationales, collectivités locales, organismes associés ☐

Associations, ONG, ... (y compris internationales) ☐

Entreprises (hors de votre groupe/réseau) ou fédérations professionnelles ☐

Banques ou compagnies d'assurance dans le cadre d'actions socialement responsables éligibles à l'ISR* ☐

B13 Entretenez-vous les relations suivantes avec la société civile ?

B13a Partenariat de long terme avec une association

OUI ☐ NON ☐

B13b Participation à des projets de réinsertion professionnelle de publics en difficulté

OUI ☐ NON ☐

B13c Partenariat de long terme avec des établissements d'enseignement

OUI ☐ NON ☐

B13d Sponsoring ou mécénat

OUI ☐ NON ☐

* cf. lexique

Réf :

C - Pilier « Social »

Lutte contre les discriminations dans l'entreprise

- C1** Avez-vous mis en place des dispositions pour recueillir et traiter toute réclamation en cas de discrimination ? OUI ☐ NON ☐
- C2** Avez-vous :
- C2a** adopté la « Charte de la diversité * » ? OUI ou en cours ☐ NON ☐
- C2b** obtenu le label « diversité* » délivré par l'AFNOR certification ? OUI ou en cours ☐ NON ☐
- C3.** Avez-vous des politiques spécifiques de lutte contre les discriminations liées
- C3a** au sexe ? OUI ☐ NON ☐
- C3b** à l'origine (ethnique, sociale ou culturelle) ? OUI ☐ NON ☐
- C3c** à l'âge concernant les seniors ? OUI ☐ NON ☐
- C3d** à l'âge concernant les jeunes ? OUI ☐ NON ☐
- C3e** au handicap ? OUI ☐ NON ☐
- C4** Un document comparant la situation des hommes et des femmes dans l'entreprise a-t-il été élaboré ou actualisé au cours des 12 derniers mois ? OUI ☐ NON ☐
- C5** Votre entreprise a-t-elle mis en place des mesures spécifiques pour l'emploi des salariés âgés ? OUI ☐ NON ☐
- C5a** Dans quel(s) domaine(s) d'actions ? (plusieurs réponses possibles) SI **NON** passer à **C6**
- Recrutement ☐
- Formation ☐
- Évolution ou changement de fonction en interne ☐
- Adaptation des postes de travail ☐
- C6** Au cours de l'année 2010, avez-vous employé des salariés sous contrat d'apprentissage ou contrat de professionnalisation ? OUI ☐ NON ☐
- C7** Avez-vous mis en place des formations de sensibilisation aux discriminations ? OUI ☐ NON ☐

Conditions de travail

- C8** Votre entreprise établit-elle en plus d'un inventaire des risques professionnels, des mesures préventives pour pallier ces risques ? OUI ☐ NON ☐
- C9** Votre entreprise a-t-elle un plan d'action de prévention des risques psychosociaux (stress, harcèlement, mal-être au travail, ...) ? OUI ou en cours ☐ NON ☐
- C10** Au cours des deux dernières années, votre entreprise a-t-elle mené des campagnes d'information auprès de ses salariés sur les addictions (tabac, alcool, drogue, alimentation) ? OUI ☐ NON ☐
- C11** Votre entreprise a-t-elle une charte de protection des données personnelles des employés et de leur vie privée ? OUI ☐ NON ☐
- C12** Pour mieux concilier leurs vies professionnelle et personnelle, votre entreprise propose-t-elle à ses salariés :
- C12a** d'aménager leur temps de travail en fonction de leurs contraintes familiales ? OUI ☐ NON ☐
- C12b** d'autres mesures en dehors de celles réalisées par le comité d'entreprise (crèches, plan de déplacement, dispositif de retour de congés maternité/parental, services sur le lieu de travail, etc.) ? OUI ☐ NON ☐

Gestion des emplois, formation, fonds ISR*

- C13** Votre entreprise évalue-t-elle ses futurs besoins de qualifications et de compétences ?
- NON ☐ OUI, mais pas régulièrement ☐ OUI, régulièrement ☐
- C14** Au cours des trois dernières années, votre entreprise a-t-elle mis en place des mesures de gestion prévisionnelle des emplois et des compétences (GPEC*) ? OUI ☐ NON ☐
- SI **NON** passer à **C15**
- C14a** Ces mesures ont-elles été négociées ? OUI ☐ NON ☐
- C15** En 2010, votre entreprise a-t-elle établi un plan annuel de formation ? OUI ☐ NON ☐
- C16** En 2010, quel est approximativement le pourcentage des dépenses pour des actions réelles de formation professionnelle (FPC*) par rapport à la masse salariale de votre entreprise ?
- Moins de 1,5% ☐ De 1,5% à moins de 2% ☐ De 2% à moins de 4% ☐ 4% ou plus ☐
- C17** Si vous avez un dispositif de participation, d'intéressement et/ou un plan d'épargne salarial (retraite et/ou entreprise), ces plans investissent-ils dans des fonds ISR* ?
- Oui, en totalité ☐ Oui en partie ☐ Non ☐ Pas de plan ☐

* cf. lexique

D - Pilier « Environnemental »

Approche générale de l'environnement

- D1** Parmi les enjeux suivants, sur lequel votre entreprise a le plus d'impact négatif ? (1 seule réponse)
- le changement climatique (émissions de gaz à effet de serre) ☐
 - la perte de la biodiversité (disparition d'espèces, d'espaces naturels et dégradation d'écosystèmes) ☐
 - la pollution de l'air ☐
 - la pollution de l'eau ☐
 - la pollution des sols ☐
 - la production de déchets ☐
 - l'utilisation ou la génération de substances toxiques ou dangereuses ☐
- D2** Votre entreprise est-elle engagée dans une démarche de *management environnemental** ? OUI ☐ NON ☐
- D3** Développez-vous des *écoproduits**, c'est-à-dire des biens ou des services davantage respectueux de l'environnement ? OUI ☐ NON ☐
Non concerné ☐
- D4** Avez-vous des produits *écolabellisés** (Ecolabel européen, NF Environnement, Blaue Engel, Nordic Swan, ...) ? OUI ☐ NON ☐
Non concerné ☐

Approche thématique de l'environnement

a) la lutte contre le changement climatique et une démarche d'économie d'énergie

- D5** Votre entreprise est-elle engagée dans une démarche d'amélioration de l'efficacité énergétique et/ou de réduction des émissions de gaz à effet de serre ? OUI ☐ NON ☐
SI **NON** passer à **D8**
- D6** Êtes-vous doté des instruments suivants pour mettre en œuvre cet engagement ?
- D6a** un plan d'amélioration de l'efficacité énergétique ou de réduction des émissions OUI ☐ NON ☐
 - D6b** un suivi dans le temps des émissions à effet de serre (type bilan carbone, ...) OUI ☐ NON ☐
 - D6c** un plan de déplacement entreprise (trajet du personnel) OUI ☐ NON ☐
 - D6d** un plan de réduction de transport de marchandises OUI ☐ NON ☐
- D7** La plupart des établissements de votre entreprise sont-ils parties prenantes* de l'engagement ? OUI ☐ NON ☐
mono-établissement ☐

b) une gestion économe des ressources et du recyclage des déchets

- D8** Votre entreprise est-elle engagée dans :
- D8a** une logique de gestion économe des ressources (matière première, eau) ? OUI ☐ NON ☐
 - D8b** un processus de prévention ou de recyclage des déchets ? OUI ☐ NON ☐
 - D8c** une logique d'écoconception* des produits ? OUI ☐ NON ☐
- SI **NON** à ces 3 questions, passer à **D11**
- D9** Êtes-vous doté des instruments suivants pour mettre en œuvre cet engagement ?
- D9a** un bilan matière suivi dans le temps pour vos productions et vos modes de fonctionnement OUI ☐ NON ☐
 - D9b** un plan de réduction de la consommation matière OUI ☐ NON ☐
 - D9c** un plan de réduction et de recyclage des déchets OUI ☐ NON ☐
- D10** La plupart des établissements de votre entreprise sont-ils parties prenantes* de l'engagement ? OUI ☐ NON ☐
mono-établissement ☐

c) la biodiversité

- D11** Votre entreprise s'implique-t-elle dans la préservation de la biodiversité (espèces, espaces naturels et écosystèmes) ? OUI ☐ NON ☐
SI **NON** passer à **
- D12** De quel(s) type(s) d'instrument êtes-vous doté pour mettre en œuvre cet engagement ?
- D12a** un bilan de l'impact sur la biodiversité suivi dans le temps OUI ☐ NON ☐
 - D12b** un système de production intégrant la préservation de la biodiversité OUI ☐ NON ☐
 - D12c** une politique de mécénat en faveur de la biodiversité OUI ☐ NON ☐

**** Si vous avez répondu NON à D2, D3, D4, D5, D11 et toutes les modalités de D8, passez à la dernière question.**

- D13** Quel est le déterminant principal de votre engagement dans la ou les démarche(s) ci-dessus ?
- développer de nouveaux produits et/ou répondre aux demandes des clients ☐
 - valoriser l'image de votre entreprise ☐
 - s'inscrire dans une démarche éthique en faveur de la protection de l'environnement ☐
 - motiver vos salariés ☐
 - réduire vos coûts ☐
- D14** Avec quel(s) partenaire(s) avez-vous développé ces démarches ?
- une autre entreprise, y compris cabinet de conseil privé (hors groupe/réseau) ☐
 - une ONG environnementale ☐
 - autre (collectivité locale, organisme public, CCI, ...) ☐
 - en interne uniquement (y compris entreprises du groupe/réseau) ☐

Combien de temps avez-vous mis pour remplir ce questionnaire ? _ _ min

* cf. lexique

2.7.2 Variables

Table 2.19: Definition of variables

Variables	Description
Panel A: Firm Characteristics	
Size	Firm size in 5 level: 2 (10-19 employees), 3 (20-49), 4 (50-249), 5 (250-499) and 6 (>500)
Nb of Unit	Number of business unit controlled by the firm
revenue	Firm revenue in euros
Debt	Debt in 4 level: 1 (<50%), 2 (50-75%), 3 (75-100%) and 4 (>100%)
Listed	Dummy equal to 1 if firm is listed on Euronext Paris
Age	Firm age in year
Mining (B)	Dummy equal to 1 if firm belongs to mining and quarrying industry
Manufacturing (C)	Dummy equal to 1 if firm belongs to manufacturing industry
Electricity (D)	Dummy equal to 1 if firm belongs to electricity, gas stream and air conditioning supply industries
Water supply (E)	Dummy equal to 1 if firm belongs to water supply, sewerage, waste management and remediation activities
Construction (F)	Dummy equal to 1 if firm belongs to construction industry
Wholesale (G)	Dummy equal to 1 if firm belongs to wholesale and retail trade industry
Transportation (H)	Dummy equal to 1 if firm belongs to transportation and storage industries
Accommodation (I)	Dummy equal to 1 if firm belongs to accommodation and food service activities industries
Information (J)	Dummy equal to 1 if firm belongs to information and Communication industries
Real Estate (L)	Dummy equal to 1 if firm belongs to real Estate industry
Scientific Activities (M)	Dummy equal to 1 if firm belongs to professional, scientific and technical activities
Administrative Activities (N)	Dummy equal to 1 if firm belongs to administrative and support service activities
Other activities (S)	Dummy equal to 1 if firm belongs to other services
Foods (X)	Dummy equal to 1 if firm belongs to food industry
Panel B: CSR Motivations	
No CSR	Dummy equal to 1 if firm claims doing no CSR
Defensive CSR	Dummy equal to 1 if firm claim doing some CSR practices in order to reduce ESG risks and to maintain its license to operate
Pro-Social CSR	Dummy equal to 1 if firm claim doing some CSR practices in order to achieve some social and environmental preferences
Strategic CSR	Dummy equal to 1 if firm claim doing some CSR practices in order to answer some demands from stakeholders

Variables	Description
Panel C: CSR Dimensions and subdimensions	
CSR	Analyze CSR awareness and policy
Environment	Environmental Issues
Env. Management	Items relative to the environmental practices throughout the production
Climate Change	Items relative to carbon emissions and greenhouse effect
Resources	Items relative to non-renewable resources consumption and waste management
Biodiversity	Items relative to biodiversity protection
Social	Social issues
Discrimination	Items relative to discrimination at the workplace
Working conditions	Items relative to employees' health and safety
Employment & Training	Items relative to employees' training
Societal	Societal issues
Customers	Items relative to the relationships with customers
Suppliers	Items relative to the relationships with suppliers
Community	Items relative to the relationships with community

This table describes the variables used in this chapter.

2.7.3 Complementary descriptive statistics and empirical results

Table 2.20: Average scores by industry

	B	C	D	E	F	G	H	I	J	L	M	N	S	X
CSR	26.97	21.62	33.26	30.02	18.61	18.05	19.70	18.23	18.11	19.93	20.16	20.52	16.35	20.01
Environment	7.77	5.16	7.51	6.79	3.76	3.90	4.07	4.15	2.66	3.91	3.71	3.64	3.37	5.11
<i>Env. Management</i>	<i>1.07</i>	<i>1.10</i>	<i>1.31</i>	<i>1.43</i>	<i>0.90</i>	<i>1.03</i>	<i>0.87</i>	<i>1.14</i>	<i>0.52</i>	<i>1.02</i>	<i>0.72</i>	<i>1.04</i>	<i>0.77</i>	<i>0.95</i>
<i>Climate Change</i>	<i>1.00</i>	<i>0.91</i>	<i>1.80</i>	<i>1.25</i>	<i>0.64</i>	<i>0.65</i>	<i>1.05</i>	<i>0.68</i>	<i>0.58</i>	<i>0.95</i>	<i>0.80</i>	<i>0.60</i>	<i>0.58</i>	<i>0.94</i>
<i>Resources</i>	<i>3.20</i>	<i>2.90</i>	<i>2.97</i>	<i>2.91</i>	<i>1.89</i>	<i>1.99</i>	<i>1.93</i>	<i>1.98</i>	<i>1.46</i>	<i>1.68</i>	<i>1.83</i>	<i>1.79</i>	<i>1.81</i>	<i>2.90</i>
<i>Biodiversity</i>	<i>2.50</i>	<i>0.24</i>	<i>1.43</i>	<i>1.21</i>	<i>0.33</i>	<i>0.23</i>	<i>0.23</i>	<i>0.34</i>	<i>0.09</i>	<i>0.26</i>	<i>0.37</i>	<i>0.21</i>	<i>0.21</i>	<i>0.32</i>
Social	10.57	10.59	14.77	13.56	8.79	9.14	10.11	8.57	10.45	9.82	10.38	10.52	8.94	9.28
<i>Discrimination</i>	<i>4.63</i>	<i>4.57</i>	<i>7.23</i>	<i>6.62</i>	<i>3.76</i>	<i>4.12</i>	<i>4.46</i>	<i>4.02</i>	<i>4.78</i>	<i>4.53</i>	<i>4.77</i>	<i>4.98</i>	<i>4.11</i>	<i>3.93</i>
<i>Working Conditions</i>	<i>2.67</i>	<i>2.68</i>	<i>3.60</i>	<i>3.14</i>	<i>2.24</i>	<i>2.23</i>	<i>2.56</i>	<i>2.19</i>	<i>2.59</i>	<i>2.20</i>	<i>2.52</i>	<i>2.46</i>	<i>1.95</i>	<i>2.34</i>
<i>Employment & Training</i>	<i>3.27</i>	<i>3.33</i>	<i>3.94</i>	<i>3.80</i>	<i>2.79</i>	<i>2.79</i>	<i>3.09</i>	<i>2.36</i>	<i>3.08</i>	<i>3.09</i>	<i>3.09</i>	<i>3.07</i>	<i>2.87</i>	<i>3.01</i>
Societal	6.10	4.57	7.77	6.86	4.86	3.97	3.96	4.20	3.58	4.64	4.41	4.66	3.27	4.35
<i>Customers</i>	<i>1.67</i>	<i>1.64</i>	<i>2.03</i>	<i>2.21</i>	<i>1.80</i>	<i>1.30</i>	<i>1.24</i>	<i>1.33</i>	<i>0.88</i>	<i>1.34</i>	<i>1.26</i>	<i>1.57</i>	<i>1.23</i>	<i>1.49</i>
<i>Suppliers</i>	<i>3.63</i>	<i>2.95</i>	<i>4.34</i>	<i>4.10</i>	<i>2.71</i>	<i>2.40</i>	<i>2.41</i>	<i>2.60</i>	<i>2.44</i>	<i>2.96</i>	<i>2.79</i>	<i>2.74</i>	<i>1.79</i>	<i>2.73</i>
<i>Community</i>	<i>2.87</i>	<i>1.55</i>	<i>3.74</i>	<i>2.71</i>	<i>1.84</i>	<i>1.61</i>	<i>1.57</i>	<i>1.73</i>	<i>1.56</i>	<i>1.90</i>	<i>1.90</i>	<i>1.78</i>	<i>1.24</i>	<i>1.56</i>
Obs.	30	1971	35	112	838	1711	579	302	431	125	697	581	62	862

Notes: The table presents the average scores per industry (mining and quarrying (B), Manufacturing (C), Electricity, gas stream and air conditioning supply (D), Water supply, sewerage, waste management and remediation activities (E), Construction (F), Wholesale and retail trade (G), Transportation and storage (H), Accommodation and food service activities (I), Information and Communication (J), Real Estate (L), Professional, scientific and technical activities (M), Administrative and support service activities (N), other services (S) and food (X)) for each CSR dimension and sub-dimension. Tables 2.2, 2.3 and 2.4 provides the items covered by each sub-dimension.

Table 2.21: Average scores by CSR motivation type

Variable	Obs	(1) No CSR	(2) Defensive	(3) Pro-Social	(4) Strategic
CSR	8336	12.05	26.00	27.10	28.81
Environment	8336	2.54	5.71	5.95	6.22
Env. Management	8336	0.60	1.22	1.34	1.38
Climate Change	8336	0.33	1.13	1.23	1.33
Resources	8336	1.51	2.97	2.87	3.03
Biodiversity	8336	0.09	0.39	0.51	0.49
Social	8336	7.00	12.14	12.51	13.10
Discrimination	8336	2.79	5.66	5.84	6.24
Working Conditions	8336	1.75	2.95	3.11	3.23
Employment & Training	8336	2.46	3.53	3.56	3.63
Societal	8336	2.51	5.75	6.05	6.60
Customers	8336	0.96	1.90	1.89	2.03
Suppliers	8336	1.61	3.48	3.65	4.03
Community	8336	0.89	2.14	2.40	2.65
Obs	8336	4118	870	1647	1701

Notes: This Table gives the average score per CSR motivation type for each CSR dimension and sub-dimension. No CSR means that the firm does not claim doing some CSR practices. Defensive CSR means that the firm does some CSR practices to reduce ESG risks and to keep its license to operate. Pro-Social CSR means that the firm does some CSR practices to achieve some social and environmental preferences. Strategic CSR means that the firm does some CSR practices to achieve some demands from stakeholders. Appendix 2.19 provides the definition of all variables. The last line gives the number of firms by CSR motivation type.

Table 2.22: Industry fixed effects estimation from multi-logit analysis

Variables	(1) Defensive	(2) Pro-social	(3) Strategic
B (Mining)	-0.281 (0.921)	0.967** (0.386)	0.165 (0.510)
C (Manufacture)	-0.459*** (0.149)	-0.0626 (0.150)	-0.0764 (0.159)
D (Electricity)	-0.994 (0.982)	1.368*** (0.305)	1.496*** (0.170)
E (water)	0.622** (0.293)	1.588*** (0.322)	0.952*** (0.216)
F (Construction)	-0.467* (0.242)	0.265 (0.169)	0.0551 (0.177)
G (Wholesale)	-1.142*** (0.154)	-0.313** (0.145)	-0.522*** (0.155)
H (Transportation)	0.0385 (0.211)	0.533*** (0.160)	0.0342 (0.179)
I (Accommodation)	-0.0188 (0.234)	0.481** (0.205)	0.618** (0.241)
J (Information)	-1.013*** (0.294)	-0.101 (0.259)	0.255 (0.264)
L (Real Estate)	-0.298 (0.347)	0.671** (0.296)	0.738*** (0.273)
M (Scientific Act.)	-0.261 (0.173)	0.546*** (0.153)	0.900*** (0.183)
N (Administrative Act.)	-0.410* (0.213)	0.518*** (0.173)	0.423** (0.215)
S (other Services)	0.546 (0.350)	0.497 (0.485)	0.0385 (0.477)
Observations	8,336	8,336	8,336
Pseudo R2	0.107	0.107	0.107

Notes: This table gives the industry fixed effects estimated in the multi-logit analysis explaining CSR motivations. The dependent variable has 4 levels: no CSR (the reference), defensive CSR, Pro-social CSR and strategic CSR. The independent variables are firm size (4 dummy variables), orthogonalized logarithm of revenue and number of establishments, debt level (3 dummy variables), firm age (log) and listed dummy. The model includes industry fixed effects. The standard errors are clustered at the strata level (interaction between industry and firm size groups). The standard errors are clustered at strata level (groups defined by industry and firm size). The significant level are *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Board independence and the monitoring-advising trade-off

Joint work with P. Crifo (University Paris Ouest-Nanterre-La Défense, Ecole Polytechnique and CIRANO)

Abstract

This chapter analyzes the trade-off between board's functions (advising and monitoring the CEO) depending on board independence and expertise. We develop a model where boards decide to be "monitoring" or "advising" towards the CEO. The "monitoring" board is characterized by a trade-off between monitoring and advising functions in terms of quality due to the informational gap. The advising board is characterized by a trade-off between both functions in terms of time, due to the lack of incentive to monitor the CEO. We show that the share of boards who decide to adopt a monitoring behavior is non-monotonically (negatively and then positively) related to the exogenous board expertise level. The choice to be monitoring towards the CEO is also negatively affected by the cost of the informational gap on the advising function. However, the advising boards may come at a cost and may be lenient toward the CEO. The CEO may then fail to choose the optimal project from a shareholder perspective in order to enjoy a private benefit. The share of advising board who let the CEO adopt an opportunistic behavior is decreasing with expertise, if and only if the incentive to continue the optimal project with respect to the opportunistic project decreases more slowly than the total number of successful advising boards. Under some conditions, there is a cleansing effect of expertise towards CEO's opportunistic behavior. The more expert boards are, the less able CEOs are to adopt the opportunistic behavior. In the other cases, increasing the expertise level may facilitate CEO's opportunistic behavior.

Keywords: Corporate governance, board, independent directors, expert directors monitoring-advising trade-off

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3.1 Introduction

Corporate scandals have pointed out the crucial role of the board of directors in order to protect the interest of the shareholders and, to some extent, the other stakeholders. Enron's, or Worldcom bankruptcies warn against boards too lenient towards the CEOs. These boards indeed let the managers conduct firms for their own benefit, especially through complicated financial management (House, 2002). The board fails in these cases to achieve their fiduciary duties towards the shareholders. To solve this issue, the American Sarbanes-Oxley regulation (2002) and the similar regulations implemented by many other countries aim to strengthen the board oversight, and to put forward the monitoring behavior towards the CEO (Adams, 2012). The monitoring function deals with hiring and firing the CEO, ensuring financial transparency and designing CEO compensation, in order to maximize the shareholder value (Hermalin and Weisbach, 2003). From this perspective, the various codes and regulations converge to promote independent directors, as a good corporate governance practice. These independent directors, who have no economic or social link with managers, significant shareholders or the firm, should be able to reduce the agency cost due to the separation between owners and managers (Berle and Means, 1932). However, despite the regulation, Lehman Brothers' bankruptcy, and, to some extent, the recent financial crisis, remind that an independent board is not always a successful strategy to improve corporate governance (Minow, 2008). Such independent board may come at a cost : a lower ability to advise the CEO. The board has indeed to advise the CEO regarding mergers, acquisitions and business strategy (Demb and Neubauer, 1992).

In fact, the quality of both monitoring and advising functions determine the firm performance (Adams, 2009; Kim et al., 2014). But some trade-offs between each function may happen because both functions pursue different objectives and compete for directors' time and abilities (Faleye et al., 2011, 2013). From this perspective, two types of boards or directors have been highlighted in the literature: "monitoring" type and "advising" type (Harris and Raviv, 2008; Baldenius et al., 2014). By definition, a monitoring board puts its effort on the monitoring function, whereas an advising or lenient board dedicates more attention to the advising function at the risk of reducing monitoring quality (Tirole, 2001). Two questions remain unsolved: how boards decide to adopt either a monitoring or an advising behavior and what are the consequences of this trade-off on firm performance.

For the first question, a part of the answer comes from the important literature explaining the link between board composition and board decisions (see for a review Adams et al., 2010). Board composition is commonly accepted as the main determinant of board effectiveness to perform its duties. Depending on the selection of directors and their characteristics, the board or the directors may be more willing either to monitor or to advise the CEO. For example, the directors who have some business relationships with the firm (affiliated directors) have the ability to advise the CEO on firm strategy. However, these directors would be less prone to monitor the CEO in order to avoid losing contracts with the firm (Dass et al., 2014; Volonte, 2015). On the contrary, the outsider financially literate directors may not have the industry and firm specific knowledge to effectively advise on firm strategy, but may have the ability to monitor the CEO in order to build a strong reputation of monitoring director on the director labor market (Cai et al., 2009; Cowen and Marcel, 2011; Levit and Malenko, 2015). More broadly, the literature in economics and finance identifies two main board qualities that may impact the monitoring and advising abilities and related trade-offs: independence and expertise.

Independence, as defined by the codes of corporate governance, means that the directors, and to some extent the board, are free of economic or social interests towards the managers, the significant shareholders and the firm by itself. It is the primary quality to ensure board ability to monitor the CEO by reducing managers' discretionary area and the agency cost (Jensen and Meckling, 1976). Hence, boards should not be lenient towards the CEO ; the independent board should act as a "monitoring" board (Tirole, 2001). The conventional wisdom argues that the independence of the board should be directly related to better performance (Hermalin and Weisbach, 1998). However, the empirical literature presents mixed results on the relationship between board independence and firm performance: some positive (as expected) (Nguyen and Nielsen, 2010; Bhagat and Bolton, 2013) some non-significant (Bhagat and Black, 1999; Wintoki et al., 2012) or even some negative correlations (Bhagat and Black, 2001; Bhagat and Bolton, 2008). To explain these inconsistent results beyond the methodological and endogeneity issues, some recent papers highlight that independence may come at a cost. Adams and Ferreira (2007) argue that the monitoring intensity reduces CEO's incentives to share firm specific information with outsider directors, and increases the agency cost due to information asymmetry. The CEO indeed faces a trade-off between the benefit of sharing firm specific information to improve the quality of the board advice and the related cost in terms of monitoring. The board is, in fact, more able to monitor the CEO thanks to a smaller information gap. The CEO may then strategically use information disclosure and asymmetry in order to reduce board effectiveness. Too much independence may therefore reduce the information sharing inside the boardroom, and may decrease directors' monitoring and advising efficiencies with respect to a lenient or less independent board. Faleye et al. (2011) empirically confirm this trade-off between monitoring and advising outputs detrimental to the shareholders: the monitoring quality is related to weaker strategic advices and managerial myopia, especially in case of complex firms and environments. Cohen et al. (2012) suggest also that independent directors without competence are just cheerleaders to satisfy shareholders' demands. Moreover, the theoretical and empirical works suggest a non-linear relationship between independence and performance due to the varying trade-off between monitoring benefit and information asymmetry cost depending on the independence level (Adams and Ferreira, 2007). Indeed, for the low level of independence, a marginal increase of independence is related to a large benefit in terms of board monitoring ability and a small cost in terms of advising ability. However, for the high level of independence, the small increase of independence may lead to a drastic reduction of information sharing and advising ability without any significant monitoring improvement. The optimal share of independent directors is then related to the maximization of both monitoring and advising benefits.

Yet, expertise is the alternative proxy to measure board ability to provide their services (Cunningham, 2008). Expertise is a multi-dimensional concept covering some specific knowledge in the industry of the firm (Burak Guner et al., 2008; Dass et al., 2014), some firm specific information and some competences such as financial literacy (Wagner, 2011). The directors develop their expertise through their education, their professional experiences and their business activity with the firm (Anderson et al., 2011; Reeb and Zhao, 2013). A large empirical literature has been interested in the impact of expertise on board efficiency and decisions (see Defond et al., 2005; Faleye et al., 2014). Expertise may first of all improve board advising quality. Dass et al. (2014) show that directors from related industries have a positive effect on firm decisions and performance when the informational gap is severe. But expertise may come at a cost: a lack of independence. In this case, boards may be lenient towards the CEO (Tirole, 2001). An expert board is then more likely to adopt an "advising" behavior. However,

expertise may also help to bridge the informational gap as a substitute of firm specific information, and improve board ability to monitor and advise the CEO. Agrawal and Chadha (2005) show that only independent directors with financial literacy may reduce earnings management and restatements. Wang et al. (2013) find that the percentage of independent expert directors on the audit committee is significantly related with a lower likelihood of intentional financial misreporting. Faleye et al. (2014) observe that the share of industry experts among independent directors is positively associated with firm value. This latter mechanism may affect both the monitoring and advising board types. On the one hand, the monitoring-type board compensates the lack of firm specific information by external knowledge. On the other hand, the advising-type board uses the knowledge to be more independent from the management, even if the board does not comply with the classic criteria of independence promoted by the codes of corporate governance. To sum up, expertise is relevant for advising board type, but also affects the board's decision regarding its type: either monitoring or advising. The board faces indeed a trade-off between costs and benefits of independence and expertise in terms of monitoring and advising, in order to choose the best type of behavior in the interest of the shareholders.

The monitoring and advising types have been highlighted in the economic literature and the board composition determines the costs and the benefits of each type. However, the optimal board composition and strategy (in terms of type) from the shareholder perspective (i.e. the board structure and type which maximize the shareholder value) have not yet converged to an academic consensus (Adams et al., 2010). Some recent works even challenge the idea that the optimal behavior is characterized by a single strategy (Coles et al., 2008). Multiple strategies may co-exist as well as various board compositions (Harris and Raviv, 2005, 2010). In terms of type, some monitoring boards are prone to fire the CEO in case of bad performance, whereas some others, generally linked with significant owners, are more lenient towards the CEO and have a long-term perspective on firm management (Weisbach, 1988; Goyal and Park, 2002; Denis et al., 1997). However, an efficient loyalty from a competent board for example may lead to a specific human capital investment from the CEO (securization of CEO job enabling a more important commitment towards the firm from the CEO) (Wagner, 2011). In terms of board composition, some French boards present more than 80% independent directors, whereas others have less than 10%. Moreover, the heterogeneity of expertise (financial or industry) inside the boardroom is well documented (Anderson et al., 2011). Why may both strategies co-exist? Is it in the interest or at the expense of the shareholders? How is the monitoring-advising trade-off related to board composition, especially independence and expertise inside the boardroom? How is board composition related to board behaviors? These questions need to be theoretically investigated in order to better understand the relationships between board compositions and firm performance. The previous literature provides some insights to answer these questions.

In the recent developments of board theory, information communication and quality is the main approach for investigating the link between board functioning and firm performance. Most papers are based on Crawford and Sobel (1982) model of strategic information transmission. Adams and Ferreira (2007) propose for example a model to analyze the strategic information sharing between the CEO and the board depending on its independence level. They show that a “friendly” board could be optimal to maximize firm performance. A strong independence may reduce managers' incentive to share the firm specific information. Harris and Raviv (2008) insist on the fact that both insiders and outsiders have some specific information (firm or industry ones), relevant for strategic choices, that they have to

share. They show that, in some cases, it is sub-optimal to give control on the final decision of investment to the outsiders, when the insiders' information is particularly valuable with respect to outsiders' information value and insiders' bias. Adopting another perspective, Raheja (2005) also highlights the cost and the benefit of the information sharing in terms of decision-making control for the CEO in competition with the other insiders. All these papers first show that the interaction between independence and information sharing are determinant for board effectiveness, and recognize the advising function as a transmission of information (or advice) from the board to the CEO. More recently, Baldenius et al. (2014) split directors in two types: monitoring and advising types. Based on a Harris and Raviv's framework (Harris and Raviv, 2008), each type of director is able to determine part of the information necessary to make the optimal firm investment. To preempt CEO entrenchment, the shareholders may promote an advising board to be more likely to have full information on the optimal investment (larger incentive for CEO to disclose information). In case of a powerful CEO, a more monitoring board is more likely to be made up in order to protect the managerial discretionary area (larger information gap). The authors argue that advising and monitoring functions are complementary to produce firm decision. They analyze then the monitoring-advising trade-off regarding board independence. More generally, in order to understand the monitoring-advising trade-off, all these papers investigate the delegation of power inside the boardroom and the information sharing according to a single criteria, mainly independence. However, we highlight that expertise is also an important board quality that can affect the monitoring-advising trade-off. Wagner (2011) analyzes for example the de facto obedience of directors towards the managers and their expertise in the decision-making process. He demonstrates that an inefficient loyalty is easier to induce from a less expert board in a repeated interaction framework, whereas an efficient loyalty from a competent board may act in the interest of the shareholders. Expertise and the related "advising" board type should be directly introduced in the equation when modeling board functioning. Moreover, advising function may cover a larger process than specific information sharing such as the time dedicated to discuss the project and the help to design the strategy (new ideas and fresh perspective). That is why it would be interesting to model board behaviors beyond a strategic information game between board members and CEOs by integrating independence and expertise determinants.

In order to investigate the advising-monitoring trade-off depending on board composition, we propose a new approach based on a two-level model: at the industry level and at the firm level. Figure 3.1 presents the structure of the model. At the firm level, we model two-stage (governance and production) firms whom CEOs may choose between a project in the direct interest of the shareholders and a project with a private benefit during the production stage. The choice of the CEO is however constrained by the board behavior. During the governance stage, the board, which protects the interests of shareholders, has the choice between two behaviors towards the CEO: monitoring or advising. A monitoring board is defined by a trade-off between monitoring and advising functions related to its independence and its informational gap. Indeed, monitoring boards may reduce CEO's incentives to disclose firm specific information in order to avoid any stronger monitoring. It therefore decreases the advising quality. On the contrary, an advising board is defined by a trade-off between both functions related to its expertise. Advising boards share their time between advising and monitoring depending on their level of expertise. The more expert a board is, the more time it spends advising the CEO. Depending on its level of expertise and independence, the board chooses its type in the best interest of the shareholders.

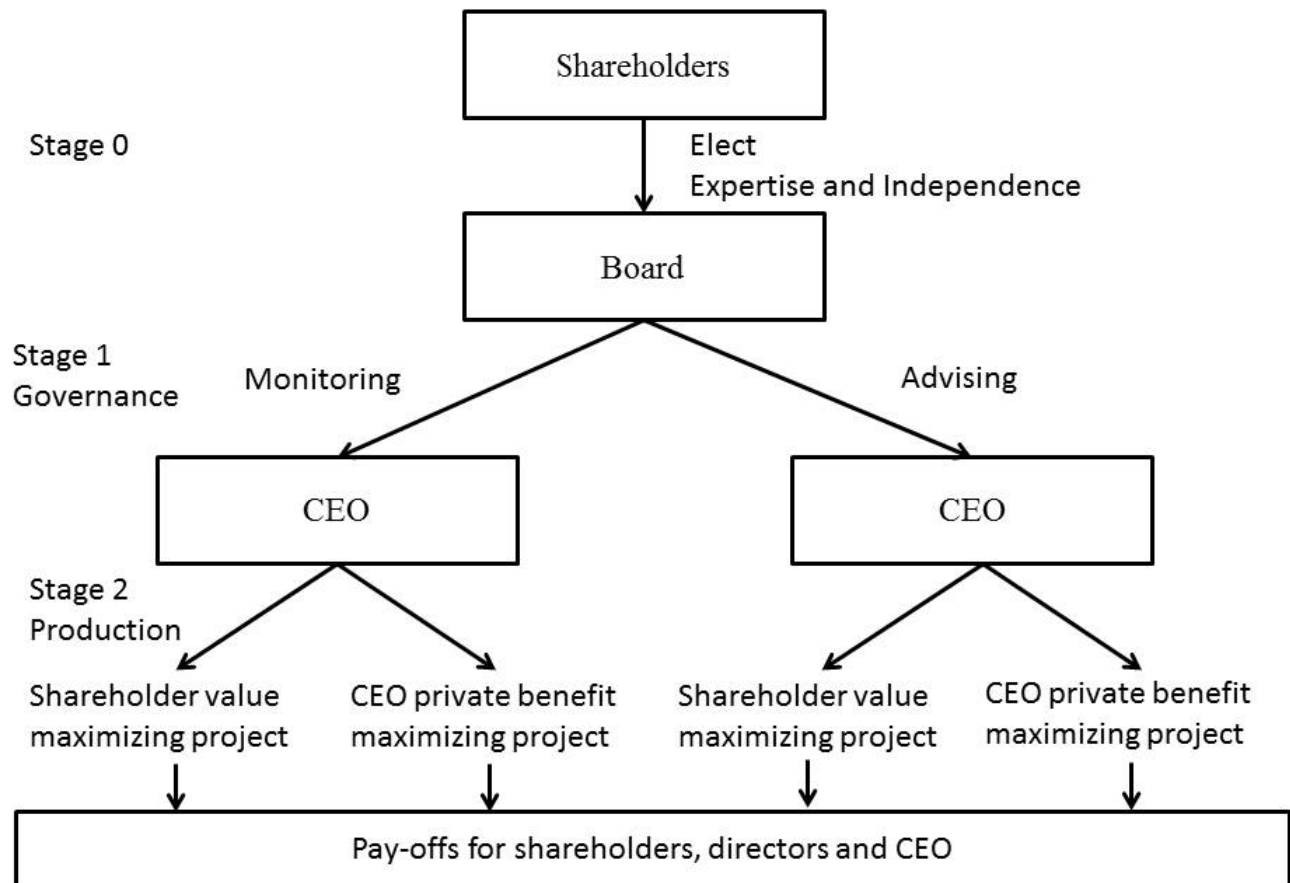


Figure 3.1: Model

At the industry level, firms compete for directors, especially regarding directors' expertise. The supply of directors is indeed limited, and there may be a trade-off between the supply of independence and expertise (Keys and Li, 2005; Masulis et al., 2012; Knyazeva et al., 2013). At least, all firms are not able to have independent and expert boards without supporting excessive costs in terms of directors' compensation but also in terms of busyness (Fich and Shivdasani, 2006). In fact, if all firms select the same type of directors, these directors would not have enough time and energy to commit to all firms (Masulis and Mobbs, 2014). The shareholders therefore elect a board with an exogenous expertise level but an endogenous independence level. Expertise is indeed observable by the shareholders before electing the directors, whereas the "true" independence level of the board is determined by the interaction between board members and CEO after the election, and is not observable *ex ante* by shareholders (Crespi-Cladera and Pascual-Fuster, 2014). Moreover, firms compete with each other at the industry level to produce two types of intermediate goods necessary to produce the final goods (final output of the model). The model enables to compute the equilibrium at the industry level taking into account the choice of governance and production of the other firms. Firms choose indeed the best strategy depending on what the other firms do. Three firm strategies emerge during the production stage: some monitoring and advising firms continue the initial project (first kind of intermediate good) and some (monitoring or advising) firms restart a new project benefiting to the manager (second type of intermediate goods).

The model enables to determine the optimal board behavior (monitoring versus advising) to maximize the shareholder value depending on the independence and expertise levels inside the boardroom. The model therefore provides new interesting insights on the relationship between board composition and firm performance. We show that below a minimal expertise level, all boards choose to be monitoring towards the CEO. Above this threshold, the optimal share of monitoring boards at the industry level (i.e. the independence cut-off to be better off with a monitoring board than with a advising board) is non-monotonically (negatively and then positively) related to the exogenous expertise level. Moreover, the share of monitoring boards is negatively affected by the increasing cost of the informational gap. Regarding the firm output, below the expertise threshold, some monitoring boards with the lowest level of independence are not able to successfully discipline the CEO who chooses the second type of good with some private benefit at the expense of the shareholders. The other firms choose the initial good maximizing the shareholder wealth. Above the expertise threshold, all monitoring boards successfully monitor the CEO. However, some advising boards may allow the CEO not to choose the optimal project and enjoy a private benefit ; they fail to discipline the CEO. The share of advising boards which let the CEO adopt an opportunistic behavior is decreasing with the expertise, if and only if, the CEO incentives to continue the optimal project with respect to the opportunistic project decrease more slowly than the total number of advising boards that successfully discipline the CEO at the industry level. Under some conditions, there is therefore a cleansing effect of expertise towards CEO's opportunistic behavior. The more expert boards are, the less CEOs are able to adopt the opportunistic behavior. In the other cases, increasing the expertise level may facilitate CEO's opportunistic behavior.

This results can be interpreted from an independence perspective which is commonly used in the board literature. We show that for the low level of independence, boards are more likely to choose an advising behavior, whereas for the high level of independence, boards are more likely to be a monitoring type. In-between, the board choice of bahavior type is more heterogeneous, and depends on the expertise level. There is indeed a non linear relationship between the expertise level and the advising-type board benefit. At a fixed level of independence, for the medium level of expertise, advising board is more efficient than monitoring board because it maximizes the trade-off between the benefit of advising and the cost of the low monitoring ability. At the same independence level, for the low or high levels of expertise, either the low benefit of board advising or the high cost of weak monitoring reduces the efficiency of advising board relatively to the monitoring board. From a performance perspective, the model suggests that the impact of independence on firm performance may be mediated by the expertise level of boards. At the low level of expertise, there is a direct relationship between independence and performance. However, above the expertise threshold, the relationship between independence and performance is non linearly dependent on the expertise level. If the cleansing effect of expertise is in play, the firm performance is positively related to both independence and expertise. In the opposite case, the relationship is mixed. To sum up, the independence-performance nexus depends on the cost and the benefit of board expertise. Future research on this question should at least take into account board expertise and the interactions between independence and expertise to highlight any significant relationship between board composition and firm performance.

This chapter makes three contributions to the literature. First, following Wagner (2011), we investigate the board effectiveness in two dimensions: independence and expertise. This analysis is crucial

to understand the change of corporate governance for the last decade. Indeed, more and more codes of corporate governance promote financial expertise in order to improve corporate governance and to avoid any scandal (Defond et al., 2005; Burak Guner et al., 2008). Recently, there is an increasing interest for industry expertise in order to strengthen advising board function (Dass et al., 2014). However, the consequences on firm decisions and performances are theoretically less investigated. This model provides a fresh perspective on board composition and functioning. In particular, the model highlights the condition for a cleansing effect of expertise, meaning that expertise helps to discipline the CEO and reduces the opportunistic behavior even for a weak independent board. This condition enables to ensure that the promotion of expertise inside the boardroom, by the codes of corporate governance for example, is not related to a cost for the shareholders. Just like the independent directors who are related to a strong information asymmetry cost, the expert directors may be related to a cost of weak monitoring. The model shows that for medium level of expertise, there is a decreasing number of monitoring boards and an increasing number of advising boards. This increasing number of advising boards could encourage CEO's opportunistic behavior. However, the cleansing effect of expertise (if effective) may limit this negative impact on board functioning when increasing the board level of expertise.

Second, following Baldenius et al. (2014), who investigate the monitoring and advising directors inside the boardroom, the model investigates the monitoring-advising trade-off in order to better understand the board composition-performance nexus. Our approach differs by two channels. On the one hand, we assume that the behavior type is determined at the board level. We argue that the separation between advising and monitoring directors may not take into account the coordination cost among directors and the loss of board efficiency due to the information sharing between groups of directors and CEO. Moreover, each director is most of the time not dedicated to a single board function and can provide some monitoring and advising services, especially because each director may belong to different monitoring and advising committees. That is why we focus on the board behavior rather than the director type. However, we acknowledge that the directors may be very heterogeneous in terms of role and services inside the boardroom. An extension of the model could investigate the consequences of directors' heterogeneity on the monitoring-advising trade-off. On the other hand, we argue that both independence and expertise are important determinant of board behavior instead of only independence. Furthermore, the model enables to explain the coexistence of advising and monitoring boards in the same industry as an equilibrium. Advising boards can indeed be in the interest of the shareholders, especially if there is a cleansing effect of expertise. It then provides some insights to understand why there is no convergence to a single board composition within the same industry.

Finally, this chapter proposes an new framework in order to analyze the relationship between board composition and firm performance. Most of the literature on the link between independence and performance provides mixed results without reaching any empirical consensus (Bhagat and Black, 1999, 2001; Wintoki et al., 2012). This model suggests first that expertise should be taken into account in the analysis because it may affect the trade-off between monitoring and advising, supporting the recent papers such as Wang et al. (2013), Dass et al. (2014) and Faleye et al. (2014). However, the model also provides evidence of non linear relationships between expertise, independence and firm performance. These complex relationships may not be well estimated by usual linear econometric models. It may partly explain the lack of significant results in this literature.

This remainder of the chapter is organized as follows. Section 3.2 presents the basic set up of the model. Section 3.3 describes the different stages of the model. Section 3.4 gives the equilibrium characteristics. Section 3.5 analyzes the main properties and results. Section 3.6 concludes.

3.2 Basic set up

3.2.1 Overview

The model has two periods: a governance stage and a production stage delimited by three dates ($t=0, 1, 2$). The economy is composed of a continuum of CEOs, directors and shareholders. The shareholders create a firm with one dollar and their objective is the firm profit maximization.

At date 0, at the beginning of the governance stage, the shareholders elect a CEO and a board (a representative director¹) with a degree of expertise (ability) $a \in [0, 1]$ and a level of independence $\gamma \in [0, 1]$ (Wagner, 2011). Expertise defines a set of knowledge and competencies related to directors' duties (financial literacy or industry specific information for example). γ measures the "endogenous" distance between the board and the CEO. Only expertise is observable by the shareholders *ex ante*. The independence is related to the combination of board members' and CEO's selections. The quality of the board is therefore defined by its expertise and independence levels.

The board is responsible for both advising and monitoring the CEO (Demb and Neubauer, 1992). The advising function determines the value of the project that the firm is able to produce. The monitoring function affects firm's probability of project success. During the governance stage, the board chooses its behavior either monitoring (H, also called hostile) or advising (L, also called lenient) towards the CEO. The board and CEO define the firm's strategy and expected payoff. The board decides to run or not the project, depending on the firm's expected pay-off.

At date 1, at the beginning of the production stage, the CEO observes the project's probability of success λ_c . Then, the CEO chooses to either continue the initial project, maximizing the shareholders' profit, or to abandon it and to start a new one with the same initial investment. This restarted project is less profitable for the shareholders but generates a personal private benefit ψ . Production takes place.

At the end of the second period, cash flows and repayments are realized and the firm is liquidated.

The objective of the shareholders is to maximize the return of their initial investment. The objectives of the directors are to protect the shareholders' interests and to maximize their compensation. Directors' interests are then fully aligned with shareholders' interests. The CEO aims at maximizing its own benefit (both compensation and private benefit related to running the restarted project).

¹Here we do not take into account the heterogeneity of directors inside the boardroom. First, we are interested in the global monitoring and advising outputs of the board and not in the individual outputs. Second, it will simplify the representation of the board and the resolution of the model. This simplification do not alter the results of the model. An extension of the model may integrate some coordination cost depending on the heterogeneity of directors inside the boardroom.

The sequence of events may be summarized as follows:

- $t = 0$: Shareholders elect a board and a CEO. Board chooses to be monitoring or advising. Board and CEO determine firm's strategy. Board decides to implement the project or not.
- $t = 1$: The project's probability of success is discovered by the CEO. The CEO decides to continue or to abandon the project and to restart a new one. Production takes place.
- $t = 2$: Cash flows are realized

Figure 3.2 presents the timing of the model.

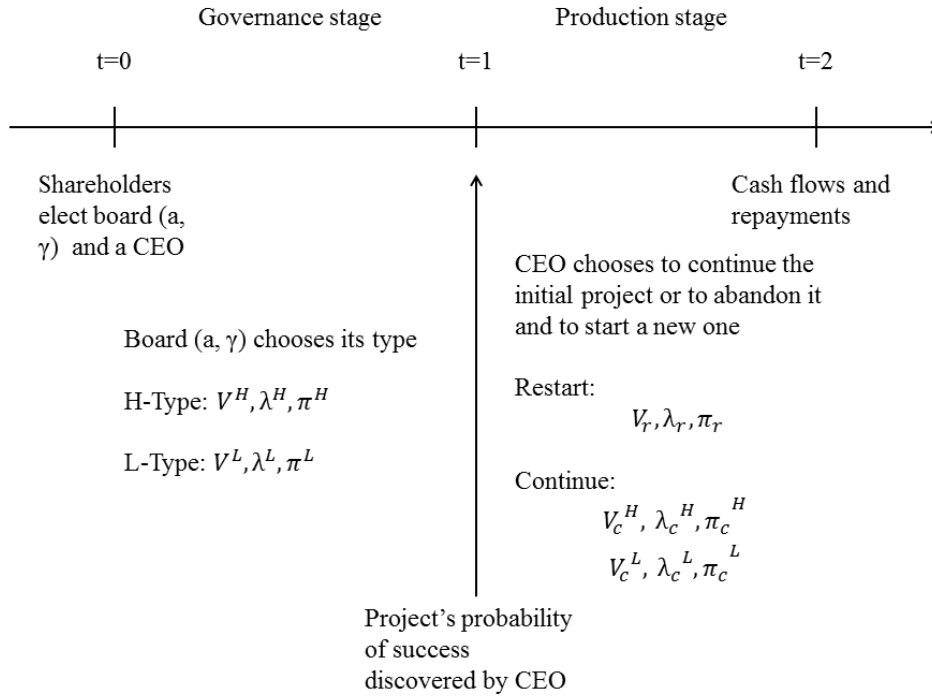


Figure 3.2: Timing

3.2.2 Contractual variables

At the beginning, the shareholders invest \$1 in the firm. The CEO uses the capital to produce goods and generate a cash flow during the production stage if the board decides to run the project. The following section describes the main characteristics of the model.

In the governance stage, the board and CEO are elected by shareholders. The board chooses among two types: a “monitoring” type (H type) or a “advising” type (L type). For simplicity, we also use H-type firms for firms with H-type board, or L-type firms for firms with L-type board.

In the advising board case (L type), the main function is advising the CEO, and the monitoring function appears as secondary (Tirole, 2001). In this case, the CEO may fully disclose firm specific information in order to benefit from the board's advice. The information asymmetry between CEO

and board is very small. The board shares its time between advising and monitoring the CEO in order to increase firm's return and the probability of success for the project. The intensity of advising increases with the degree of expertise as well as the time dedicated to this board function. The intensity of monitoring is then inversely proportional to the time dedicated to the advising function (opportunity cost of advising). Advising and monitoring functions are here substitute. The board's independence level does not play any role here.

In the monitoring board case (type H), the main board function is monitoring the CEO, leading to the common information asymmetry between CEO and board (Adams and Ferreira, 2007). CEO is indeed less prone to take into account board's advices and to share firm specific information in order to avoid a stronger board monitoring. The efficiency of board monitoring depends positively on the independence level. Nevertheless, the advising function is less effective in case of a "monitoring" type board than in case of an "advising" type board. In the "monitoring" board, monitoring and advising are complement. Expertise here has no impact on board output.

At the end of the governance stage, the board decides to run or not the project depending on the firm's expected payoff. If we denote by θ the board's type ($\theta = H, L$), the project's value, the project's probability of success and the firm's expected payoff are denoted respectively as V^θ , λ^θ and π^θ .

In the productive stage (period 2), a final good is produced using two different types of intermediate goods: goods produced by continued projects (labeled $j = c$) and goods produced by restarted projects (labeled $j = r$). Hence, we denote the inputs in the production of intermediate goods as "restarted projects' goods" and "continued projects' goods". At date 1, after observing the business's probability of success, the CEO decides to either continue the initial project ($j = c$) or to start a new project ($j = r$). Note that the CEO derives a private benefit to implement the production of restarted projects' goods because that increases his managerial discretionary area. The CEO may also achieve some interests of other stakeholders like the employees, the customers or the suppliers (Tirole, 2001) thanks to implementing the restarted project. In this latter case, the board has no impact on the project due to the second-stage implementation (one-period project).

The business yields a cash flow of V_j at date 2. The project's value, the project's probability of success and the firm's expected payoff are then denoted as V_c^θ , λ_c^θ and π_c^θ for continued projects and as V_r , λ_r and π_r for restarted projects. If the project generates no cash flow at date 2, firm's profit is 0. The firm is therefore restricted to a non-negative cash flow.

The shareholders, directors and CEO share the cash flow at the end of stage 2 (Wagner, 2011). $\beta_{shareholder}$ is the share of profit that rewards shareholders' investment. β_{board} and β_{CEO} is the share of profit that directors and CEO receive as compensation. Because the firm is liquidated at the end of stage 2, we assume the following condition:

$$\beta_{CEO} + \beta_{board} + \beta_{shareholders} = 1 \quad (3.1)$$

CEO and directors belong to a competitive market. Therefore, the shares that they receive are exogenous to the firm. We assume here that the CEO is not able to extract a direct rent due to his bargaining power relative to the board members when determining the level of manager compensation.

But the CEO is still able to extract a private benefit during the production stage by choosing the restarted good. This assumption is based on the fact that the independent compensation committees are more frequent inside the boardroom and that most of the time, these committees use an industry benchmark to draw executive compensation. Directors' compensation reward the services that they provide to the firm. Regarding the directors, we assume that director compensation (share) is related to a fixed part (constant whatever director's expertise) and a variable part depending on the level of expertise. This latter part is the opportunity cost for the shareholders to hire a more expert board. This property enables in the future extension of the model to connect the director selection (independence-expertise trade-off) issue and the board functioning (monitoring-advising trade-off) issue when investigating the relationship between board composition and firm performance.

3.3 The governance and productive stages

3.3.1 The governance stage

At date 0, the shareholders elect a board and a CEO. Depending on its characteristics, the board may be monitoring or advising towards the CEO. For each type of board, the effectiveness of monitoring and advising functions depends on either independence (γ) or expertise (a). The next section presents the different monitoring-advising trade-offs for “monitoring” and “advising” types of board behavior.

Let the project's expected value V^θ be defined as:

$$V^\theta = V_c \cdot \rho(a, \gamma)^\theta, \quad \theta = H, L$$

It depends on the ex-ante continuation value of the project V_c (in case of restarting project) and on the board advising intensity $\rho(a, \gamma)^\theta$.

Let the firm's expected payoff be defined as:

$$\pi^\theta = \lambda(a, \gamma)^\theta \cdot V^\theta, \quad \theta = H, L$$

Where $\lambda(a, \gamma)^\theta$ denotes the probability of success of the project, which depends on two variables: the intensity of monitoring $m(a, \gamma)^\theta$ and the exogenous project's probability of success λ with $0 < \lambda < 1$, that is: $\lambda(a, \gamma)^\theta = \lambda(a, \gamma) \cdot m(a, \gamma)^\theta$. The probability of success is only discovered at stage 1 by the CEO.

L-type firms are run by the CEO and an advising board. The main objective of the board is to advise the CEO in order to design, during the governance stage, the best project in the interest of the shareholders. The CEO and the board work together and there is no information asymmetry. In this case, the advising function is determined by the board expertise level a . Nevertheless, the advising activity implies an opportunity cost regarding the monitoring function. Directors indeed split their time between monitoring and advising duties. The more expert the board is, the longer it spends advising and the shorter it spends monitoring the CEO. There is therefore a trade-off between the time dedicated to monitoring and the time dedicated to advising (Faleye et al., 2014). This trade-off directly depends on the board's expertise degree. In this case, the loss in terms of project's proba-

bility of success (monitoring function) is balanced by a better firm expected value thanks to a better strategy (advising function). We normalize board's time to 1, so a fraction of time δa is dedicated to advising the CEO and the remaining fraction $1 - \delta a$ is dedicated to monitoring the CEO. The advising intensity $\rho(a, \gamma)^L$ depends only on the expertise level a .

Assumption 1A. $0 < \delta a < 1$ (time constraint)

The advising intensity function of an “advising” board is then determined by:

$$\rho^L = \delta a$$

δ reflects also the efficiency of the advising function. A L-type firm's expected value then is defined as:

$$V^L = V_c \cdot \delta a$$

The monitoring intensity is then negatively related to the degree of expertise a , the probability of success of the project decreases with the board's level of expertise so that:

$$\begin{aligned} m(a, \gamma)^L &= 1 - \delta a \\ \lambda(a, \gamma)^L &= (1 - \delta a)\lambda. \end{aligned}$$

H-type firms are run by the CEO and a “monitoring” board. The main board function is monitoring the CEO. Nevertheless, in the monitoring board, both monitoring and advising functions are achieved at the same time. This behavior induces a loss in terms of advising quality and information sharing: the CEO may be reluctant to share firm specific information to avoid a stronger monitoring. There is a trade-off between the monitoring and advising quality.

In this case, the project's probability of success ($\lambda(a, \gamma)^H$) driven by the monitoring intensity ($m(a, \gamma)^H$) is positively correlated with the level of independence:

$$\begin{aligned} m(a, \gamma)^H &= g(\gamma) \\ \lambda(a, \gamma)^H &= g(\gamma)\lambda \end{aligned}$$

where $0 < g(\gamma) < 1$, $g'_\gamma > 0$, $g''_\gamma \leq 0$,

The monitoring efficiency (g) is assumed as a concave function of the independence level in order to take into account the decreasing marginal impact of independence.

Regarding the advising intensity, we define $\sigma(a, \gamma)$ as the advising efficiency cost when behaving as a monitoring board. Then, the advising function is equal to:

$$\rho(a, \gamma)^H = \frac{1}{\sigma(\gamma, a)}$$

σ is fixed in this model for simplicity.

A H-type firm's expected value is then defined as:

$$V^H = V_c \cdot \frac{1}{\sigma}$$

We assume that a H-type board is more able to monitor the CEO than a L-type board. To make the model consistent, at any expertise level, the projects' probability of success (which reveals the quality of monitoring) is higher for a monitoring board than for an advising board. We make the following assumption:

Assumption 1B. $0 < 1 - \delta a < g(\gamma)$ (monitoring consistency constraint)

From the same perspective, the efficiency of the advising function in a L-type board is better than in a H-type board for the same level of expertise. Indeed, H-type boards suffer from the informational gap and may not be able to provide the best advising intensity that they could. This effect can be interpreted as the advising opportunity cost of monitoring behavior.

Assumption 1C. $0 < \frac{1}{\sigma(\gamma, a)} < \delta a$ (advising consistency constraint)

To ensure that the shareholders invest at the first place in the firm, we assume that the average project has a positive net present value for the shareholders ex-ante:

Assumption 2. Average project's positive net present value:

$$\lambda \cdot (g(\gamma) + 1 - \delta a) \cdot V^\theta > \frac{1}{1 - \beta_{CEO} - \beta_{board}}$$

In sum, firm's expected payoffs are given by:

$$\pi^L(\gamma) = \lambda \cdot (1 - \delta a) \cdot \delta a \cdot V_c \quad (3.2)$$

$$\pi^H(\gamma) = \lambda \cdot g(\gamma) \cdot \frac{1}{\sigma} \cdot V_c \quad (3.3)$$

As both shareholders and directors receive a fixed share of firm's profit, their interests are perfectly aligned. Boards choose to adopt the behavior which is in the best interest of the shareholders. At date 0, given the above expected payoffs and board characteristics in terms of independence and expertise levels, a board chooses to be a monitoring (type H) rather than advising (type L), if and only if, given the expertise level a and the independence degree γ , the expected payoff from a H-type firm is higher than the expected payoff from a L-type firm, that is:

$$\pi^H(\gamma) \geq \pi^L(\gamma) \quad (3.4)$$

$$\iff \lambda \cdot g(\gamma) \cdot \frac{1}{\sigma} \cdot V_c \geq \lambda \cdot (1 - \delta a) \cdot \delta a \cdot V_c \quad (3.5)$$

$$\iff g(\gamma) \geq \sigma \cdot (1 - \delta a) \cdot \delta a \quad (3.6)$$

Since the function $g(\cdot)$ is continuous and strictly increasing, the inverse function g^{-1} is also continuous and strictly increasing. In order to ensure that the project's probability of success driven by the monitoring intensity of the H-type board is always lower than 1, we assume that the opportunity cost of H-type in terms of advising is lower than 4. Otherwise, monitoring and advising boards can not co-exist and the advising board would be the only possible behavior.

Assumption 1D. $g(\gamma) < 1 \Leftrightarrow \sigma < 4$

Given that g function, $0 < \sigma < 4$ and $0 < \delta \cdot a < 1$, this inequality 3.6 implies that there is a unique threshold level of independence, γ^* , such that $0 < \gamma^* < 1$, which equalizes the firm's expected profit from both H and L-type boards. Assumption 1D is required to ensure that the threshold is always below 1.

Then, $\pi^H(\gamma^*) = \pi^L(\gamma^*)$, where:

$$\gamma^* = g^{-1}(\sigma\delta a \cdot (1 - \delta a)) \quad (3.7)$$

Boards with an independence level above the threshold, γ^* choose to be a H-type (monitoring towards the CEO), while boards with an independence level below γ^* choose to be L-type (advising towards the CEO).

In cases when a is higher than $a^* = \frac{1}{\sigma\delta}$, assumption 1B is satisfied for any board. The project's probability of success is higher for monitoring boards than for advising boards because g is an increasing function of the independence level and $\sigma\delta a$ is higher than 1. The trade-off condition between advising and monitoring boards shows in fact a direct relationship between the project's probability of success in advising board $(1 - \delta a)$ and monitoring board $(g(\gamma))$.

In cases when a is lower (or equal) than (to) a^* , assumption 1B is no longer verified. Monitoring and advising boards cannot co-exist. Moreover, the level of expertise is too low to be beneficial to the CEO (low benefice in terms of advising relative to the cost in terms of monitoring). The CEO has then no incentive to share any firm specific information even with the advising board. In this case, the board can only be monitoring type to protect the interest of the shareholders.

3.3.2 The production stage

At date 1, the CEO observes the probability of project success (λ) and chooses whether to continue the initial project ($j = c$) or change the project ($j = r$). We consider that the probability of success for restarted project is the same independently of firms' initial types. Hence, the CEO generates the same level of output whatever the board's type.

At date 2, conditional on success, the firm's expected payoff is $\pi_j^\theta = \lambda_j^\theta \cdot V_j$ and each CEO running a firm of type θ receives a net cash flow $W_j^\theta = \beta_{CEO} \cdot \lambda_j^\theta \cdot V_j$ where V_j represent the value of each type of business. The shareholders and the board may expect to receive the remaining $(1 - \beta_{CEO}) \cdot \pi_j^\theta$. The non-negativity constraint on firm's cash flows requires the following assumption:

Assumption 3. Non-negative cash flows: $V_j \geq 0, j = c, r$

The probabilities of success are labeled λ_r for a restarted project, λ_c^H for a H-type continuing project and λ_c^L for a L-type continuing project. We assume that $\lambda_r = \min(\lambda_c^\theta) \cdot \kappa$, with $\kappa \leq 1$ in order to take into account that the restarted project has a lower probability to be successful. Hence the probability of success for a restarted project is:

$$\lambda_r = (1 - \delta a) \cdot \lambda \cdot \kappa \quad (3.8)$$

The expected payoff for each type of firm then writes:

$$\pi_c^H = \lambda_c^H \cdot V_c, \quad \pi_c^L = \lambda_c^L \cdot V_c, \quad \pi_r = \lambda_r \cdot V_r \quad (3.9)$$

We assume that a continued project has a positive net present value to ensure that, at the end of the governance stage, the board decides to run the production stage.

Assumption 4. Continued project's positive net present value:

$$\lambda_c^H \cdot V_c > \frac{1}{1 - \beta_{CEO} - \beta_{board}} \text{ if } g(\gamma^*) \leq (1 - \delta a) \quad (3.10)$$

$$(\lambda_c^H + \lambda_c^L) \cdot V_c > \frac{1}{1 - \beta_{CEO} - \beta_{board}} \text{ otherwise} \quad (3.11)$$

After substituting for π_c and π_r from equations (3.53) and (3.54) in appendix (3.7.1), the payoffs from each type of firms are given by:

$$\pi_c^H = \lambda_c^H \frac{1 - \alpha}{\alpha} \cdot x_c \quad (3.12)$$

$$\pi_c^L = \lambda_c^L \frac{1 - \alpha}{\alpha} \cdot x_c \quad (3.13)$$

$$\pi_r = \lambda_r \frac{\alpha}{1 - \alpha} \cdot x_r \quad (3.14)$$

The expected payoff of the CEO is

$$W_c^H = \beta_{CEO} \cdot \lambda_c^H \frac{1 - \alpha}{\alpha} \cdot x_c \quad (3.15)$$

$$W_c^L = \beta_{CEO} \cdot \lambda_c^L \frac{1 - \alpha}{\alpha} \cdot x_c \quad (3.16)$$

$$W_r = \beta_{CEO} \cdot \lambda_r \frac{\alpha}{1 - \alpha} \cdot x_r + \psi \quad (3.17)$$

The CEO derives a private benefit from the implementation of the restarted project (ψ). Nevertheless, this private benefit should be such that the minimum CEO expected payoff in case of continuing project is equal to the payoff of the restarted project. Otherwise, the shareholders would not implement the project in the first place.

Assumption 5. Private benefit: $W_r \leq \min(W_L, W_H)$

The expected payoff for the board is:

$$B_c^H = \beta_{board} \cdot \lambda_c^H \frac{1 - \alpha}{\alpha} \cdot x_c \quad (3.18)$$

$$B_c^L = \beta_{board} \cdot \lambda_c^L \frac{1 - \alpha}{\alpha} \cdot x_c \quad (3.19)$$

$$B_r = \beta_{board} \cdot \lambda_r \frac{\alpha}{1 - \alpha} \cdot x_r \quad (3.20)$$

The expected payoff for the shareholders is:

$$S_c^H = (1 - \beta_{CEO} - \beta_{board}) \cdot \lambda_c^H \frac{1 - \alpha}{\alpha} \cdot x_c \quad (3.21)$$

$$S_c^L = (1 - \beta_{CEO} - \beta_{board}) \cdot \lambda_c^L \frac{1 - \alpha}{\alpha} \cdot x_c \quad (3.22)$$

$$S_r = (1 - \beta_{CEO} - \beta_{board}) \cdot \lambda_r \frac{\alpha}{1 - \alpha} \cdot x_r \quad (3.23)$$

3.4 Equilibrium

3.4.1 The trade-off between monitoring and advising boards

The trade-off between monitoring and advising boards may only happen when the level of expertise is high enough to incite the CEO to disclose firm specific information. We assume in this section that $a > \frac{1}{\sigma\delta}$.

3.4.1.1 Resource constraints

Boards differ in their type (H or L) and at date 1, we can distinguish three categories of firms: those that restart a project (whatever the type), firms of L-type board that continue the initial project and firms of H-type board that continue the initial project. The firm population mass is normalized to one. The type of the firm (H or L) is determined by the independence and the expertise level of the board. $\mu(\gamma, a)$ is the cumulative distribution function of firms regarding their independence level γ conditional to the expertise level a . f is the related density function. Then the distribution function is:

$$\mu(\gamma, a) = \int_0^\gamma f(x, a) dx \quad (3.24)$$

Because the population is normalized to one, we make the following assumption:

Assumption 6.

$$\forall a, \mu(1, a) = 1 \quad (3.25)$$

Because a board chooses to be H-type if the independence level is higher than the threshold γ^* , the proportion of L-type firms is $\mu(\gamma^*, a)$ and the proportion of H-type firms $1 - \mu(\gamma^*, a)$.

We denote by H_c (respectively L_c) the fraction of CEOs in type H firms (respectively type L) who continue their project. Since the number of firms is normalized to 1, the resource constraints write:

$$n_c^H + n_c^L + n_r \equiv 1 \quad \text{with} \quad \begin{cases} n_c^H = (1 - \mu(\gamma^*, a)) \cdot H_c \\ n_c^L = \mu(\gamma^*, a) \cdot L_c \\ n_r = (1 - \mu(\gamma^*, a)) \cdot (1 - H_c) + \mu(\gamma^*, a) \cdot (1 - L_c) \end{cases} \quad (3.26)$$

where n_c^H (respectively n_c^L) is the number of type H (respectively type L) firms which continue the project and n_r is the number of firms which restart the project.

3.4.1.2 Restarting project decisions

We consider CEO's decision to continue or abandon the initial project and restart a new one at date 1. An equilibrium is determined by the strategy (continuation or restart) of the CEO who observes the probability of success of the project and the private benefit driven from the restarted project.

CEOs with a L (H)-type board choose to continue their project as long as the expected value of conducting the initial project for the CEO (the value that the CEO can extract), W_c^L (W_c^H), is higher than the expected value of the restarted project, W_r . In equilibrium, as the probability of success of a L-type board is always lower than the probability of success of a H-type board, this condition is only binding for L-type boards.

Restarting decisions in turn satisfy the following rule:

$$W_r = W_c^L < W_c^H \quad (3.27)$$

This rule implies that, CEOs with a H-type board are always continuing:

$$H_c = 1 \quad (3.28)$$

CEOs with L-type board are indifferent between continuing or restarting, that is:

$$\beta_{CEO} \lambda_c^L \frac{1-\alpha}{\alpha} \cdot x_c = \beta_{CEO} \lambda_r \frac{\alpha}{1-\alpha} \cdot x_r + \lambda_r \psi \quad (3.29)$$

Taking into account the resource constraints (3.26), the market clearing condition writes:

$$x_c = \int_{\gamma^*}^1 \lambda_c^H H_c f(\gamma, a) d\gamma + \int_0^{\gamma^*} \lambda_c^L L_c f(\gamma, a) d\gamma \quad (3.30)$$

$$x_c = \int_{\gamma^*}^1 g(\gamma) \lambda f(\gamma, a) d\gamma + \lambda_c^L n_L \quad (3.31)$$

$$x_c = \int_{\gamma^*}^1 g(\gamma) \lambda f(\gamma, a) d\gamma + \lambda_c L_c \mu(\gamma^*, a) \quad (3.32)$$

$$x_r = \int_0^{\gamma^*} \lambda_r (1 - L_c) f(\gamma, a) d\gamma \quad (3.33)$$

$$x_r = \lambda_r n_r \quad (3.34)$$

$$x_r = \lambda_r (1 - L_c) \mu(\gamma^*, a) \quad (3.35)$$

The continued goods are produced by all monitoring boards and part of the advising boards whereas restarted goods are produced by part of the advising boards.

Substituting for (3.32) and (3.35) into (3.29) finally allows to determine the number L_c of firms with a L-type board that choose to continue:

$$\Leftrightarrow L_c = \frac{\frac{\psi\kappa}{\beta_{CEO}\lambda(1-\delta a)\mu(\gamma^*,a)} + \kappa^2 \frac{\alpha}{1-\alpha} + \frac{\alpha-1}{\alpha} \frac{\int_{\gamma^*}^1 g(\gamma)\lambda f(\gamma,a)d\gamma}{\lambda(1-\delta a)\mu(\gamma^*,a)}}{\frac{1-\alpha}{\alpha} + \frac{\kappa^2\alpha}{1-\alpha}} \quad (3.36)$$

$$\Leftrightarrow L_c = \frac{\kappa^2 \frac{\alpha}{1-\alpha} + \frac{\frac{\psi\kappa}{\beta_{CEO}} - \frac{1-\alpha}{\alpha} \int_{\gamma^*}^1 g(\gamma)\lambda f(\gamma,a)d\gamma}{\lambda(1-\delta a)\mu(\gamma^*,a)}}{\frac{1-\alpha}{\alpha} + \frac{\kappa^2\alpha}{1-\alpha}} \quad (3.37)$$

$$(3.38)$$

We can identify in the formula of the fraction of advising boards which continue the initial project (L_c) some interesting components. $\frac{\psi\kappa}{\beta_{CEO}}$ is the difference between the value of a successful continued project and a restarted project from the shareholder perspective and $\frac{1-\alpha}{\alpha} \int_{\gamma^*}^1 g(\gamma)\lambda f(\gamma,a)d\gamma$ is the value of the initial project related to the fact that some monitoring firms effectively produce the initial intermediate good (at the equilibrium). $\lambda(1-\delta a)\mu(\gamma^*,a)$ is the share of successful advising boards (i.e. firms with advising board which produce a good). We can rewrite the share of continued advising boards as:

$$\Leftrightarrow L_c = \frac{\kappa^2 \frac{\alpha}{1-\alpha} + \frac{V_c^L - V_r}{\lambda(1-\delta a)\mu(\gamma^*,a)}}{\frac{1-\alpha}{\alpha} + \frac{\kappa^2\alpha}{1-\alpha}} \quad (3.39)$$

$$V_c(Advising) - V_r = V_c - V_r - \frac{1-\alpha}{\alpha} \int_{\gamma^*}^1 g(\gamma)\lambda f(\gamma,a)d\gamma \quad (3.40)$$

The share of advising boards which continue the initial project depends on two terms: the rate of elasticity between the two factors of the production function (fixed whatever the level of expertise), the incentive value to continue the project relative to the share of successful advising boards ($V_c(Advising) - V_r$). $V_c(Advising)$ is the value of the initial intermediated goods generated by advising firms which successfully continue the initial project. The value of the continued goods is indeed the sum of the value due to the monitoring firms which successfully produce the initial project and the value due to the advising firms which successfully produce the initial goods.

3.4.2 Monitoring boards with low expertise level

In cases when $a \leq \frac{1}{\sigma\delta}$, the number of firms with L-type board is equal to zero. All firms have a monitoring board.

3.4.2.1 Resource constraints

In this case, the firms either continue the initial project or restart a new one during the productive stage. We denote by H_c the fraction of CEOs who continue the initial project.

Since the number of firms is normalized to 1, the resource constraints write:

$$n_c^H + n_r \equiv 1 \quad \text{with} \quad \begin{cases} n_c^H = H_c \\ n_r = (1 - H_c) \end{cases} \quad (3.41)$$

where n_c^H is the number of H-type firms which continue the project and n_r is the number of firms which restart the project.

3.4.2.2 Restarting project decisions

CEOs with a H-type board choose to continue their projects as long as the expected value that a CEO can extract from the continued project, W_c^H , is higher than the expected value of the restarted project, W_r . In equilibrium, this condition is binding for a H-type board implying that the number of H-type firms which continue the initial project satisfy the following indifference condition: $W_c^H = W_r$. As, at a fixed level of expertise, the expected payoff is increasing with the level of independence of the board, the CEOs who decide to implement the restarted project, are the ones with the lowest levels of board independence.

Restarting decisions in turn satisfy the following rule:

$$W_r = W_c^H \quad (3.42)$$

This rule implies that, CEOs with a H-type board are indifferent between continuing or restarting, that is:

$$\beta_{CEO} \lambda_c^H \frac{1-\alpha}{\alpha} \cdot x_c = \beta_{CEO} \lambda_r \frac{\alpha}{1-\alpha} \cdot x_r + \lambda_r \psi \quad (3.43)$$

Taking into account the resource constraint (3.41), and considering γ^{**} , the threshold of independence level below which the CEO decides to restart a new project, the market clearing condition writes:

$$x_c = \int_{\gamma^{**}}^1 \lambda_c^H f(\gamma, a) d\gamma \quad (3.44)$$

$$x_r = \int_0^{\gamma^{**}} \lambda_r f(\gamma, a) d\gamma \quad (3.45)$$

Substituting (3.44) and (3.45) into (3.43) finally allows to determine the number H_c of firms of type H that choose to continue:

$$\Leftrightarrow H_c = 1 - \gamma^{**} \text{ such that } x_c \left(\frac{1 - \alpha}{\alpha} - \frac{\kappa \alpha}{1 - \alpha} \frac{x_r}{x_c} \right) = \frac{\kappa \psi}{\beta_{CEO}} \quad (3.46)$$

H_c is independent of the level of expertise. There is no incentive to increase the level of expertise in this case.

3.4.3 Board's decision

Board's interests are aligned with shareholders' interests because the board receives a share of firm's profit determined by his level of expertise. The board maximizes shareholders' profit, by choosing its type regarding its own independence and expertise. At the end of the governance stage, the board also decides to run the company if the net present value of the project is positive after the payment of the CEO compensation. The net present value of the project should then satisfy:

$$(1 - \beta_{CEO} - \beta_{board}) \lambda_c^\theta V_c^\theta > 1 \quad (3.47)$$

3.4.4 Shareholders' decision

Shareholders maximize the profit from their initial investment \$1. At the beginning of the first stage, shareholders create the firm if and only if the expected return is at least equal to their initial investment. If shareholders receive repayment lower than the initial investment, they refuse to finance the CEO's project. Shareholders set an identical expectation for both types of boards since they can not distinguish between the two when the firm is created. Nevertheless, they can determine the optimal level of board expertise in order to maximize the expected payoff.

As board members belong to a limited and small labor market and firms have to compete to hire board members, the shareholders support an opportunity cost increasing with the level of board expertise. Moreover the increasing cost enables to reward the director's human capital. The more expert a board is, the higher the opportunity cost to hire the board is. We assume here that directors compensation is linearly dependent on the expertise level.

$$\beta_{board} = \beta_1 + \beta_2 * a \quad (3.48)$$

β_1 and β_2 are determined by the overall labor equilibrium and exogenous from a specific firms. Shareholders determine the optimal level a^{**} by maximizing:

$$\max_a (1 - \beta_{CEO} - \beta_{board}) (\lambda_c^H + \lambda_c^L) V^\theta \quad (3.49)$$

3.4.5 Incentive compatibility constraints

The incentive compatibility constraint ensuring that for $a \leq \frac{1}{\delta \sigma}$, H-type firms with a low probability of success choose to continue is:

$$\lambda_c^H H_c \cdot \beta_{CEO} \cdot V_c > \lambda_r (1 - H_c) \cdot (\beta_{CEO} \cdot V_r + \psi) \quad (3.50)$$

The incentive compatibility constraint ensuring that, for $g(\gamma^*) > (1 - \delta a)$, L-type firms with a low probability of success choose to continue is:

$$\mu(\gamma^*, a) \cdot L_c \cdot \lambda_c^L \cdot \beta_{CEO} \cdot V_c > \mu(\gamma^*, a) \cdot (1 - L_c) \cdot \lambda_r(\beta_{CEO} \cdot V_r + \psi) \quad (3.51)$$

Those conditions enable to determine the optimal level of CEO compensation depending on the value of the private benefit driven from the implementation of the restarted project.

3.5 The relationship between board characteristics and monitoring boards

This section interprets the different equilibria at the firm and the industry level depending on board and CEO decisions. The different properties enable to understand the various trade-offs between monitoring and advising types of boards.

3.5.1 Proposition 1. Expertise and monitoring boards.

When $a \leq \frac{1}{\sigma\delta}$, all boards choose to be monitoring.

When $a > \frac{1}{\sigma\delta}$:

- *When the cost for monitoring board in terms of advising quality is low ($1 < \sigma \leq 2$), a higher degree of expertise increases the share of firms with monitoring board (H-type).*
- *When the cost for monitoring board in terms of advising quality is high ($2 < \sigma \leq 4$), a higher degree of expertise increases (decreases) the share of firms with monitoring board (H-type) when $a > a^* = 1/2\delta$ (respectively $a \leq a^* = 1/2\delta$).*

Proof: see appendix 3.7.2.1.

Figure 3.3 presents the choice of monitoring or advising types by boards depending on the expertise and independence levels if the cost for monitoring board in terms of advising quality is high.

Below a threshold $a^* = \frac{1}{\sigma\delta}$, monitoring and advising boards can not co-exist. The level of expertise and then advise quality are low and CEO is not prone to disclose any firm specific information necessary for the board to adopt an advising behavior. The monitoring intensity $(1 - \delta a)$ is indeed stronger than the advising intensity (δa) for the advising type board. All boards are therefore of monitoring type.

When $a > \frac{1}{\sigma\delta}$, both board types co-exist in the industry. If the opportunity cost in terms of advising quality is low for the monitoring boards, there is an increasing share of monitoring boards with the level of expertise. The overall efficiency of advising boards is indeed decreasing with the expertise level, because the marginal benefit of advising for the “advising” type board is always lower than the related cost in terms of weaker monitoring. The advising type board spends less time monitoring the

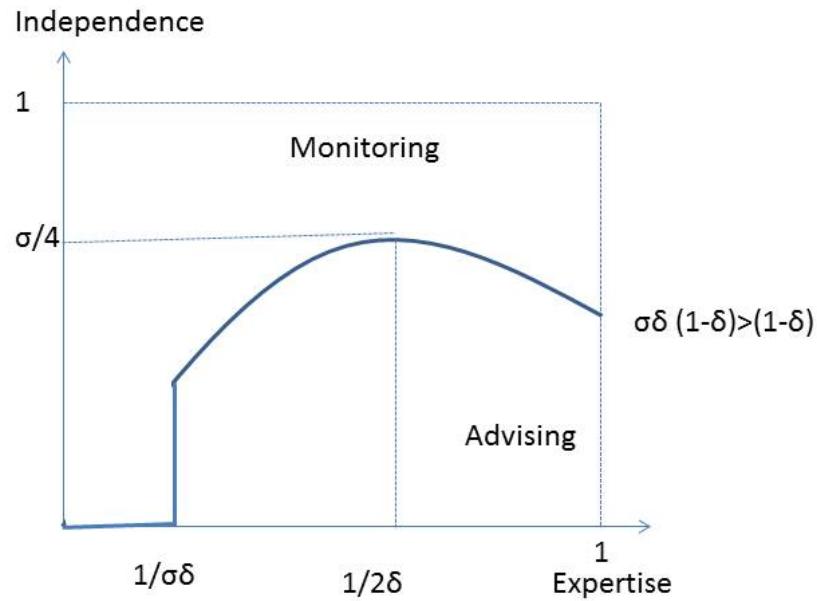


Figure 3.3: Board type depending on independence and expertise levels (second case)

CEO with the expertise level. On the contrary, the monitoring board does not support a large cost in terms of weak advising quality. From a shareholder perspective, the time trade-off between advising and monitoring functions for the advising board is more detrimental than the quality trade-off for the monitoring board when the expertise level is increasing.

If the cost in terms of advising quality is high for the monitoring type board, there is a non-monotonic relationship between the level of expertise and the share of monitoring boards. For the lowest level of expertise, there is an increasing share of advising boards because the expertise increases the overall benefit of both monitoring and advising functions for such board type. After the threshold $a^* = \frac{1}{2\delta}$, the share of advising boards is decreasing according to the same mechanisms as previously presented. The maximum share of advising boards is equal to $\frac{\sigma}{4}$ at $a^* = 1/2\delta$. The higher the monitoring intensity costs in terms of information asymmetry (increasing value of σ), the less there are monitoring boards. The relationship between the share of advising boards and expertise is then non-monotonous and more importantly the time trade-off between advising and monitoring functions is optimal at the medium level of expertise.

3.5.2 Proposition 2. The cost of monitoring board in terms of advising quality

The higher the quality trade-off between monitoring and advising for monitoring boards is (σ), the lower the minimal expertise level is to have both monitoring and advising boards at the industry level, and the lower the proportion of monitoring boards is at any expertise level. The cost of monitoring board in terms of advising quality is increasing with the level of expertise.

The minimal expertise level to have both monitoring and advising type boards is $\frac{1}{\sigma\delta}$. This threshold is inversely proportional to the cost of monitoring board in terms of advising quality (σ). The share of monitoring board is then $1 - g^{-1}(\sigma\delta a(1 - \delta a))$. The increase of σ is related to an increasing threshold of independence level when the board decides to switch from an advising type to a monitoring type, because g is a strictly concave function. The number of monitoring boards is then decreasing with σ . The difference between both types of boards in terms of advising quality is equal to $\delta a - \frac{1}{\sigma}$. This is therefore increasing with the level of expertise.

3.5.3 Proposition 3. Advising boards and CEO's private benefit

The increase of CEO's private benefit (ψ) decreases the number of advising boards which restart the project. The increase of profit share dedicated to CEO (β_{CEO}) reduces the number of advising boards which continue the initial project.

By assumption, the expected payoff of the restarted project for the CEO can not be higher than the expected payoff of the continued project. The increase of CEO's private benefit decreases the minimal value that the restarted project should have to be beneficial for the CEO to adopt an opportunistic behavior. But it increases the minimal value of continued goods required for firms to produce it. As the share of monitoring boards is independent from the private benefit derived from the restarted project, the only adjustment process in play is the increase in the share of advising boards who choose to continue the initial project. Advising boards are less sensitive to high private benefits as they do not share part of the rent extracted by the CEO. Advising boards may also have a disciplinary effect at the industry level regarding CEO's opportunistic behavior.

Proof: see appendix 3.7.2.2

3.5.4 Proposition 4. The cleansing effect of expertise

Below a^ , the expertise has no impact on the share of firms with a monitoring board who restart a new project.*

Above a^ , a higher degree of expertise increases the share of firms with an advising board that choose to continue their initial business if the incentive value to continue ($V_c(\text{Advising}) - V_r$) relative to the share of successful advising boards is increasing with the expertise level.*

Below a^* , the share of monitoring boards who choose to restart a new project is constant and independent on the expertise level according to equation (3.46).

Above a^* , the share of advising boards who choose to continue the initial project is given by equation (3.40). There is a constant term and a variable term relative to the expertise level. First, the successful share of advising boards $\lambda(1 - \delta a)\mu(\gamma^*, a)$ is decreasing with the level of expertise so the inverse is increasing. The incentive value $(V_c(\text{Advising}) - V_r)$ is decreasing with the expertise level because the value derived from successful monitoring boards is increasing.

3.6 Conclusion

A vast literature on corporate governance characterizes board functioning with a strategic communication model (Crawford and Sobel, 1982). Adams and Ferreira (2007) successfully demonstrate that an independent board is not always the best board composition to maximize both monitoring and advising board outputs on firm decisions and performance. More recently, Baldenius et al. (2014) propose to separate the monitoring and advising functions in the corporate governance model at the director level. Our model follows the same idea to investigate the monitoring-advising trade-off depending on board composition. But our model proposes an original framework to analyze the link between board composition and firm performance. On the one hand, we emphasize two main board types (monitoring and advising), rather than director type, at the industry level. On the other hand, we take into account both independence and expertise as determinants of board quality. The main results can be summarized by Figure 3.4.

We show that for low levels of expertise, there are only monitoring boards at the industry level. From a certain threshold of expertise, advising and monitoring boards co-exist. The share of monitoring boards is first decreasing (if the parameters enable this situation) and then increasing with respect to the expertise level. The share of advising boards is then increasing with the expertise and decreasing for the highest level of expertise. Regarding CEO's decisions at the production stage, when there are only monitoring boards, the firm with the non-independent board are more likely to let the CEO adopt an opportunistic behavior at the expense of the shareholders. The others continue the initial project in the interest of the shareholders. Above the expertise threshold, all monitoring boards continue the initial project. The share of advising boards which decide to restart a new project during the production stage is not always decreasing with respect to the level of expertise. The share of advising boards which let the CEO adopt an opportunistic behavior is decreasing with the expertise, if and only if, the incentive value to continue the optimal project with respect to the opportunistic project decreases more slowly than the total number of successful advising boards. The cleansing effect of expertise depends then on the trade-off between monitoring and advising behaviors.

From a performance perspective, the model suggests that for the low levels of expertise, there is a positive relationship between the level of independence and firm performance above a independence threshold for which the CEO is not able to restart the new project. Below this threshold, the model predicts a smaller positive relationship between independence and performance due to the lower likelihood of project success. For the low levels of expertise, the relationship between independence and firm performance is non-linear whatever the level of expertise. When advising and monitoring boards

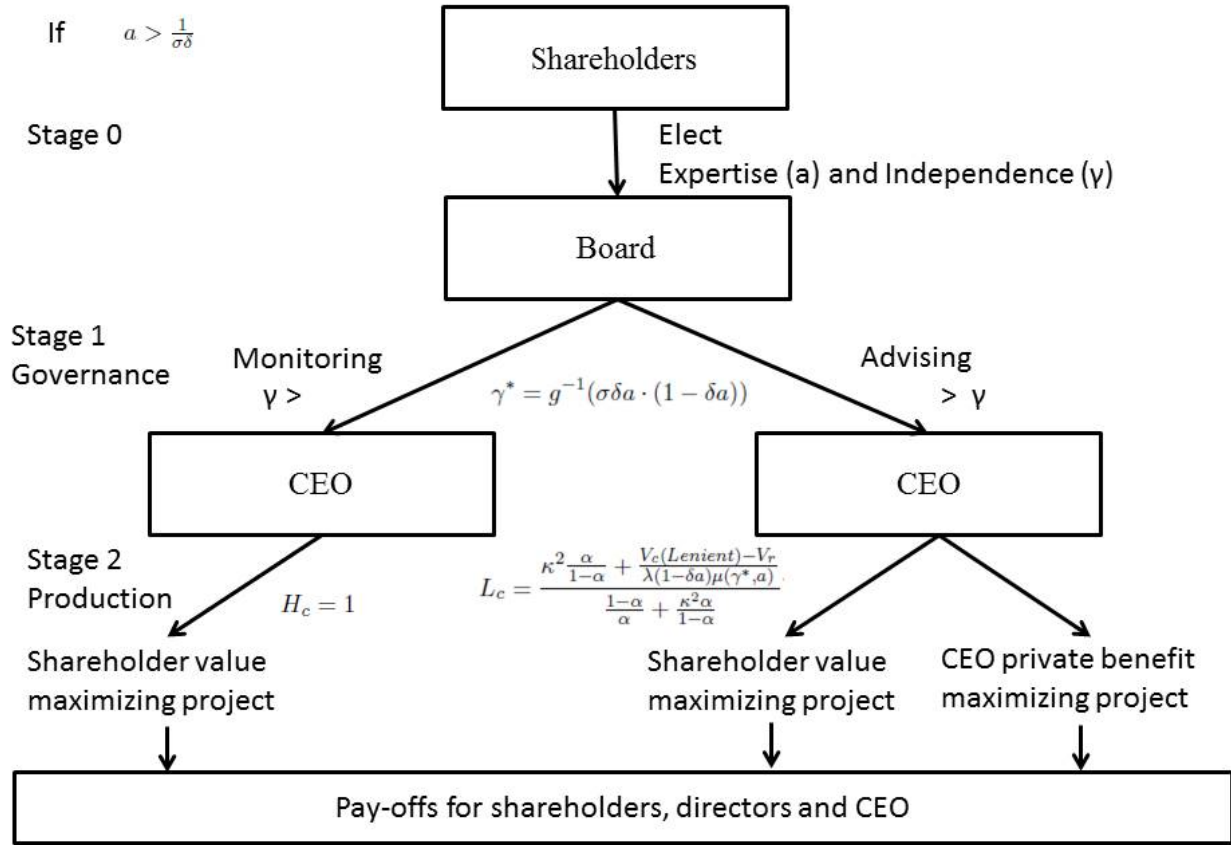


Figure 3.4: Overview on board's and CEO's decisions

co-exist, the relationship between independence and performance is more complex. Conditional on expertise, the model predicts a positive relationship between independence and performance above an independence threshold. This threshold depends on the cost of monitoring boards in terms of advising quality and on the expertise level. Below this threshold, there is no expected relationship with independence. When the expertise level increases, the positive relationship between independence and performance covers a larger spectrum of the independent board. Regarding expertise, there is a positive relationship between expertise and firm performance if the cleansing effect is in play. Otherwise, a negative correlation may be highlighted. The final output is a non-linear relationship between independence, expertise and firm performance. It is also very likely that the classic linear model used in corporate governance fail to capture the complex effect highlighted by this theoretical model. However, the model is consistent with the empirical studies which show that firm value is related to the share of independent expert directors inside the boardroom (Wang et al., 2013; Faleye et al., 2014). Indeed, these firms belong to the monitoring board at a high level of expertise (right top corner on Figure 3.3). The model is also consistent with Dass et al. (2014) that demonstrate a positive association between expert board and firm performance. Indeed, the model shows that firm performance increases with the level of expertise if there is a cleansing effect. However, more importantly, the model suggests to investigate the relationship between board composition and firm performance according to independence and expertise criteria.

This model opens new perspectives in the corporate governance research. First, our model links directly monitoring board with the independence level and advising board with the expertise level. Investigating some interactions between independence and expertise within a specific behavior could be an interesting perspective to better understand the trade-offs inside the boardroom. Indeed, independence and expertise may be complementary. Second, we assume that independence is homogeneously distributed for each level of expertise. However, the empirical literature shows most of the time a trade-off between independence and expertise among directors and some supply shortage regarding directors who hold both characteristics (Knyazeva et al., 2013). We may introduce in the model a more complex director labor market and analyze the consequences on the different equilibriums. It may worsen the cleansing effect of expertise and favor CEO's opportunistic behavior. Moreover, it enables to link the director selection to the board monitoring issues, especially when we take into account director compensation. Third, the model predicts some non-linear relationships between independence and firm performance when we control for expertise level. These predictions should be tested on data.

3.7 Appendix

3.7.1 Description of the productive stage

In the production stage, we consider an economy composed of two industries: a final good industry and an intermediate goods industry. Intermediate goods are used as factors of production in the final good industry. The final good is produced using two different types of intermediate goods: The goods produced by continued firms (labelled c) and the goods produced by refinanced firms (labelled r).

The production function is a Cobb-Douglas:

$$y = x_c^\alpha x_r^{1-\alpha} \quad (3.52)$$

where y is the final good production in a competitive environment using both continued firms' goods, x_c , and restarted firms' goods, x_r , and where $0 < \alpha < 1$.

The profit maximization problem by a representative firm in this industry leads to the following inverse demand for inputs:

$$p_c = \frac{\partial y}{\partial x_c} = \alpha x_c^{\alpha-1} x_r^{1-\alpha} \quad (3.53)$$

$$p_r = \frac{\partial y}{\partial x_r} = (1-\alpha) x_c^\alpha x_r^{-\alpha} \quad (3.54)$$

where p_c denotes the price of continued firms' goods and p_r the price of restarted firms' goods. Consequently, the equilibrium price of each intermediate good, x_c and x_r is given by its marginal product.

Intermediate goods are used to produce the final good according to a one-for-one technology. In particular, it is assumed that x units of final good requires x units of intermediate goods. Given the inverse demand for intermediate goods in the final good sector (3.53) and (3.54), the optimization program for continued firms, c and for restarted firms, r is given by:

$$\begin{aligned} \max_{x_c} p_c x_c - x_c &= \alpha x_c^\alpha x_r^{1-\alpha} - x_c. \\ \max_{x_r} p_r x_r - x_r &= (1-\alpha) x_c^\alpha x_r^{1-\alpha} - x_r. \end{aligned}$$

from where we obtain the profit-maximizing prices and the flow of profits for each type of business:

$$\begin{aligned} p_c &= \frac{1}{\alpha}, \quad p_r = \frac{1}{1-\alpha} \\ V_c &= \frac{1-\alpha}{\alpha} \cdot x_c, \quad V_r = \frac{\alpha}{1-\alpha} \cdot x_r \end{aligned} \quad (3.55)$$

3.7.2 Proofs

3.7.2.1 Proof of Proposition 1

The proof is made for a general set of functions $g(\cdot)$.

Note that function $g(\cdot)$ is continuous and strictly increasing. Then, the inverse function, g^{-1} is also continuous and strictly increasing. From equation (3.7) we get

$$\frac{\partial \gamma^*}{\partial a} = g^{-1'}(\sigma \delta a(1 - \delta a)) \cdot \sigma \delta (1 - 2\delta a)$$

where $g^{-1'}(\cdot) > 0$.

If σ is higher than 2, the number of advising firms, equal to γ^* , increases when $\frac{1}{\sigma\delta} < a < \frac{1}{2\delta}$ and decreases when $a > \frac{1}{2\delta}$. At $a = \frac{1}{2\delta}$, the percentage of advising boards is $\frac{\sigma}{4}$. Then σ should not be higher than 4 in order to keep γ^* under 1.

Given that the number of boards that choose to run type H firms is equal to $1 - \gamma^*$, we have

$$\frac{\partial H}{\partial a} > 0 \Leftrightarrow (1 - 2\delta a) < 0$$

Then the number of monitoring firms, equal to $1 - \gamma^*$, decreases when $a_i < \frac{1}{2\delta}$ if σ is higher than 2, and increases when $a_i > \frac{1}{2\delta}$ in any case. At $a_i = \frac{1}{2\delta}$, the percentage of monitoring boards is $1 - \frac{\sigma}{4}$. If σ is lower than 2, the number of advising board is decreasing from $\frac{1}{\sigma\delta}$ to 1. The number of monitoring board is increasing.

3.7.2.2 Proof of Proposition 3

The share of advising boards who choose to continue the initial project is then:

$$L_c = \frac{\kappa^2 \frac{\alpha}{1-\alpha} + \frac{\frac{\psi\kappa}{\beta_{CEO}} - \frac{1-\alpha}{\alpha} \int_{\gamma^*}^1 g(\gamma) \lambda f(\gamma, a) d\gamma}{\lambda(1-\delta a) \mu(\gamma^*, a)}}{\frac{1-\alpha}{\alpha} + \frac{\kappa^2 \alpha}{1-\alpha}} \quad (3.56)$$

$$(3.57)$$

$$\frac{\partial L_c}{\partial \psi} = \frac{\kappa}{\beta_{CEO} \lambda (1 - \delta a) \mu(\gamma^*, a) \left(\frac{1-\alpha}{\alpha} + \frac{\kappa^2 \alpha}{1-\alpha} \right)} \quad (3.58)$$

$$\frac{\partial L_c}{\partial \psi} > 0 \quad (3.59)$$

The partial derivative of the share of advising boards relative to ψ is always positive.

Independent directors: Less informed, but better selected than affiliated directors?

Joint work with S. Cavaco (University Paris-Panthéon Assas), P. Crifo (University Paris Ouest-Nanterre-La Défense, Ecole Polytechnique and CIRANO) and A. Rebérioux (University Paris-Diderot)

Abstract

This chapter examines the role of director unobservable heterogeneity in firm performance. Using French data, we develop an original empirical strategy based on the AKM (Abowd, Kramarz, Margolis) methodology that allows estimating director fixed effects for a comprehensive, large sample of directors. We first show that being independent relative to affiliated inside the boardroom is negatively related to performance when controlling for unobservable individual heterogeneity. This result suggests that independent board members experience a strong informational gap that outweighs other monitoring benefits. However, we show that industry-specific expertise and informal connections inside the boardroom may help bridge this gap. Second, we provide evidence that independent directors have a higher intrinsic ability compared to affiliated board members, consistent with a selection process of independent board members made in the best interests of minority shareholders.

Key words: : independent director heterogeneity, information asymmetry, director selection, firm performance, two-way fixed effect model

JEL codes: C21, G34, L21, M14

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4.1 Introduction

Do independent directors significantly improve the quality of corporate governance? Few questions have received more interest in the corporate finance and management literature. Since at least the mid-1980s, independence has been the main criterion to assess the adequacy of board composition in the USA, the UK and continental Europe, with the aim to strengthen board monitoring effectiveness. In particular, considerable attention has been paid to the empirical relationship between board independence and firm performance, without conclusive results (see e.g. Bhagat and Bolton, 2008; Wintoki et al., 2012). So far, these studies have neglected one important aspect of the independence - performance nexus: the role of individual unobservable characteristics. This chapter shows that taking into account these unobservable characteristics allows a better understanding of the benefits and costs of independent directors relative to affiliated directors and insiders.

The importance of unobservable individual characteristics is directly related to what is increasingly considered as a key issue in corporate governance: the selection of board members and the relative bargaining power of CEOs, incumbent directors and shareholders in this process (Hermalin and Weisbach, 1998). Directors are not randomly allocated across companies. For instance, a powerful CEO may be reluctant to appoint high ability individuals as independent directors in order to avoid a strengthening in the board monitoring effectiveness. In contrast, powerful shareholders may favor the selection of the best individuals as independent members. If effective, these processes will result in distinctive intrinsic ability distributions across groups of directors (independent, affiliated and insider, Clarke, 2007). Affiliated directors (to the firm) and insiders (executive directors) are indeed more likely to be appointed inside the boardroom for representing the management, blockholders, customers, suppliers or employees rather than for their intrinsic ability. Selection considerations will then interfere with board functioning, together determining independent board members' overall effectiveness (Adams et al., 2010; Withers et al., 2012).

Extensive researches have been devoted to individual unobservable attributes in labour economics and managerial studies. In labour economics, there is large evidence that productivity and remuneration are not only driven by observable characteristics (education, occupation, tenure, etc.) but also by unobservables (such as intrinsic ability) (see e.g. Abowd and Kramarz, 1999). In managerial studies, several researches have examined whether firm performance might be partly driven by top executives unobservable traits, defining a “managerial style” (Bertrand and Schoar, 2003). Interestingly, the idea that director unobservable attributes might impact corporate governance and firm performance has received so far very little consideration.

This chapter develops an original empirical strategy that allows estimating director fixed effects for a comprehensive and large sample of individuals. This strategy rests on the Abowd Kramarz Margolis (AKM) methodology (Abowd et al., 1999), which makes use of (longitudinal) linked employer-employee data to disentangle firm effects and person effects in wage formation. This empirical method has been used in different fields, like education economics to measure the contribution of school quality and student ability in test scores (Kramarz et al., 2008) or finance to evaluate the effects of managers and firms on mutual fund performance (Huang and Wang, 2015). Applied to the corporate governance-firm performance context, this methodology makes it possible to estimate separately director fixed effects and firm effects in firm performance equation. Moreover, we extend this approach to estimate

the effect of board-related attributes (e.g., independence, specific expertise, informal network connection), netted out individual ability and firm unobservable heterogeneity. The AKM method rests yet on the assumption of exogenous mobility of directors across companies. Several tests are classically conducted to validate ex-post this assumption (Card et al., 2013; Flabbi et al., 2014), all supported by our data. In addition, as highlighted by the corporate governance literature as a key issue (Hermalin and Weisbach, 2003; Adams et al., 2010), we check that the endogeneity regarding independence does not drive our results.

Our empirical strategy has two advantages, and delivers two distinct results.

First, controlling for director fixed effects alleviates the individual heterogeneity concerns when considering the relationship between independence and other board-related attributes, on the one hand, and performance, on the other hand. We are thus able to directly observe the net effect of independent position inside the boardroom relative to affiliated or insider position, irrespective of individual intrinsic ability. Our estimation reports a negative significant correlation between independent position and firm performance. This evidence is consistent with the idea that independent directors support an informational gap, as top executives may be reluctant to share firm-specific information with board members dedicated to monitoring (Adams and Ferreira, 2007). More precisely, it suggests that the costs of the informational gap outweigh the benefits of more intense monitoring associated with independence. We also show that industry-specific expertise and informal connections (from elite institutions) inside the boardroom may help bridge this gap. However, some social connections with the CEO may increase the agency cost.

Second, estimating director fixed effects helps identify the type of selection process that occurs in the appointment of independent directors because it allows for a direct test of the difference in (economic) intrinsic ability distribution between independent and non-independent board members. When controlling for individual observable attributes unrelated to intrinsic ability that may affect director fixed effect estimation and firm fixed effects, quantile regressions show that there is a decreasing positive correlation between individual ability and independence within firms. This evidence is consistent with a selection process whereby the most talented individuals are appointed as independent directors. It supports the view that the selection of independent board members is made in the best interests of minority shareholders, rather than in the objective of limiting the intensity of monitoring.

Our estimations are conducted on a database of 108 French listed firms (among the SBF120 index, i.e., the 120 largest listed companies on Euronext Paris, excluding financial companies), combining firm-level and individual information for 1,279 distinct directors over the 2006-2011 period. The French corporate governance model has some important similarities with Anglo-Saxon countries, following a process of convergence over the last 20 years (Martynova and Renneboog, 2011). Unsurprisingly, in such an environment, independence has become the conventional wisdom, a decade after the USA and the UK. However, the French corporate governance model presents its own characteristics, making it an interesting and complementary subject for the literature. In particular, board composition is more diversified in France than in the US or the UK, at least regarding independence: in our sample, the average proportion of independent directors is 49%, with a standard deviation of 21% and there are less than 5% of “super-majority boards” (i.e., with more than 80% of independent board members).

Such variation allows for a more precise estimation of the independence-performance relationship. In addition, independent board members cohabit with affiliated directors, who account for 42% of board members (the last group is insiders, with a proportion of 9%). The importance of affiliated directors, unusual for Anglo-Saxon standards, is directly related to corporate governance *à la française* that combines family ownership, cross-holdings in equity capital and labor representation at the board level (although to a much smaller extent than in Germany, Fauver and Fuerst, 2006). As such, affiliated directors play a particular role in corporate governance by providing specific resources and strategic advice to top management (Hillman and Dalziel, 2003). In our study, the benefits and the costs of independence can therefore be assessed relatively to the benefits arising from the affiliation of non-executive directors. Finally, the French corporate system is characterized by the intensity of multiple directorships (or “cumul des mandats”, see Fanto, 1998). In our sampled period, one quarter of the directors (323 of 1,279) are “movers” or multiple board holders. It turns out to be a significant advantage from a methodological perspective, as our identification strategy requires sufficient director “mobility” among sampled firms to accurately differentiate firm and individual fixed effects. In addition, the fact that some directors are independent and affiliated across their directorships enables to correctly disentangle the effect of position and the director fixed-effect. All these properties of the French corporate governance model therefore perfectly suit the requirements of AKM framework in order to estimate the position, director and firm effect in the firm performance.

Our chapter contributes to two different strands of the literature: the role of individual talent in business conduct and the informational gap of independent directors.

Regarding the role of individual talent in business conduct, there has been an increasing interest since Bertrand and Schoar (2003) in the way managerial heterogeneity may affect governance structure, firm decision and performance, and executive compensation (see, e.g., Graham et al., 2012; Coles and Li, 2013; Arena and Braga-Alves, 2013; Fee et al., 2013). We extend this analysis to company directors and connect our results to board members’ selection. The estimation of director fixed effects has been used as a robustness check for a small sub-sample of agents by a few papers (see, in particular, Nguyen and Nielsen, 2010; Masulis and Mobbs, 2014). An (unpublished) study by Richardson et al. (2003) directly investigates director fixed effects. There are, however, two key differences with our approach. First, the authors are interested not in firm performance but in a range of firm policies (regarding governance, financial disclosure and strategic policies). Second, they do not use the AKM method but rather limit their investigation to directors who sit on at least two different boards at the same time, leading to a possibly problematic selection bias. As will be clear in the empirical strategy section, we are able to estimate individual fixed effects for multi-board and single-board individuals, as long as they belong to the so-called “connected group” (which covers 96% of the directors present in our sample). We are therefore the first, to the best of our knowledge, to estimate director fixed effects for a comprehensive, large sample of firms and individuals.

Regarding the debate on the informational gap (Adams and Ferreira, 2007; Faleye et al., 2011; Faleye, 2015; Cai et al., 2015) and the factors that may mitigate it, our approach allows the assessment of how independence, expertise and informal network affiliation relate to performance, netted out unobservable individual heterogeneity concerns. This is important because there are good reasons to believe (i) that the independence status is correlated with intrinsic individual ability whenever selection occurs in

the appointment process and (ii) that having industry-expertise or belonging to a network from elite institutions is correlated with intrinsic ability. In addition, the results provide new evidence for how independence benefits from industry expertise, following the studies of Wang et al. (2013) and Faleye et al. (2014). Regarding social network, whereas Nguyen (2012) and Kramarz and Thesmar (2013) show the negative impact of educational connection between CEO and board members on corporate governance quality and firm performance, partly confirmed by our investigation, our results highlight a positive effect of connections among board members, except the CEO, to foster independence effectiveness (see also Fogel et al., 2014). Finally, the strict “true” independence, netted out of industry expertise and social connection effects, is negatively related to firm performance, confirming the cost of a strict monitoring ability (Faleye, 2015).

The remainder of the chapter is organized as follows. Section 4.2 introduces the literature and hypotheses of our study. Section 4.3 discusses our identification strategy. Section 4.4 presents the data and section 4.5 details our results. Section 4.6 examines endogeneity issues and section 4.7 concludes.

4.2 Literature review and hypotheses

This section presents alternative hypotheses regarding the extent of the informational gap suffered by independent directors on one side and the selection process of independent board members on the other side.

4.2.1 Board functioning and the informational gap

The main benefit expected from board independence is the limitation of collusion between directors and corporate officers, thereby reducing agency costs (Hermalin and Weisbach, 1998). However, seminal papers by Raheja (2005) and Adams and Ferreira (2007) stress that corporate executives may be reluctant to share firm-specific information with outside, independent directors. This informational gap may, of course, impede the ability of independent directors to both effectively monitor and advise corporate executives. If true, independence may have a detrimental effect on firm performance, especially when the firm operates in complex environments (Duchin et al., 2010; Faleye et al., 2011). Ultimately, whether being independent brings benefits to the firm is an empirical question. We therefore state the following hypothesis:

Hypothesis 1 (H1): if the benefits of independence outweigh its costs, we expect a positive correlation between firm performance and being independent.

Hypothesis 2 (H2): alternatively, if the costs of independence outweigh its benefits, we expect a negative correlation between firm performance and being independent.

Two elements may reduce the informational deficit of independent directors, thereby enhancing their effectiveness: industry expertise and social connections at the board level.

The fact that industry expertise may strengthen board effectiveness has received empirical support in the literature. For instance, Dass et al. (2014) report a positive conditional correlation between firm value and the share of “directors in related industries”. However, it has long been recognized that the

criteria used in virtually all jurisdictions to define independence do not favor such industry expertise (Baysinger and Hoskisson, 1990). This does not mean, however, that all independent directors are amateurish regarding the firm business model. Crucially, a few recent papers have produced evidence consistent with the argument that such expertise is specifically important regarding independent board members' effectiveness (see, in particular, Faleye et al., 2012; Wang et al., 2013).

Hypothesis 3a (H3a): if industry-expertise helps to bridge the informational gap experienced by independent directors, we expect a positive correlation between firm performance and the interaction term being expert*being independent.

A second important factor may impact the effectiveness of independent directors: the extent of informal connections with non-executive board members or corporate executives. Sharing social networks with at least some other board members should increase her power and effectiveness (Fogel et al., 2014). Informal connections ease information circulation among network members (Cohen et al., 2007; Coles et al., 2012) and most likely increase the strength of conviction for a person belonging to the network. We therefore expect social connections to narrow the independent director informational gap: as such, they will be associated with greater firm performance.

Hypothesis 3b (H3b): if social connections among directors helps to narrow the informational gap experienced by independent directors, we expect a positive correlation between firm performance and the interaction term being connected with board members*being independent.

In the same way, being connected to the CEO may enhance the ability of an independent director to extract firm-specific information: informal networks foster a climate of mutual trust that should favor information sharing, thereby reducing the informational gap (Cohen et al., 2010; Schmidt, 2014).

Hypothesis 3c (H3c): if social connections with the CEO helps to narrow the informational gap experienced by independent directors, we expect a positive correlation between firm performance and the interaction term being connected with the CEO*being independent.

However, informal connections with the CEO may also limit the willingness of independent directors to supervise and sanction him. Using French data, Nguyen (2012) and Kramarz and Thesmar (2013) present evidence consistent with this hypothesis: they show that social networks (defined through education and career) decrease the probability of CEO dismissal when the company under-performs and increase CEO compensation (see also Hwang and Kim, 2009; Nguyen, 2012; Coles et al., 2014). We therefore expect social connections to increase the agency cost related to the independent director: as such, they will be associated with lower firm performance.

Hypothesis 3d (H3d): if social connections with the CEO increase more the agency cost than the benefit from reducing the informational gap experienced by independent directors, we expect a negative correlation between firm performance and the interaction term being connected with the CEO*being independent.

4.2.2 Director selection and heterogeneity

The previous discussion focused on board functioning, but a full understanding of the economics of independence also necessitates investigating directors' appointment and selection. By selection, we consider any process that contributes to heterogeneity in terms of ability across groups (i.e., independent versus affiliated directors).

To be clear, let us consider as a starting point where there are two groups of potential non-executive directors: affiliated and independent. We may assume that the distribution of talents is strictly similar across these two groups, and normally distributed¹. However, we only observe directors who have been effectively appointed at the board. There will be selection if the ability distribution of independent directors is significantly different from the distribution of affiliated directors. It is important to note that affiliated directors are most likely not selected on the basis of their intrinsic ability but rather for specific attributes that are orthogonal to it. Indeed, affiliated directorship is (usually) based on a representativeness principle (for instance, a blockholder representative or worker representative). Accordingly, affiliated directors would be randomly chosen on the (normal) distribution of potential affiliated board members, so the distribution of ability for this group should reflect the whole ability spectra. On Figure 4.1, affiliated directors' ability distribution is drawn by the dash line (so called "No selection" case). The situation may be different for independent directors because the ability (most likely correlated with a set of observable attributes for the shareholders but not for the econometricians) is likely to be the primary criterion of selection. On Figure 4.1, we plot the ability distribution for independent directors under two alternative selection processes (plain lines): the first one ("shareholder-friendly selection") induces a shift on the right with a left truncation for the ability distribution relative to the reference distribution, while the second one ("CEO-friendly selection") induces a shift on the left with a right truncation. The following paragraphs provide more details about director selection processes and the related individual ability distribution.

Shareholders are empowered with the right to elect and remove directors. This power may impede the appointment of low ability directors, especially if investors are able to observe, determine or infer director ability through different signs (such as board meeting attendance or behavior in other companies) before their appointment or renewal. Cai et al. (2009) show, for example, that directors who attend less than 75% of board meetings receive 14% fewer votes in the general assembly. Besides voting rights, shareholders also have the opportunity to sell and buy stocks, therefore impacting the firm value. Investors' opinion on particular individuals may therefore cause positive or negative movements in the firm's value, forcing corporate agents to act in the best interests of shareholders. A few studies yield evidence of such reputation effects: in particular, Fich (2005) shows that the cumulative abnormal return following the appointment of a director who is CEO of another firm j increases with the (industry-adjusted) ROA of firm j . More recent evidence of such effects is provided by Masulis and Mobbs (2011) for inside directors and by Ertimur et al. (2012) for outside directors in firms involved in the 2006-2007 option backdating scandal. Negative stock market reaction may force corporate agents to avoid low ability individuals and to look for talented outside directors who will comply with regulatory requirements on the one hand and please investors' expectations on the other

¹Insider directors may present a selection bias because they usually hold the most powerful positions in the firm (CEO, CFO) and should be hired as the most talented directors on a competitive executive labor market. The distribution of insiders' intrinsic ability is very likely to be specific and could not be used as reference.

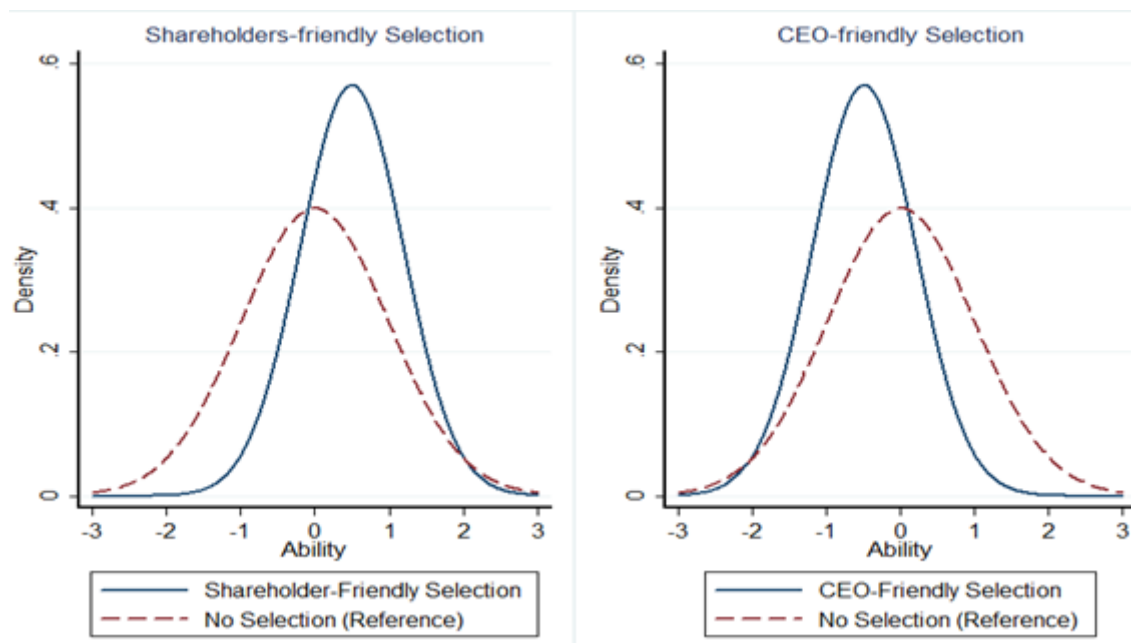


Figure 4.1: Theoretical independent directors' ability distribution under different selection processes

Notes: The dash line represents the ability distribution for independent directors when no selection occurs: this distribution should then be similar to the affiliated directors' distribution (taken as reference). In contrast, plain lines represent the distribution for independent directors when selection occurs: a shareholder-friendly selection process on the left, and a CEO-friendly selection process on the right.

hand. The selection process of independent directors will then be such that low ability persons should have a lower probability of entering the boardroom. In light of this argument, we state the following final hypothesis:

Hypothesis 4 (H4, shareholder-friendly selection): if the influence of shareholders in the selection process is strong enough, we expect to observe more frequently the appointment of high ability individuals as independent directors compared with affiliated directors.

If verified, this first process ("shareholder-friendly selection") induces a left-truncation and a shift on the right for the ability distribution of independent directors (see Figure 4.1) because the low ability individuals are less likely to be appointed as independent directors relative to the affiliated counterparts.

While shareholders have voting rights, a number of authors have argued that their direct influence over board makeup is actually limited (see, e.g., Warther, 1998). Regarding removal, staggered boards offer incumbent directors significant (and rather common) protection. Regarding appointment, the influence of top executives on the slate of nominees is arguably dramatic (Bedchuck and Fried, 2004). In addition, the vast majority of elections are uncontested. French corporate law arguably gives shareholders more authority over board composition (Armour et al., 2009), particularly considering removal. Shareholders in French listed companies may revoke directors *ad nutum*, at any general assembly meeting (Code de commerce, article 225-18). Nevertheless, (minority) shareholders' *de facto* power is quite limited: *ad nutum* revocation is extremely rare, and the slate of nominees is also influenced by top executives. In light of these elements, the involvement of CEOs in directors' selection is hardly negligible.

It is then possible for direct managerial influence to be strong enough to allow CEOs to make up the board composition according to their own interests or preferences (Hermalin and Weisbach, 1998). There is empirical evidence supporting this argument. In the US, Shivdasani and Yermack (1999) observe that when the CEO serves on the nominating committee (or when no such committee exists), companies appoint fewer independent directors. Cohen et al. (2012) provide evidence that firms tend to select so-called “cheerleaders” as independent directors, that is, individuals who are overly sympathetic to top management. In the French case, Kramarz and Thesmar (2013) show that the probability for a director to be appointed in firm j increases when (s)he belongs to the same network as the CEO (defined in terms of education or career). Accordingly, just as managerial power may be used to extract rent in the form of soaring compensation (Bedchuck and Fried, 2004), CEOs may use their power to reduce the monitoring effectiveness of the board. Consistent with this idea, Carcello et al. (2011) show that firms that experiment the most severe restatements are those where the CEO is involved in the selection process. Because board monitoring effectiveness mainly depends on independent directors, CEOs may use their influence to avoid the appointment of “high ability” individuals as independent. In contrast, no effort should be made to screen (and reject) low ability individuals. This argument is, to some extent, a simple extension of Adams and Ferreira (2007) argument: though they portray CEOs as voluntarily restricting the share of firm-specific information to limit the monitoring effectiveness of independent directors, it is plausible that CEOs use their influence to avoid the appointment of highly talented persons as independent board members. We end up with the following prediction about the relationship between director position and individual ability:

Hypothesis 5 (H5, CEO-friendly selection): if independent directors are opportunistically selected by CEOs, we expect to observe more frequently the appointment of low ability individuals as independent directors compared with affiliated directors.

This second process (“CEO-friendly selection”) implies a right-truncation and a shift on the left for the distribution of talents among independent board members (see Figure 4.1) because the high ability individuals are less likely to be appointed as independent directors relatively to the affiliated directors.

4.3 Identification strategy

4.3.1 General approach

To test our hypotheses, we need to estimate the role of time-invariant unobservable director heterogeneity (or ability) in determining firm performance. This approach extends the analysis conducted by Bertrand and Schoar (2003) that empirically imputes part of firm performance to top-executives' (CEOs and Chief Financial Officers and other top managers) individual characteristics (see also, e.g., Perez-Gonzalez, 2006; Bennedsen et al., 2007). Here, we consider director effects rather than managerial effects. We disaggregate the firm-level performance equation at the individual level, where each observation is a triplet (director-firm-year). Basically, the model we want to test is the following:

$$Y_{i,j,t} = \rho + \beta X_{j,t} + \gamma Z_{j,t} + \mu_i + \delta_j + \theta_t + \epsilon_{i,j,t} \quad (4.1)$$

Where $Y_{i,j,t}$ is the performance at time t of firm j where director i holds a seat, μ_i is a personal identifier (director fixed effect), δ_j is a firm identifier (firm fixed effect) and θ_t is a time dummy. Director fixed effects capture both time- and firm-invariant observable attributes (gender, nationality) and (unobservable) intrinsic ability. $X_{j,t}$ is a vector of board structure variables (including board size, proportion of women and the proportions of independent directors and of insiders) and $Z_{j,t}$ is a vector of firm characteristics (e.g., number of employees, financial leverage). The last component is the statistical residual $\epsilon_{i,j,t}$.

In their seminal paper, Bertrand and Schoar (2003) use top executives movement across companies to separately estimate personal identifiers and firm identifiers, by time-demeaning over i . There is, however, one problem with this approach (Huang and Wang, 2015): individual fixed effects are estimable only for movers, i.e. for individuals that are present in at least two companies over the period of interest. These movers are likely to be not numerous, and significantly different from non-movers (inducing selection bias). In our case, 25% of the directors (323 of 1,279) are "movers" or multiple board holders over the period (see section 4.4, Table 4.2). Clearly, we would like to estimate individual fixed effects for the whole population of directors.

To do so, we rely on the approach first proposed by Abowd et al. (1999) in labor economics (AKM) and further developed by Abowd et al. (2002). This method provides a statistical framework for decomposing wage rates into components due to individual heterogeneity and firm heterogeneity using matched (longitudinal) employer-employee data and worker mobility across firms. Crucially, in the AKM set-up, individual and firm fixed effects are separately identifiable through standard methods of covariance analysis for all individuals and firms as soon as they belong to a connected group of workers and firms. A connected group contains all the individuals who have ever worked for any of the firms that are linked by at least one individual (one mover) over the period. Movers are important insofar as they connect the group; but once a group is connected, individual fixed effects are possible to estimate for movers and non-movers. Figure 4.2, extracted from Abowd et al. (2002), illustrates this notion.

We extend this approach to a model of director-firm outcomes, using individual (director) multiple seats and mobility across firms as a source of identification of individual effects and firm effects. Our

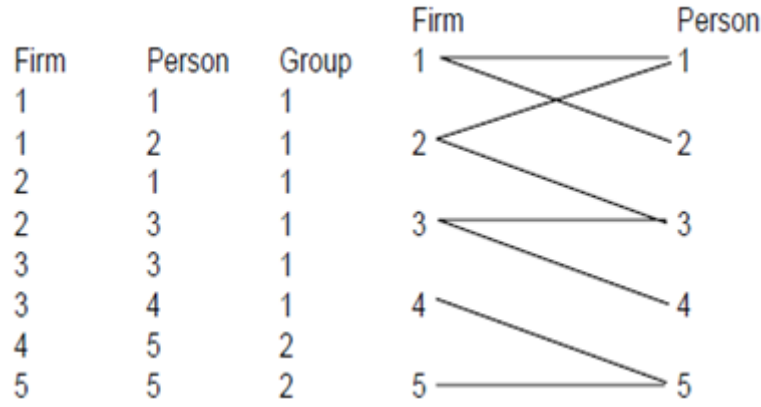


Figure 4.2: Group connection (Abowd et al., 2002)

Notes: in this example, there are two connected groups, 1 and 2. Group 1 contains firms 1, 2 and 3 and individuals 1, 2, 3 and 4. While firms 1 and 3 do not share any individuals, they still belong to the same connected group through firm 2 and persons 1 and 3. Group 2 contains firms 4 and 5, and individual 5. In this case, AKM enables to differentiate firm and director fixed effects within each group. However, an additional hypothesis about director group homogeneity should be assumed if the objective is to compare director fixed effects across groups.

baseline model 4.1 is correctly estimated if two conditions hold. First, we need to have sufficient individual mobility so that the group of connected directors/firms is large enough to consistently estimate firm fixed effects and individual fixed effects. Second, the statistical residual should, of course, be orthogonal to all variables in the model. In particular, we need to have $E[\delta_j; \epsilon_{i,j,t}] = 0 \forall j$ and $E[\mu_i; \epsilon_{i,j,t}] = 0 \forall i$. These orthogonality conditions suppose that the assignment of directors in the different companies is strictly exogenous, i.e. that there is no match effect. In section 6, we perform several tests to validate this “exogenous mobility” assumption.

Three further considerations are needed. First, individual fixed effects are normalized, summing to zero. This avoids having our estimation be driven by the (random) choice of a given person for a reference and makes interpretation easier². Second, because we have multiple observations per firm-year, we compute standard errors that are robust to this two-dimension within-cluster correlation³. Finally, as a robustness check, we run weighted regressions, using board size as a weight: it avoids having our estimations driven by companies with large boards (i.e. with more observations in our database).

4.3.2 Independent position and the informational gap

To test hypothesis H1 and H2 (on the relations between independence and performance), we expand model 4.1 by adding two dummies: $Independent_{i,j,t}$ takes value 1 if director i is independent in firm j at time t , and $Insider_{i,j,t}$ takes value 1 if the director i is an executive in j at time t . Affiliated

²The user-written Stata do file `reg2hdfe` (Guimaraes and Portugal, 2010) allows this normalization while having clustered standard errors.

³As discussed by Petersen (2009), multi-dimensional clustering is a critical issue in corporate finance research. Due to the structure of our dependent variable (annual performance of the company in which each director sits), the correlation within firm-year cluster is the most important bias we have to take into account in the estimation of standard errors. Introducing the director dimension in the cluster would correct the standard errors for any correlation within director observations. Nevertheless, the two-way firm-year and director cluster does not significantly change our results (available upon request). Introducing a year or firm dimension would be redundant with the firm-year cluster chosen in the analysis. The other potential correlations are considered by the introduction of director, firm and year fixed effects.

position is therefore taken as a reference. Our baseline model is then the following:

$$Y_{i,j,t} = \rho + \alpha_1 Independent_{i,j,t} + \alpha_2 Insider_{i,j,t} + \beta X_{j,t} + \gamma Z_{j,t} + \mu_i + \delta_j + \theta_t + \epsilon_{i,j,t} \quad (4.2)$$

It is clear that the estimation of coefficients on independence α_1 is not possible for directors that never change position either across firms or in a given company. Suppose we have an individual i that sits on two different boards during our sample period but always as an independent director. The independent position effect cannot then be separated from the individual fixed effect. Position effects are identified using two sources of variation: variation in position for a director having multiple holdings in different firms (inter-firm variation) and variation in position over successive years for a director in a given firm (intra-firm variation)⁴. Potential selection biases are further discussed. Of course, this coefficient is correctly estimated if the independent position is exogenous regarding firm performance: we discuss this issue in section 4.6. Note that by definition, there is a direct relationship between the dummy $Independent_{i,j,t}$ and the proportion of independent directors in firm j at date t ($\%Independent_{i,j,t}$) included in the $X_{j,t}$ vector. To deal with this multi-collinearity issue, we simply re-compute $\%Independent_{i,j,t}$ while excluding individual i . We apply the same treatment for the share of insiders.

Finally, to test H3a, b, c and d, we extend model 4.2 to consider the effects of other possible board-related individual attributes, namely industry expertise and the affiliation to various informal networks. We then estimate the following model:

$$\begin{aligned} Y_{i,j,t} = & \rho + \alpha_1 Independent_{i,j,t} + \alpha_2 Insider_{i,j,t} + \alpha_3 Industry\ Expert_{i,j,t} \\ & + \alpha_4 Independent_{i,j,t} * Industry - Expert_{i,j,t} \\ & + \alpha_5 CEONET + \alpha_6 Independent_{i,j,t} * CEONET_{i,j,t} \\ & + \alpha_7 BoardNET_{i,j,t} + \alpha_8 Independent_{i,j,t} * BoardNET_{i,j,t} \\ & + \beta X_{j,t} + \gamma Z_{j,t} + \mu_i + \delta_j + \theta_t + \epsilon_{i,j,t} \end{aligned} \quad (4.3)$$

$Industry\ Expert_{i,j,t}$ is a dummy variable that takes value 1 if the director i has industry expertise in j at time t , $CEONET_{i,j,t}$ equals 1 if there is a social connection between i and the CEO in j at time t (zero otherwise) and $BoardNET_{i,j,t}$ equals 1 if i is connected with at least one other director, except the CEO if relevant, in j , t . Like before, the (firm-level) shares of industry experts and of independent industry experts are computed excluding director i .

4.3.3 Director fixed effects and selection

While the validity of H1, H2 and H3 relies on the estimation of α parameters, testing H4 and H5 requires a comparison of the ability distribution across two groups: independent and affiliated directors. In our framework, director ability is estimated using the director fixed effect. We should, however, ensure that our results are not driven by inaccurately estimated person fixed effects (among

⁴While surprising, the case of people changing position in the same firm is possible. People who switch from independent to non-independent belong to the following cases: an independent director who passes the 12-year threshold for seniority, someone who becomes involved in a business relationship with the company, and someone who becomes a corporate executive or a worker. Alternatively, the switch from non-independent to independent encompasses the following: a director classified as affiliated because (s)he was a corporate executive within the previous five years but for whom the criterion no longer applies, and a gray director who terminates a business relationship with the company. In our sample period, only 2% of directors change positions within the same firm; consequently, α_1 is almost exclusively identified on inter-firm variation.

our connected group). Consequently, we exclude from our sample, before running any regressions, individuals who appear only once over our sample period (i.e., only one year in one firm). Indeed, for these individuals, our empirical model is unable to distinguish the person fixed effect and the error term. Of these individuals, 39% are directors who finish their directorships at the beginning of our period (2006), whereas 42% are newly appointed when our period ends (2011). The probability of inducing a selection-bias in our estimation is thus a minor concern. A second problem arises when considering directors appointed in a single firm (i.e., non-movers) who arrive and leave on the same dates. Contrary to a standard AKM model (where the wage rate is different for each individual), the statistical structure of our dependent variable in this case does not offer sufficient variation to accurately distinguish director fixed effects for each of these directors: the fitted director fixed effect is an average (at the firm level) of directors' ability. We therefore exclude *ex post* these directors, after performing regressions, when examining the distribution of individual fixed effects across groups. Selection issues are examined in due time.

With these precautions in mind, the most convenient way to compare ability distribution across groups is to perform quantile regression. The theoretical section predicts indeed a shift and a truncation of the ability distribution for independent directors relative to affiliated directors. A simple OLS (ordinary least square) regression would miss the truncation pattern. The quantile regression is necessary to be able to conclude about the type of director selection process in place in the boardroom. This regression allows the conditional correlation between independence and individual effects for each decile of individual effects (rather than on the mean). It therefore enables conclusions to be drawn on the whole joint distribution of our dependent (individual effects) and explanatory variables. We estimate the following model at the directorship level:

$$Q_{FE}(\tau|S_{i,j}, D_i) = \omega + v_1 S_{i,j} + v_2 D_i + \delta_j + \epsilon_{i,j} \quad (4.4)$$

$Q_{FE}(\tau)$ stands for the value of the director fixed effect at a decile τ , $S_{i,j}$ is a vector of positions (independent, insider and industry expert), D_i is a vector of individual time-invariant observable characteristics (gender, financial expertise, foreigner, age at the beginning of the period or at the moment of the first appointment), and $\epsilon_{i,j}$ is the residual. Subscript t is dropped because person effects are, by definition, stable over time. Because the dependent variable is estimated (rather than measured), the regressions are bootstrapped with 100 replications. The individual time invariant variables ensure that the results are not driven by a sorting between the positions and individual characteristics that may impact firm performance and then director fixed effect estimation, such as gender (Adams and Ferreira, 2009), financial expertise (Burak Guner et al., 2008) or age (as a proxy of professional experience, see Anderson et al., 2011). The director fixed effect is indeed a proxy for both individual unobservable ability and time-invariant observable characteristics. We also introduce a whole set of firm identifiers δ_j in model (4). This allows controlling for firm unobservable heterogeneity that may play a role if directors and companies sort on unobservable components (e.g., if directors with high intrinsic quality enter a highly attractive firm for reputation concerns, see Masulis and Mobbs, 2014). In this model, H4 (shareholder-friendly selection of independent directors) is corroborated if the correlation (v_1) between the independence position and individual fixed effects is significantly positive and stronger for the lowest deciles (truncation on the left). In contrast, H5 (CEO-friendly selection) is validated if this correlation is significantly negative and more intense for the highest deciles (right truncation).

4.4 Data

4.4.1 Sample selection

We collected linked (longitudinal) director-firm data for companies belonging to the SBF120 index in 2011. Using a restrictive group of large listed companies allows sufficient director mobility and cross-holdings, as board-level networks are a prominent feature of French corporate capitalism. Ethics&Boards, an international board watching agency, provides us with comprehensive individual data on directors over the 2009-2011 period. Additional hand-collections from annual reports and internet researches enable us to expand the database to the 2006-2011 period. Both collections are methodically consistent. We exclude financial companies (see Wintoki et al., 2012) and use the Infinancial database to obtain economic and financial information for companies. We also use Thomson One Banker (TOBO) to collect detailed ownership structure data. We thus start with a unique matched director-firm dataset including 114 firms and 1,622 distinct directors.

In order to be able to separately estimate firm and directors fixed effect thanks to AKM methodology, we first need to identify groups of firms connected through common directors⁵. Six groups are single firms whose directors (mainly blockholder representatives and executives) do not appear in any other SBF120 company over the period. For these firms, AKM model is not able to differentiate firm and directors fixed effect; we exclude them from our sample (6 firms and 65 directors). We keep the largest connected group, comprising 108 firms and 1,557 directors (7,637 observations). We exclude firms with missing financial data (207 observations). To avoid having our estimates be driven by outliers in terms of return, we trim our measure of operating performance: we exclude all observations with ROE or ROA belonging to the extreme 1% percentiles (70 observations). Finally, we exclude directors who are present only once in our sample period (249 directors or observations) because the model is not able to differentiate individual fixed effects and error terms. We end-up with a slightly unbalanced panel of 1,279 directors sitting in 107 distinct firms over the 2006-2011 period (608 firm-years). As indicated in Table 4.1, the panel has 7,111 director-firm-year observations corresponding to 1,785 directorships (a triplet of firm-director-independence position). We estimate models (2) and (3) on this unbalanced panel data, using the AKM methodology.

Table 4.1: Data distribution

Year	Number of firms	Number of director-firm-year observations
2006	96	1,038
2007	100	1,170
2008	99	1,175
2009	104	1,255
2010	105	1,290
2011	104	1,183
Total	608	7,111

Notes: This table displays the number of firm and director-firm observations per year over the 2006-2011 period.

⁵To do so, we use the STATA command `felsdvvregdm` (Mihaly et al., 2010).

As emphasized in the previous section, the identification power of the AKM approach (in particular, the separate identification of firm and individual effects) and the accuracy of the estimated coefficients depends on having sufficient worker mobility across firms. Similarly, our identification strategy relies on directors sitting on different boards over our sample period. Table 4.2 depicts directors' mobility inside our connected group. We observe that 25% of directors (323 of 1,279) are “movers” or multiple board holders over the period. Together, these movers represent 45% of our directorships and 43% of our observations. These properties of French corporate governance network ensure the robustness of our estimations. Enlarging our sample to smaller companies, where isolated boards dominated by family and corporate insiders are the norm, would not have increased the precision of our estimations.

Table 4.2: Directors' mobility

Nb boards	Nb directors	% directors	Nb directorships	% directorships	Nb observations	% observations
1	957	74.82	957	53.61	4,394	61.79
2	212	16.58	424	23.75	1,440	20.25
3	62	4.85	186	10.42	685	9.63
4	28	2.19	112	6.27	370	5.2
5	15	1.17	75	4.2	196	2.76
>5	5	0.39	31	1.7	26	0.32
Total	1,279	100	1,785	100	7,111	100

Notes: An observation is a individual i sitting in a firm j during the year t . A directorships is a triplet of individual, a firm and a position (independent or non-independent). The number of directors counts the directors depending on the number of boards that they hold over the period. The number of directorships counts the directorships depending on the number of boards (directorships) that the directors hold over the period. The number of observations counts director-firm-year observations depending on the number of boards that the directors hold the same year. % variables give the share of directors (directorships or observations) corresponding to the number of boards.

4.4.2 Director, board and firm characteristics

For every director, we obtain the following personal information: gender, age, nationality, tenure, past professional experience and educational background⁶. Regarding position, we also know from annual reports whether the individual is an insider, an affiliated or an independent board member. We use the standard AFEP/MEDEF⁷ code definition⁸: independence is assumed to be compromised if the director of a company (1) is or has been, within the previous five years, a corporate executive or an employee of that company or of its affiliates; (2) is employed as an executive of another company where any of that company's executives sits on the board; (3) has been a director of the company for more than twelve years; (4) is a representative of a large blockholder (with at least 10% of stocks or voting rights); (5) has a significant business relationship with that company or its affiliates (as customer, supplier, banker or auditor); or (6) is related by close family ties to an executive director.

⁶All variables are presented in the Appendix 4.8.1 Table 4.10.

⁷AFEP (Association Française des Entreprises Privées) and MEDEF (Mouvement des Entreprises De France) are two associations representative of the private business sector at the national level.

⁸Firms are allowed to adopt a “comply or explain” approach. Most of firms apply all criteria of independence. We take here firm disclosure in order to evaluate the impact of independence as defined by practitioners. We do not take into account stricter definition of independence (see Crespi-Cladera and Pascual-Fuster, 2014, for discussion).

We use past or current professional experience to define expertise (see Anderson et al., 2011; Dass et al., 2014). A director is then defined as an industry-expert if (s)he has or has had professional experience in the industry (defined with a one-digit code) of the firm where (s)he sits. A director is defined as a financial expert if (s)he has or has had professional experience in the insurance or financial service industry⁹. So defined, these variables are time-invariant in our study (2006-2011 period). The accumulation of experience over the period is proxied through tenure (board experience) and age (professional experience) (Masulis and Mobbs, 2011, 2014).

Finally, we examine network impacts via different measures of informal connections. We first intend to check whether sharing informal networks with other board members has an impact on director efficiency. We suppose that a director is informally connected to the board if (s)he shares with at least one other board member, excluding the CEO, a particular educational background. The sociological literature on business elites in France usually points two main networks, structuring labor market for high-skilled workers and business practices: engineers and (former) high civil servant (Kadushin, 1995; Bauer and Bertin-Mourot, 1995; Frank and Yasumoto, 1998) (see Appendix 4.8.2). Following Kramarz and Thesmar (2013), we pay particular attention to the two most important French institutions regarding the provision of business elites: the ENA (Ecole Nationale d'Administration) for high civil servant and the Ecole Polytechnique for engineers. In our panel, 11% of directors are graduated from ENA and 12% from Ecole Polytechnique. Two former graduates are likely to know each other thanks to friendships, attending the same lectures during the training or meetings organized by the associations of former graduates (see Hwang and Kim, 2009; Nguyen, 2012). Accordingly, we consider director i to be (informally) connected if both i and (at least) one other board member, except the CEO, both graduated from the ENA or both graduated from Polytechnique ($BoardNET_{i,j,t}$). Concerning connections with the CEO, we also focus on networks based on educational background. Once again, we consider that a director i is informally connected to the CEO if they both graduated from the ENA or both graduated from Polytechnique ($CEONET_{i,j,t}$). To test the robustness of our results, we use an alternative definition of informal networks. This broadest definition includes, following Nguyen (2012), graduation from the three leading French business schools (HEC-ESSEC-ESCP) or from the IEP (Institut d'Etudes Politiques, specializing in politic sciences, public and international affairs), together with graduation from the ENA or Ecole Polytechnique (so called Top Grande Ecole). Here, a director i is connected if she/he shares one of these four educational backgrounds (ENA or Polytechnique or Business schools or IEP) with at least one other board member or the CEO ($BoardNET2_{i,j,t}$ and $CEONET2_{i,j,t}$).

Summary statistics are presented in Table 4.3. The proportions of independent directors and insiders inside the boardroom are, respectively, 49% and 9% of the observations, with affiliated directors representing 42%. Regarding expertise, we have 55% of industry experts (and 57% of financial experts). As we stressed previously, combining expertise and independence may help reduce independent directors' informational gap. In our sample, 19% of the observations concern industry expert independent direc-

⁹Note that with these definitions, there might be variation across firms for a given individual in the industry expert position but not in the financial expert position: a director with past experience in the banking sector is considered, once and for all, a financial expert, this experience providing some general competencies transferable across companies. This is why we do not introduce financial expertise in the firm performance equation (where only individual-variant positions can be estimated) but only as a determinant of director intrinsic ability.

Table 4.3: Descriptive statistics for director variables

Variables	Obs	Mean	Median	Std. Dev.	Min.	Max.
Woman	7111	0.10	0	0.3	0	1
Foreigner	7111	0.21	0	0.41	0	1
Age	7091	58.86	60	10.11	22	95
Tenure	7111	6.91	5	6.61	1	64
Independent	7111	0.49	0	0.5	0	1
Insider	7111	0.09	0	0.29	0	1
Industry Expert	7111	0.55	1	0.5	0	1
Industry Expert Independent	7111	0.19	0	0.39	0	1
Financial Expert	7111	0.57	1	0.49	0	1
Ecole Polytechnique	7111	0.15	0	0.36	0	1
ENA	7111	0.14	0	0.34	0	1
Top Grande Ecole	7111	0.47	0	0.5	0	1
CEONET	7111	0.11	0	0.31	0	1
CEONET*Independent	7111	0.04	0	0.19	0	1
BoardNET	7111	0.23	0	0.42	0	1
BoardNET*Independant	7111	0.12	0	0.32	0	1
CEONET2	7111	0.18	0	0.38	0	1
CEONET2*Independent	7111	0.07	0	0.25	0	1
BoardNET2	7111	0.40	0	0.49	0	1
BoardNET2*Independant	7111	0.21	0	0.41	0	1

Notes: This table presents the descriptive statistics at the director-firm-year level. The definition of variables is given by Table 4.10 (Appendix 4.8.1).

tors. Controlling for age, gender, nationality and firm industry, the propensity to be an independent director is negatively correlated with industry expertise and non-significantly associated with financial expertise¹⁰. Our data therefore confirm the idea that independence does not favor industry expertise. Finally, 15% of the observations are for directors graduated from Ecole Polytechnique 14% from ENA and 47% from Top Grande Ecole (Polytechnique, ENA, top business schools and top political sciences schools). Directors connected with the CEO through educational networks represent 11% (18%) of our observations, while connections with other board members represent 23% (40%). Almost half of them are independent directors.

Our model uses a mix of individual and aggregate (firm-level) data. Summary statistics for aggregate variables are presented in Table 4.4¹¹. We define the following new variables regarding board structure and composition: board size (Yermack, 1996; Coles et al., 2008), supervisory board (two-tier board), Chairman/CEO separation (Belot et al., 2014), average board tenure (Vafeas, 2003; Huang, 2013a), the proportion of busy directors (with at least one other seat the same year in our sample period) (Fich and Shivdasani, 2006; Field et al., 2013; Falato et al., 2014), and the proportion of young directors aged under 45 (Anderson et al., 2011).

¹⁰We report a point estimate of -0.937 for industry expertise, with a standard error of 0.074 (clustered by director). Controlling for firm fixed effects rather than industry effects increases the point estimate to -1.129 (standard error 0.081). Full results are available upon request.

¹¹For the sake of clarity, we decided to present all the descriptive statistics on a director-firm-year basis (7,111 observations). The statistics on a firm-year basis (606 observations) are very similar (available upon request).

Table 4.4: Descriptive statistics for board variables

Variables	Obs	Mean	Median	Std. Dev.	Min	Max
Board Size	7111	13.08	13	3.35	4	23
Supervisory Board	7111	0.22	0	0.41	0	1
Chairman/CEO Separation	7111	0.26	0	0.44	0	1
Average Tenure	7111	6.83	6.36	3.38	1	21.11
% of Women	7111	0.11	0.09	0.09	0	0.44
% of Foreigner Directors	7111	0.21	0.18	0.18	0	1
% of Independent Directors	7111	0.49	0.45	0.2	0	1
% of Insider Directors	7111	0.09	0.08	0.08	0	0.45
% of Industry Expert Directors	7111	0.54	0.55	0.21	0	1
% of Industry Expert Independents	7111	0.18	0.17	0.17	0	0.82
% of Financial Expert Directors	7111	0.57	0.58	0.22	0	1
% of Busy Directors	7111	0.37	0.38	0.18	0	0.89
% of Young Directors (< 45-years old)	7111	0.19	0.15	0.16	0	0.91

Notes: This table displays the descriptives statistics for board characteristics. Table 4.10 (Appendix 4.8.1) gives the definition of board variables.

Regarding firm characteristics, we follow the literature by controlling for a set of variables likely to be correlated with firm performance and board structure (Masulis et al., 2012; Wintoki et al., 2012): we control for size (proxied by the number of employees, in log) as well as financial leverage, measured as total debt over total equity. To proxy for the propensity of the firm to innovate and to accumulate intangible capital, we use the ratio of R&D expenditures over total sales. We control for long run stock price volatility, a proxy for firm risk, measured as the standard deviation of the monthly stock returns over the previous 50 months. We also control for ownership structure, with the share of outstanding shares held by significant owners (defined as owner with 5% or more of the equity capital). Finally, we control for market-to-book ratio, as a proxy for growth opportunities. Regarding firm performance, we use two different measures in all our regressions as a way to test the robustness of our results: Return On Equity (ROE) and Return On Assets (ROA). Summary statistics for firm characteristics are presented in Table 4.5¹².

4.4.3 Selection bias

Our empirical strategy leads us to exclude non-connected firms (6 of 114) and directors with one single observation (249 observations). These exclusions might restrict the relevance of our results. Moreover, both the estimation of coefficients on independence and the comparison of individual fixed effects across groups (independent and affiliated) raise selection issues. In the first case, the coefficients are estimated on directors who have some variations in independence position (27% of the directorships in our sample). In the second case, we exclude directorships for which director fixed effects are not accurately estimated (38% of directorships). We discuss all these issues in the Appendix 4.8.3 (Tables 4.11 and 4.12). Finally, the design of our sample may lead to a survivorship bias. The directors with

¹²Both stock price volatility and R&D expenditures on sales are missing for some observations. To avoid reducing the sample size in the regressions, we set missing values of both variables equal to zero and include for each variable a dummy that equals one if the information is available, and zero otherwise. This dummy allows the intercept term to capture the mean of both variables for missing values.

Table 4.5: Descriptive statistics for firm variables

Variables	Obs	Mean	Median	Std. Dev.	Min	Max
Number of Employees	7111	60866	26744	81291	38	479072
MTBV	7111	1.94	1.61	2.21	-8.93	38.69
Leverage	7111	0.88	0.68	1.11	-6.53	9.07
R&D Investment	6767	0.02	0	0.04	0	0.26
Stock Volatility	6928	0.54	0.32	2.52	0	38.31
Ownership (float)	7111	0.45	0.47	0.21	0.01	0.94
ROE	7049	0.11	0.11	0.12	-0.57	0.56
ROA	7048	0.04	0.04	0.05	-0.09	0.27

Notes: This table displays the descriptive statistics for firm characteristics. Table 4.10 (Appendix 4.8.1) gives the definition of firm variables.

a long tenure have more weight in the sample than directors with short tenure. If somehow, the value of independent position changes with the tenure, the estimation may be downward biased by directors with multiple observations in the sample. Independent directors are indeed more likely to suffer from an informational gap when they enter the boardroom. To tackle this issue, we control the regression with director tenure and we run some robustness checks on sub-samples of observations: eliminating the observation relative to the first year of the directorship or keeping only observations for directors who stay at least 3 years inside the boardroom (see Appendix 4.8.4, Table 4.14).

4.5 Empirical results

4.5.1 Independence position and the informational gap

Table 4.6 presents the results of our baseline model 4.2. Columns (1) to (4) use ROE as a dependent variable, whereas Columns (5) to (8) use ROA. Table 4.6 tells a consistent story about the relationship between independence and performance. Considering ROE first, Column (1) does not account for independent director heterogeneity, whether observable (industry expertise or social connections) or unobservable (director fixed effect). We simply account for unobservable heterogeneity at the firm level (through firm fixed effects) while controlling for firm-level and board-level time-variant characteristics. In this set-up, we do not observe any conditional correlation between the Independent dummy and ROE. The results dramatically change when we control for unobservable individual heterogeneity through director fixed effects (Column 2): the association between independence and performance becomes negative and slightly significant (with a corresponding point estimate of -0.013 and a standard error of 0.006). The mean proportion of independent directors is 49%, with an average board size of 13 members. A deviation from 0 to 1 in the Independent dummy means approximately an increase in the independent share from 49% to 59%. This 10 percentage points increase then reduces ROE from -0.013, for a mean value of 0.11. In sum, a 10% increase in the share of independent is associated with a 10% decrease in financial return. With respect to board-level variables, we find consistent results: the coefficient on the proportion of independent directors is negative, although non-significant, at conventional levels.

Columns (5) and (6) show a pattern of results very similar for ROA: the more we control for individual heterogeneity (through director fixed effects and industry expertise), the higher in absolute value the coefficient on the Independent dummy (from 0.001 to 0.004, with rather stable standard errors of 0.002): likewise, a 10% increase in the fraction of independent board members is related to a 10% decrease in ROA (-0.004, for a sample average of 0.04). The fact that independence netted out individual ability heterogeneity is negatively related to operating performance validates H2: it supports the idea that independent directors experience an informational gap, as compared to affiliated board members. One other potential explanation for this negative relation might be invoked, however. It is therefore possible for agents with multiple positions to be less incentivized when serving as independent director than when serving as affiliated \bar{U} with a contrasted effect on firm performance. Affiliated board members necessarily have a strong involvement with the company (e.g., as a major blockholder, business partner, or worker representative). This is not the case for independent directors, even considering meeting fees and remuneration. We get back to this argument latter on.

We test the robustness of our results in three different ways. First, in Columns (3) and (7), we weight the observations by board size. Firms with large board are over-represented in our sample, by design. They may therefore drive our estimation if there is a relationship between board size, the number of independent directors and firm performance. Our findings are almost unchanged, thus suggesting that differences in board size do not account for the negative relation we have found. Second, we introduce director-year fixed effects (instead of director and year fixed effects). In this case, the estimation of coefficients on independence only rests on the variation of positions across companies (rather than inter-firm and intra-firm variation). It also takes into account temporal changes in directors' ability and avoids any spurious temporal correlation (simultaneity issue). As previously noted, we excluded from other regressions (Columns 1, 2, 3, 5, 6 and 7) individuals who appear only once over our sampled period (as our empirical model cannot, in this case, separate the individual fixed effect and the residual). To be coherent, we only keep in Columns (4) and (8) individuals who sit in at least two boards over a given year. For the others, our model is unable to distinguish the director-year fixed effect from the error term. We observe that most of our coefficients are fairly stable for ROE and ROA. The standard errors increase a bit and the significant level slightly drops around 10%. Third, our results are consistent to the elimination of all observations corresponding to the first year of the directorship (as the influence of newly appointed directors might not be significant during the first months) and to the elimination of all observations corresponding to directors who stay less than three consecutive years in the same company (see Bertrand and Schoar (2003), Appendix 4.8.4, Table 4.13).

To test more directly the informational gap argument and to undermine the incentive hypothesis, we first introduce industry expertise, in isolation and interacted with independence (Table 4.7, Columns 1 and 5 for unweighted regressions on ROE and ROA, 2 and 6 for weighted regressions). The point estimate on Independent dummy more than doubles (from -0.013 to -0.027) and becomes significant at the 1% level. Independence alone, netted out expertise, is negatively related to performance, a result that is more consistent with independent directors suffering from an informational gap than with independent members lacking proper incentives. Furthermore, the coefficient on the interaction Independent*Industry Expert is positive (+0.034) and significant at the 1% level (standard error: 0.012). This result validates hypothesis H3a and suggests that the dark side of independence is held by independent non-expert directors.

Table 4.6: Independence and operating performance

Variables	(1) ROE	(2) ROE	(3) ROE	(4) ROE	(5) ROA	(6) ROA	(7) ROA	(8) ROA
Independent	-0.003 (0.005)	-0.013** (0.006)	-0.011* (0.006)	-0.011 (0.008)	-0.001 (0.002)	-0.004** (0.002)	-0.003* (0.002)	-0.004* (0.002)
Insider	0.014 (0.012)	0.003 (0.013)	0.009 (0.013)	0.019 (0.013)	0.005 (0.005)	0.002 (0.005)	0.004 (0.005)	0.006 (0.004)
% Independents	-0.031 (0.055)	-0.025 (0.066)	-0.007 (0.060)	-0.057 (0.064)	-0.008 (0.019)	-0.007 (0.021)	0.001 (0.021)	-0.013 (0.018)
% Insiders	0.172 (0.134)	0.178 (0.141)	0.232 (0.151)	0.371** (0.148)	0.053 (0.055)	0.039 (0.052)	0.065 (0.057)	0.084** (0.043)
Tenure (log)	0.001 (0.002)	0.003 (0.003)	0.002 (0.002)	-0.000 (0.004)	0.001 (0.000)	0.001 (0.001)	0.001 (0.001)	0.000 (0.001)
Chairman/CEO Separation	0.007 (0.016)	0.008 (0.016)	0.010 (0.016)	0.004 (0.020)	0.003 (0.004)	0.003 (0.004)	0.004 (0.004)	0.001 (0.004)
Supervisory Board	0.009 (0.044)	0.020 (0.042)	0.004 (0.039)	-0.002 (0.031)	-0.004 (0.016)	-0.001 (0.015)	-0.004 (0.014)	-0.005 (0.009)
Board Size	0.004 (0.004)	0.004 (0.004)	0.006 (0.004)	0.004 (0.004)	0.002 (0.001)	0.002 (0.001)	0.002 (0.002)	0.003*** (0.001)
% Women	-0.226*** (0.084)	-0.229*** (0.086)	-0.241*** (0.087)	-0.277*** (0.098)	-0.053* (0.028)	-0.046 (0.029)	-0.047 (0.029)	-0.054* (0.030)
% Foreigners	-0.010 (0.093)	-0.036 (0.096)	-0.066 (0.093)	-0.015 (0.094)	-0.024 (0.031)	-0.031 (0.031)	-0.034 (0.030)	-0.029 (0.022)
% Busy Directors	0.036 (0.049)	0.049 (0.051)	0.069 (0.055)	0.048 (0.061)	0.013 (0.015)	0.012 (0.016)	0.022 (0.016)	0.023 (0.016)
% of Young Directors	-0.132** (0.058)	-0.138** (0.061)	-0.133** (0.062)	-0.147** (0.068)	-0.035** (0.016)	-0.031* (0.017)	-0.034* (0.018)	-0.030* (0.016)
Av. Board Tenure	0.011 (0.021)	0.005 (0.024)	0.005 (0.023)	-0.030 (0.022)	0.005 (0.006)	0.007 (0.007)	0.006 (0.007)	-0.001 (0.005)
Observations	7,049	7,049	7,049	2,531	7,048	7,048	7,048	2,535
Nb of firms	601	601	601	571	603	603	603	573
R-adj	0.517	0.468	0.478	0.527	0.663	0.627	0.617	0.718
Director FE	No	Yes	Yes	No	No	Yes	Yes	No
Director- Year FE	No	No	No	Yes	Yes	No	No	Yes
Firm and Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Weighted	No	No	Yes	No	No	No	Yes	No

Notes: (1) Dependent variable: Return On Equity (columns 1 to 4) or Return On Assets (columns 5 to 8). (2) Director controls include the position (independent, insider) and tenure (log) (3) Board controls include % of independent directors, % of insiders, % of industry expert directors, board size, % of women, % of foreigners, % of busy directors (with at least one other directorship the same year), % of young directors aged less than 45, average board tenure (in log), a dummy that takes the value 1 in the case of a two-tier board (Supervisory Board) and a dummy that takes the value 1 in case of separation between CEO and chairman positions in a one-tier board (0 otherwise). (4) Firm controls include size (number of employees, in log), MBTV (market to book value), financial leverage, R&D on sales, stock price volatility, % of float ownership. (5) Columns 1 and 5 includes firm and year fixed effects. Columns 2, 3, and 6, 7 include director, firm and year fixed effects. Columns 4 and 8 include director-year fixed effects and firm fixed effect. Columns 3 and 7 are weighted by board size. (6) Robust standard errors, clustered on firm by year, in parentheses. (7) Significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 4.7: Independence, informational gap and operating performance

Variables	(1) ROE	(2) ROE	(3) ROE	(4) ROE	(5) ROA	(6) ROA	(7) ROA	(8) ROA
Independent	-0.027*** (0.009)	-0.025*** (0.008)	-0.034*** (0.010)	-0.030*** (0.009)	-0.008** (0.003)	-0.007** (0.003)	-0.010*** (0.003)	-0.009*** (0.003)
Insider	0.007 (0.014)	0.013 (0.014)	0.004 (0.015)	0.009 (0.015)	0.003 (0.005)	0.005 (0.005)	0.002 (0.005)	0.004 (0.005)
Industry Expert	-0.010 (0.008)	-0.007 (0.008)	-0.010 (0.008)	-0.007 (0.008)	-0.002 (0.003)	-0.002 (0.003)	-0.002 (0.003)	-0.001 (0.003)
Industry Expert* Independent	0.034*** (0.012)	0.035*** (0.011)	0.035*** (0.012)	0.036*** (0.011)	0.009** (0.004)	0.009** (0.004)	0.009** (0.004)	0.009** (0.004)
CEONET			0.010 (0.008)	0.013 (0.008)			0.002 (0.002)	0.002 (0.002)
Independent*CEONET			-0.019** (0.009)	-0.020** (0.009)			-0.002 (0.003)	-0.002 (0.002)
BoardNet			-0.029*** (0.011)	-0.025*** (0.010)			-0.003 (0.003)	-0.003 (0.002)
Independent*BoardNet			0.023*** (0.008)	0.019*** (0.007)			0.007*** (0.002)	0.006*** (0.002)
Observations	7,049	7,049	7,049	7,049	7,048	7,048	7,048	7,048
Nb of firms	601	601	601	601	603	603	603	603
R-adj	0.478	0.493	0.479	0.493	0.631	0.624	0.631	0.624
Director, Firm and Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Weighted	No	Yes	No	Yes	No	Yes	No	Yes

Notes: (1) Dependent variable: Return On Equity (columns 1 to 4) or Return On Assets (columns 5 to 8). (2) Director controls include the positions (independent, insider, industry expert), the interaction term (industry expert independent) and the network variables (directors belonging to the same educational network (X-ENA), as the CEO (CEONET), or as other board members (BoardNet) with the interaction term (independent, network connections and board structure) for columns 3,4, 7 and 8, tenure. (3) Board controls include % of independent directors, % of insiders, % of industry expert directors, % of industry expert independent, board size, % of women, % of foreigners, % of busy directors (with at least one other directorship the same year), % of young directors aged less than 50, average board tenure, Supervisory Board dummy and a Chairman/CEO separation. (4) Firm controls include size (number of employees, in log), financial leverage, R&D on sales, stock price volatility, and % of float ownership. (5) All models include director, firm and year dummies. (6) Robust standard errors, clustered on firm by year, in parentheses. (7) Significance: *** p<0.01, ** p<0.05, * p<0.1

This result echoes the increasing contention that, contrary to the conventional wisdom of the 1990s, independence alone is not the ultimate solution or criterion regarding board composition: industry-expertise might be just as important. To refine this conclusion, we test directly whether the total (net) effect of an independent expert is significantly different from 0 (and positive): the result is inconclusive, independent expert and affiliated directors are not significantly different from a performance point of view. However, we find that the total effect of an independent non-expert is significantly negative (point estimate = -0.027, t-value = -2.97). The lack of information and expertise seems to impede these board members from efficiently performing their duties. We also find, at the 5% level, a negative and significant correlation between ROA and Independent dummy (point estimate: -0.008 and standard error of 0.003) and a positive and significant correlation between ROA and the interaction term Independent*Industry Expert, with a point estimate of 0.009 (standard error of 0.004). The results are robust to the weighted regression with the same significant level (columns 2 and 6).

We then examine the potential role of informal connections (defined with educational background). We simultaneously test the role of informal connections with the CEO and with other board members, in addition to the role of industry expertise. We therefore estimate our full model 4.3. Results are presented in Table 4.7: Columns 3 and 4 are for ROE, and Columns 7 and 8 are for ROA. Columns 4 and 8 present weighted regression by board size. We report a significant and positive coefficient for Independent*BoardNet with both measures of performance: sharing an informal network with other board members appears to increase independent directors' effectiveness. These results supports H3b. However the net effect of independence with board connections is not different from zero. In contrast, we show a negative relationship between independent director efficiency and informal connection with the CEO, significant at 5% for ROE. A possible reason was previously mentioned: though sharing a social network with the CEO may increase the extent of firm-specific information sharing (thereby implying a positive relationship with operating performance), it also strengthens potential conflicts of interest (implying a negative association with performance). The latter mechanism seems to overweight the benefit of information sharing. It support the hypothesis H3d. It is convergent with Cohen et al. (2012) and Coles et al. (2014), showing that "friendly" directors are less able to monitor the CEO. Finally, we obtain consistent results if we take into account broader definition of networks (see Appendix 4.8.4, Table 4.14).

To sup up, we report evidence of a negative conditional correlation between independence and operating performance that was unobservable when individual heterogeneity was not accounted for. This result is robust to the definition of performance as well as to a more stringent definition of individual identifiers (director-year fixed effects instead of director fixed effects ¹³) and to different methods of standard error correction. Overall, our findings support the view that in the French corporate system, the position of independence is a difficult one, fraught with a strong informational gap. We further evaluate the propensity of a set of individual characteristics to moderate or to magnify the extent of this informational gap. We report evidence that industry expertise and informal connections with board members significantly help independent directors bridge the informational gap. However, informal connections with the CEO may increase the agency cost and overweight the benefit from information sharing.

¹³Results upon request

4.5.2 Independent directors' selection

Our results provide evidence that being independent is associated with a lower level of operating performance only once individual time-invariant heterogeneity is taken into account through director fixed effects. This evidence, in turn, suggests that independent directors have specific attributes positively related to performance. Figures 4.3 and 4.4 below confirm this idea by plotting the distribution of fitted individual fixed effects for independent and non-independent directors derived from the full model 4.3 (Table 4.7, Columns 3 and 7) with respectively ROE and ROA. As detailed in the Appendix 4.8.3, we only consider individual fixed effects that are accurately estimated. The Wilcoxon rank test shows that the distribution of independent directors fixed effect is different from non-independent directors one ($z=-6.74$ for ROE and $z=-9.03$ for ROA). The rank sum of independent directors is higher than the rank sum of non-independent directors, suggesting that the distribution is shifted on the left for independent directors on the intrinsic ability scale. However, this observation is insufficient to confirm that the appointment of independent directors is characterized by a selection process based on intrinsic ability, in this case, a shareholder-friendly selection process. Estimated fixed effects capture all time-invariant individual attributes, including intrinsic ability, and are influenced by certain observable characteristics such as gender and financial expertise, some of which are likely to be correlated with operating performance. Regarding these characteristics, independent director and non-independent director populations may significantly differ due to the director labor market structure for independent directors (supply of potential directors). In this case, the distribution pattern of the individual fixed effect would be driven more by other observable director attributes than by intrinsic ability (the unobservable component).

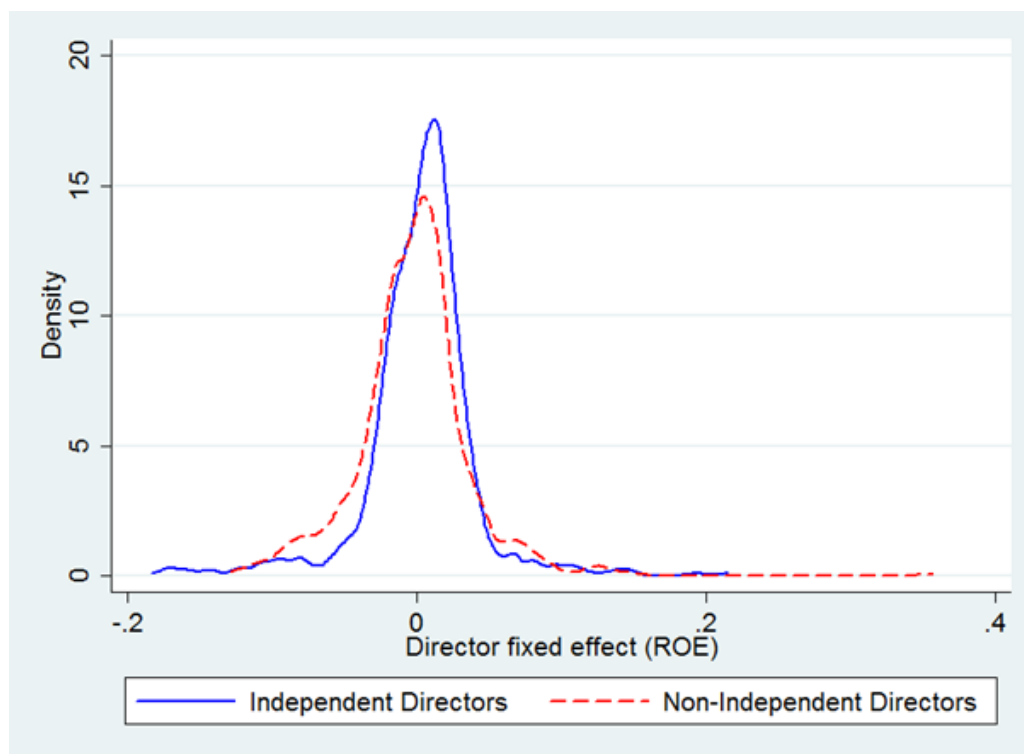


Figure 4.3: Director fixed effects distribution (ROE)

Notes: This figure plots the density of director fixed effect (ROE) estimated by model 4.3 (Table 4.7, column (3)) depending on independent position. The dash line is the density curve for non-independent directors. The plain line is the density curve for independent directors.

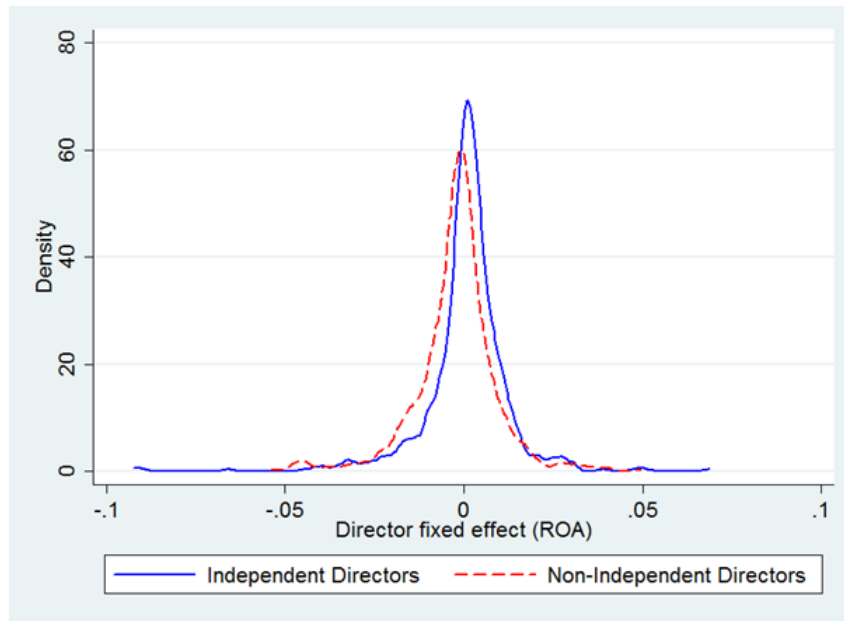


Figure 4.4: Director fixed effects distribution (ROA)

Notes: This figure plots the density of director fixed effect (ROA) estimated by model 4.3 (Table 4.7, column (7)) depending on independent position. The dash line is the density curve for non-independent directors. The plain line is the density curve for independent directors.

To refine our conclusion, we perform multivariate quantile estimations, where fixed effects are regressed on the independent and insider positions, gender, nationality, expertise (industry and financial), a dummy that takes the value 1 if the individual has more than one directorship over the period¹⁴ and firm fixed effects¹⁵. We choose the full model with independence, industry expertise, board structure and education network variables (Columns 3 and 7, Table 4.7) to extract directors' fixed effects, as it allows cleaning any board-related effects. The results are presented in Table 4.8, panel A for ROE and panel B for ROA. In these tables, the lowest deciles represent directors with the lowest ability (low economic value) to perform their duties, whereas the highest deciles represent the most talented directors (high economic value).

We observe that regardless of the measure of performance used, there is a positive conditional correlation between individual fixed effects and being independent that diminishes when climbing the deciles. Put differently, each decile of the independent directors' distribution is, on average, more "talented" (higher individual intrinsic ability or director fixed effect from an economic perspective) than the corresponding decile of the affiliated directors' distribution, and this difference is decreasing for the highest deciles. For ROE, the point estimate is 0.009 for the first decile and 0.004 for the last decile, with rather similar standard errors (0.004 and 0.003). The same pattern is observable for ROA, with a coefficient that goes from 0.004 to 0.002 and with a stable standard error (0.001). Clearly, this

¹⁴We introduce this dummy to avoid having a spurious relationship between being independent and director ability. Indeed, we suspect (and test the fact) that the most talented directors have a higher propensity to be appointed inside a boardroom than independent directors. At the same time, these directors are likely to have a good external reputation and, therefore, to be appointed in multiple boards over the period (see Masulis and Mobbs, 2011, for a similar analysis of insider directors). Due to our estimation methodology, these latter directors are more likely to have their fixed effect accurately estimated than directors with a single-directorship.

¹⁵Firm fixed effects enable controlling for prestige or firm-reputation effects (Masulis and Mobbs, 2014). The most talented independent directors may have a greater incentive to work for the most visible and prestigious firms. However, our main question is to investigate whether, within the same firm, there is a significant difference between independent and non-independent directors in terms of intrinsic ability.

decrease in point estimates along the distribution is suggestive of a left-truncation for the distribution of independent directors' ability compared to the distribution for affiliated board members. This result, consistent with a shareholder-friendly selection process, corroborates H4. As a robustness check, we re-run our quantile regressions keeping all directorships: the results are consistent (see Appendix 4.8.5, Table 4.15).

Interestingly, we note that the insider position is also positively related to the individual fixed effect. This indicates that in contrast to affiliated directors, a selection process based on ability is also at stake concerning insiders. This finding confirms that individuals who become top executives are rather high ability agents who are able to manage large and complex companies. For the multi-directorship directors, the results show both a left-truncated distribution (significant positive coefficients for the lowest deciles) and a right-truncation (negative significant coefficients for the highest deciles). We suspect that the left-truncation occurs as a result of a shareholder-friendly selection process, while the right-truncation occurs because the most talented individuals might not share their time in multiple boards or may be an executive in another firm.

Overall, our results are consistent with the idea that independent directors are (positively) selected based on their individual intrinsic ability because the appointment process is under strong scrutiny by shareholders.

Panel B: ROA

VARIABLES	(1) 10th	(2) 20th	(3) 30th	(4) 40th	(5) 50th	(6) 60th	(7) 70th	(8) 80th	(9) 90th
Independent	0.004*** (0.001)	0.004*** (0.001)	0.003*** (0.001)	0.003*** (0.001)	0.003*** (0.001)	0.003*** (0.001)	0.002*** (0.001)	0.002*** (0.001)	0.002*** (0.001)
Insider	0.003* (0.002)	0.002 (0.001)	0.002* (0.001)	0.002* (0.001)	0.002** (0.001)	0.002** (0.001)	0.002* (0.001)	0.003** (0.001)	0.003** (0.001)
Industry Expert	-0.001 (0.001)	-0.000 (0.001)	0.000 (0.001)	0.000 (0.001)	-0.000 (0.001)	-0.000 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)
Woman	0.000 (0.001)	-0.000 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.002 (0.001)	0.002 (0.001)	0.005** (0.002)
Foreigner	0.003*** (0.001)	0.001 (0.001)	0.001 (0.001)	0.001* (0.001)	0.002** (0.001)	0.002** (0.001)	0.001 (0.001)	0.002** (0.001)	0.001 (0.001)
Age	0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Financial Expert	0.001 (0.001)	0.001* (0.001)	0.000 (0.001)	0.000 (0.001)	-0.000 (0.001)	0.000 (0.001)	-0.000 (0.001)	-0.000 (0.001)	0.000 (0.001)
Multi-directorships	0.004*** (0.001)	0.003*** (0.001)	0.002* (0.001)	0.001 (0.001)	0.001 (0.001)	-0.000 (0.001)	-0.001 (0.001)	-0.002* (0.001)	-0.004*** (0.001)
Observations	1,067	1,067	1,067	1,067	1,067	1,067	1,067	1,067	1,067
Firm fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: (1) Dependent variable: Director fixed effect computed with Return On Equity (Panel A) or Return On Assets (Panel B). (2) Director controls include: the positions (independent, insider, industry expert, financial expert), the age, the gender and foreigner dummies, as well as a dummy for multi-directorships (3) All models include firm fixed effects. (4) Robust standard errors in parentheses. (5) Significance: *** p<0.01, ** p<0.05, * p<0.1.

4.6 Endogeneity issues

Common strategies used in applied economics to overcome endogeneity issues (difference in difference estimator, IV approach) are not easy to implement in corporate governance. Unanticipated shocks and valid instruments are (extremely) rare. Over the period we examine (2006-2014), there has been no regulatory shock concerning board independence in France. Since the end of the 1990s, companies are invited to respect certain thresholds (50% of independent directors or 33% if a significant blockholder controls the firm) defined in the French code of corporate governance, following a “comply or explain” approach. Moreover, the sudden death of directors, used by Nguyen and Nielsen (2010) to determine the market value of independent directors, is too infrequent to be able to use it to investigate the independence-performance nexus. Our empirical approach, based on the AKM framework, raises three endogeneity issues, regarding individual and firm identifiers (δ_j and μ_i) and regarding independence position. For these parameters of interest to be correctly estimated, the three following orthogonality conditions should hold:

$$E[\delta_j; \epsilon_{i,j,t}] = 0 \quad \forall j \quad (4.5)$$

$$E[\mu_i; \epsilon_{i,j,t}] = 0 \quad \forall i \quad (4.6)$$

$$E[Independent_{i,j,t}; \epsilon_{i,j,t}] = 0 \quad \forall i, j \quad (4.7)$$

The AKM framework allows *ex post* verification of the validity of the first two conditions, regarding personal and firm identifiers. These conditions rest on one key identifying assumption, namely an “exogenous mobility” assumption (Card et al., 2013). Intuitively, if the data-generating process is such that some directors bring more value to certain types of firms, then our empirical strategy will fail to capture time-invariant firm and director components. In this case, the additive separability of firm and director effects should be abandoned: the error term $\epsilon_{i,j,t}$ would consist of two distinct components, namely, a match component $\varphi_{jI(j,t)}$ and a pure error term $r_{i,j,t}$, so that $\epsilon_{i,j,t} = \varphi_{jI(j,t)} + r_{i,j,t}$. The match component represents an idiosyncratic performance effect brought by director i at firm j relative to the baseline level $\mu_i + \delta_j$. For instance, it is possible that the CEO and incumbent directors select particular individuals belonging to their networks as new board members: the network may indeed play as an information channel for newly appointed directors about their quality and their style (Kramarz and Thesmar, 2013), thereby improving the match between individuals and the firm (Saloner, 1985). Such a match effect would prevent the proper identification of our model.

In order to validate the previous estimations, we perform two distinct tests of the additive separability assumption of AKM methodology, following Card et al. (2013) and Flabbi et al. (2014).

A convenient way to assess the soundness of an empirical model is to look at residuals: high residuals, specifically related to some covariates, are a first indication that something has gone wrong. In our case, we are mainly interested in the relationships between residuals and fitted (firm and director) fixed effects when additive separability is assumed. Using the estimation of model 4.3 (Table 4.7, columns 3 and 7), we only keep observations for which individual fixed effects are correctly estimated, and we trim these fixed effects at the 1% and 99% levels. We then sort directors and firms into deciles according to their fitted fixed effects and cross these deciles to obtain 100 groups or matches. Figures 4.5 and 4.6 present the average residuals for each of these groups ($\bar{\epsilon}_{i,j,t}$). If our additive separable model is erroneous, we expect to observe high values of (mean) residuals being concentrated on par-

ticular matches. We do not have evidence of such a pattern. Looking at ROE first (Figure 4.5), we see that in only 7 times out of 100 are residuals greater than 0.02 (in absolute value), which is less than half the standard deviation of the estimated fixed effects. Moreover, important deviations do not appear to be concentrated on particular matches; they rather seem to be randomly disseminated throughout the distribution. The same applies for ROA (Figure 4.6), with deviations greater than 0.007 (in absolute value) in only 8 cases out of 100, and with no systemic pattern in their occurrence.

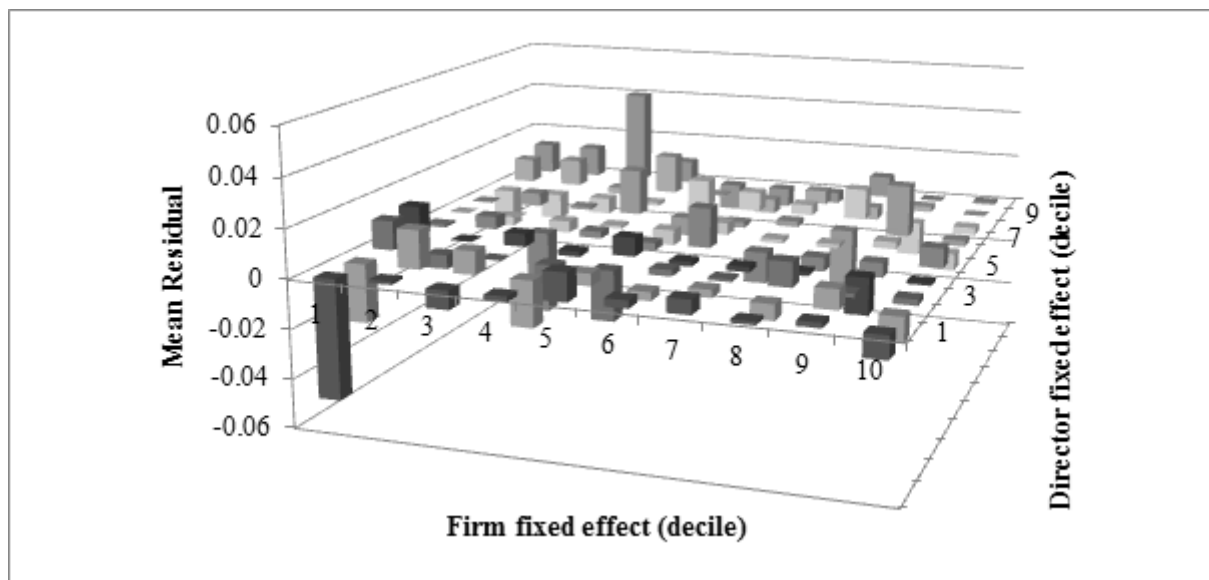


Figure 4.5: Mean residuals by director and firm fixed effect deciles (ROE)

Notes: This figure presents the average residuals of the estimation of model 4.3 (Table 4.7, column 3) for groups of observations defined by director and firm fixed effect deciles.

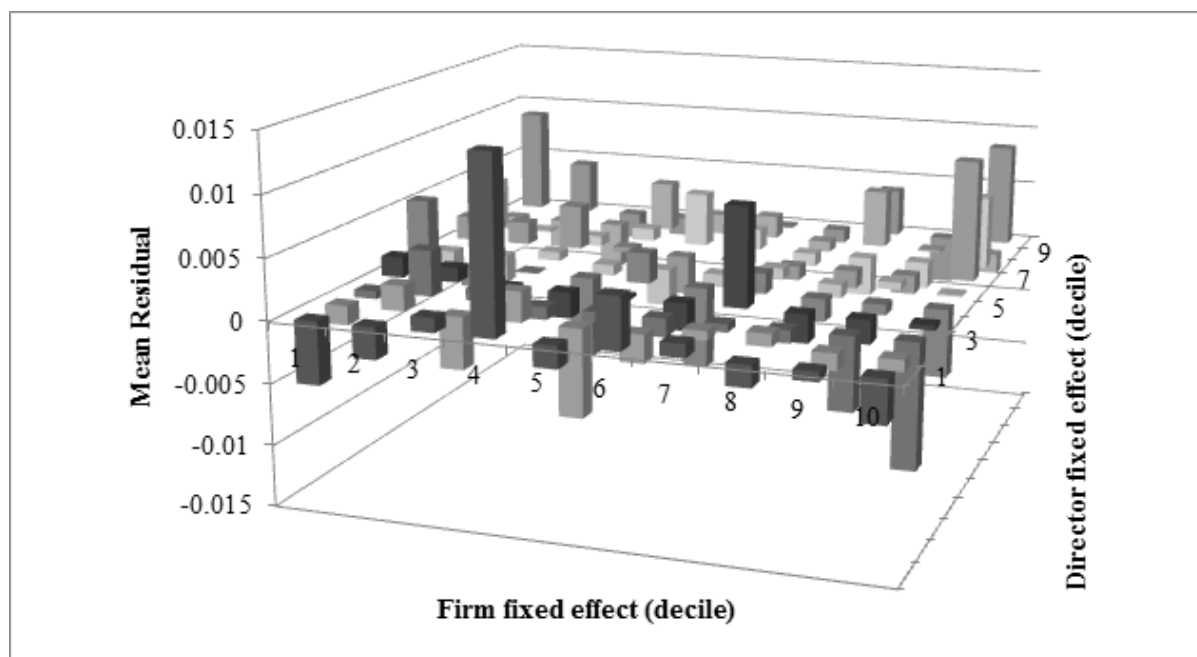


Figure 4.6: Mean residuals by director and firm fixed effect deciles (ROA)

Notes: This figure presents the average residuals of the estimation of model 4.3 (Table 4.7, column 7) for groups of observations defined by director and firm fixed effect deciles.

As a second test, we fit a fully saturated model that includes a separate dummy for each director-firm match. Does this saturated model outperform our baseline, additive separable model? The answer is negative. Estimating our baseline model (Column 3 in Table 4.7, for ROE) with director-firm fixed effects (instead of director fixed effects and firm fixed effects) only increases the R-square by 0.022 (from 0.595 to 0.6170) and slightly decreases the adjusted R-square (from 0.493 to 0.486). In comparison, the inclusion of firm and director fixed effects increases R-square by 0.372. The evolutions in R-square are of the same magnitude regarding ROA. These results clearly suggest that omitting the match component does not undermine the explicative power of our model.

In order to undermine the endogeneity issue regarding independent position, we need to test the last orthogonality condition, namely, $E[Independent_{i,j,t}; \epsilon_{j,t}] = 0$. This condition ensures that the estimated coefficient on Independent actually measures the net effect of being independent on performance, irrespective of firm and director identifiers. A possible violation of this condition will occur if firms tend to hire more or less independent directors depending on their past or current performance. There is evidence of such behavior on Anglo-Saxon data. Mulcahy (2014) shows for instance that loss events lead companies to improve their governance, most notably by appointing outside board members. Farber (2005) provides evidence that fraud firms also increase board independence, in response to their difficulties. Finally, Easterwood et al. (2012) show that firms experiencing large performance decline react in increasing the number of independent board members. As underlined by Adams et al. (2010), if bad performances lead to more independence, empirical investigations on the relationship between independence and performance are subject to reverse causality problem - or “dynamic endogeneity” (Wintoki et al., 2012). To the best of our knowledge, there is no comparable empirical evidence in the French case. However, we need to verify that such dynamic endogeneity is not present in our data. Also, we need to verify that bad performance does not lead firms to strategically select independent directors with either high ability or low ability. We perform two distinct tests to refute the validity of the dynamic endogeneity assumption, where each test considers the relationship between firm performance and being independent.

A first possible test for the existence of dynamic endogeneity has been done in section 4.5, with the introduction of director-year fixed effects (instead of director fixed effects). We observed in Table 4.6, Columns (4) and (8), that the coefficients on Independent are not reduced: this means the effect of Independent is netted out personal ability and business cycle effects that may impact firm performance.

A second, more direct test consists in observing whether there is a relationship between firm performance in $t - 1$ and the probability $P_{i,j,t}$ for a director i to be appointed in firm j in year t as independent (rather than as a non-independent director). A significant correlation would strongly suggest the presence of dynamic endogeneity. In Column (1) (resp. 2) in Table 4.9, we run a logit regression of $P_{i,j,t}$ on ROE (resp. ROA) in $t - 1$ and a set of firm (board and financial variables) and individual (age, gender, nationality, industry expertise and financial expertise) covariates. Point estimates on lagged performance are not significant at conventional levels.

Table 4.9: Dynamic endogeneity, independent director selection and operating performance

Variables	(1) Independent	(2) Independent	(3) Low ability independent	(4) High ability independent	(5) Low ability independent	(6) High ability independent
Lagged ROE	-0.275 (0.596)		-0.617 (0.522)	0.193 (1.018)		
Lagged ROA		0.577 (1.659)			-0.051 (2.358)	0.738 (1.937)
Age	0.066*** (0.013)	0.066*** (0.013)	0.077*** (0.015)	0.059*** (0.016)	0.077*** (0.015)	0.059*** (0.016)
Woman	0.822*** (0.285)	0.824*** (0.285)	1.247*** (0.364)	0.535* (0.319)	1.236*** (0.362)	0.535* (0.321)
Foreigner	0.396 (0.299)	0.399 (0.301)	0.837** (0.328)	-0.143 (0.349)	0.849*** (0.328)	-0.138 (0.352)
Industry Expertise	-1.565*** (0.215)	-1.568*** (0.213)	-1.537*** (0.280)	-1.661*** (0.273)	-1.531*** (0.278)	-1.662*** (0.273)
Financial Expertise	0.046 (0.210)	0.049 (0.213)	0.029 (0.243)	0.039 (0.242)	0.034 (0.244)	0.040 (0.246)
Observations	606	606	606	606	606	606
R-adj	0.25	0.25	0.24	0.24	0.24	0.24
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes

Notes: (1) Dependent variables: a dummy that takes value 1 if director i is appointed as independent (0 otherwise) in Columns 1 and 2, a variable that takes value 1 if director i is appointed as a low ability independent director (the two lowest quintiles of fixed effect distribution), 2 as a high ability (the three highest quintiles of fixed effect distribution) independent director (positive fixed effect), and 0 otherwise (columns 3-6). (2) Director controls include: age, gender and foreigner dummies and financial and industry expertise. (3) Board controls include lagged % of independent directors, lagged % of insiders, lagged % of industry expert directors, lagged board size, lagged % of women, lagged % of foreigners, lagged % of busy directors (with at least one other directorship the same year), lagged % of young directors aged less than 45, a dummy that takes the value 1 in the case of a two-tier board (Supervisory Board), and a dummy that takes the value 1 in the case of separation between CEO and chairman positions (0 otherwise). (4) Firm controls include lagged ROE or ROA, size (number of employees, in log), financial leverage, R&D on sales, stock price volatility, and % of float ownership. (5) Robust standard errors, clustered on director. (6) Method: logit (1 and 2) and multi-nominal logit (3-4 and 5-6) regressions. (7) Significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

In Columns (3) and (4), we split the independent category between high (the three highest quintiles of fixed effect distribution) and low ability (the two lowest quintiles) independent directors, and we run a multinomial logit regression with ROE as a dependent variable. We do not have evidence of firms appointing more high ability independent board members when performance is low or the opposite (low ability when performance is high). The same is true when using ROA instead of ROE (Columns 5 and 6). In light of these results, we believe that dynamic endogeneity is unlikely to drive our estimates.

4.7 Conclusion

Our study brings new insights into the governance-firm performance context. Most papers (Bhagat and Bolton, 2008; Wintoki et al., 2012) blame so-called “dynamic endogeneity” (i.e., the appointment of independent directors when the firm experiences poor performance) in explaining the lack of strong results regarding board independence and performance. Following the recent papers by Masulis and Mobbs (2011, 2014) and Fogel et al. (2014), we highlight here another reason: the heterogeneity of independent directors in terms of board-related attributes and in terms of intrinsic ability.

Our empirical strategy consists in applying the AKM statistical framework to matched director-firm data to separately identify firm (fixed) effects, director (fixed) effects, and board-related attribute effects (independence and specific expertise and informal network connections) in firm performance equation. To our knowledge, this is the first systematic application of the AKM approach, initially developed in labor economics, to the board/performance context. We obtain two main results on a representative sample of large non-financial French listed companies (the SBF120) for the 2006-2011 period.

First, we find evidence that independence, netted out individual heterogeneity (both observable and unobservable), is negatively correlated with operating performance. This result is robust to alternative definitions of fixed effects (director-year or firm-director effects), to corrections of standard errors (firm-year versus two-way firm-year and director clusters) and to sample variations (elimination of short term directorships, for instance). We also show that this correlation is smaller when directors have industry-specific expertise (not as common among independent board members) or social connections with other board members. These results suggest that industry expertise and social connections may help to bridge the informational gap experienced by independent board members and reduce the information cost related to be independent rather than affiliated directors. CEOs may be indeed reluctant to share firm-specific information to directors dedicated to monitoring board function. In addition, these results pinpoint the role of board functioning and in particular the information sharing, as a determinant of independent directors’ effectiveness (see Nowak and McCabe, 2003; Adams and Ferreira, 2007; Cai et al., 2015).

Second, while independent directors appear to be less informed, we show that they are also more likely to be selected than affiliated board members, at least in terms of individual intrinsic ability. We derive this conclusion from a comparison of fixed effect distributions across both groups of directors: netted out observable individual attributes and firm (unobservable) heterogeneity, we find that the independent directorship fixed effects distribution is left-truncated. We argue that this left truncation

occurs as a result of a shareholder-friendly selection process that comes to play in the appointment of independent board members. Independent directors are indeed more likely to be high ability individual than affiliated directors. The increasing interest for independent directors (Gordon, 2007; Adams, 2012) could have benefited to corporate governance quality by promoting the appointment of better individual than classic affiliated directors (Keys and Li, 2005; Linck et al., 2009).

Finally, our empirical investigation highlights that the main issue regarding independent position relative to affiliated one in current corporate governance is the board functioning (that is the extent of information sharing inside the board) rather than selection. Independent board members are indeed better selected than affiliated ones, as shareholders should have a set of observable attributes to assess *ex ante* the ability of these directors. Shareholder-friendly selection is but one part of the story, as it stops at the gate of the boardroom, beyond which shareholders do not have direct, visible signs to assess board functioning adequacy, especially regarding information sharing. The overall effect of independent directors is then on average close to zero in the French context. It shows that independence as defined by the French code of corporate governance is not enough to ensure proper corporate governance and to improve firm performance (Crespi-Cladera and Pascual-Fuster, 2014). Independence could even be costly for firms and shareholders if the independent directors do not have particular attributes such as expertise or informal connections, characteristics which may question their “true” independence. From a policy maker perspective, the criteria to define independence and the related board functioning to improve firm corporate governance is then crucial question and remains a research avenue (Van den Berghe and Baelden, 2005).

4.8 Appendix

4.8.1 Variables

Table 4.10: Definition of variables

Panel A	Director Variables
Directorship	Triplet (director; firm; position)
Woman	Dummy equal to 1 if the director is a female
Foreigner	Dummy equal to 1 if the director is not a French citizen
Age	Director's age in years
Tenure	Number of years the director has been seated in the board-room
Independent	Dummy equal to 1 if the director complies with the AFEP/MEDEF definition (Corporate Governance code) of independent director.
Insider	Dummy equal to 1 if the director is an executive of the firm
Industry Expert	Dummy equal to 1 if the director is or has been employed in the same industry as the firm where she sits (one-digit code)
Industry Expert Independent	Dummy equal to 1 if the director is independent regarding AFEP/MEDEF criteria and is or has been employed in the same industry as the firm where she sits (one-digit code)
Financial Expert	Dummy equal to 1 if the director is or has been employed in the financial industry
Ecole Polytechnique	Dummy equal to 1 if the director is graduated from the leading engineer school
ENA	Dummy equal to 1 if the director is graduated from the leading high civil servant school
Top Grande Ecole	Dummy equal to 1 if the director is graduated from either the leading engineer school (Ecole Polytechnique), business schools (HEC, ESSEC, ESCP) or political sciences schools (ENA, IEP)
BoardNET	Dummy equal to 1 if both the director and at least one other director graduated from ENA or from Ecole Polytechnique
CEONET	Dummy equal to 1 if the director belongs to the CEO network (i.e., they share one of these two types of graduation: ENA, Ecole Polytechnique)
BoardNET2	Dummy equal to 1 if both the director and at least one other director graduated from ENA, Ecole Polytechnique, HEC, ESSEC, ESCP and IEP
CEONET2	Dummy equal to 1 if the director belongs to the CEO network (i.e., they share one of these graduations: ENA, Ecole Polytechnique, HEC, ESSEC, ESCP and IEP)
Multi-directorships	Dummy equal to 1 if the director has at least one other directorship over the period in the SBF120 index

Panel B	Board Variables
Board Size	Size of the board
Average Board Tenure	Average tenure of the board members
Supervisory Board	Dummy equal to 1 if the board is a two-tier board
Chairman/CEO Separation	Dummy equal to 1 if the board is a one-tier board with a separation between the Chief Executive and Chairman of the board positions
% of Independents	Proportion of independent directors, excluding the director of interest (in the regressions only)
% of Insiders	Proportion of inside directors, excluding the director of interest (in the regressions only)
% of Industry Experts	Proportion of industry expert directors, excluding the director of interest (in the regressions only)
% of Industry Expert Independents	Proportion of industry expert independent directors, excluding the director of interest (in the regressions only)
% of Financial Experts	Proportion of financial expert directors, excluding the director of interest (in the regressions only)
% of Women	Proportion of female directors
% of Foreigners	Proportion of non-French directors
% of Busy Directors	Proportion of directors who have at least one other directorship during the same year in the SBF120 index
% of Young Directors	Proportion of directors who are less than 45 years old
Panel C	Firm Variables
Number of Employees	Number of employees
MTBV	Market to book value
Leverage	equal to total debt over total equity
R&D investment	equal to the ratio of R&D expenditures over total sales
Stock volatility	equal to the standard deviation of the monthly stock returns over the previous 50 months
Ownership (float)	equal to the share of outstanding shares held by significant owners (defined as owners with 5% or more of the equity capital).
ROA (Return on Assets)	equal to the ratio between EBITDA (earnings before interest, taxes, depreciation and amortization) and beginning-year total assets
ROE (Return on Equity)	equal to the ratio between net income and total equity

4.8.2 The French elite social network

The sociological literature on business elites in France commonly highlights two main networks: engineers and (former) high civil servants (see Kadushin, 1995; Bauer and Bertin-Mouro, 1995; Frank and Yasumoto, 1998). These networks are connected to Grandes Ecoles system. In France, after high school, students may choose to go to classic university system for either a bachelor or a master degree, or to apply for Grandes Ecoles program. In the first case, there is no selection of students and only a minimal grade is required to pass the exams. In the second case, students are selected based on their grades after high school and during the program (after 2 and 5 years) in order to have access to the best and most well-known schools in France. The “Grandes Ecoles” system is divided in three groups: engineer schools, business schools and political science schools (Instituts d’ Etudes Politiques). The Ecole Nationale d’ Administration (ENA, political science school) and the Ecole Polytechnique (Engineer School) are the most prestigious and give access to high level civil servant positions at least for the best students. The ENA is a training school for high civil servants in economics, political science, accountability and finance. All students have a master of arts or sciences, before entering ENA thanks to a very selective competitive exam. After graduation, all students have to take a high-level civil servant position and then belong to the “Grand corps de l’ Etat” (Kadushin, 1995). Ecole Polytechnique is the most well-known engineer school with a very selective entry competitive exam. The most talented ones are able to get a high-civil servant positions (scientific Grand corps de l’ Etat) and the others join the private sector. All students are fast tracked to high level positions in government, state and private sectors. Both schools lead to prestigious bureaucratic career such as cabinet advisor, head of ministries, government position or top management of private and state owned companies. 20% of French largest listed firms are managed by Ecole Polytechnique or ENA graduates over the 1992-2003 period (Kramarz and Thesmar, 2013). Two complementary networks might be pinpointed: the first is formed by the three top French business schools (HEC, ESSEC and ESCP) and the second by political science schools (IEP). As shown by Nguyen (2012), between 1992 and 2001, 61% of the SBF120 CEOs are graduated from a Top Grande Ecole previously mentioned (29% from Ecole Polytechnique and 21% from ENA).

4.8.3 Selection bias

Our identification strategy necessitates excluding non-connected firms and directors, as well as directors who have a single observation in the sample period. The comparison between connected and unconnected firms shows that for financial variables, disconnected firms do not differ significantly from connected firms. Regarding board composition, unconnected firms have a slightly smaller board with less foreigners, more insiders and less independent directors: the board is dominated by company owners, as well as top executives, explaining firm isolation. There is, therefore, no major concern for the relevance of our sample regarding the general conclusion. Concerning directors who appear only once in our database, the only apparent selection bias stems from a significantly higher proportion of females: indeed, 42% of these single observation female directors have been appointed in our last year (2011). At this time, the pressure for hiring female directors was significantly higher due to the forthcoming gender quota (20% in 2014). This selection bias is more the consequence of a new regulation requirement than an endogeneity issue.

Table 4.11: Identification strategy and selection bias

	All directorships (1,785 obs.)		Directorships held by movers (828 obs.)		Directorships held by individuals with at least one independent directorship (1,089 obs.)		Independent identifying directorship (497 obs.)	
Variables	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Woman	0.12	0.33	0.11	0.32	0.13	0.33	0.09	0.29
Foreigner	0.22	0.41	0.11	0.31	0.22	0.42	0.1	0.3
Age	56.65	9.98	57.49	9.28	58.82	8.89	58.4	9.38
Financial Expertise	0.56	0.5	0.63	0.48	0.59	0.49	0.61	0.49
Industry-Expertise	0.53	0.5	0.48	0.5	0.44	0.5	0.54	0.5

chi2 / ttest		
Variables	Movers directorships vs other directorships	Identifying dir. vs other independent dir.
Woman	1.09	9.64***
Foreigner	104.50***	84.47***
Age	-3.31***	1.42
Financial Expertise	30.42***	1.12
Industry-Expertise	16.07***	36.06***

Notes: Chi-square tests (p-values) for equality of distributions between the groups are given, except for age. Ttest for age difference between the groups is given for age. Reading: considering all directorships, 12% are held by women over our sample period. Only 11% are held by female movers. This share is 13% if we consider individuals with independent position. Finally, the share of females is 9% if we only consider individuals used to identify the coefficient on Independence (that is, individuals with a variation in the independence position).

The identification strategy of AKM method is based on the fact that some directors are movers, meaning they hold different directorship across firms over the period. 828 (46%) directorships are held by movers or busy directors (directors who have multi-directorships over the period). The other directors have only a single directorship in our sample. The high connectedness of firm networks in our sample enables to have a robust estimation of the model. The tests of hypothesis H1 to H3 rely on the estimation of position effects α and, in particular, on the estimation of the independent position effect α_1 . These parameters are fitted using individuals with a diversity of positions over our sample period (for instance, independent in two firms and affiliated in a third, or independent for a while in a firm and then affiliated). Of a total of 1,785 directorships (director-firm-position observations), 497 (27%) fulfill this condition. These 497 directorships correspond to a total of 174 distinct directors and 1,903 director-firm-year observations. The other directorships are held by directors with the same position regardless the directorship (never independent for 39% and always independent for 34%). The number of directorships, directors and observations used to identify the effect of industry expertise is only slightly lower.

Table 4.11 provides evidence on the possible selection bias produced by our strategy of identification. Among the directorships, the subgroup held by movers has a significant lower share of foreigners and industry experts but a higher share of financial expert. This individual characteristic bias between movers and non-movers should not however affect the estimation. These individual characteristics are indeed taken into account in the econometric model and the movers enable to correctly identify firm and director fixed effect whatever their individual characteristics. The movers are on average characterized by generic characteristics: French, financial expert 57 year-old individuals. Among the independent directors, the sub-group of identifying directors has a significantly lower proportion of foreigners and women than the sub-group of other independent directors. The main reason is the lower occurrence of multiple directorships for foreigners and female directors: for instance, only 22% of foreign directors have multiple directorships, against 52% for French directors. The geographical distance may partly explain this pattern. For women, this may reflect their rather marginal role in the traditional French corporate system. These observations suggest that individuals used to identify the independence position coefficient are more involved in this system, with a greater experience of French board functioning. Finally, the identifying independent directors are less likely to be industry expert. It is consistent with the fact that independent position and industry expertise are often antagonist.

Finally, the structure of our dataset, with a common output for directors sitting the same year in a given company, imposes some restrictions when analyzing individual fixed effects. As previously argued, fixed effects for non-mover directors arriving and leaving at the same dates in the same firm are not accurately estimated. This is actually the case for 716 of the 1,785 directorships, and we exclude them when comparing the fixed effects distribution across groups. Table 4.12 compares individual characteristics and positions between directorships with accurate fixed effects (group A) and directorships with non-accurate fixed effects (group B). Age, the share of women and the share of insiders are not significantly different between the two groups. We see, however, that group B includes significantly more foreigners. The share of industry experts is also greater, this being related to a lower proportion of independent directors. Finally, there are substantially fewer financial experts in the excluded group. Of course, we cannot exclude the possibility of a selection bias in our estimation. However, the pattern of this potential bias is far from clear: why would a foreign director with industry expertise be of a lower or higher intrinsic quality than a French one with financial expertise? In addition, the selection should occur for the two groups we compare: independent and non-independent directors. We are therefore confident that this selection does not produce a substantial bias when examining the relationship between independence and individual fixed effects. As a way to check the robustness of our results, we also implement our quantile regressions on the full sample (1,785 directorships, see Appendix 4.8.5, Table 4.15).

Table 4.12: Director fixed effects and selection bias

	Directorships with accurate fixed effect (1,069)		Excluded directorships (716)		
Variables	Mean	Std. Dev.	Mean	Std. Dev.	Tests
Women	0.12	0.33	0.12	0.33	0.0028
Foreigner	0.17	0.38	0.28	0.45	31.19***
Age	56.96	9.65	56.17	10.45	-1.64
Financial Expert	0.59	0.49	0.51	0.5	10.63***
Independent	0.52	0.5	0.42	0.49	16.93***
Insider	0.08	0.27	0.09	0.29	0.54
Industry Expert	0.51	0.5	0.57	0.5	7.63***

Notes: Student and Chi-square tests (p-values) for equality of distributions between the two comparison groups are given.

4.8.4 Robustness checks for independent position

Table 4.13: Independence and operating performance, excluding short tenures

Variables	(1) ROE	(2) ROE	(3) ROA	(4) ROA
Independent	-0.013* (0.007)	-0.012 (0.007)	-0.004* (0.002)	-0.003 (0.002)
Insider	0.009 (0.013)	0.013 (0.014)	0.005 (0.004)	0.004 (0.006)
% of Independents	-0.041 (0.068)	-0.009 (0.072)	-0.010 (0.022)	-0.002 (0.022)
% of Insiders	0.216 (0.138)	0.163 (0.147)	0.057 (0.047)	0.032 (0.055)
Tenure (log)	0.008 (0.017)	0.010 (0.017)	0.004 (0.004)	0.004 (0.004)
Chairman/CEO Separation	0.011 (0.045)	0.041 (0.048)	-0.002 (0.016)	0.004 (0.017)
Supervisory Board	0.005 (0.005)	0.004 (0.004)	0.003* (0.002)	0.002 (0.002)
Board Size	-0.195** (0.087)	-0.215** (0.088)	-0.033 (0.030)	-0.040 (0.030)
% of Women	-0.036 (0.098)	-0.027 (0.101)	-0.039 (0.032)	-0.028 (0.032)
% of Foreigners	0.050 (0.052)	0.050 (0.051)	0.014 (0.016)	0.013 (0.016)
% of Busy Directors	-0.129** (0.059)	-0.129** (0.060)	-0.032* (0.017)	-0.029* (0.017)
% of Young Directors	0.001 (0.005)	0.007* (0.004)	-0.000 (0.001)	0.001 (0.001)
Average Board Tenure (log)	-0.004 (0.028)	0.009 (0.024)	0.005 (0.007)	0.007 (0.007)
Observations	6,255	6,315	6,251	6,325
Nb of firms	595	598	597	600
R-adj	0.475	0.453	0.631	0.622
Director, Firm and Year FE	No	No	No	No

Notes: (1) Dependent variable: Return On Equity (columns 1 to 2) or Return On Assets (columns 3 to 4). (2) Directors' controls include the position (independent, insider) and tenure (log) (3) Board controls include % of independent directors, % of insiders, % of industry expert directors, board size, % of women, % of foreigners, % of busy directors (with at least one other directorship the same year), % of young directors aged less than 45, average board tenure (in log), a dummy that takes the value 1 in the case of a two-tier board (Supervisory Board) and a dummy that takes the value 1 in case of separation between CEO and chairman positions in a one-tier board (0 otherwise). (4) Firm controls include size (number of employees, in log), MBTV (market to book value), financial leverage, R&D on sales, stock price volatility, % of float ownership. (5) Models include director, firm and year fixed effects. (6) Columns 1 and 3 exclude the first year following the appointment; Columns 2 and 4 exclude individuals with less than three years of tenure (7) Robust standard errors, clustered on firm by year, in parentheses. (8) Significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 4.14: Independence, informational gap and performance with extended definition for network

Variables	(1) ROE	(2) ROE	(3) ROA	(4) ROA
Independent	-0.034*** (0.011)	-0.028*** (0.009)	-0.011*** (0.004)	-0.009*** (0.003)
Insider	0.004 (0.014)	0.009 (0.014)	0.002 (0.005)	0.004 (0.005)
Industry Expert	-0.009 (0.008)	-0.006 (0.008)	-0.002 (0.003)	-0.001 (0.003)
Industry Expert* Independent	0.034*** (0.012)	0.035*** (0.011)	0.009** (0.004)	0.009** (0.004)
CEONET2	0.011 (0.008)	0.013* (0.007)	0.003 (0.002)	0.003 (0.002)
Independent*CEONET2	-0.013 (0.009)	-0.014 (0.009)	-0.001 (0.003)	-0.001 (0.002)
BoardNet2	-0.005 (0.008)	-0.003 (0.008)	-0.002 (0.003)	-0.000 (0.003)
Independent*BoardNet2	0.017** (0.008)	0.012* (0.007)	0.007*** (0.003)	0.005** (0.002)
Observations	7,049	7,049	7,048	7,048
Nb of firms	601	601	603	603
R-adj	0.478	0.493	0.631	0.624
Director fixed effect	Yes	Yes	Yes	Yes
Firm and Year fixed effect	Yes	Yes	Yes	Yes
Weighted	No	Yes	No	Yes

Notes: (1) Dependent variable: Return On Equity (columns 1 to 2) or Return On Assets (columns 3 to 4). (2) Director controls include the positions (independent, insider, industry expert), the interaction term (industry expert independent) and the network variables: directors belonging to the same educational network (X-ENA-HEC-ESSEC-ESCP-IEP) as the CEO (CEONET2), or as other board members (BoardNet2) with the interaction term (independent and network connections), tenure. (3) Board controls include % of independent directors, % of insiders, % of industry expert directors, % of industry expert independent, board size, % of women, % of foreigners, % of busy directors (with at least one other directorship the same year), % of young directors aged less than 50, average board tenure, a dummy that takes the value 1 in the case of a two-tier board (Supervisory Board) and a dummy that takes the value 1 in case of separation between the CEO and chairman positions (0 otherwise). (4) Firm controls include size (number of employees, in log), financial leverage, R&D on sales, stock price volatility, and % of float ownership. (5) All models include director, firm and year dummies. (6) Robust standard errors, clustered on firm by year, in parentheses. (7) Significance: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

4.8.5 Robustness checks for director fixed effects analysis

Table 4.15: Director fixed effects and independence (quantile regressions on all directorships)

[illegible]

Panel B: ROA

Variables	(1) 10th	(2) 20th	(3) 30th	(4) 40th	(5) 50th	(6) 60th	(7) 70th	(8) 80th	(9) 90th
Independent	0.005*** (0.001)	0.004*** (0.000)	0.005*** (0.000)	0.005*** (0.000)	0.005*** (0.000)	0.004*** (0.000)	0.004*** (0.000)	0.003*** (0.001)	0.003*** (0.001)
Insider	0.003*** (0.001)	0.003*** (0.001)	0.003*** (0.001)	0.003*** (0.001)	0.003*** (0.001)	0.003*** (0.001)	0.002*** (0.001)	0.002* (0.001)	0.002 (0.001)
Industry Expert	0.000 (0.001)	0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.001 (0.000)	-0.000 (0.000)	-0.001 (0.001)	-0.001* (0.001)
Woman	-0.001 (0.001)	-0.001 (0.001)	-0.000 (0.001)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.001)	0.001 (0.001)	0.002* (0.001)	0.003 (0.002)
Foreigner	0.001** (0.001)	0.001* (0.001)	0.001 (0.000)	0.001* (0.000)	0.001** (0.000)	0.001** (0.001)	0.002*** (0.001)	0.002*** (0.001)	0.002*** (0.001)
Age	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Financial Expert	0.000 (0.001)	0.001 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.001)
Multi-directorships	0.001 (0.001)	0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	-0.000 (0.000)	-0.001 (0.001)
Observations	1,778	1,778	1,778	1,778	1,778	1,778	1,778	1,778	1,778
Firm fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: (1) Dependent variable: Director fixed effect computed with Return On Equity value (Panel A) or Return On Assets (Panel B). (2) Director controls include: the positions (independent, insider, industry expert, financial expert), the age, the gender and foreigner dummies as well as a dummy for multi-directorships (3) All models include firm fixed effects. (4) Robust standard errors in parentheses. (5) Significance: *** p<0.01, ** p<0.05, * p<0.1.

The representation of managers, shareholders and stakeholders inside the boardroom: Does it Matter for CSR commitment?

Abstract

Using multi-source extra-financial rating datasets (Vigéo and Asset4), this chapter investigates empirically the relationship between CSR commitment (social, environment and societal) and board composition for the French listed firms (SBF120) over the 2006-2011 period. Two main motivations may explain CSR commitment beyond the average industry practices. On the one hand, managers may seek for private benefits such as building their personal reputation (good citizen reputation) or entrenching themselves in their job (the “agency” view). On the other hand, CSR commitment may help to reduce conflicts between managers, shareholders and other stakeholders in order to maximize the shared value (the “value-enhancing” view). CSR commitment, except the environmental one, is driven by good corporate governance practices from the shareholder perspective (high independence and low share of insiders). From the stakeholder perspective, social commitment is positively associated with the stakeholders’ representation inside the boardroom and societal commitment is positively related to the supply-chain stakeholders’ representation. These results support the stakeholders’ conflict resolution hypothesis (value-enhancing view). This chapter also highlights the complementarity between shareholder and stakeholder perspectives to investigate the link between board composition and CSR commitment.

Key words: Corporate Governance, Corporate Social Responsibility, Stakeholder Theory, Agency Theory.

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5.1 Introduction

For decades, scandals and crises (e.g. environmental crises such as the oil pollution of British Petroleum Deepwater Horizon, as well as social crises, such as the wave of suicides in France Telecom) have focused attention on corporate governance practices and Corporate Social Responsibility (CSR). On the one hand, Corporate Governance refers to either “the ways in which the suppliers of finance to corporations assure themselves of getting a return on their investments” (the shareholder model) (Shleifer and Vishny, 1997) or to the ways to protect the firm’s social interest beyond the shareholders’ interests, especially the blockholders, and to balance the interests of various stakeholders, especially labor forces (the stakeholder model) (Aglietta and Reberlioux, 2005). On the other hand, according to the European Commission (2011), CSR describes the fact that firms “have in place a process to integrate social, environmental, ethical, human rights and consumer concerns into their business operations and core strategy in close collaboration with their stakeholders”¹. From an economic perspective, firms accept to bear extra-costs to implement actions beyond what the law and their financial goals require (McWilliams and Siegel, 2000), in order to comply with the legal, moral and ethical rules of the society (Hill et al., 2007), to produce welfare for strategic stakeholders (Freeman, 1984) and to maximize shareholders’ long-term wealth (Friedman, 1970). Nevertheless, the link between governance and CSR commitment (Governance-CSR nexus, see Harjoto and Jo (2011)) remains largely unclear. Most of the academic literature has indeed focused interest on the relationship between governance and financial performances. Only a couple of studies highlight a causal link from corporate governance to CSR performances (Jo and Harjoto, 2012).

From this perspective, the board of directors plays a central role. Board is indeed responsible for firm’s objectives, legal compliance, and risk management, and looks after CSR as an extension of their fiduciary duties towards the shareholders (Mickels, 2009, OECD Principles). Two main motivations may justify the interest of the board for CSR issues. On the one hand, from an agency view, CSR, as a part of managers’ discretionary area (Wood, 1991), may be opportunistically used by the managers in order to entrench himself (Cespa and Cestone, 2007) or to build a good citizen reputation (Barnea and Rubin, 2010). CSR is therefore an agency problem (opportunistic behavior hypothesis) (Ferrell et al., 2014). In this case, inefficient governance systems (i.e. board dominated by the Chief Executive Officer -CEO-) and CSR commitment should be positively correlated (Harjoto and Jo, 2011). On the other hand, from a stakeholder theory perspective, CSR is a way to reduce conflicts between managers, investors and non-investing stakeholders (Jensen, 2001; Scherer et al., 2006) in order to maintain firms’ license to operate and to improve long-term financial performances (Post et al., 2002b). CSR is therefore a value-enhancing strategy (the stakeholders’ conflicts resolution hypothesis) (Ferrell et al., 2014). In this case, CSR commitment should be dependent on good corporate governance practices, related to board effectiveness against the CEO and board ability to take into account CSR issues in the decision-making process (Hillman et al., 2001).

The effectiveness of corporate governance, especially the board of directors, remains still a vivid academic debate, especially when defining the good corporate governance practices (Van den Berghe and Levrau, 2004). Board composition and organization are the main drivers of governance effectiveness. Gender and ethnic diversity of board members have been highlighted in this debate as good criteria

¹New policy on Corporate Social Responsibility, European Commission, 2011

of governance quality regarding CSR issues (Post et al., 2011; Boulouta, 2013; Harjoto et al., 2014). However, more importantly, the bargaining power of CEO towards shareholders and, at some extent, stakeholders appears as the crucial issue (Adams et al., 2010) even for CSR perspective (Harjoto and Jo, 2011; Hillman et al., 2001). From the shareholder perspective, the main objective is to protect the interest of minority shareholders. Independent directors, without any economic or social relationship with the firm, blockholders or managers, are therefore promoted to reduce the conflict of interest between the shareholders and the managers. Insiders should be avoided because they may help the CEO to entrench him-self in his job. Moreover, the duality of chairman and CEO may increase CEO's bargaining power against board members and help the CEO to increase his discretionary area. Good corporate governance practices from the shareholder perspective are then defined by an independent board with the separation of Chairman and CEO jobs (Jo and Harjoto, 2011; Shaukat et al., 2015). However, Hillman et al. (2001) argue that from a CSR perspective, the presence of stakeholder directors may help the board to take into account stakeholder demands and to better design CSR policy and commitment. From the stakeholder perspective, good corporate governance practices are then related to the representation of the various strategic stakeholders inside the boardroom, especially the employee or the community representative, in order to maintain the license to operate. However, the board domination by insiders and few stakeholders' representatives may lead to an efficient governance. Most of the literature adopts the shareholder perspective to study the relationship between board composition and CSR commitment (Harjoto and Jo, 2011; Ntim and Soobaroyen, 2013; Shaukat et al., 2015). Yet, the stakeholder perspective could be very relevant, especially in the case of the stakeholder model of corporate governance.

This chapter investigates the relationship between board composition, respectively from shareholder and stakeholder perspectives, and CSR commitment in social, environment and societal dimensions. The empirical analyses rely on an original database matching one corporate governance database and two extra-financial data sets (Vigéo and Asset4) for French listed firms (SBF120, 120 largest firms on Euronext-Paris) over the 2006-2011 period. Regarding board composition, from the shareholder perspective, directors are identified, depending on their employment, as insider, affiliated² or independent in order to measure CEO's entrenchment and board monitoring abilities. From the stakeholder perspective, directors are classified, depending on their status and expertises (industry and financial), according to the original typology of stakeholder directors: shareholders' representatives, insiders, employees' representatives, business directors (customers and suppliers), support directors (bankers and Insurers) and extern directors (other stakeholders). Regarding CSR commitment, Vigéo and Asset4 ratings enable to measure CSR commitment intensity (CSR commitment index) and to compare firm behavior (policy and practices) in various dimensions. After aggregating data at the board level, the probit analyses estimate the propensity to care about CSR more than the average firm behavior thanks to board composition (from both the shareholder and stakeholder perspectives) and firm characteristics. These analysis are controlled for industry and year heterogeneities (fixed effect methods). Moreover, non-linear effects of board composition are tested as suggested by de Villiers et al. (2011) and Chang et al. (2015). Finally, robustness checks test other CSR commitments indexes and compare the informational content of both extra-financial ratings.

²Affiliated directors have a business relationship with the firm or the significant shareholders without being executive.

The chapter shows that from the shareholder perspective, CSR, societal and social commitment intensities are negatively correlated with the share of insiders or positively related to the share of independent directors, depending on the extra-financial rating data set. These results are consistent with the stakeholders' conflict resolution hypothesis. The CEO's opportunistic behavior hypothesis is clearly rejected. However, environmental commitment is non significantly related to monitoring or entrenchment abilities. This result does not support any hypothesis. From the stakeholder perspective, empirical evidence on Vigéo data suggests that social commitment may be used to resolve conflicts between managers and non-investing stakeholders, whereas customers and suppliers engagement is more likely to reduce conflicts only with business stakeholders and employees. In the opposite, environmental and community commitments seem to resolve conflicts only with the employees or business stakeholders and to exacerbate conflicts with other stakeholders, especially with support and extern stakeholders. The stakeholders' conflict resolution hypothesis is then fully accepted for the social and customers and suppliers dimensions and partly accepted for the environment and community dimensions. Depending on the most strategic firm stakeholders, firms are more willing to commit or not to environment or community. The CEO's opportunistic behavior hypothesis is also clearly rejected by the stakeholder perspective. However, Asset4 data remain inconclusive from the stakeholder perspective. The shareholder and stakeholder perspectives on board composition provide consistent results and show that multi-dimensional CSR commitment is driven by the objective of reducing of conflict with the stakeholders. However, the difference of results between both extra-financial data sets suggests that the informational content varies depending on the methodology and the selected indicators whereas similar issues are considered.

This chapter makes the following contribution to the CSR-Governance nexus literature. First, this chapter fills the gap between the shareholder and stakeholder perspectives to investigate the relationships between board composition on the one hand and CSR commitment intensity on the other hand. It analyzes indeed the impacts of monitoring and entrenchment abilities (Jo and Harjoto, 2011) and the stakeholder board representation, extending Hillman's typology (2001), on CSR engagements. This chapter follows the recent papers testing the two main hypotheses (the opportunistic behavior or the stakeholders' conflict resolution) explaining CSR commitment from a corporate governance perspective, thanks to either the shareholder perspective on board composition (independence) (Harjoto and Jo, 2011), an aggregate governance quality perspective (corporate governance rating) (Jo et al., 2015) or an agency view of firm characteristics and decisions (cash flow, dividend, leverage) (Ferrell et al., 2014). This chapter complements this literature by providing new insight and evidence on governance determinants of CSR commitment and discussing the good corporate governance practices regarding sustainable objectives (Coles et al., 2008).

Second, the most recent studies on the link between CSR and financial performances highlight the multi-dimensionality of CSR policies and the potential trade-offs and synergies between CSR dimensions (Harjoto and Jo, 2011; Jo and Harjoto, 2012; Cavaco and Crifo, 2014). Most of empirical studies on board of directors (with the noticeable exception of Hillman et al. (2001)) use either aggregated CSR measures or focused on one criterion (strengths or concerns of KLD data for example in environment). Using Vigéo and Asset4 multi-dimensional extra-financial data, this chapter separately tests the determinants of each CSR commitment. I show thus that social and societal engagements may be driven by the same stakeholders, whereas environment investment could exacerbate conflicts among

firm stakeholders. This evidence provides some pieces of explanation about some complementary and substitute effects highlighted in the CSR-performance nexus literature. In particular, Cavaco and Crifo (2014) show a complementary effect between social and societal engagements on firm performance, whereas social and environment commitments have substitute effects.

Third, this chapter contributes to the important debate about the robustness and consistency of CSR practices evaluation and extra-financial ratings (Chatterji et al., 2009; Escrig-Olmedo et al., 2014). Extra-financial rating agencies differ indeed by their CSR theorization, indicators and aggregation methodology (Chatterji et al., 2014). I propose here to analyze the same relationships on two independent data-sets coming from Vigéo and Asset4, the two leading European extra-financial rating agencies. Vigéo rates firms according to a set of industry-related indicators and the knowledge of extra-financial analysts. Asset4 systematically uses the same indicators without any input of analysts. Asset4 provides then ESG (Environment, Social and Governance) information rather than extra-financial ratings like Vigéo (Escrig-Olmedo et al., 2010). Moreover, the evaluated CSR practices and the international standards, used as benchmark, are slightly divergent between both agencies. This chapter provides the first comparison to my knowledge between Vigéo and Asset4. Even if the results from both data sets are mainly consistent, each one highlights different specific board determinants of CSR commitment, especially from the stakeholder perspective. The empirical results pinpoint therefore the importance of a stringent choice of ESG information providers and the need of using multi-ESG sources to test the robustness of results and to reduce the measurement and estimation biases (Chatterji et al., 2014).

Fourth, most of the previous studies are based on the American case (Harjoto and Jo, 2011; Ntim and Soobaroyen, 2013; Shaukat et al., 2015). However, some authors argue that the Anglo-Saxon governance model is less stakeholder-oriented than the continental European model (Martynova and Renneboog, 2011). I produce then the first evidence on the French case, defined by an hybrid model of corporate governance between the shareholder and stakeholder models, which should be driven by firm social interest (Aglietta and Reberlioux, 2005). The interest of minority shareholders, blockholders and employees are directly taken into account by the board. This framework is then an appropriate setting to test the effects of both the shareholder and stakeholder perspectives on CSR commitments (Crifo and Reberlioux, 2015). In terms of board composition, American and French boards are slightly different: the average proportion of independent directors is around 50% in France, whereas 60% of directors are independent in the similar US samples (Harjoto and Jo, 2011). Furthermore, the share of affiliated directors is almost 40%, with 4% of employees' representatives, inside the French boardroom. However, the American and French results are convergent. In both cases, the empirical evidence rejects the CEO's opportunistic behavior hypothesis and accepts the stakeholders' conflict resolution hypothesis (Harjoto and Jo, 2011). Nevertheless, the stakeholders representation seems to be a determinant of CSR commitment in the French case, whereas the similar American study is quite inconclusive on this point (Hillman et al., 2001). It suggests that French governance may take better into account stakeholders' interests in the decision-making process, at least by improving stakeholders' representation inside the boardroom (Crifo and Reberlioux, 2015).

The reminder proceeds as follows. Section 5.2 discusses the literature and the hypotheses on the link between CSR and board composition. Section 5.3 presents the data and section 5.4 the empirical results. Section 5.5 discusses the results before concluding.

5.2 Literature review and hypotheses

CSR has received an important attention for decades (see Kitzmueller and Shimshack, 2012) and may be analyzed as an answer for market imperfections and government failures. In particular, CSR reveals contract incompleteness and is a delegated responsibility from directors to managers (Crifo and Forget, 2015). CSR is indeed part of executive discretionary area and the information asymmetry between directors and managers may help these latter to deviate from the optimal CSR commitment from a shareholder point of view. Few recent studies focused on the link between corporate governance, especially board composition, and CSR commitments (see e.g. Hillman et al., 2001; Jo and Harjoto, 2011) without reaching any clear consensus. From this literature, two hypotheses have emerged in order to attempt to understand what the drivers of CSR engagement from a corporate governance perspective are: the CEO opportunistic behavior hypothesis and the stakeholders' conflict resolution hypothesis (Ferrell et al., 2014). In the first hypothesis, firms are over-committed in CSR at the expense of the shareholders and CSR commitment is a bad signal of CEO's opportunistic behavior. In the second case, CSR commitment shows the ability of management to take into account shareholders' and stakeholders' interests in order to ensure firm's long-term wealth. CSR performance is in this case a good signal.

Regarding board composition, beyond the diversity determinants (Anderson et al., 2011; Harjoto et al., 2014) the corporate governance-CSR nexus can be analyzed according to the shareholder perspective (Harjoto and Jo, 2011) or to the stakeholder perspective (Hillman et al., 2001). The shareholder perspective reflects how directors represent shareholders in the decision-making process (Adams et al., 2010). The literature highlights the role of independent directors to protect minority shareholders' interests and the role of insiders to support the CEO. Affiliated directors are representative of specific interests such as significant shareholders. Nevertheless, the shareholder perspective does not reflect the diversity of stakeholders taken into account by the boardroom such as employees, business (customer and suppliers), support (banks) or outside (environmental activists) stakeholders. On the one hand, directors regarding their background and their employment do not recognize the same stakeholders and treat them differently (see Wang and Coffey, 1992). On the other hand, the direct representation of stakeholders inside the boardroom acknowledges the firm's interest for these strategic stakeholders and their demands. The stakeholder representation reveals then the bargaining power between managers and non-investing stakeholders in the decision-making process (Mitchell et al., 1997). The following literature review develops each hypothesis regarding both the shareholder and stakeholder perspectives on board composition.

5.2.1 The CEO's opportunistic behavior hypothesis

According to the agency theory, Barnea and Rubin (2010) develop the hypothesis that CSR, as a part of the principal-agent relationship, may be overly promoted by the CEO and the insiders (executive directors) in order to receive some private benefits, like getting a personal reputation of good citizen. In this purpose, managers use their discretionary area in order to over-commit to CSR, potentially at the expense of shareholders. The authors demonstrate that the ownership of insiders is negatively correlated with the likelihood that the firm adopts a responsible behavior (i.e. insiders invest more in CSR policy when they do not bear the cost as shareholders). In the same direction, Coffey and Wang (1998) show that board dominated by insiders (management control) are significantly more likely to invest in philanthropic activities in order to pursue personal interests at the expense of shareholders.

More recently, Masulis and Reza (2015) confirm these results and show that philanthropic givings are more related to CEO preferences rather than the interests of shareholders. These evidence legitimates CSR engagement as an opportunistic behavior from managers. Thus, from the shareholder perspective, CSR performances should be correlated with boards dominated by the CEO and insiders (entrenchment ability).

In order to reduce the CEO's opportunism, Hermalin and Weisbach (1998) argued that independent directors, free of any conflict of interests, are more able to monitor CEO's choices and reduce the bargaining power of the CEO in the decision-making process. In the same sense, the separation between Chairman and CEO positions leads to a more balanced power inside the boardroom and improves board monitoring ability (Rhoades et al., 2001). According to the CEO's opportunistic behavior hypothesis, Surroca and Tribo (2008) demonstrated empirically that the proportion of independent directors and the CEO-chairman separation are negatively correlated with CSR performances. The monitoring ability (Chairman-CEO separation and Independent directors) are therefore able to improve governance efficiency (better alignment between managers' and shareholders' interests), to reduce the managerial discretionary area, and at the end to reduce CSR over-investment. In this perspective, a negative relationship between monitoring ability and CSR commitment intensity is therefore expected.

Hypothesis 1A (the shareholder perspective): If the opportunistic behavior hypothesis is valid, a negative relationship between CSR commitment intensity and board monitoring ability and a positive relationship between CSR commitment intensity and the CEO's entrenchment ability are expected.

From the stakeholder perspective, Cespa and Cestone (2007) justified, thanks to a theoretical model investigating the conflicts of interest between managers, shareholders and non-investing stakeholders, that the CEO invests in CSR in order to obtain stakeholders' support and protection against a firing threat in the case of poor performances. Surroca and Tribo (2008) confirmed empirically a potential collusion between managers and non-investing stakeholders, especially employees and environmental activists, thanks to specific CSR commitment. The representatives of the other stakeholders should prone the reduction of CSR commitment. In this perspective, a positive relationship between the share of insiders and the representatives of the specific stakeholders on the one hand and CSR commitment on the other hand is expected. The other stakeholder representatives should be negatively related to CSR commitment.

Hypothesis 1B (the stakeholder perspective): If the opportunistic behavior hypothesis is valid, CSR commitment intensity should be positively related to the share of insiders and the representatives of at least one strategic stakeholder, and negatively related to the share of the other stakeholders' representatives.

5.2.2 The stakeholders' conflicts resolution hypothesis

From the stakeholder theory perspective (Freeman, 1984), CSR commitment may be a way to ensure firm's license to operate and to protect shareholders' long-term interests. According to the New Stakeholder View (Post et al., 2002b), maintaining good relationships with the network of legitimate stakeholders (social or environmental activists but also employees, customers and suppliers, see Don-

aldson and Preston (1995)) is indeed a key objective in order to ensure firm survival. Nevertheless, the possible antagonism between shareholders' and non-investing stakeholders' interests may be a source of conflicts. In this case, firms are able to achieve some stakeholders' demands through CSR in order to reduce these conflicts (Jensen, 2001) and to maximize shareholders' wealth (Harjoto and Jo, 2011). However, managers may be willing to under-commit to CSR, leading to worth CSR firm performances (McKendall, 1999), because the short-term cost of CSR commitment may be high relative to the long-term return, and because CSR commitment may hurt short-term financial performances and the related manager compensation (McGuire et al., 2003; Coombs and Gilley, 2005). Cai et al. (2011) show on US data that an interquartile increase of CSR commitment is related to a 4.35% decrease of executive total compensation. The board of directors is therefore responsible for aligning managers and shareholders' interests from the CSR perspective (Berrone and Gomez-Mejia, 2009; Mallin et al., 2013).

The most important issue here is to understand how the stakeholders' and shareholders' long-terms interests are at best represented in the decision-making process. According to Johnson and Greening (1999) or Ibrahim and Angelidis (1995), independent directors are more likely to protect long-term shareholders' interests by accepting environmental investments or sustainable behaviors even if they are in conflict with the short-term economic performances. Moreover, Harjoto and Jo (2011) argue that efficient governance structure, characterized by strong board monitoring ability, may correctly represent stakeholders' interests and promote CSR commitment. Finally, Shaukat et al. (2015) show that a more independent board is able to construct a clearer CSR strategy and is related to better social and environmental performances. Few other studies (Webb, 2004; Post et al., 2011; de Villiers et al., 2011; Ntim and Soobaroyen, 2013; Zhang et al., 2013) confirm the positive relationship between board monitoring ability (independent directors, CEO-chairman separation) and socially responsible status or CSR performances. From the shareholder perspective, a better monitoring governance structure, aligned with the long-term shareholders' interests, should lead firms to commit to CSR.

Hypothesis 2A (the shareholder perspective): If the stakeholders' conflict resolution hypothesis is valid, monitoring (entrenchment) ability should be positively (negatively) correlated with CSR commitment intensity.

From the stakeholder perspective, Hillman et al. (2001) argue that the stakeholder directors improve the recognition of stakeholders' interests and that they may trigger CSR commitment, especially in the dimensions related to the stakeholders' demands. The authors propose four types of stakeholder directors in order to represent the diversity of firms' stakeholders: community directors (academics, political leaders, NGO), customers directors, suppliers directors and employees directors. However, they show only a positive relationship between community directors and diversity CSR dimension and a negative one with environment. They conclude that the divergence of stakeholders' interests may, contrary to what is expected, reduce the effectiveness of stakeholder representation inside the boardroom in terms of CSR commitment by increasing conflicts. Globally, these results are inconclusive. Nevertheless, to my knowledge, this perspective has never been tested again on other samples, especially outside US in a stakeholder-oriented corporate governance model. The stakeholder governance model could be more sensitive to stakeholders' interests (Fauver and Fuerst, 2006; Kluge and Schomann, 2008). According to the stakeholder theory, the presence of stakeholders' representatives

may increase specific care about CSR in order to reduce conflicts between managers and the recognized stakeholders because the board is more able to take into account their specific interests Post et al. (2002b). A positive relationship between the shares of stakeholder representatives and CSR commitment is expected, except for the share insiders which reflects management entrenchment.

Hypothesis 2B (the stakeholder perspective): If the stakeholders' conflict resolution is valid, the proportion of stakeholders' representatives, except the proportion of insiders, should be positively correlated with CSR performances.

5.3 Data and methods

I matched five data sets from Ethics&Boards, Vigéo, Asset4, ThomsonOneBanker and Infiniti for firms belonging to the SBF120 index in 2011 (the 120 largest listed firms by market capitalization and by trading volumes in 2011 on NYSE-EURONEXT Paris³). Ethics&Boards, an international board watching agency, provides information on board composition and directors characteristics for French listed firms. Vigéo, the leading European ESG rating agency (since 2002), and Asset4, a worldwide provider of ESG data included in Datastream, furnish multi-dimensional CSR scores and ratings for French and international listed firms. Both Vigéo and Asset4 only cover part of the SBF120 index, specifically firms with a large share of their ownership traded on the market. But these two agencies have the largest coverage of the French market. Infiniti gives comprehensive financial data and ThomsonOneBanker ownership structure. After matching and excluding financial firms (due to their specific regulatory constraints), 91 among the 120 largest French listed companies (SBF120) make up the sample. The unbalanced final panel comprises 461 firm-level observations over the 2006-2011 period. Tables 5.19 and 5.20 (Appendix 5.7.1) provide the definition of board, CSR and firm variables.

5.3.1 Board variables

Ethics & Boards database provides board composition and board-related information for directors such as status (insider, independent, or employee's representative) and functions (Chairman, Chief Executive Officer -CEO-, executive). The database also includes individual characteristics such as the gender, the nationality, the date of birth, and previous and current professional activities. The missing information has been completed by hand collection from annual reports and internet searches (Who's who, linkedin...). Table 5.1 presents the board descriptive statistics, calculated by aggregation of individual data at the board level.

First, Panel A presents the board control variables. French firms can choose between one tier (79%) and two tiers boards (supervisory boards, 21%) (see Belot et al., 2014). Supervisory board does not include any executive whereas one tier board includes the chief executive officer or other executive directors. The relative bargaining power of the CEO and the decision-making process are therefore different in the two systems (Rhoades et al., 2001; Shaukat et al., 2015). To take into account this heterogeneity, a dummy "Supervisory Board" takes the value 1 if the board is organized in two tiers and 0 otherwise. The average age of directors enables to take into account the moral and CSR concerns among directors (Post et al., 2011), and board size (Yermack, 1996; Harris and Raviv, 2008) the cost

³In the chapter, firms are included in the sample if they belonged to SBF120 index in January 2011. The sample of firms is then stable over the period in order to avoid selection bias due to index exclusion or entrance.

Table 5.1: Board descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Panel A: Board Characteristics					
Supervisory Board	461	0.21	0.41	0	1
Board Size	461	12.36	3.46	3	23
Avg Age	461	58.91	4.32	41.91	68.75
Sh of Women	461	0.11	0.09	0	0.44
Sh of Foreigner Directors	461	0.23	0.20	0	1
CSR Committee	461	0.12	0.33	0	1
Panel B: Monitoring and Entrenchment Abilities					
Sh of Insider Directors	461	0.10	0.12	0	0.83
Chairman/CEO separation	461	0.29	0.45	0	1
Sh of Independent Directors	461	0.51	0.21	0	1
Panel C: Stakeholder Representation					
Nb of Stakeholders	461	4.12	1.03	1	6
Diversity of Stakeholders' representatives	461	0.69	0.17	0.17	1
Sh of Shareholders	461	0.04	0.07	0	0.50
Sh of Employees' representatives	461	0.04	0.08	0	0.39
Sh of Business Directors	461	0.19	0.16	0	0.80
Sh of Support Directors	461	0.32	0.17	0	0.90
Sh of Extern Directors	461	0.30	0.19	0	1

Notes: This table provides the descriptive statistics relative to the board composition. Board size gives the size of the board whereas average age variable is the average age of directors inside the boardroom. The Supervisory Board dummy takes the value 1 if the corporate governance is organized around a management board and a Supervisory board (two tiers board) and 0 otherwise (one tier board). The Chairman/CEO separation dummy takes the value 1 if the position of board chairman and CEO are held by two different individuals. Nb Stakeholders gives the number of stakeholders represented inside the boardroom among six types. The other variables report the share of each individual characteristic (women, foreigners, independent -according AFEP-MEDEF criteria-, insider -executive directors-, shareholders' representatives, employees' representatives, business, support and extern directors).

of coordination between directors in the decision-making process. On average, in the sample, there are twelve directors inside the boardroom with an average of 59 years-old. Moreover, there is an extended literature on the impact of board diversity on CSR firm commitment (see Webb, 2004; Bear et al., 2010; Kruger, 2010; Harjoto et al., 2014; Rao and Tilt, 2015). Beyond the fact that diversity may improve governance quality and decision-making (Carter et al., 2010), women may be more prosocial than men and focus more attention on CSR (Wang and Coffey, 1992). Moreover, foreigners with different cultural and educational background may be more or less sensitive to CSR issues than French directors (Post et al., 2011). Finally, in 12% of observations, boards have a committee dedicated to CSR issues. A CSR committee may be a signal towards the stakeholders to highlight firm commitment (Lam and Li, 2008) as well as a way to improve the management of such issues (Mallin and Michelin, 2011). A dummy CSR committee takes the value 1 if there is a CSR committee in order to control from this source of heterogeneity.

Second, Panel B provides descriptive statistics for monitoring and entrenchment variables defining the shareholder perspective of board composition (Adams et al., 2010). Insider directors may indeed have some private benefits (career and reputation concerns) to support CEO decisions against shareholders' interests (Barnea and Rubin, 2010). The share of insiders, with an average of 10%, is the proxy for the CEO's entrenchment ability (Harjoto and Jo, 2011). The monitoring ability is defined by the share of independent directors and the separation of Chairman and CEO positions (dummy) (Shaukat et al., 2015). On the one hand, independent directors, who should have no economic or professional link with the firm or the executives, may be indeed more able to reduce conflicts of interest between shareholders and managers by monitoring the CEO (see Hermalin and Weisbach, 1998). Here, independent directors respect the criteria of the AFEP/MEDEF French code of corporate governance⁴. On the other hand, in a one-tier board, CEO and chairman positions may be held by a single individual or by two distinct individuals. The separation of Chairman and CEO positions (29 % on the sample) reflects the lower bargaining power of CEO inside the boardroom and is more frequent in responsible firms, at least in the US (Webb, 2004). Finally, affiliated directors, who are linked with the firm through business or shareholders connections without being an executive, form the reference group. On average, there are 10% of insiders, 39% of affiliated and 51% of independent directors.

From the stakeholder perspective of board composition (Panel C), according to the typology developed by Post et al. (2002b), a director may be a representative of intern stakeholders (shareholders, executives and employees), direct outside stakeholders (business and support stakeholders), or indirect stakeholders (Non-Governmental Organizations...). The type of stakeholders that the directors should represent is defined by their board-related attributes (insider, employees' representative, affiliated and independent) and their expertises related to their professional experiences. The directors are defined as industry experts if they have worked in firms of the same industry as the firm where they sit in. Similarly, the financial expert directors have worked in finance industry. In case of dual expertise, industry expertise is prevailing. The insiders represent the executive managers and the employees' representatives the other workers. Business directors, representing the customers and suppliers, are defined as industry expert non independent directors (i.e. directors who have worked in the same industry as the firm and have some economic ties with the firm). Support directors, representing the interests of banks and capital suppliers, are exclusively financial expert directors. Finally, extern directors, who represent other outside stakeholders (environmental activists, community), are defined as independent directors without any financial expertise as suggested by Johnson and Greening (1999). The reference group is made up by directors who represent only shareholders (i.e. non-independent and non-expert directors). The board is made up by 4% of shareholders, 10% of insiders, 4% of employees, 19% of business directors, 32% of support directors and 30% of extern directors. On average, there are 4 different types of stakeholders' representatives (on a total of 6) inside the boardroom.

⁴AFEP, Association Française des Entreprises Privées, and MEDEF, Mouvement Des Entreprises de France, are two professional associations which are representatives of private sector at the national level. According to AFEP/MEDEF recommendations, a director is qualified as an independent if (s)he satisfies the following criteria: (1) Not to be an employee or executive director of the corporation, or an employee, or director of its parent or a company that it consolidates, and not having been in such a position for the previous five years; (2) Not to be an executive director of a company in which the corporation holds a directorship, directly or indirectly, or in which an employee appointed as such or an executive director of the corporation (currently in office or having held such office going back five years) is a director; (3) Not to be a customer, supplier, investment banker or commercial banker: that is material for the corporation or its group; or for a significant part of whose business the corporation or its group accounts; (4) Not to be related by close family ties to an executive director; (5) Not to have been an auditor of the corporation within the previous five years; (6) Not to have been a director of the corporation for more than twelve years.

5.3.2 CSR commitment indexes

CSR commitment indexes are defined as a comparative measure of firm policy and commitment with respect to the industry average practices in the various CSR dimensions. Policy covers the objectives and the guide lines in terms of CSR whereas commitment is related to the tools and actions taken by the firms in order to achieve their CSR objectives. The evaluation of firm's CSR commitment relies on the extra-financial rating agencies who analyze firm's policy, commitment and, at some extent, the results thanks to public information (annual report, media) and private information (survey, dialogue). The rating agencies cover a multi-dimensional framework based on three pillars: social (human resources and rights), environment and societal (relationships with outside stakeholders such as customers, suppliers or community). However, the materiality of CSR outcomes is hardly measurable. Extra-financial ratings then reflect more the CSR policy and processes than outcome (Chatterji et al., 2009; Delmas et al., 2013). That is why the chapter focuses on CSR commitment intensity rather than CSR performance.

A firm is qualified as a CSR leader if its practices are more responsible than the average industry behavior, if its engagement is stronger than the average industry commitment. The main CSR commitment indexes are then dummies which take 1 if the firm has a stronger commitment than the average industry commitment and 0 otherwise for a specific dimension or globally. This study is based on Vigéo and Asset4 extra-financial ratings, two leading agencies in Europe. These data are the counterpart of American KLD data (Kinder, Lydenberg, Domini Research & Analytics); comparable methods, based on questionnaires (only Vigéo), researches and official documents, are applied in line with international standards. However, the CSR theorization and commensurability are not fully convergent (Escrig-Olmedo et al., 2010; Chatterji et al., 2014).

Vigéo supplies extra-financial ratings for European firms (DJSTOXX600, MSCI world indexes, around 600 firms) to investors and asset managers. Firm CSR commitment is analyzed in 6 main dimensions (Community Involvement, Corporate Governance, Customers and Suppliers, Environment, Human Resources, and Human Rights) according to 38 criteria. Each criterion evaluates how firms address the related CSR issue in terms of leadership (integration into the strategy, the objectives), implementation (means to achieve the objectives) and results. Appendix 5.7.3 (Table 5.22) gives more information about the CSR issues that cover each dimension. Vigéo provides two types of measures per dimension: scores (from 0 to 100, i.e. from no evidence of commitment to the most advanced commitment) and ratings (5 levels). In particular, the rating reveals firm position in the industry-specific score distribution of the overall Vigéo universe (ie: regarding the behavior of the other firms belonging to the same industry). The rating is based on the 5-level scale: poor commitment (level 1, the 5% worst firms in terms of CSR commitment), below the average (level 2, firms between the fifth and the thirtieth percentiles), average commitment (level 3, firms between the thirtieth and the seventieth percentiles), above the average (level 4, firms between the seventieth and the ninety-fifth percentiles) and best commitment (level 5, the 5% most advanced firms in terms of CSR commitment). In the sample, for any CSR dimension, 70% of observations have a rating of 3 (average commitment) or 4 (above the average). This concentration of observations in the levels 3 or 4 is due to the sample choice with respect to the Vigéo universe. The largest firms, such as firms belonging to the SBF120 index, are indeed usually the most committed in CSR (Margolis and Walsh, 2001). In order to avoid any bias from outliers with the worst or the best CSR behaviors, the CSR commitment indexes are 5 dummy

variables which take the value 1 if firm rating in the related dimension is above 3 and 0 otherwise (HR -human resources-, HRT -human rights- in social dimension, ENV for environment, C&S - customer and supplier-, and CIN -community involvement- in societal dimension). Corporate governance topics are excluded because this pillar largely covers board issues. For the global CSR commitment, a firm is considered as a CSR leader (dummy equal to 1) if firm adopts at least the average behavior (level 3) in each CSR dimension and a stronger commitment above the average (level 4) in at least 2 dimensions. As a robustness check, alternative commitment indexes in three level (low commitment -levels 1 and 2-, average commitment -level 3- and high commitment -levels 4 and 5-) are used in the last section.

Asset4 provides ESG information for world-wide firms (MSCI world, MSCI Europe). CSR commitment is measured in 18 categories with 900 individual data points and 250 key performance indicators (KPIs). Most of the CSR indicators are firms qualitative practices or quantitative outcomes. The KPIs are an aggregation of company commitment indicators. The score (from 0, the worst behavior, to 100, the most committed) of each category is the z-score, relative to the Asset4 universe based on the equally weighted KPI scores of the category. These scores cover five main dimensions: Social, Societal, Environment, Economic and Corporate Governance. Corporate governance and economic scores are excluded because they evaluate either the topic of interest (board of directors) or outside the classical CSR framework. Appendix 5.7.3 (Table 5.23) provides more details about Asset4 criteria. In the opposite of Vigéo, the scores do not take into account that CSR issues have different weights and impacts regarding the industry. To have consistent commitment indexes, the CSR commitment indexes are 3 dummies which takes the value 1 if firm score is above the industry and year average score in either Social (Ind Social), environment (Ind Env) or societal (Ind Societal). The global CSR performance is a dummy which takes 1 if the average score of social, environmental and societal scores is higher than the industry and year average score. As a robustness check, alternative commitment indexes in three level (low commitment -the 25% lowest scores-, average commitment -25% around the average- and high commitment -the 25% best committed-) are used in the last section.

Vigéo and Asset4 differ in three folds: the CSR theorization, the nature of scores and the methodology of aggregation (commensurability). First, Asset4 does not usually make the difference between social and societal dimensions. Societal dimension is indeed part of social dimensions whereas Vigéo makes a clear difference. Here I assume that according to the Vigéo perspective, social dimension covers the relationships with employees whereas the societal dimension covers the relationships with outside stakeholders (customers, suppliers and community). Second, both Vigéo and Asset4 rely mostly on public information. However, Vigéo uses analysts' knowledge to rate firm behavior from primary sources, whereas Asset4 uses only their data points to evaluate firm CSR practices through z-score transformation. Third, Vigéo takes into account the differences across industry to select the most relevant criteria whereas Asset4 applies the same criteria across industry. That is why the commitment index are adjusted for industry to make the two sets of CSR commitment indexes comparable.

Table 5.2 presents the distribution of observations per extra-financial rating agency and year. There are 265 observations for Vigéo and 424 for Asset4 covering 91 and 80 single firms over the 2006-2011 period. This difference is explained by the scope and the rating frequency of the extra-financial information providers. Vigéo does not annually rate firms' CSR policy. On average, there are 2.9 observations per firm over the 6-years period. But it covers most of the SBF120 index. In the

opposite, Asset4 provides an annual score but the Asset4 universe of French firms is smaller than the Vigéo universe. Furthermore, both agencies increase the coverage of French firms over the period, explaining the increasing number of observations. Both data sets therefore are complementary to study the link between board of directors and CSR performances. Table 5.21 (Appendix 5.7.2) presents the data distribution per industry. There is no selection bias in the coverage of both extra-financial rating agencies in terms of industry.

Table 5.2: Distribution of observations depending on the provider (Vigéo or Asset4) and the year

Year	Asset4	Vigéo	Total
2006	58	38	66
2007	66	33	71
2008	72	56	78
2009	73	48	79
2010	76	44	80
2011	79	46	87
Total	424	265	461

Notes: This table reports the data distribution per year depending on the source (Asset4, Vigéo and total).

Table 5.3: CSR commitment indexes

Variable	Obs	Mean	Std. Dev.	Min	Max
Measure 1: Vigéo's Commitment indexes					
CSR	265	0.52	0.50	0	1
HR	265	0.66	0.48	0	1
HRT	265	0.49	0.50	0	1
ENV	265	0.51	0.50	0	1
C&S	265	0.44	0.50	0	1
CIN	265	0.48	0.50	0	1
Measure 2: Asset4's Commitment inddexes					
Ind CSR	418	0.61	0.49	0	1
Ind Social	418	0.59	0.49	0	1
Ind Environmental	424	0.63	0.48	0	1
Ind Societal	424	0.60	0.49	0	1

Notes: This table reports the descriptive statistics for CSR commitment indexes (dummy variables) based on Vigéo's and Asset4's ratings. The dummies are equal to 1 if firm's commitment is over the industry average behavior. CSR is the overall CSR evaluation, HR means Human Resources, HRT Human RighTs, ENV Environment, C&S Customers and Suppliers, CIN Community INvolvement. Ind CSR is the overall CSR evaluation by Asset4, Ind Social means index for social dimension, Ind Societal for societal dimension and Ind Env for environmental dimension.

Table 5.3 presents the descriptive statistics of CSR commitment indexes. On average, according to Vigéo's ratings, there are 52% of leaders in CSR, 66% leaders in human resources and 49 % in human rights for social performances, 51% of environmental leaders and 44% of C&S leaders and 48% leaders in community for societal commitment. According to Asset4, there are 61% of leaders in CSR, 59% in social, 63% in environment and 60% in societal. In both case, CSR leaders and non-leaders are two balanced groups.

5.3.3 Control variables

Financial performances and firm characteristics come from Infinancials and ThomsonOneBanker. Infinancials provides standardized information like annual accounts, financial profile (balanced sheets, financial ratios, total assets, intangible assets valuations), operational and structure ratio. ThomsonOneBanker gives the detailed ownership structure. Similar to Harjoto and Jo (2011), control variables are introduced in the econometric model: industry dummies in order to take into account different CSR pressures and industry issues (legal, competitiveness on the market, contestability...), operating performance with the return on asset (ROA) to control for reverse causality (Garcia-Castro et al., 2009), firm size measured by the logarithm of the total number of employees ($\log(\text{Nb Employees})$) to control for market visibility (Margolis and Walsh, 2001), the leverage by total debt on equity and firm risk by the volatility of stock prices to control for financial constraints (Margolis et al., 2011). Two complementary control variables may play a significant role: the Research&Development investment proxied by the ratio of the R&D total expenditures by the total sales (RDonSales) to control for specific innovation ability in terms of social and environmental attributes (McWilliams and Siegel, 2000) and the advertising investment measured by the ratio of intangible assets on the total sales to take into account the heterogeneity of available public information (Elsayed and Paton, 2005). According to the agency theory, the significant shareholders (large blockholders) may be an important external monitoring factor. They have indeed more incentives to control the manager and to reduce their opportunism in order to maximize their own benefits (Shleifer and Vishny, 1997). Moreover, some empirical studies show that ownership matters in terms of CSR commitment (Oh et al., 2011; Dam and Scholtens, 2012). The ownership float is then used as an external monitoring proxy. State-owned firms may be driven by other objectives than traditional listed firms. To take into account the impact of state ownership, a dummy "State Ownership" takes the value 1 if French state is a significant blockholder. Finally, firms which belong to CAC40 (40 biggest listed firms on NYSE-Euronext Paris) are more likely to be scrutinized by analysts and NGOs regarding their externalities (Margolis and Walsh, 2001). A dummy CAC40, which takes 1 for firms belongs to CAC40 index, enables to control for this external monitoring factor. Business cycles are taken into account by year dummies. Table 5.4 presents the descriptive statistics of firm characteristics. Ten percent of firms have public ownership and the ownership float is around 35%. CAC40 index is over represented with 41% of the observations (CAC40 represents one third of firm sample) because CAC40 are more likely to be monitored by extra-financial rating agencies. The other variables do not show any specific pattern.

Table 5.4: Firm descriptive statistics

Variables	Meaning	Obs	Mean	Std. Dev.	Min	Max
Nb Employees	Number of employees	461	68894	85943	238	479072
Cac40	Cac40 index	461	0.43	0.50	0	1
State Ownership	1 if state Ownership	461	0.10	0.30	0	1
Ownership Float	Ownership Float (>5%)	461	0.34	0.22	0	0.95
Prox Volatility	Stock volatility	461	0.49	2.21	0	38.31
RDonSales	R&D ratio (total R&D expenditures by total sales)	461	0.03	0.05	0	0.36
Advertisement	Total intangibles assets by total sales revenues	461	0.55	0.58	0	7.54
Leverage	debt on equity	461	0.73	1.55	-21.36	8.79
ROA	Return On Assets	461	0.05	0.05	-0.31	0.30

Notes: This table displays the descriptive statistics for the control variables. There are the number of employees, State-owned firm, the ownership float, the CAC40 index, the stock volatility, the investments in R&D, Advertisement, the leverage and the return on asset and equity. State-Owned firm is a dummy which takes 1 if firm have a significant share of the capital hold by State. Ownership float is the share of capital hold by significant shareholders (at least 5% of the capital). Prox Volatility is the stock volatility measured as the standard deviation of the monthly stock returns over the previous 50 months. RDonSales is a proxy for R&D investment and measures as R&D investment on total sales. Advertisement is measured as total of intangibles assets on total sales. Leverage is equal to total debt over total equity. Return on assets is equal to the ratio between EBITDA (earnings before interest, taxes, depreciation and amortization) and beginning-year total assets.

5.3.4 Methods

CSR commitment indexes are dummies which split the more committed firms from the less committed firms in terms of CSR whatever the dimension. A probit analysis enables therefore to evaluate firms' propensity to commit to each CSR dimension more than the industry average firm regarding board and firm characteristics. The model to explain CSR commitment indexes is written as follows:

$$P(CSR_{i,t+1} = 1|B_{i,t}, Z_{i,t}, X_{i,t}) = \alpha + \beta B_{i,t} + \gamma Z_{i,t} + \zeta X_{i,t} + \mu_t + \delta_i + \epsilon_{i,t} \quad (5.1)$$

Where $CSR_{i,t+1}$ is a dummy equal to 1 if firms i 's policy in the specific CSR dimension is better than the average industry policy during the year $t + 1$ and 0 otherwise, $B_{i,t}$ are the variables of interest (monitoring and entrenchment variables or stakeholders representation), $Z_{i,t}$ are board control variables (proportion of women, foreigners, log of board size), $X_{i,t}$ firm control variables (log of number of employees, leverage, R&D investment on Sales, Advertisement, ROA, CAC40, ownership structure), μ_t the year fixed effect, δ_i the industry fixed effect and $\epsilon_{i,t}$ is the error term. Board and firm control variables are lagged of one year to take into account the delay between decisions made by the board and consequences in the firm outcome. Board size and number of employees are transformed by a logarithm to avoid any bias from outliers. The regressions are clustered at the firm level in order to take into account correlation of error terms within firm observations. As robustness check, a lag of 2 years are applied between CSR commitment indexes and firm variables.

5.4 Results

5.4.1 Bivariate analysis

Table 5.5 shows the Spearman correlation matrix for board and firm characteristics and CSR commitment indexes. CSR commitment indexes are significantly positively correlated between each other with a high correlation coefficient above 0.4 within the same data set and with a medium correlation coefficient between data sets (from 0.13 to 0.37). However all indexes are not totally collinear. It is then interesting to analyze specifically the link between board composition and each CSR commitment index.

In terms of board composition, from the shareholder perspective, the share of independent directors is positively significantly correlated with each dimension of CSR commitment indexes whereas the insiders are negatively correlated except with the environment commitment index, supporting the stakeholders' conflict resolution hypothesis for social and societal dimensions (H2A). From the stakeholder perspective, the shares of extern directors and employee's representatives are positively correlated with CSR commitment indexes whereas the shares of business directors and insiders are negatively correlated, except for environmental commitment index. The correlations partly support the stakeholders' conflict resolution hypothesis (H2B) because it may increase conflict with business stakeholders.

For the control variables, the correlations between CSR commitment indexes and firm characteristics highlight the significant negative link between the ownership structure and CSR commitment as well as with stock volatility, advertisement and operating performance. Firm financial characteristics are then potential determinants of CSR commitment. Firm visibility on the market (CAC40 and firm size) is positively correlated with CSR commitment indexes as expected from the previous empirical studies. Finally, board size and CSR committee are positively correlated with most of CSR commitment indexes, confirming that board structure is one important determinant of CSR commitment.

In order to investigate the relationship between CSR commitment and corporate governance, the propensity for a firm to be a CSR leader is estimated from the shareholder and stakeholder perspectives. For each perspective, both Vigéo and Asset4 data sets are used in order to analyze the robustness of the relationships to CSR measurement issues.

Table 5.5: Bivariate correlation matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1 Board_size	1.00															
2 Sh women	0.08	1.00														
3 Sh foreigners	0.02	-0.09*	1.00													
4 CSR Committee	0.32*	0.01	-0.08	1.00												
5 Sh independent	-0.16*	-0.02	0.26*	0.05	1.00											
6 Sh insider	-0.18*	-0.07	-0.17*	0.04	-0.36*	1.00										
7 Supervisory Board	-0.27*	0.07	-0.05	-0.19*	0.28*	-0.41*	1.00									
8 Chair/CEO position	0.07	-0.01	0.29*	-0.05	-0.06	0.00	-0.33*	1.00								
9 Nb Stakeholders	0.59*	0.05	-0.13*	0.19*	-0.33*	-0.10*	-0.45*	0.14*	1.00							
10 Stakeholders' diversity	0.45*	0.05	-0.09	0.11*	-0.36*	-0.12*	-0.30*	0.15*	0.80*	1.00						
11 Sh Employee	0.41*	0.08	-0.27*	0.16*	-0.22*	-0.09	-0.13*	-0.10*	0.57*	0.35*	1.00					
12 Sh Business	-0.02	0.01	0.06	-0.12*	-0.48*	-0.11*	0.05	0.15*	-0.01	0.20*	-0.21*	1.00				
13 Sh Support	0.06	-0.02	0.05	-0.06	0.12*	-0.17*	0.07	-0.05	-0.06	-0.09	-0.26*	-0.31*	1.00			
14 Sh Extern	-0.20*	-0.03	0.20*	0.04	0.76*	-0.30*	0.21*	-0.02	-0.29*	-0.31*	-0.08	-0.36*	-0.4*	1.00		
15 Nb employees	0.29*	0.12*	0.03	0.21*	0.16*	-0.15*	-0.04	0.04	0.11*	0.08	0.12*	0.01	-0.05	0.11*	1.00	
16 Cac40	0.34*	0.10*	0.19*	0.33*	0.38*	-0.10*	0.03	-0.01	0.09	0.00	0.12*	-0.26*	0.02	0.25*	0.50*	1.00
17 State Owned Firm	0.48*	0.04	-0.19*	0.16*	-0.27*	-0.10*	-0.08	-0.13*	0.48*	0.34*	0.73*	-0.04	-0.22*	-0.14*	0.16*	0.08
18 Ownership Float	0.11*	0.01	-0.09	-0.08	-0.59*	0.04	-0.09	0.04	0.20*	0.22*	0.16*	0.39*	0.00	-0.51*	-0.14*	-0.35*
19 Prox volatility	0.01	-0.06	-0.04	-0.02	0.01	-0.02	0.06	-0.04	-0.01	0.03	0.02	-0.03	-0.01	0.02	-0.03	-0.06
20 RDonSales	-0.20*	-0.21*	0.24*	-0.13*	0.13*	0.16*	-0.05	0.081	-0.12*	-0.09*	-0.11*	-0.08	-0.15*	0.17*	-0.12*	0.03
21 Adertissement	0.03	-0.03	0.16*	-0.03	-0.03	0.03	-0.10*	0.09	-0.02	-0.01	-0.13*	0.01	0.19*	-0.14*	-0.13*	0.06
22 Leverage	0.11*	0.11*	-0.02	0.07	-0.07	-0.04	-0.06	0.05	0.01	0.02	0.04	0.01	0.11*	-0.11*	0.20*	0.08
23 ROA	-0.05	0.04	-0.01*	-0.10*	-0.21*	0.03	0.09	0.09	0.06	0.14*	-0.07	0.17*	-0.03	-0.11*	-0.18*	-0.08
24 CSR	0.26*	-0.01	0.01	0.26*	0.12	-0.15*	-0.03	0.02	0.23*	0.10	0.23*	-0.08	-0.03	0.10	0.33*	0.42*
25 C&S	0.12	-0.02	-0.01	0.19*	0.10	-0.11	-0.06	0.12*	0.14*	0.09	0.08	-0.02	-0.07	0.12*	0.18*	0.21*
26 CIN	0.20*	0.10	0.00	0.13*	0.07	-0.19*	0.05	-0.02	0.21*	0.13*	0.29*	0.00	-0.03	0.00	0.31*	0.37*
27 ENV	0.25*	-0.06	-0.05	0.22*	0.15*	-0.08	0.04	-0.02	0.18*	0.03	0.23*	-0.15*	-0.05	0.12	0.24*	0.43*
28 HR	0.27*	0.05	0.02	0.24*	0.23*	-0.21*	-0.06	0.00	0.22*	0.10	0.19*	-0.14*	0.07	0.14*	0.31*	0.42*
29 HRT	0.33*	0.04	0.05	0.29*	0.03	-0.16*	-0.09	0.07	0.31*	0.19*	0.26*	-0.01	-0.04	0.04	0.33*	0.36*
30 Ind CSR	0.17*	0.00	0.04	0.19*	0.28*	-0.13*	-0.01	-0.05	0.06	0.00	0.12*	-0.18*	-0.02	0.19*	0.23*	0.36*
31 Ind Social	0.19*	0.05	0.00	0.16*	0.27*	-0.15*	0.08	-0.11*	0.01	-0.06	0.08	-0.18*	-0.03	0.22*	0.13*	0.33*
32 Ind Societal	0.21*	0.02	0.01	0.22*	0.18*	-0.07	-0.08	0.01	0.12*	0.08	0.15*	-0.10*	-0.07	0.12*	0.26*	0.30*
33 Ind Environment	0.06	-0.04	0.08	0.06	0.27*	-0.05	0.02	-0.02	0.04	-0.01	0.10*	-0.19*	-0.03	0.21*	0.33*	0.39*

	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
17 State Owned Firm	1.00																
18 Ownership Float	0.22*	1.00															
19 Prox volatility	0.10*	0.01	1.00														
20 RDonSales	-0.06	-0.05	-0.01	1.00													
21 Aderissement	-0.10*	-0.08	-0.03	0.05	1.00												
22 Leverage	0.08	0.09	-0.01	-0.12*	0.10*	1.00											
23 ROA	-0.13*	0.15*	-0.03	-0.13*	-0.07	0.06	1.00										
24 CSR	0.20*	-0.06	-0.13*	0.09	-0.04	0.04	-0.02	1.00									
25 C&S	0.03	-0.03	-0.14*	0.09	0.06	0.07	-0.06	0.60*	1.00								
26 CIN	0.28	0.01	-0.15*	0.02	0.06	0.17*	-0.03	0.60*	0.40*	1.00							
27 ENV	0.19*	-0.18*	-0.09	0.13*	-0.02	-0.03	-0.05	0.71*	0.44*	0.42*	1.00						
28 HR	0.15*	-0.10	-0.15*	0.07	-0.07	-0.01	-0.05	0.74*	0.45*	0.43*	0.56*	1.00					
29 HRT	0.20*	-0.05	-0.19*	-0.02	-0.03	0.04	0.06	0.76*	0.39*	0.45*	0.58*	0.61*	1.00				
30 Ind CSR	0.04	-0.13*	-0.09	0.03	-0.15*	-0.10*	-0.16*	0.35*	0.25*	0.29*	0.31*	0.31*	0.23*	1.00			
31 Ind Social	0.09	-0.10*	0.00	0.01	-0.12*	-0.07	-0.18*	0.25*	0.17*	0.21*	0.29*	0.25*	0.16*	0.68*	1.00		
32 Ind Societal	0.07	-0.11*	-0.09	0.01	-0.11*	-0.04	-0.16*	0.37*	0.30*	0.28*	0.32*	0.30*	0.28*	0.73*	0.55*	1.00	
33 Ind Environment	0.08	-0.131*	0.06	0.08	-0.17*	-0.07	-0.23*	0.28*	0.12	0.22*	0.30*	0.29*	0.19*	0.58*	0.47*	0.42*	1.00

Notes: This Table presents Spearman bivariate correlation coefficients for the whole sample (461 firm-year observations). * indicates significant correlation between variables at least at the 5% level. Panel A provides board variables correlations. Board size gives the size of the board whereas average age variable is the average age of directors inside the boardroom. The Supervisory Board dummy takes the value 1 if the corporate governance is organized around a management board and a Supervisory board (two tiers board) and 0 otherwise (one tier board). The Chairman/CEO separation dummy takes the value 1 if the position of board chairman and CEO are held by two different individuals. Nb Stakeholders gives the number of stakeholders represented inside the boardroom among six types. The other variables report the share of each individual characteristic (women, foreigners, independent -according AFEP-MEDEF criteria-, insider -executive directors-, shareholders' representatives, employees' representatives, business, support and extern directors). Panel B gives the firm variables correlations. Nb Employee is the number of employees. State-Owned firm is a dummy which takes 1 if firm have a significant share of the capital hold by State. Ownership float is the share of capital hold by significant shareholders (at least 5% of the capital). Prox Volatility is the stock volatility measured as the standard deviation of the monthly stock returns over the previous 50 months. RDonSales is a proxy for R&D investment and measures as R&D investment on total sales. Advertisement is measured as total of intangibles assets on total sales. Leverage is equal to total debt over total equity. Return on assets is equal to the ratio between EBITDA (earnings before interest, taxes, depreciation and amortization) and beginning-year total assets. Panel C provides the CSR commitment indexes for Vigéo and Asset4. CSR commitment indexes are dummies equal to 1 if firm's commitment is over the industry average behavior. According to Vigéo ratings, CSR is the overall CSR evaluation, HR means Human Resources, HRT Human RightTs, ENV Environment, C&S Customers and Suppliers, CIN Community Involvement. Ind CSR is the overall CSR evaluation by Asset4, Ind Social means index for social dimension, Ind Societal for societal dimension and Ind Env for environmental dimension.

5.4.2 The shareholder perspective on the link between CSR commitment and board composition

In this section, board composition is analyzed from the shareholder perspective. The entrenchment ability is proxied by the share of insiders and the monitoring ability by the share of independent directors and the separation of chairman and CEO positions. Table 5.6 and 5.8 present the results by CSR dimensions analyzed respectively by Vigéo and Asset4. Table 5.7 and 5.9 provide the related average marginal effect of each variable of interest for the average firm in the sample.

On Table 5.6 (Vigéo), except for the environmental commitment (Model 4), there is a negative correlation between the share of insiders and CSR commitment index at a 1% level (5% for Community involvement). The link between the share of independent directors and performance is negative but non significant. Finally, the separation between chairman and CEO positions is positively related and significant for human resources. On Table 5.8 (Asset4), there are positive and significant relationships between the share of independent directors and being a leader in CSR, in social dimension at 1% level, and in societal dimension at 10% level. Entrenchment ability and the separation of chair and CEO positions are not significantly related with CSR commitment. These results reject the CEO's opportunistic behavior hypothesis (H1A) and support the stakeholders' conflict resolution hypothesis for social and societal dimensions (H2A) whatever the extra-financial information providers. However, in both cases (Vigéo and Asset4), the environmental commitment index is not significantly correlated with any entrenchment or monitoring ability. The analysis is then inconclusive for the environment dimension.

The average marginal effect provides an idea about the average impact of a change in board composition (Table 5.7 and 5.9). From Vigéo ratings, a 10% increase of insider share (one extra-director) is related with a 12% decrease of the propensity to be a CSR leader, 13% and 17% for human resources and human rights and 11% for the customers and suppliers and community involvement (Table 5.7). The result suggests that the departure of one insider may significantly increase the chance to be a CSR leader. From Asset4 ratings, on Table 5.9, a 10% increase of independent share (one independent director) is related to a 7% increase of the propensity to be a CSR leader, 8% to be a social leader and 5% to be a societal leader. The marginal effect of an independent director is lower than the previous effect of an insider. The share of independent directors is on average higher than the share of insiders inside the boardroom. The marginal increase of independent directors could have less impact on their bargaining power than the decrease of insiders if the marginal effect is decreasing with the share of each director type.

Table 5.6: Propensity to be a CSR leader from the shareholder perspective (Vigéo)

Model Variables	(1) CSR	(2) HR	(3) HRT	(4) ENV	(5) C&S	(6) CIN
Monitoring ability						
Sh independents	-1.053 (0.964)	0.000 (0.844)	-1.515 (0.969)	-0.262 (0.951)	-0.647 (0.734)	-0.774 (0.842)
Chair/CEO separation	0.082 (0.290)	-0.315 (0.275)	0.044 (0.289)	0.001 (0.321)	0.485* (0.257)	0.104 (0.330)
Entrenchment ability						
Sh insiders	-4.439*** (1.567)	-5.529*** (1.442)	-6.556*** (2.031)	-1.435 (1.209)	-3.287*** (1.214)	-4.142** (1.780)
Board Variables						
Supervisory board	-0.282 (0.472)	-0.802** (0.397)	-0.515 (0.440)	0.269 (0.467)	-0.200 (0.363)	-0.319 (0.480)
Size of the board (log)	-0.692 (0.455)	-0.372 (0.512)	-0.178 (0.467)	-0.077 (0.396)	-0.692 (0.429)	-1.591*** (0.437)
Sh foreigners	-0.588 (0.697)	-0.440 (0.653)	0.687 (0.618)	-1.258* (0.707)	-0.984 (0.654)	-0.415 (0.566)
Sh women	-0.974 (1.475)	0.091 (1.273)	0.130 (1.424)	-1.679 (1.537)	-0.390 (1.250)	0.510 (1.364)
CSR Committee	1.129*** (0.426)	1.434*** (0.523)	1.280*** (0.437)	0.517 (0.341)	0.853*** (0.298)	0.062 (0.413)
Observations	265	265	265	265	265	265
Nb Firms	91	91	91	91	91	91
R2	0.317	0.337	0.318	0.282	0.174	0.310

Notes: This table displays the estimated coefficients of probit analysis for multi-dimensional CSR commitment indexes regarding board monitoring abilities. CSR commitment indexes are based on Vigéo extra-financial ratings. (1) These dependent variables are dummies which equal to one if firms are committed more than the industry-average commitment in CSR policy or specifically in each CSR dimension, and zero otherwise. The social dimension is covered by HR (Human Resources) and HRT (Human Rights); the environment dimension by ENV (Environment) and the societal dimension by C&S (Customers & Suppliers) and CIN (Community Involvement). (2) The independent variables are the share of insiders and independent directors, the dummy of separation of Chairman and CEO positions. The reference group of directors are affiliated directors. The control variables are the log of board size, the share of women and foreigner directors, the supervisory board dummy, the CSR committee dummy, the number of employees, the leverage, the ownership float, the CAC40 dummy, the CSR committee dummy, the stock volatility, the advertisement expenses, the R&D investment, and the return on asset (3) Probit Models include industry and year fixed effects. (4) Standard errors are clustered at firm level. (5)***, **, * mark statistically significant coefficients at the 1%, 5% and 10% levels, respectively.

Table 5.7: Marginal effect for monitoring and entrenchment abilities (Vigéo)

Model Variables	(1) CSR	(2) HR	(3) HRT	(4) ENV	(5) C&S	(6) CIN
Independent directors	-0.280	0.001	-0.402	-0.074	-0.208	-0.209
Insider directors	-1.181***	-1.330***	-1.741***	-0.404	-1.057***	-1.117**
Observations	265	265	265	265	265	265
Nb Firms	91	91	91	91	91	91

Notes: This table displays the average marginal effect for the monitoring and entrenchment variables corresponding to the previous econometric model (Table 5.6). The social dimension is covered by HR (Human Resources) and HRT (Human Rights); the environment dimension by ENV (Environment) and the societal dimension by C&S (Customers & Suppliers) and CIN (Community Involvement).***, **, * mark statistically significant coefficients at the 1%, 5% and 10% levels, respectively.

Other control variables are positively correlated with CSR commitment indexes. In particular, having a CSR committee is positively related to being a CSR leader at least according to Vigéo ratings, suggesting that a CSR committee is a signal of a larger commitment. CAC40 firms are more likely to commit to CSR, except for customers and suppliers and human rights. It is consistent with the visibility hypothesis (Margolis and Walsh, 2001). State-owned firms are more likely to commit to community involvement. Ownership float is positively related to CSR commitment indexes according to Asset4 assessment, especially for the social and the environment dimensions. These results suggest that CSR is sensitive to external monitoring (Gillan, 2006). Finally, board diversity is not significantly related to CSR performance in contrast with Bear et al. (2010) and Harjoto et al. (2014) that show a positive correlation. Board diversity may be then less discriminant among firms to tackle CSR issues in the French context.

As conclusion, engaging in societal or social dimensions may be driven by the stakeholders' conflict resolution motivation (H2A) rather than an opportunistic behavior from the management (H1A). At the aggregate level, the same motivation seems to dominate the overall CSR commitment. As an explanation, CSR may become now a mainstream strategy and the entrenchment strategy through a specific CSR commitment may not be anymore very efficient, especially thanks to the growing compulsory CSR disclosure (Lattemann et al., 2009). Consistent with the previous literature (Webb, 2004; Harjoto and Jo, 2011; de Villiers et al., 2011; Post et al., 2011), the results showed that, on one hand, good corporate governance practices (independent board) and, on the other hand, social and societal commitments are positively related. However, the environmental commitment is not related to board composition from the shareholder perspective.

Table 5.8: Propensity to be a CSR leader regarding monitoring board abilities (Asset4)

Model Variables	(1) Ind CSR	(2) Ind Social	(3) Ind Env	(4) Ind Societal
Monitoring Abilities				
Sh independents	2.528*** (0.981)	2.863*** (0.868)	1.090 (0.967)	1.589* (0.874)
Chair/CEO Separation	-0.345 (0.273)	-0.332 (0.250)	-0.065 (0.266)	-0.055 (0.252)
Entrenchment ability				
Sh insiders	-0.843 (1.384)	0.105 (1.192)	0.585 (1.135)	-0.579 (1.196)
Board Variables				
Supervisory board	-0.784* (0.418)	-0.079 (0.377)	-0.730* (0.415)	-0.704* (0.386)
Size of the board (log)	0.523 (0.519)	1.454*** (0.522)	-0.783 (0.521)	0.550 (0.448)
Sh foreigner directors	-0.513 (1.445)	0.437 (1.303)	-0.472 (1.378)	-0.202 (1.185)
Sh Women	-0.742 (0.815)	-1.151 (0.824)	0.502 (0.817)	-0.882 (0.775)
CSR Committee	0.619* (0.346)	0.375 (0.301)	-0.421 (0.322)	0.921*** (0.324)
Observations	418	418	424	424
Nb Firms	79	79	80	80
R2	0.301	0.242	0.368	0.242

Notes: Using Asset4 data, this table displays the estimated coefficients of the probit analysis for multi-dimensional CSR commitment indexes regarding board monitoring abilities. (1) These dependent variables are dummies which equal to one if firms are committed in CSR policy or specifically in each CSR dimension (Ind CSR, Ind Social for social, Ind Env for environment and Ind Societal for societal), and zero otherwise. (2) The independent variables are the share of insiders and independent directors, the dummy of separation of Chairman and CEO positions. The control variables are the board size, the share of women and foreigner directors, the supervisory board dummy, the CSR committee dummy, the number of employees, the leverage, the ownership dummies, the Cac40 dummy, the CSR committee dummy, the stock volatility, the advertisement expenses, the R&D investment, and the return on asset. (3) Probit Models include industry and year fixed effects. (4) Standard errors are clustered at firm level. (5) ***, **, * mark statistically significant coefficients at the 1%, 5% and 10% levels, respectively.

Table 5.9: Marginal effect for monitoring and entrenchment abilities (Asset4)

Model Variables	(1) Ind CSR	(2) Ind Social	(3) Ind Env	(4) Ind Societal
Independent directors	0.658***	0.824***	0.255	0.456*
Insider directors	-0.219	0.030	0.137	-0.166
Observations	418	418	424	424
Nb Firms	79	79	80	80

Notes: This table displays the average marginal effect for the monitoring and entrenchment variables corresponding to the previous econometric model (Table 5.8). Ind CSR is for global policy, Ind Social for social, Ind Env for environment and Ind Societal for societal. ***, **, * mark statistically significant coefficients at the 1%, 5% and 10% levels, respectively.

5.4.3 The stakeholder perspective on the link between CSR commitment and board composition

The previous analysis adopts the shareholder perspective of corporate governance where the minority shareholders are well represented by independent directors (Hermalin and Weisbach, 1998). However, CSR is a way to answer some stakeholders' demands beyond the shareholders' interests (Post et al., 2002b). These stakeholders may be represented inside the boardroom, such as the employees' representatives, and may influence board decision towards CSR issues (Hillman et al., 2001). Hence, the empirical strategy is based on the assumption that stakeholders' interests are better recognized and represented by specific directors. Six different stakeholder representatives have been highlighted: shareholders' representatives, insiders, employees' representatives, business directors, support directors, and extern directors. The stakeholder representation variables included in the probit model are the share of each stakeholder director type. The proportion of shareholders' representatives is taken as the reference. Both Vigéo and Asset4 commitment indexes are used as dependent variables.

In Tables 5.10 and 5.12, the uneven models make the assumption of a linear relation with the proportion of each stakeholder's representative whereas the even models make the assumption of a non-linear relationship with these variables. The coordination cost among stakeholders' directors may indeed be a determinant trigger of directors' effectiveness inside the boardroom (de Villiers et al., 2011; Chang et al., 2015)⁵. This hypothesis is tested by introducing the square of the share of each stakeholder director type. This issue is more important from the stakeholder perspective because there is an important heterogeneity of board composition among firms. Table 5.11 and 5.13 provide the average marginal effect for each stakeholder representative.

⁵The non-linear models for shareholder perspective do not provide significant output for this topic. Tables are available upon request.

Table 5.10: Propensity to be a CSR leader depending from the stakeholder perspective (Vigéo)

Model Variables	(1) CSR	(2) CSR	(3) HR	(4) HR	(5) HRT	(6) HRT	(7) ENV	(8) ENV	(9) C&S	(10) C&S	(11) CIN	(12) CIN
Insiders	-1.094 (2.451)	7.674 (5.679)	-0.652 (2.207)	-1.012 (3.362)	-2.262 (2.648)	3.599 (5.189)	-0.259 (2.250)	-1.484 (3.064)	-2.364 (1.992)	-2.601 (3.154)	-4.112* (2.411)	1.694 (4.602)
Insiders (square)		-28.327* (14.803)		-1.917 (7.601)		-21.736 (17.794)		-1.386 (3.497)		-2.903 (4.439)	-20.407* (10.857)	
Employees	9.463*** (3.605)	12.631** (6.164)	11.709*** (3.422)	19.078*** (5.379)	11.448*** (3.205)	19.223*** (5.723)	5.933* (3.304)	13.340** (5.343)	2.271 (3.468)	11.380** (5.063)	6.659** (3.150)	2.065 (6.316)
Employees (square)		-22.166 (19.761)		-37.926*** (14.293)		-32.423* (16.870)		-38.356*** (14.544)		-36.250** (15.737)		21.556 (30.352)
Businesses	3.565* (2.098)	6.406** (2.978)	6.370*** (1.998)	10.265*** (2.702)	4.679** (2.038)	9.772*** (2.803)	0.952 (1.954)	0.983 (2.888)	0.704 (1.673)	7.698*** (2.683)	0.064 (1.847)	7.240** (2.927)
Businesses (square)		-7.158** (3.634)		-7.795** (3.299)		-9.255** (3.610)		-3.023 (3.470)		-13.353*** (4.536)		-15.181*** (4.752)
Supports	2.572 (2.270)	-7.806* (4.167)	6.563*** (2.069)	-0.468 (3.246)	3.184 (2.153)	-4.482 (3.478)	0.467 (2.222)	-10.840*** (3.731)	-0.097 (1.638)	-1.758 (2.816)	-0.742 (1.957)	-8.338** (4.109)
Supports (square)		11.423*** (3.941)		8.470*** (2.942)		9.326** (3.689)		12.216*** (3.802)		1.643 (2.951)		8.220** (3.420)
Externs	1.690 (2.149)	1.475 (2.475)	4.367** (1.973)	6.781*** (2.313)	2.698 (2.026)	4.764* (2.532)	0.078 (1.937)	-1.280 (2.198)	0.227 (1.554)	-3.301 (2.089)	-1.657 (1.787)	-6.464** (2.744)
Externs (square)		-2.256 (1.751)		-4.125*** (1.580)		-3.440 (2.209)		-1.138 (1.887)		4.395** (1.990)		4.504* (2.247)
Obs.	265	265	265	265	265	265	265	265	265	265	265	265
Nb Firms	91	91	91	91	91	91	91	91	91	91	91	91
R2	0.348	0.348	0.385	0.385	0.357	0.357	0.303	0.303	0.178	0.178	0.350	0.350

Notes: This table displays the estimated coefficients of the probit analysis for multi-dimensional CSR commitment indexes regarding stakeholder board composition perspective. (1) These dependent variables are dummies which equal to one if firms are more committed in CSR policy or specifically in each CSR dimension than the average firm behavior according to Vigéo, and zero otherwise. The social dimension is covered by HR (Human Resources) and HRT (Human Rights); the environment dimension by ENV (Environment) and the societal dimension by C&S (Customers & Suppliers) and CIN (Community Involvement). (2) The independent variables are the share of each stakeholder's representative and the square of these shares (Models 2, 4, 6, 8, 10 and 12). The control variables are the board size, the share of women and foreigner directors, the supervisory board dummy, the CSR committee dummy, the number of employees, the leverage, the ownership dummies, the Cac40 dummy, the stock volatility, the advertisement expenses, the R&D investment and the return on asset. (3) Probit Models include industry and year fixed effects. (4) Standard errors are clustered at the firm level. (5) ***, **, * mark the statistical significance at the 1%, 5% and 10% levels, respectively.

Table 5.11: Marginal effect of each stakeholder representative on CSR commitment indexes (Vigéo)

Model Variables	(1) CSR	(2) CSR	(3) HR	(4) HR	(5) HRT	(6) HRT	(7) ENV	(8) ENV	(9) C&S	(10) C&S	(11) CIN	(12) CIN
Insiders	-0.277	0.564	-0.146	-0.278	-0.563	-0.049	-0.07	-0.428	-0.755	-0.919	-1.039*	-0.486
Employees	2.397***	2.489***	2.621***	3.398***	2.850**	3.772***	1.612*	2.481**	0.725	2.331***	1.683**	0.750
Businesses	0.903*	0.862*	1.426***	1.507***	1.165**	1.400**	0.259	-0.040	0.225	0.822*	0.016	0.279
Supports	0.651	-0.013	1.469***	1.041***	0.793	0.362	0.127	-0.652	-0.031	-0.196	-0.187	-0.616
Externs	0.428	0.024	0.978**	0.859**	0.672	0.596	0.021	-0.472	0.072	-0.199	-0.419	-0.855*
Observations	265	265	265	265	265	265	265	265	265	265	265	265
Nb Firms	91	91	91	91	91	91	91	91	91	91	91	91

Notes: This table displays the average marginal effect for each stakeholder representative corresponding to the previous econometric model (Table 5.10). The social dimension is covered by HR (Human Resources) and HRT (Human Rights); the environment dimension by ENV (Environment) and the societal dimension by C&S (Customers & Suppliers) and CIN (Community Involvement). ***, **, * mark the statistical significance at the 1%, 5% and 10% levels, respectively.

Table 5.12: Propensity to be a CSR leader from the stakeholder perspective (Asset4)

Model Variables (Sh)	(1) Ind CSR	(2) Ind CSR	(3) Ind Social	(4) Ind Social	(5) Ind Env	(6) Ind Env	(7) Ind Societal	(8) Ind Societal
Insiders	-2.216 (2.446)	9.633 (6.113)	-1.138 (2.337)	10.065* (5.836)	0.502 (2.167)	0.725 (3.162)	-1.612 (2.181)	-0.252 (3.283)
(Square)		-27.369* (14.628)		-30.817** (15.460)		-0.823 (3.031)		-0.932 (3.037)
Employees	1.200 (4.257)	-10.131* (5.415)	-2.867 (3.975)	-5.136 (5.064)	3.836 (3.179)	13.617*** (4.724)	2.095 (3.923)	-4.316 (5.254)
(Square)		56.586*** (21.815)		-0.139 (11.688)		-38.434*** (13.218)		34.150** (16.006)
Businesses	-2.718 (2.195)	-3.826 (3.389)	-1.914 (2.077)	-3.918 (2.771)	-1.738 (1.899)	2.096 (2.983)	-1.272 (1.956)	-2.565 (2.629)
(Square)		2.752 (4.685)		2.535 (3.928)		-8.482* (4.857)		3.193 (3.919)
Supports	-0.823 (2.214)	-1.384 (3.554)	-0.073 (2.131)	-3.819 (3.231)	0.450 (1.920)	1.041 (3.400)	-1.082 (1.937)	1.996 (3.101)
(Squared)		1.446 (3.358)		4.285 (3.095)		-1.497 (3.915)		-3.506 (3.028)
Externs	0.116 (2.087)	0.844 (2.893)	1.391 (2.106)	-1.906 (2.870)	0.075 (1.921)	-0.015 (2.409)	-0.195 (1.945)	1.537 (2.656)
(Squared)		-0.399 (2.015)		3.482 (2.741)		-0.474 (1.827)		-1.327 (1.909)
Observations	418	418	418	418	424	424	424	424
Nb Firms	79	79	79	79	80	80	80	80
R2	0.304	0.339	0.240	0.272	0.389	0.416	0.244	0.261

Notes: This table displays the estimated coefficients of the probit analysis for multi-dimensional CSR commitment indexes regarding stakeholder board composition. (1) These dependent variables are dummies which equal to one if firms are more committed than the industry average behavior in CSR policy or specifically in each CSR dimension (ind CSR for global policy, Ind Social for social, Ind Env for environment and Ind Societal for societal) according Asset4, and otherwise which equal to zero. (2) The independent variables are the share of each stakeholder's representative and the square of the share. The control variables are the board size, the share of women and foreigner directors, the supervisory board dummy, the CSR committee dummy, the number of employees, the leverage, the ownership dummies, the Cac40 dummy, the stock volatility, the advertisement expenses, the R&D investment, and the return on asset. (3) Probit Models include industry and year fixed effects. (4) Standard errors are clustered at firm-level. (5) ***, **, * mark the statistical significance at the 1%, 5% and 10% levels, respectively.

Table 5.13: Marginal effects of each stakeholders' representative on CSR commitment indexes (Asset4)

Model Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Ind CSR	Ind CSR	Ind Social	Ind Social	Ind Env	Ind Env	Ind Societal	Ind Societal
Insiders	-0.575	2.379	-0.328	2.782*	0.114	0.156	-0.462	-0.071
Employees	0.311	-2.502*	-0.827	-1.419	0.870	2.925***	0.601	-1.211
Businesses	-0.705	-0.945	-0.552	-1.083	-0.394	0.450	-0.365	-0.720
Supports	-0.213	-0.342	-0.021	-1.056	0.102	0.224	-0.310	0.560
Externs	0.030	0.209	0.401	-0.527	0.017	-0.003	-0.056	0.431
Observations	418	418	418	418	424	424	424	424
Nb Firms	79	79	79	79	80	80	80	80

Notes: This table displays the average marginal effect for each stakeholder representative corresponding to the previous econometric model (Table 5.12). Ind CSR is for global policy, Ind Social for social, ind Env for environment and Ind Societal for societal. ***, **, * mark the statistical significance at the 1%, 5% and 10% levels, respectively.

The CSR commitment index according to Vigéo is positively correlated with the proportion of employees' representatives (see model 1, Table 5.10) and the proportion of business directors at a 10% level. A 10% increase of the proportion of employees' representatives (business directors) is related with an 24% (9%) increase of the probability of being a CSR leader (see model 1, Table 5.11). Even if there is no causal direction, this correlation suggests that CSR policy may target employees and direct strategic stakeholders. The hypothesis 2B (the stakeholder conflicts resolution) is partly accepted for direct stakeholders. However the opportunistic behavior hypothesis (H1B) is clearly rejected. The non-linear model (model 2) highlights a non-linear negative correlation for the business directors suggesting a coordination problem among stakeholder directors when their share is increasing. This model shows also a negative correlation with the proportion of support directors for the low proportion of support directors. Support directors, who represent the financial sector (ie Bank, insurance), seem to reduce the commitment in CSR, maybe because it is not directly related with firm productivity and reduce the cash flow. For extern directors, there is a positive non-significant relation. From the stakeholder perspective, the results suggest that engaging in CSR may exacerbate conflicts with support stakeholders but reduce conflict with the other strategic stakeholders. Each CSR dimension should be investigated in order to validate or reject the hypothesis.

For the social dimension (HR and HRT), the linear model (Models 3 and 5) shows a positive correlation, at a level of 1%, with the share of employees' representatives and business directors, and with support and extern directors only for human resources. The more employees' representatives, business directors, support directors or extern directors there are, the more firm is likely to invest in the social dimension. Their average marginal effects related to an 10% increase of those proportions are respectively 26 %, 14%, 15% and 10% for HR (and 29%, 15%, 10% and 9% for HRT). Hypothesis 2B related to CSR as a way to reduce conflicts with stakeholders is clearly accepted for the social dimension. By allowing non-linear relationships (models 4 and 6), the proportion of employees' representatives, business and extern (only for HR) directors are significantly positively linearly and negatively non-linearly correlated at 1 % (or 10%) level with social commitment intensity. Their average marginal effects related to an 10% increase of their proportion are respectively 34 %, 15% and 9%. These stakeholders' directors seem therefore promoting social commitment but the non-linear pattern suggests that an increasing proportion of stakeholders' representatives may weaken their action due to coordination problems for example. The social dimension is very consensual among stakeholders because it may benefit to any stakeholder: to the employees through the improvement of working conditions and career development, to business stakeholders thanks to the supply chain development and functioning, to support ones by improving productivity and cash flow and to other outside stakeholders thanks to the satisfaction of ethical and moral values.

For the environment dimension, the linear model (Model 7) explaining the commitment by the stakeholder board composition shows only a 10% positive correlation with the representation of employees inside the boardroom. The non-linear model (Model 8) highlights a positive linear and a negative non-linear correlation with the proportion of employees' representatives. The non-linear pattern might be viewed as a coordination cost among employees' representatives. A 10% increase of the proportion of employees' representatives is related with an 25% increase of the propensity to be an environmental leader. This strong result suggests that environmental commitment may help to resolve conflict with employees. Consistent with the increasing literature about the role of environmental commitment

in employees' motivation and productivity (see Lanfranchi and Pekovic, 2014; Delmas and Pekovic, 2013), employees may be very sensitive to environmental friendly firms. Nevertheless, the model 8 also shows a negative linear and a positive non-linear correlation with the share of support directors at a level of 1%. The marginal effect of business, support directors and extern directors are negative but insignificant. Environmental commitment may exacerbate conflicts with the other stakeholders. The stakeholders' conflicts resolution hypothesis is only partly accepted (H2B).

For the societal dimension, the linear model (9) explaining the customers and suppliers (business) commitment by stakeholder board composition does not show any significant result. However, by allowing non-linear relationships (model 10), the proportion of business directors and employees' representative are positively linearly and negatively non-linearly correlated with business commitment intensity. These results support that C&S commitment may reduce conflicts within the supply chain (customers and suppliers) and inside the firm. However, the decreasing slope tends to highlight the increasing coordination cost between directors. The average marginal effects for an increase of one business directors and employees' representative are 8% and 23% (Table 5.11). For community involvement (model 11), the proportion of employees' representative is significantly positively correlated with performance and the proportion of insiders negatively related leading to an acceptance of stakeholders' conflict resolution hypothesis. However, the non-linear model (12) shows that the share of business directors is linearly positively and non-linearly negatively related to community involvement commitment intensity whereas the shares of support and extern directors are negatively and non-linearly related to this commitment. This model suggests that community involvement may reduce conflicts only among supply-chain stakeholders. The societal performances support the conflict resolution hypothesis for supply-chain stakeholders (employees, customers and suppliers) (H2B).

In contrast with the Vigéo perspective, there is no significant linear correlation between the share of any stakeholder director type and CSR commitment indexes on Asset4 data. The non-linear models present some significant correlations. The share of employees' representative is positively and non-linearly negatively correlated with environmental performance like for Vigéo data. For the societal dimension, the share of employees' representative is non-linearly positively correlated with commitment intensity. These results suggest that there is a threshold above which there is a positive effect of employees' representatives. Finally, the share of insiders is positively and non-linearly negatively related with the social engagement. The stakeholder perspective on Asset4 suggests that CSR commitment is motivated by reducing conflicts with employees and at some extend business stakeholders.

As conclusion, the evidences show that CSR commitment may be a way to manage stakeholders' interests. The CEO's opportunistic behavior hypothesis is indeed rejected for any CSR dimension (H1B). The stakeholders' conflicts resolution hypothesis is supported by social and societal (customers&suppliers) dimensions (H2B). All results are also mostly consistent with the shareholder perspective presented in the previous section. Nevertheless, the environment and community involvement dimensions seem to exacerbate conflicts with some stakeholders and reduce only conflicts with employees or business stakeholders. In this case, the stakeholders' conflicts resolution hypothesis is only partly supported. These conflicts may also explain why the shareholder perspective on environment commitment is inconclusive.

From the stakeholder perspective, I conclude that stakeholders' interests may converge for the social or societal goals but diverge for the environmental and community ones. Employees' representatives may use CSR as a bargaining power inside the boardroom and as a way to improve their working conditions and motivation (Lanfranchi and Pekovic, 2014). Business stakeholders may promote commitment in societal and social dimensions in order to improve the relationships within the supply-chain. Support directors may be focused on the solvency of firms and their financial performances. Support directors are indeed negatively correlated with CSR, especially community involvement and environmental commitments, and only positively correlated with social commitment. Finally, extern directors are positively correlated with social and slightly negatively with community involvement. Extern directors are then unlikely to represent or protect environmental goals contrary to the expectation. This latter result is opposite with the findings of Hillman et al. (2001) and may highlight divergences between the American shareholder model and the French stakeholder model of corporate governance.

5.5 Discussion

5.5.1 Robustness checks

The previous analyses show consistent results between Vigéo and Asset4 data. Both Vigéo and Asset4 performances validate the same hypothesis regarding the corporate governance objective for CSR commitment. However, the determinants are different: the Vigéo performance is negatively related to entrenchment ability whereas the Asset4 performance is positively related to monitoring ability. From the stakeholder perspective, only the models explaining Vigéo commitment indexes highlights significant correlation with the stakeholder board composition. Two hypotheses may explain these differences. First, the sample of firms rated by both agencies are different and lead to inconsistent estimations (the selection bias hypothesis). Vigéo and Asset4 do not cover the same French firm populations, even if the rating only depends in both cases on the whole rated firm population. Second, the informational content of both rating agencies are divergent even if similar issues are analyzed. The differences may reflect the heterogeneity among the extra-financial rating agencies to measure CSR firm practices and aggregate the information (analysts' rating versus quantitative approach) (Chatterji et al., 2009; Escrig-Olmedo et al., 2010) (informational content hypothesis).

First, the same regressions are run on the sub-sample of firms which are rated by both agencies over the period in order to test the selection bias hypothesis. Tables 5.14 and 5.15 present the output. For Vigéo data, the results are pretty consistent. The share of insiders is negatively related to social (Human Resources and Rights) and societal (Community Involvement and Customer and Suppliers relationships) commitment indexes at the 1% and 10% levels. Environment is not associated with insider representation as previously demonstrated. More surprisingly, the share of independent directors is negatively related to humans rights and global CSR, suggesting that affiliated directors may be more willing to promote this issue. For Asset4, there is a positive correlation between the share of independent directors and Social commitment intensity and a negative between the separation between CEO and chairman position and Social commitment intensity. This latter correlation suggests that the duality of chairman and CEO may help to promote social commitment. Only societal commitment is not anymore related to the share of independent directors. The results support the stakeholder conflict resolution hypothesis.

Table 5.14: Propensity to be a CSR leader from the shareholder perspective (Vigéo)

Variables	(1) CSR	(2) HR	(3) HRT	(4) ENV	(5) CS	(6) CIN
Sh Independents	-2.244** (1.116)	-0.920 (1.040)	-2.469** (1.033)	-1.670 (1.066)	-0.796 (0.904)	-0.913 (1.000)
Chair/CEO Separation	0.368 (0.276)	-0.100 (0.293)	0.332 (0.289)	0.531 (0.330)	0.526* (0.275)	0.197 (0.336)
Sh Insiders	-4.485*** (1.664)	-4.545*** (1.575)	-6.665*** (2.141)	-1.224 (1.388)	-2.615* (1.346)	-3.714* (1.897)
Observations	228	228	228	228	228	228
Nb firms	80	80	80	80	80	80
R2	0.288	0.301	0.313	0.284	0.150	0.307

Notes: This table displays the estimated coefficients of probit analysis for multi-dimensional CSR commitment indexes regarding board monitoring abilities. CSR commitment indexes are based on Vigéo extra-financial ratings. (1) The sample is restricted to the common observations between Vigéo and Asset4. (2) These dependent variables are dummies which equal to one if firms are committed more than the industry-average commitment in CSR policy or specifically in each CSR dimension, and zero otherwise. The social dimension is covered by HR (Human Resources) and HRT (Human Rights); the environment dimension by ENV (Environment) and the societal dimension by C&S (Customers & Suppliers) and CIN (Community Involvement). (3) The independent variables are the share of insiders and independent directors, the dummy of separation of Chairman and CEO positions. The reference group of directors is the group of affiliated directors. The control variables are the board size, the share of women and foreigner directors, the supervisory board dummy, the CSR committee dummy, the number of employees, the leverage, the ownership float, the CAC40 dummy, the CSR committee dummy, the stock volatility, the advertisement expenses, the R&D investment, the return on asset. (4) Models include industry and year fixed effects. (5) Standard errors are clustered at firm level. (6) ***, **, * mark statistically significant coefficients at the 1%, 5% and 10% levels, respectively.

From the stakeholder perspective, Tables 5.24 and 5.25 show similar relationships as previously from Vigéo data, especially the significant positive correlation with the share of employees' representatives, business representatives for the social and societal dimensions and the mixed results for support directors. The stakeholders' conflict resolution hypothesis is then accepted. For Asset4, the analysis is still inconclusive. These tables confirm the robustness of the results on the sub-sample of firms rated by Vigéo and Asset4. There is therefore no selection bias due to the data availability.

In order to test the informational content hypothesis, I regress Vigéo scores on Asset4 scores and industry and year fixed effects for each dimension. Both sets of scores are comprised between 0 and 100. Year and industry fixed effects are necessary to take into account that criteria and methodology may change over time, and that Vigéo uses different sets of criteria depending on the firm industry whereas Asset4 evaluates the same indicators whatever the firm industry (difference in CSR theorization, see Chatterji et al. (2014)). Vigéo controls for industry heterogeneity in terms of CSR issues and average commitment (due to different legal pressures for example) whereas Asset4 evaluates any firm with the same criteria.

Table 5.15: Propensity to be a CSR leader from the shareholder perspective (Asset4)

Variables	(1) Ind CSR	(2) Ind Social	(3) Ind Env	(4) Ind Societal
Sh Independents	2.213** (1.085)	3.037*** (1.085)	1.047 (1.072)	1.771 (1.125)
Chair/CEO Separation	-0.570* (0.302)	-0.892*** (0.262)	0.002 (0.339)	-0.047 (0.295)
Sh Insiders	2.076 (1.679)	1.771 (1.694)	2.008 (1.351)	0.114 (1.504)
Observations	224	224	228	228
Nb firms	79	79	80	80
R2	0.316	0.310	0.383	0.247

Notes: Using Asset4 data, this table displays the estimated coefficients of the probit analysis for multi-dimensional CSR commitment indexes regarding board monitoring abilities. (1) The sample is restricted to the common observation between Asset4 and Vigéo. (2) These dependent variables are dummies which equal to one if firms are committed in CSR policy or specifically in each CSR dimension (Ind CSR, Ind Social for social, Ind Env for environment and Ind Societal for societal), and zero otherwise. (3) The independent variables are the share of insiders and independent directors, the dummy of separation of Chairman and CEO positions. The control variables are the board size, the share of women and foreigner directors, the dummy of employees' representative inside the boardroom, the supervisory board dummy, the CSR committee dummy, the number of employees, the leverage, the ownership dummies, the Cac40 dummy, the CSR committee dummy, the stock volatility, the advertisement expenses, the R&D investment and the return on asset. (4) Probit Models include industry and year fixed effects. (5) Standard errors are clustered at firm level. (6) ***, **, * mark statistically significant coefficients at the 1%, 5% and 10% levels, respectively.

Table 5.16 presents the regression for the 5 dimensions of Vigéo framework. First, the R2s are quite low (between 33 and 48%) whereas both scores should measure the same issues, especially for the environmental dimension. In the case of social and societal dimensions, Vigéo and Asset4 do not theorize the CSR issues in the same way. However, Asset4 does not explain well Vigéo scores and variations, even if the difference of CSR theorization is taken into account by industry fixed effects. The discrepancy between Vigéo and Asset4 scores and then CSR commitment indexes may explain why the results on Vigéo and Asset4 data are not fully consistent.

Second, the point estimates of Asset4 scores are smaller than 1 for each model. An increase of the social score from the Asset4 perspective is only related to 47% and 55% increase of human rights and resources scores (social score from the Vigéo perspective) after controlling for year and industry heterogeneities. The environmental score is related to 43% of the related Vigéo score whereas the societal score is associated with 41% and 38% of community involvement and customers and suppliers scores. Asset4 scores seem to be more lenient (less stringent) towards firms practices than Vigéo scores. Indeed, firms go up faster in the CSR commitment scale with Asset4 rating than with Vigéo rating. It also questions how extra-financial rating agencies measure CSR practices and calculate the scores for each dimension. These results bring therefore a piece of evidence in the debate of rating quality Chatterji et al. (2014). Assuming that the industry fixed effects capture the CSR theorization effect (the fact that Vigéo and Asset4 differently deal with industry heterogeneity), the results show

Table 5.16: Informational contents: Vigéo and Asset4

Variables	(1) HRT	(2) HR	(3) ENV	(4) CIN	(5) CS
Social	0.469*** (0.067)	0.551*** (0.058)			
Environment			0.433*** (0.053)		
Societal				0.405*** (0.069)	0.381*** (0.051)
Observations	224	224	228	228	228
R-squared	0.325	0.480	0.409	0.326	0.353

Notes: This table displays the regressions of Vigéo scores on Asset4 scores. (1) These dependent variables are Vigéo scores (0 to 100) which evaluate CSR firm commitments at the aggregate and dimension levels. The social dimension is covered by HR (Human Resources) and HRT (Human Rights); the environment dimension by ENV (Environment) and the societal dimension by C&S (Customers & Suppliers) and CIN (Community Involvement). (2) The independent variables are the the Asset4 scores on social issues (models 1 and 2), on environmental issues (model 3) and societal issues (models 4 and 5). (3) Models include industry and year fixed effects. (4) Standard errors are clustered at the firm level. (5) ***, **, * mark the statistical significance at the 1%, 5% and 10% levels, respectively.

that the commensurability of CSR indicators across extra-financial ratings is quite low. These results are convergent with Chatterji et al. (2014) who show the lack of agreement between extra-financial rating agencies on US data, especially Asset4 and KLD. In this framework, the main differences between Vigéo and Asset4 are twofold (Escrig-Olmedo et al., 2010). On the one hand, both Vigéo and Asset4 diverge about the relevant CSR issues that a rating agency should evaluate, and about the international standards that should be applied as benchmark. For example, Asset4 does not take into account business behavior issues whereas Vigéo cares less about diversity issues. Regarding the international standards, Vigéo uses OECD (Organisation for Economic Co-operation and Development) guidelines or ILO (International Labour Organization) core labour standards whereas Asset4 prefers UN (United Nation) Global compact or GRI (Global Reporting Initiative). On the other hand, both agencies have different way to measure CSR practices. As a primary source of information, Asset4 uses only quantitative or qualitative indicators that are transformed in z-scores, whereas Vigéo uses the knowledge of analysts to rate CSR dimensions before ranking firms according to the 5 level ratings. The commensurability of CSR indicators across extra-financial ratings is certainly the main reason to explain the divergent results on the relationships between board composition and CSR commitment intensity. The informational content hypothesis is therefore validated. It justifies also the need to use multi-sources of extra-financial information to measure the robustness of these analysis.

Finally, the robustness of the results is tested with other CSR commitment indexes. In order to better separate the good and the bad CSR behavior, I create a three-level CSR commitment index. For Vigéo, this index takes the value 1 if firms commit more than the average behavior (levels 4 and 5)

and the value -1 if firms commit less than the average behavior (levels 1 and 2) and zero for the average behavior (level 3). For Asset4, this index takes the value 1 if firms belong to the best 25% ones in terms of scores and the value -1 if firms belong to the 25% worse ones in terms of scores and zero otherwise. I then analyze the determinants of CSR commitment indexes depending on board composition for both the shareholder and stakeholder perspectives thanks to an ordered logit model.

Tables 5.17 and 5.18 present the results for the shareholder perspective. Once again, similar results are found. For Vigéo, CSR commitment indexes are negatively related to the share of insiders, except for the environment dimension. For asset4, the share of independents is related to CSR, the social and environment dimensions. The results are consistent with the probit analysis for CSR and the social dimension. According to Asset4 evaluation, only the best environmental leaders (top 25%) have a more independent board. All the results support again the stakeholders' conflict resolution hypothesis. However, societal dimension is not related to the board composition in this analysis. From the stakeholder perspective, Tables 5.26 and 5.27 show very similar results to the probit analyses. The stakeholders' conflict resolution hypothesis is supported for the social and societal dimensions. For environment, the results are not significant.

Table 5.17: Ordered logit explaining CSR commitment indexes from the shareholder perspective (Vigéo)

Variables	(1) CSR	(2) HR	(3) HRT	(4) ENV	(5) CS	(6) CIN
Sh Independents	-1.517 (1.619)	0.525 (1.495)	-2.652* (1.585)	-0.103 (1.657)	-0.148 (1.441)	-0.493 (1.438)
Chair/CEO Separation	0.005 (0.589)	-0.574 (0.482)	0.001 (0.471)	0.235 (0.498)	0.377 (0.438)	-0.008 (0.532)
Sh Insiders	-8.823*** (2.965)	-4.925* (2.545)	-8.145*** (2.789)	-0.230 (2.469)	-3.906* (2.090)	-2.614 (2.543)
Observations	265	265	265	265	265	265
Nb Firms	91	91	91	91	91	91
R2	0.344	0.272	0.239	0.212	0.148	0.247

Notes: This table displays the estimated coefficients of ordered logit analysis for multi-dimensional CSR commitment indexes regarding board monitoring abilities. CSR commitment indexes are based on Vigéo extra-financial ratings. (1) These dependent variables are factor variables which equal to one if firms are more committed in CSR policy or specifically in each CSR dimension than the average firm behavior according to Vigéo, zero if firms adopt the average behavior and -1 otherwise. The social dimension is covered by HR (Human Resources) and HRT (Human Rights); the environment dimension by ENV (Environment) and the societal dimension by C&S (Customers & Suppliers) and CIN (Community Involvement). (2) The independent variables are the share of insiders and independent directors, the dummy of separation of Chairman and CEO positions. The reference group of directors is the group of affiliated directors. The control variables are the board size, the share of women and foreigner directors, the supervisory board dummy, the CSR committee dummy, the number of employees, the leverage, the ownership float, the CAC40 dummy, the CSR committee dummy, the stock volatility, the advertisement expenses, the R&D investment and the return on asset. (3) Ordered logit models include industry and year fixed effects. (4) Standard errors are clustered at firm level. (5) ***, **, * mark statistically significant coefficients at the 1%, 5% and 10% levels, respectively.

Table 5.18: Ordered logit explaining CSR commitment indexes from the shareholder perspective (Asset4)

Variables	(1) Ind CSR	(2) Ind Social	(3) Ind Env	(4) Ind Societal
Sh Independents	3.750*** (1.417)	3.090** (1.329)	4.755*** (1.589)	0.844 (1.287)
Chair/CEO Separation	-0.385 (0.484)	-0.375 (0.422)	-0.269 (0.438)	-0.053 (0.418)
Sh Insiders	0.391 (2.067)	-0.356 (1.708)	-0.088 (2.038)	-1.017 (1.716)
Observations	418	418	424	424
Nb Firms	79	79	80	80
R2	0.228	0.185	0.302	0.180

Notes: Using Asset4 data, this table displays the estimated coefficients of the ordered logit analysis for multi-dimensional CSR commitment indexes regarding board monitoring abilities. (1) These dependent variables are factor variables which equal to one if firms are committed in the top 25% in CSR policy or specifically in each CSR dimension (ind CSR for global policy, Ind Social for social, Ind Env for environment and Ind Societal for societal) according Asset4, -1 if firms are the less committed in the bottom 25% and zero otherwise (average behavior). (2) The independent variables are the share of insiders and independent directors, the dummy of separation of Chairman and CEO positions. The control variables are the board size, the share of women and foreigner directors, the dummy of employees' representative inside the boardroom, the supervisory board dummy, the CSR committee dummy, the number of employees, the leverage, the ownership dummies, the Cac40 dummy, the CSR committee dummy, the stock volatility, the advertisement expenses, the R&D investment and the return on asset. (3) Ordered logit analysis include industry and year fixed effects.(5) Standard errors are clustered at firm level. (6) ***, **, * mark statistically significant coefficients at the 1%, 5% and 10% levels, respectively.

As conclusion, the main results are robust with this second set of CSR commitment indexes which is more discriminating for best and worse behaviors. The main analysis therefore does not capture any spurious correlation between board composition and CSR commitment dummy. Whatever the CSR commitment indexes, the conflict resolution hypothesis is clearly accepted for the social and societal dimensions. For environment, the results are mixed.

5.5.2 Endogeneity issues

Simultaneous evolution, endogeneity and causal relationships constitute the major issues in the literature about corporate governance and firm performances (Adams et al., 2010). In this senss, the observed correlations between board composition and CSR commitment indexes do not mean that there is a causal relationship from board composition to CSR commitment. I discuss here the main endogeneity concerns arisen by the empirical design.

Simultaneity means that the CSR commitment increase and board changes, although driven by different determinants, happen at the same time. Simultaneity reflects then some spurious correlations. Regarding board composition, over the period, on SBF120 index, the share of independent directors has on average increased around 4% over the period relative to the share in 2006, but the share of insiders decreases around 8%. From the stakeholder perspective, the proportion of employees' representatives and business directors have decreased around respectively 13% and 8%, but the support directors have grown up around 3%. On average, the board composition changes are however very limited, less than one director per board. There is also no severe temporal trend in the stakeholder representation. For CSR commitment indexes, there is no temporal trend because the scores or ratings are annual normalized evaluations of firm behavior relative to CSR practices of the whole rated firm population. It is then very unlikely to have simultaneous changes in board composition and CSR commitment intensity. Moreover, the 1-year lag between board composition and CSR commitment index variables in the probit model should induce enough delay to avoid this bias.

Another explanation of the relationships between CSR commitment and board composition could be the reverse causality; the most committed firms in the social, environment or societal dimensions could change their board composition afterwards to fit with the expected standards of a responsible corporate governance (for example, independent board). Corporate governance is indeed one CSR dimension that firms may take into account (Jamali et al., 2008): the change in board composition may be a final signal of CSR commitment towards the strategic stakeholders (Post et al., 2002b). In particular, employees' representation inside the boardroom could be a CSR action to improve the social dialogue with the intern stakeholders and may reflect a better firm commitment regarding the social issues. The appointment of business directors could signal to customers and suppliers a greater commitment in the societal issues. However, the representation of employees is mainly driven by other corporate governance determinants. Most of former State-owned firms have compulsory employees' representatives (around one third) since the mid 2000's. Most of the other firms have employees' representatives because the employees' ownership is above 3%, which gives the right by law to be directly represented inside the boardroom. Finally, only two firms appoint for the first time employees' representatives over the period. It is then very unlikely that the social commitment intensity drives employees' representation. Furthermore, the French corporate governance model has been defined for decades by a high share of affiliated directors, including business directors. CSR commitment is however not related to an increase of affiliated directors inside the boardroom. The reverse causality is therefore not an issue in the French context. To confirm, some robustness checks have been done with the two-years lag between board composition and CSR commitment index variables. The results are pretty consistent but the significance levels are lower. The reverse causality does not drive the results.

Finally, controlling for endogeneity issue requires most of the time either a quasi-natural experiment due to an exogenous shock or an exogenous instrument variable (Wintoki et al., 2012). Unfortunately, the framework does not allow us to find a better identification strategy. There is no exogenous shock over the period on board composition. Most of good corporate governance practices are promoted by a code of governance. Few interesting regulations happen only after the investigated period. In particular, the French Parliament voted in 2013 a law to promote employees' representation inside the boardroom for large firms (more than 5000 employees including the subsidiaries). This law could be used to apply a difference in difference strategy or discontinuity analysis to better identify the causal relationship from employees' representation to CSR commitment intensity. On the one hand, regarding a difference in difference analysis, the experimental design faces the same drawbacks as the gender quota design inside the Norwegian boardroom: treated and controlled groups are endogenously determined by firm strategy before the regulation (Ferreira, 2015). Indeed, the firms which are already compliant before the regulation have specific characteristics which may introduce a bias when identifying the difference in difference estimator. The discontinuity analysis, on the other hand, is more likely to capture a firm size effect. Firm size is indeed one of the main CSR determinants (Margolis et al., 2011). Nevertheless, in the literature dealing with the relationship between board composition, CSR commitment and firm performance, there are few examples of instruments for board composition variables. Kruger (2010) uses for example the Sarbanes-Oxley regulation as an instrument for the bargaining power of insiders inside the boardroom. The lack of exogenous regulation in the French context prevent us using such strategy. Furthermore, most of papers about the governance-CSR nexus evaluate the role of corporate governance on CSR commitment and firm performance. They instrument the CSR commitment rather than board composition (Harjoto and Jo, 2011; Jo and Harjoto, 2011; Ntim and Soobaroyen, 2013). From the stakeholder perspective, I am unaware about the use of instrumental variables (Hillman et al., 2001). From this perspective, I am not able to provide an original solution in this chapter.

5.6 Conclusion

Despite an extended literature on the relationships between corporate governance and financial performances (Adams et al., 2010), the corporate Governance-CSR nexus has received limited attention from academics. Recent papers have yet investigated the links between board composition, CSR commitment and firm performance (Harjoto and Jo, 2011; Jo and Harjoto, 2011, 2012; Ntim and Soobaroyen, 2013) from the shareholder perspective. In this literature, two main competing hypotheses have been highlighted to explain CSR commitment from the corporate governance perspective: the CEO's opportunistic behavior and the stakeholders' conflicts resolution. In addition, these papers show that board composition, especially the balance between independent directors and insiders, may be an important trigger of CSR commitment. More recently, there is also a new interest for the stakeholder board orientation (Shaukat et al., 2015) but without investigating the representation of stakeholders inside the boardroom and the related consequences on CSR commitment intensity (with the exception of Hillman et al. (2001)). This chapter analyzes therefore the relationships between board composition and CSR commitment intensity from the shareholder and stakeholder perspectives. This specific empirical design helps to better understand the governance mechanisms behind CSR commitments, especially if CSR is a way to answer stakeholders' interests (the stakeholders' conflict resolution hypothesis).

Similarly to the previous papers, this chapter uses a comprehensive Governance-CSR database covering three CSR dimensions (social, environment and societal) and board composition for French listed firms over the 2006-2011 period. More originally, two different extra-financial datasets coming from Vigéo and Asset4, the two leading European extra-financial rating agencies, are compared. Following the example of Ferrell et al. (2014), the robustness of the results is tested with two independent sets of CSR ratings and the methodological issues of CSR evaluation through ratings is discussed.

I show that from the shareholder and stakeholder perspectives, the CEO's opportunistic behavior hypothesis is rejected for each CSR dimension. Consistent with the stakeholders' conflict hypothesis, the results highlight from the shareholder perspective that the social and societal commitment intensity is either negatively related to the share of insiders or positively related to board independence. From the stakeholder perspective, the shares of employees' representatives, business, support and extern directors are positively related to the social commitments. For the societal dimension, the positive relationships are limited to employees and business stakeholders (direct strategic stakeholders). Nevertheless, for the environment dimension and the global CSR, the commitment may help to reduce conflicts within the supply-chain, but may exacerbate conflicts with support and extern stakeholders. The stakeholders' conflict resolution is therefore only partly accepted in these cases. The shareholder and stakeholder perspectives are then consistent and support the stakeholders' conflict resolution hypothesis. But the stakeholder board representation enables to better understand the bargaining power of each stakeholder inside the boardroom. The stakeholder board composition appears then as an new promising research perspective of research in order to analyze CSR commitment.

This chapter demonstrates also that CSR has to be analyzed as a multi-dimensional concept, since the determinants of each commitment may vary or even conflict with each other. That echoes the emerging literature about multi-dimensional CSR commitments and financial performance (Crifo et al., 2014). In particular, according to our analysis, investing in both the social and societal dimensions help to decrease conflicts with all firm stakeholders. That could explain the complementary effect of these two commitments on financial performance, demonstrated by Cavaco and Crifo (2014). On the opposite, engaging in social and environment could exacerbate some conflicts between stakeholders' interests, leading to a substitute effect between both commitments on financial performance. Merging the literature on board composition, CSR commitment and financial performance from the stakeholder perspective gives then some new promising perspectives to analyze and understand trade-offs and synergies between CSR practices. These analysis show also that non-linear effects should be taken into account in order to understand the relationships between board composition and CSR performance (de Villiers et al., 2011; Chang et al., 2015). Most of the literature have focused attention on linear relationship between board composition and CSR commitment. Our results suggest that some coordination problems within the boardroom could happen and may reduce the effectiveness of stakeholders' representatives to foster CSR commitment. Finally, the chapter shows that extra-financial ratings from different providers (here Vigéo and Asset4) do not give the same information about firms (Chatterji et al., 2014). Even if the results coming from Asset4 and Vigéo are consistent for the shareholder perspective, the stakeholder perspective remains inconclusive on Asset4 data and meaningful for Vigéo. Vigéo's methodology and ratings might be more oriented towards stakeholders' demands and interests whereas Asset4 might be more oriented towards shareholders' interests (Escrig-Olmedo et al., 2010).

Due to limited CSR-governance data and the lack of exogenous shock, the main limitation of this chapter is the untreated endogeneity issue between board composition, CSR performances, and financial performance. Nevertheless, without underestimating the endogeneity issue in the governance literature (Harjoto and Jo, 2011), this chapter strategically enlarges the question of Governance-CSR nexus outside the classical CSR-Governance-Performance framework. The impact of CSR policy on financial performance is a long-term benefit but there is no effective financial performance measure to anticipate these potential effects. However, understanding the impact of corporate governance on CSR commitment could help to better design policy and incentives to promote sustainable firm strategy. Corporate governance is indeed subjected to an increasing regulation pressure (e.g. gender diversity, employees' representative law in France) and there is a crucial debate on how to define good corporate governance practices in order to manage firms in a sustainable way. From this perspective, this chapter contributes firstly to understand how stakeholders could be recognized inside the boardroom, especially the employees' representatives, and how they may influence the decision-making process, especially in terms of CSR commitment and sustainability management. The shareholder perspective, adopted by the code of corporate governance, seems to fail to correctly take into account the heterogeneity of stakeholders' interests. From this perspective, the future research avenue is the natural experiment created by the new law about compulsory employees' representation inside the boardroom since 2013 in France.

5.7 Appendix

5.7.1 Variables

Table 5.19: Definition of variables

Variables	Description
Panel A: Board characteristics	Ethics & Boards
Board Size	Size of the board
Sh Women	Share of women
Sh Foreigners	Share of foreign directors
CSR Committee	Board committee dedicated to CSR issues
Sh Independent	Share of independent directors (according AFEP-MEDEF code of corporate governance)
Sh Insider	Share of executive directors
Supervisory Board	Dummy equal to 1 if corporate governance is a two tier board
Chair/CEO separation	Dummy equal to 1 if chairman and CEO are two distinct persons
Nb Stakeholders	Number of stakeholders' representative types among 6
Stakeholders' diversity	Blau index of stakeholders' representatives shares
Sh Employees	Share of employees' representatives
Sh Businesses	Share of business' representatives (outside non-independent directors with industry expertise)
Sh Supports	Share of support directors (directors with financial expertise)
Sh Externs	Share of extern directors (independent directors without any expertise)
Panel B: Firm characteristics	Infinancials & Thomson One Bankers
Nb employees	Number of employees
Cac40 Index	Dummy equal to 1 if firm belongs to the first 40 listed firms by market capitalization and/or market trade
State Owned Firm	Dummy equal to 1 if the French State owns at least 5% of the equity capital
Ownership Float	Share of ownership which is held by significant shareholders (each shareholder should hold at least 5% of the capital)
Prox volatility	Stock volatility measures as the standard deviation of the monthly stock returns over the previous 50 months
RDonSales	Research and development expenses on total Sales
Advertisement	Total of Intangibles assets on total sales
leverage	Leverage equal to total debt over total equity
ROA	Return on assets equal to the ratio between EBITDA (earnings before interest, taxes, depreciation and amortization) and beginning-year total assets

Notes: This table describes the board and firm variables. Board characteristics are provided by Ethics&Boards. Firm characteristics are provided by Infinancials, except ownership structure by ThomsonOneBankers.

Table 5.20: Description of CSR Commitment indexes

Variables	Description	Provider
CSR	Dummy equal to 1 if CSR ratings (sum of ratings in the 5 dimensions) is higher than 17 without any CSR dimension below 3	Vigéo
HR	Dummy equal to 1 if firm's Human Resources ratings is above 3	
HRT	Dummy equal to 1 if firm's Human Rights ratings is above 3	
ENV	Dummy equal to 1 if firm's Environment ratings is above 3	
C&S	Dummy equal to 1 if firm's Customer and suppliers ratings is above 3	
CIN	Dummy equal to 1 if firm's Community rating is above 3	
Ind CSR	Dummy equal to 1 if firm average score in social, societal and environmental dimensions is above the annual industry average score	Asset4
Ind Social	Dummy equal to 1 if firm score is above the annual industry average score in social	
Ind Environment	Dummy equal to 1 if firm score is above the annual industry average score in Environment	
Ind Societal	Dummy equal to 1 if firm score is above the annual industry average score in societal	

Notes: This table describes the CSR commitment variables. Vigéo and Asset4 are two extra-financial rating agencies.

5.7.2 Sample descriptive statistics

Table 5.21: Distribution per industry

Digit	Industry	SBF120	Nb of firms	Nb of obs	%
1	Agriculture	3	3	15	3.25
2	Energy	15	12	60	13.02
3	Manufacturing Industry	34	29	148	32.1
4	Building	7	7	33	7.16
5	Retail	8	7	38	8.24
7	Transport	4	4	18	3.9
9	Services	8	7	31	6.72
12	Media	22	22	118	25.6
	Total	101	91	461	100

Notes: This table provides the distribution of firms and observations by industry. The column SBF120 reminds the number of firms included in the SBF120 index (Euronext-Paris) by industry (financial industry is omitted). Nb of firms gives the number of firms included in the sample. Nb of obs provides the number of observations per industry.

5.7.3 Extra-financial data

Vigéo is the leading extra-financial rating agency in France and cover the largest spectrum in terms of firms. Table 5.22 provides the description of issues covered by each CSR dimension according to Vigéo's methodology.

Table 5.22: Vigéo dimensions and issues

Dimension	Sub-dimension	Issues
Social	Human resources	Promotion of labor relations
		Encouraging employee participation
		Training and Development
		Career management and promotion of employability
		Quality of remuneration systems
		Improvement of health and safety conditions
		Respect and management of working hours
	Human Rights	Respect for human rights standards
		Respect for freedom of association and of collective bargaining
		Elimination of child and forced labour
Non-discrimination		
Environment		Environmental strategy and eco-design
		Pollution prevention and control
		Development of green products and services
		Protection of biodiversity
		Protection of water resources
		Minimizing environmental impacts from energy use
		Environmental supply chain management
		Waste management
		Management of environmental nuisances (pollution)
		Management of environmental impacts from transportation
		Management of environmental impacts from the use and disposal of products and services
Societal	Customers and suppliers	Product safety
		Information to costumers
		Responsible contractual agreement
		Integration of CSR in purchasing process
		Sustainable relationship with suppliers
		Integration of CSR factors in the supply chain
		Prevention of corruption
		Prevention of anti-competitive practices
		Transparency and integrity
	Community Involvement	Promotion of social and economic development
		Social impacts of compagny’s products and services
		Contribution to general interest causes

Notes: This table gives the main issues analyzed by Vigéo in the various CSR dimensions.

Asset4 is a worldwide extra-financial rating agency providing quantitative and qualitative ESG data. Table 5.23 details the criteria used by Asset4 to analyze the social, societal and environmental pillars.

Table 5.23: Asset4 dimensions and issues

Dimension	Sub-dimension	Issues
Social	Employment Quality	Providing high-quality fair employment benefits and job conditions (long-term employment, trade unions)
	Health & Safety	Providing a healthy and safe workplace
	Training and Development	Providing training and development (education)
	Diversity and Opportunity	Maintaining diversity and equal opportunities regardless of gender, age, ethnicity, religion or sexual orientation and creating an effective life-work balance and a family friendly environment
Environment	Emission Reduction	Reducing environmental emission in the production and operational processes (air emissions, waste, hazardous waste, water discharges) and the related environmental impacts (biodiversity)
	Resource Reduction	Achieving an efficient use of natural resources in the production and in the supply chain management.
	Product Innovation	Supporting the research and development of eco-efficient products or services and creating new market opportunities
Societal	Human Rights	Respecting the fundamental human rights conventions (freedom of association and excluding child, forced or compulsory labor)
	Community	Maintaining the company's reputation within the general community (local, national and global) as good citizen (philanthropy), protecting public health and respecting business ethics (avoiding bribery and corruption)
	Product Responsibility	Creating value-added products and services upholding the customer's security (health and safety,integrity and privacy, information and labeling)

Notes: This table gives the main issues analyzed by Asset4 in the various CSR dimensions.

5.7.4 Robustness checks

Table 5.24: Propensity to be a CSR leader from the stakeholder perspective (Vigéo)

Model Variables	(1) CSR	(2) CSR	(3) HR	(4) HR	(5) HRT	(6) HRT	(7) ENV	(8) ENV	(9) CS	(10) CS	(11) CIN	(12) CIN
Insiders	-1.211 (2.539)	12.527* (6.596)	0.571 (2.292)	4.858 (6.703)	-2.262 (2.764)	7.536 (6.076)	-1.210 (2.754)	0.508 (3.502)	-1.951 (2.277)	-1.964 (3.320)	-2.908 (2.957)	12.941** (6.180)
Square		-37.546** (17.285)		-11.861 (18.846)		-30.040 (19.502)		-4.088 (3.469)		-4.381 (5.031)		-50.650*** (18.276)
Employees	8.833** (4.109)	13.320** (6.583)	11.169*** (4.126)	18.302*** (5.807)	10.691*** (3.649)	21.307*** (6.561)	5.681 (4.028)	14.818** (6.305)	-0.134 (3.622)	8.916* (5.370)	5.660 (3.718)	4.025 (5.448)
Square		-20.122 (20.447)		-32.368** (13.965)		-36.681** (17.443)		-39.347*** (15.207)		-36.610** (16.479)		14.972 (23.352)
Businesses	3.322 (2.190)	8.142*** (3.103)	5.978*** (1.941)	11.169*** (2.932)	4.569** (2.251)	12.467*** (3.126)	0.020 (2.480)	1.184 (3.345)	1.116 (1.924)	8.491*** (2.773)	1.107 (2.411)	11.288*** (3.474)
Square		-8.503** (3.868)		-8.979** (3.491)		-12.022*** (3.885)		-3.175 (3.836)		-14.519*** (4.647)		-19.235*** (5.355)
Supports	0.987 (2.406)	-7.975* (4.540)	5.791*** (2.128)	-0.901 (3.752)	2.025 (2.419)	-1.767 (3.963)	-2.395 (2.607)	-10.031** (4.228)	-0.550 (2.006)	-2.863 (3.211)	-0.337 (2.628)	-7.221 (4.960)
Square		10.993** (4.770)		8.487* (4.367)		5.621 (4.127)		8.717** (4.424)		2.044 (3.737)		8.723* (4.959)
Externs	0.938 (2.343)	2.770 (2.844)	3.868* (1.999)	7.259*** (2.577)	2.407 (2.417)	6.396** (3.162)	-1.552 (2.571)	-0.845 (3.093)	0.363 (1.903)	-3.895 (2.582)	-0.466 (2.397)	-5.153 (3.281)
Square		-3.546 (2.170)		-4.923** (2.019)		-4.030* (2.294)		-2.602 (2.382)		4.783* (2.481)		5.395* (2.926)
Obs.	228	228	228	228	228	228	228	228	228	228	228	228
Nb Firms	80	80	80	80	80	80	80	80	80	80	80	80
R2	0.314	0.375	0.342	0.392	0.347	0.415	0.320	0.362	0.162	0.233	0.328	0.409

Notes: This table displays the probit analysis for multi-dimensional CSR commitment indexes regarding stakeholder board composition perspective. (1) The sample is restricted to the common observations between Vigéo and Asset4. (2) These dependent variables are dummies which equal to one if firms are more committed in CSR policy or specifically in each CSR dimension than the average firm behavior according to Vigéo, and zero otherwise. (3) The independent variables are the share of each stakeholder's representative and the square of the share. The control variables are the board size, the share of women and foreigner directors, the supervisory board dummy, the CSR committee dummy, the number of employees, the leverage, the ownership dummies, the Cac40 dummy, the stock volatility, the advertisement expenses, the R&D investment and the return on asset. (4) Probit models include industry and year fixed effects. (5) Standard errors are clustered at firm level. (6) ***, **, * mark statistically significant coefficients at the 1%, 5% and 10% levels, respectively.

Table 5.25: Propensity to be a CSR leader from the stakeholder perspective (Asset4)

Model Variables	(1) Ind CSR	(2) Ind CSR	(3) Ind Social	(4) ind Social	(5) Ind Env	(6) Ind Env	(7) Ind Societal	(8) Ind Societal
Insiders	1.374 (2.819)	10.772** (4.749)	0.319 (2.660)	6.184 (3.943)	2.328 (2.615)	1.606 (3.804)	-0.691 (2.452)	3.424 (3.953)
Square		-13.645*** (5.280)		-10.323* (5.487)		1.238 (3.784)		-6.440 (4.273)
Employees	1.606 (4.398)	-14.855** (7.376)	-2.266 (4.667)	-13.424** (5.821)	7.364** (3.676)	18.916*** (5.722)	2.678 (4.060)	-6.141 (5.482)
Square		86.767* (44.814)		52.954*** (18.321)		-51.669*** (16.653)		47.280* (24.124)
Businesses	-1.820 (2.418)	-4.512 (3.721)	-2.367 (2.387)	-4.273 (3.398)	-1.121 (2.318)	3.423 (3.383)	-1.395 (2.145)	-2.970 (2.946)
Square		5.169 (5.205)		3.721 (4.565)		-9.830* (5.322)		3.273 (4.084)
Supports	0.124 (2.455)	-2.491 (4.024)	-0.291 (2.341)	0.029 (4.052)	1.537 (2.517)	-0.091 (4.365)	-0.747 (2.225)	0.210 (3.820)
Square		3.819 (3.617)		0.066 (4.152)		1.516 (4.673)		-0.874 (3.764)
Externs	0.382 (2.242)	1.677 (3.154)	1.006 (2.193)	-3.454 (4.175)	-0.269 (2.245)	1.393 (2.809)	-0.129 (2.153)	0.604 (2.906)
Square		-2.007 (2.344)		6.372 (4.866)		-2.570 (2.183)		-0.555 (2.277)
Observations	224	224	224	224	228	228	228	228
Nb Firms	79	79	79	79	80	80	80	80
R2	0.315	0.380	0.304	0.346	0.419	0.458	0.246	0.269

Notes: This table displays the probit analysis for CSR commitment indexes regarding stakeholder board composition. (1) The sample is restricted to the common observations between Vigéo and Asset4. (2) These dependent variables are dummies which equal to one if firms are more committed than the industry average behavior in CSR policy or specifically in each CSR dimension according Asset4, and otherwise which equal to zero. (3) The independent variables are the share of each stakeholder's representative and the square of the share. The control variables are the board size, the share of women and foreigner directors, the supervisory board dummy, the CSR committee dummy, the number of employees, the leverage, the ownership dummies, the Cac40 dummy, the stock volatility, the advertisement expenses, the R&D investment and the return on asset. (4) Probit models include industry and year fixed effects. (5) Standard errors are clustered at firm level. (6) ***, **, * mark statistically significant coefficient at the 1%, 5% and 10% levels, respectively.

Table 5.26: Ordered logit explaining CSR commitment indexes from the stakeholder perspective (Vigéo)

Model Variables	(1) CSR	(2) CSR	(3) HR	(4) HR	(5) HRT	(6) HRT	(7) ENV	(8) ENV	(9) CS	(10) CS	(11) CIN	(12) CIN
Insiders	-1.241 (5.135)	6.841 (8.711)	4.712 (4.500)	-5.205 (4.576)	-1.467 (3.546)	-1.453 (4.862)	1.542 (4.987)	-6.121 (5.853)	0.126 (3.638)	-2.032 (4.753)	-1.509 (3.992)	-7.781 (5.453)
Square		-12.280 (13.167)		14.377** (6.448)		-2.789 (9.405)		8.943* (5.104)		0.712 (5.754)		8.863 (5.462)
Employees	28.840** (11.340)	-35.144 (26.282)	23.196*** (7.448)	38.741*** (14.892)	18.151*** (5.733)	23.554** (10.341)	10.074 (7.459)	18.046 (11.700)	8.609 (6.075)	23.241** (9.805)	12.971** (5.776)	2.133 (12.099)
Square		559.323*** (194.950)		-70.126** (34.128)		-29.131 (29.800)		-41.165 (30.469)		-58.852** (26.784)		81.456 (71.973)
Businesses	7.377* (4.317)	16.220** (7.521)	10.143*** (3.280)	17.305*** (5.068)	6.698** (2.936)	13.847*** (4.194)	1.089 (4.404)	4.943 (6.247)	3.731 (3.208)	11.616*** (4.351)	1.213 (3.685)	9.858* (5.887)
Squared		-9.397 (7.666)		-11.177** (4.585)		-14.315*** (5.466)		-9.001* (5.393)		-14.461*** (5.500)		-15.228** (7.592)
Supports	6.174 (4.330)	3.804 (8.798)	10.241*** (3.453)	0.848 (5.921)	5.290* (2.931)	-5.959 (5.353)	0.625 (4.867)	-12.536 (8.333)	3.256 (3.256)	-1.323 (5.501)	0.586 (3.744)	-4.630 (6.599)
Squared		8.497 (6.256)		12.444** (10.896**)		13.299** (2.804)		15.378** (4.508)		5.271 (3.369)		7.277 (4.054)
Externs	3.659 (4.220)	6.256 (6.111)	7.722** (3.310)	10.896** (4.245)	2.804 (2.883)	4.210 (3.452)	0.109 (4.508)	-1.467 (4.639)	3.256 (3.054)	-0.900 (3.369)	-0.976 (3.389)	-3.874 (4.499)
Squared		2.122 (4.543)		-4.495* (2.644)		-3.251 (2.961)		-0.126 (3.667)		5.484 (3.370)		4.499 (3.781)
		(8.002)		(5.930)		(5.758)		(7.485)		(5.119)		(5.429)
Obs	265	265	265	265	265	265	265	265	265	265	265	265
Nb Firms	91	91	91	91	91	91	91	91	91	91	91	91
R2	0.402	0.455	0.314	0.355	0.268	0.302	0.227	0.264	0.157	0.198	0.277	0.309

Notes: This table displays the ordered logit analysis for CSR commitment indexes regarding stakeholder board composition perspective. (1) These dependent variables are factor variables which equal to one if firms are more committed in CSR policy or specifically in each CSR dimension than the average firm behavior according to Vigéo, zero if firms adopt the average behavior and -1 otherwise. (2) The independent variables are the share of each stakeholder's representative and the square of the share. The control variables are the board size, the share of women and foreigner directors, the supervisory board dummy, the CSR committee dummy, the number of employees, the leverage, the ownership dummies, the Cac40 dummy, the stock volatility, the advertisement expenses, the R&D investment and the return on asset. (3) Ordered logit models include industry and year fixed effects. (4) Standard errors are clustered at firm level. (5) ***, **, * mark statistically significant coefficient at the 1%, 5% and 10% levels, respectively.

Table 5.27: Ordered logit explaining CSR commitment indexes from the stakeholder perspective (Asset4)

Model Variables	(1) Ind CSR	(2) Ind CSR	(3) Ind Social	(4) Ind Social	(5) Ind Env	(6) Ind Env	(7) Ind Societal	(8) Ind Societal
Insiders	0.570 (3.054)	4.810 (4.816)	3.027 (3.739)	6.154 (5.639)	0.751 (3.465)	-0.037 (5.231)	-1.215 (2.830)	3.842 (4.818)
Square		-6.166 (5.868)		-5.621 (5.708)		0.525 (5.971)		-8.135 (5.080)
Employees	1.356 (4.936)	-2.160 (8.781)	6.541 (7.668)	-0.343 (9.754)	6.099 (4.132)	13.752* (7.440)	6.514 (5.725)	2.330 (8.113)
Square		9.810 (24.477)		19.026 (18.816)		-29.648 (23.416)		15.743 (21.344)
Businesses	-0.567 (2.905)	-3.171 (4.237)	2.717 (3.231)	1.408 (4.067)	-0.824 (3.042)	3.482 (4.811)	-1.206 (2.674)	-3.447 (3.395)
Square		4.345 (6.060)		1.851 (6.004)		-9.887 (7.391)		4.071 (5.778)
Supports	2.088 (2.976)	-1.940 (4.989)	3.754 (3.264)	-1.378 (4.690)	3.352 (3.015)	-0.058 (5.606)	-0.873 (2.756)	0.843 (4.597)
Square		5.194 (5.242)		7.138 (4.428)		3.705 (5.924)		-2.189 (3.870)
Externs	2.980 (2.960)	3.599 (4.427)	5.713* (3.351)	-0.992 (5.274)	3.552 (2.932)	4.534 (4.284)	-0.480 (2.771)	-3.453 (3.632)
Square		-1.588 (3.062)		8.365* (4.684)		-1.970 (3.165)		3.523 (3.163)
Observations	418	418	418	418	424	424	424	424
Nb Firms	79	79	79	79	80	80	80	80
R2	0.222	0.229	0.189	0.212	0.301	0.312	0.193	0.202

Notes: This table displays the ordered logit analysis for CSR commitment indexes regarding stakeholder board composition. (1) These dependent variables are factor variables which equal to one if firms are committed in the top 25% in CSR policy or specifically in each CSR dimension according to Asset4, -1 if firms are the less committed in the bottom 25% and zero otherwise (average behavior). (2) The independent variables are the share of each stakeholder's representative and the square of the share. The control variables are the board size, the share of women and foreigner directors, the supervisory board dummy, the CSR committee dummy, the number of employees, the leverage, the ownership dummies, the Cac40 dummy, the stock volatility, the advertisement expenses, the R&D investment, and the return on asset. (3) Ordered logit models include industry and year fixed effects. (4) Standard errors are clustered at firm level. (5) ***, **, * mark statistically significant coefficient at the 1%, 5% and 10% levels, respectively.

Gender quota inside the boardroom: Female directors as new key players?

Joint work with A. Rebérioux (University Paris-Diderot)

Abstract

This chapter examines the way the French board-level gender quota, enacted in 2011, has impacted corporate governance for listed companies belonging to the SBF120 index over the 2006-2014 period. It shows that the quota succeeded in opening the doors of the boardroom to new, unseasoned female directors, not present on the director labour market before the regulation. However, these unseasoned directors present distinctive characteristics (in terms of experience, age, nationality etc.) as compared to other directors. These characteristics, combined with discretionary choices made by companies to allocate directors to positions inside the boardroom, make them less likely to enter the most strategic committees (namely monitoring committees). The seasoned female directors who were already present on the director labour market, on the other hand, get more directorships after the quota, but they still face difficulties in reaching some of these committees. The female directors experience therefore an inner glass ceiling. As a consequence, the gender fees gap that female directors are facing increased with the quota to reach 6%.

Key words: : board, gender quota, independence, director fees

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6.1 Introduction

Representing almost half of the workforce in Europe, women are still under-represented inside the boardroom (European Report, 2012). In 2014, only 20% of directorships on average were held by female directors in the largest European firms, with an important heterogeneity across countries (see Figure 6.1). In recent years, board diversity has therefore come to the front in public policy: the EU Commission and Parliament agreed to reach the target of 40% of female directors by 2020. There are, however, two competing approaches (see Appendix 6.7.2). Voluntary approaches through codes of governance have been supported by the UK, Sweden, Denmark, Finland, Austria, Poland, Luxemburg and half a dozen countries in the rest of the world. Following Norway, some countries have adopted a legislative approach, implementing gender quotas. This is the case of France, The Netherlands, Spain, Italy, Germany and Belgium with targets between 30% and 50%, but also of several other countries around the world (Adams et al., 2015). Evaluating the relative effectiveness of the two approaches is then a priority and has prompted a fierce debate in economics and finance (Terjesen et al., 2015a). There is in particular a need to investigate the benefits and costs of the legislative approach.

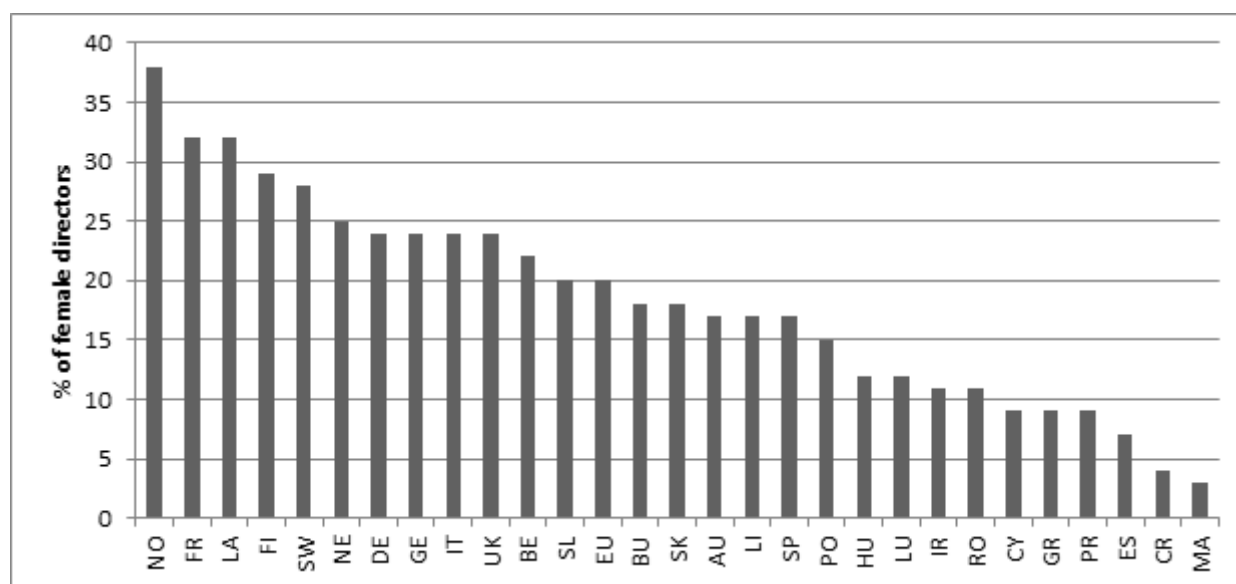


Figure 6.1: The share of female directors in the EU countries (2014)

Notes: Figure is a histogram of the share of female directors in the largest European firms by market capitalization and/or trade (2014). EU is the average share in the 28 EU countries. The country codes are: Norway (NO), France (FR), Latvia (LA), Finland (FI), Sweden (SW), The Netherlands (NE), Denmark (DE), Germany (GE), Italy (IT), United Kingdom (UK), Belgium (BE), Slovenia (SL), Croatia (CO), Bulgaria (BU), Slovakia (SK), Austria (AU), Lithuania (LI), Spain (SP), Poland (PO), Hungary (HU), Luxembourg (LU), Ireland (IR), Romania (RO), Cyprus (CY), Greece (GR), Portugal (PR), Estonia (ES), Czech Republic (CR), Malta (MA). Sources: Eurostats (European Commission database on women and men in decision-making)

Improving board-level gender diversity is of course part of a global agenda promoting gender equality in our society. But it is also commonly perceived as a way to increase firm accountability and performance through better corporate governance. Indeed, women should bring new resources into the boardroom. First, they are less connected to the old boy networks that often characterized boards in listed companies (Miller and Del Carmen Triana, 2009; Nielsen and Huse, 2010a; Smith, 2014). Second, female directors appear to have distinct values and perspectives as compared to male directors (Adams and Funk, 2012). A positive relationship between board diversity, corporate governance

quality and firm performance is therefore expected. If one considers that market imperfections (such as taste-based or statistical discrimination) impeding women board access are likely to be resilient, then a legislative approach might be necessary.

However, the Norwegian experience, the first completed implementation of a gender quota in 2008, provided very mixed results. Ahern and Dittmar (2012) and Matsa and Miller (2013) show a negative relationship between gender diversity and firm performance. This suggests that the relationship between diversity and performance is not straightforward, especially in the case of quotas. It involves complex interactions between the companies' needs, the characteristics and busyness of potential candidates (Adams and Kirchmaier, 2015) and the role allocated to newly appointed female directors inside the boardroom (in terms of committee membership and chairing, in particular). Interestingly, it is somewhat reminiscent of the independence debate, with a first generation of studies examining the relation between independence and performance - with no conclusive empirical results (Hermalin and Weisbach, 1998; Bhagat and Black, 2001) - and a second generation investigating the precise characteristics and role of independent directors inside the boardroom (Adams and Ferreira, 2007; Baldenius et al., 2014; Masulis and Mobbs, 2014). Simply put, and similarly to independence, reaping the potential benefits of gender diversity under a quota necessitates appointing the right persons at the right places. This raises two distinct issues.

The first issue relates to director appointment and the pool of new female potential candidates (unseasoned female directors). Seasoned directors, who have entered the director labor market before the quota, belong to the classic pool of directors. On the contrary, unseasoned directors, entered after the quota, may constitute a new pool, with specific characteristics (Hillman et al., 2002). For instance, it is known that the typical French board looks like an old boy network, with an over-representation of individuals graduating from the Grande Ecole (the most prestigious French schools, Kramarz and Thesmar, 2013). Also, it is possible that female candidates lack, on average, executive experience. In the same vein, the supply shortage may lead to appoint more foreigners and younger individuals, and also more independent directors (Singh et al., 2008; Terjesen et al., 2009). Whatever these differences, it is very likely that the effectiveness of a quota - in terms of corporate governance - closely depends on the characteristics of the pool of female candidates. And there might be some reasons to be skeptic on such effectiveness, if board-level gender inequality finds its roots in the existence of a glass ceiling for women regarding executive careers, leading to a relative narrowness of female director supply (Adams and Kirchmaier, 2015).

The second issue relates to role allocation inside the boardroom. Not every director is equal: there exist some key positions inside the boardroom, associated in particular to committee memberships and committee chairings that give individuals holding them a greater ability to set the tone at the top. Importantly, role allocation inside the board is, to a large extent, a discretionary choice made by the chairman (and eventually top executives) and incumbent board members. And just like the characteristics of the pool, these choices are very likely to shape the impact of a board quota on corporate governance and firm performance: for instance, appointing new female directors to comply with the law, but placing them in non-strategic roles (for example without any committee membership) inside the boardroom may reduce the value of female directors for firms and should not necessarily help to improve corporate governance.

Accordingly, assessing the effectiveness of gender quota necessitates answering the three following questions: what are the main characteristics of female directors appointed to comply with the law? What are their roles, in particular in terms of committee memberships, inside the boardroom? Ultimately, what is the value they bring to the firm? This article proposes to answer these three questions, using the French context as a quasi-natural experiment framework. In January 2011, the French Parliament voted the so-called “Zimmerman-Copé” law promoting gender equality inside the boardroom. Each gender should represent at least 40% of directors in 2017 with an intermediate threshold of 20% in 2014. The regulation goes beyond the “comply or explain” principle. If a firm does not reach the threshold in 2014, the new appointments of the over-represented gender are considered invalid and the directors could not receive any fees until the situation changes. Any firms with more than 500 employees and 50 million€ of profit during three following years has to comply with the law. Our analysis is based on a sample of firms belonging to the SBF120 index in 2011 (the 120 first listed firms in 2011 by market capitalization and trading volume on Euronext NYSE-Paris). They are all concerned by the gender quota. Starting in 2010 (firms have anticipated the success of the political debate), we observe an impressive, steady growth in the share of female directors - with no company on the side of the road. Importantly, this growth has been to a large extent fueled by the appointment of new female directors (unseasoned), who were not already in the French pool of directors before 2010. In 2014, for instance, these unseasoned female directors represented 90% of female appointments - the rest consisting of seasoned female directors already in the market before. While it is impossible to assert that any given recruitment was made because of the quota, it is evident that French companies had, and still need, to find new faces - the number of seasoned female directors (around one hundred) being definitely too small to be used as the only pool. Consistent with this observation, we do not report evidence of a significantly high level of multi-directorships for female directors following the quota - something that may undermine both corporate governance improvement and the search for a larger access for women to top positions (Adams and Kirchmaier, 2015).

Our empirical study brings three main findings. Regarding individual characteristics, we show that female directors present distinctive attributes. First, female directors are younger than male counterparts. Unseasoned female directors are also more independent and less industry expert than all other groups of directors. Like seasoned women, a lower proportion graduated from the Ecole Polytechnique, the leading French engineer school. These observations suggest a shortage supply of potential candidates. Besides, the share of natives and financial-experts is less important than what is observed among seasoned directors (male or female), but is not significantly different from what we observe for male newcomers. As a consequence, we might suspect that these two attributes reflect a deliberate strategy by companies to recently appoint foreigners and individual with non-financial expertise, whether male or female, and irrespective of the new regulation.

Regarding their position inside the boardroom, we provide evidence that the characteristics of unseasoned female directors (short tenure, young, foreigners, etc.) make them less likely to be appointed in the monitoring committees (audit, compensation and nomination) and more likely in the advising committees (strategy, risk management, corporate social responsibility). This is surprising because we have reported that unseasoned female directors are on average more independent than other directors, and therefore *a priori* better suited to enter monitoring than advising committees. This mismatch

between unseasoned female directors' characteristics and positions is suggestive of a second, inner glass ceiling: while the quota has allowed women to break the first glass ceiling (entering the boardroom), it has produced another one inside the board - with female unseasoned directors apparently confined to advising committees as a consolation prize.

Finally, we measure director roles through individual fees. We show that female directors support a within-firm fee discount of 5.6%. This discount is borne by unseasoned female directors, especially independent ones. It reflects, to a large extent, the difficulty they have to enter monitoring committees (with larger payoffs) and to acquire senior leading functions (such as vice-chairman, lead director, etc.). The results however do not confirm any difference in terms of attendance across groups of directors. Performing an Oaxaca decomposition enables us to conclude that two third of the gender fees gap is due to positions (committees' memberships and chairings) and one third to individual attributes (short tenure and age in particular). While we find no pure discrimination (gender gap unexplained by any observables), we provide evidence of the existence of a segregation process, whereby unseasoned female directors are at the moment not able to be the new key players inside the boardroom - with limited access to highly strategic committees. As a consequence, the French quota has resulted in an increase in the gender fees gap.

This chapter makes the following contributions.

First, this chapter complements the literature on the relationship between gender diversity and performance by providing fresh evidence on the dynamics of firm compliance to a quota. For the moment, the gender diversity-performance nexus, especially under quota, has received a lot of attention without reaching any consensus (Smith, 2014). Even a natural experiment such as the Norwegian regulation does not provide the perfect, appropriate empirical framework to correctly estimate the impact of diversity on performance. Indeed, some confounding effects, such as other concomitant regulations, early compliers and correlated board changes, may hide the true gender effect (Ferreira, 2015). Hillman (2015) then suggests going beyond the impact of gender diversity on performance by investigating how firms comply with either soft or hard regulation, how female directors are selected and how it impacts board organization and functioning. This chapter does so, for the French quota. France is a leading OECD economy, whose national stock exchange is 7 to 8 time larger than the Norwegian one (in terms of stock market capitalization). It therefore constitutes a unique experience to observe a gender quota in motion. Our results confirm some arguments or observations previously made on quota: it forces companies to select board members in a particular pool, which present distinctive characteristics (Adams and Kirchmaier, 2015; Bohren and Staubo, 2015). In particular, like in Norway, appointing new female directors often means appointing independent board members - something that was not necessarily on the agenda of listed companies. However, it succeeds in opening the pool to brand new candidates, rather than multiplying directorships for incumbent female directors. Our results also bring new evidence on the role played inside the boardroom by female directors following the quota - something that has not been covered so far in the literature to the best of our knowledge: in particular, we report evidence of a new, inner, glass ceiling, preventing female directors, especially unseasoned ones, to reach the most rewarded and most strategic committees - namely the monitoring committees. At least on the short run, this may call into question the efficiency of the French quota.

Second, this chapter brings new evidence on the determinant of director fees and on the existence of gender discrimination inside the boardroom. Director compensation has received limited attention so far, as compared to CEO remuneration; the same is true for gender discrimination among directors, as compared to gender discrimination on the labour market (whatever the occupation level). These are however, crucial questions - the lack of comprehensive information on director fees probably explaining the relative silence of the literature so far. Like wage, director fees constitute a global measure of the services provided by individuals at the very top of listed companies, and determine to some extent the effort devoted by individuals in their jobs (Hahn and Lasfer, 2011). As such, we contend that understanding the determinant of these fees, and raising the questions of gender discrimination is of interest, from a corporate governance point of view but also from a social, gender equality, perspective. The studies by Gregory-Smith et al. (2014) and Goh and Gupta (2015) are the most closely related to ours. They highlight a gender fees gap among directors in Great-Britain, between 5 and 8% - that they interpret as pure discrimination against women. We provide a rather similar estimation for French female directors but give an alternative explanation: the gap is entirely explained by the characteristics and positions of female directors. This suggests that they do not have attendance problems, and that there is no pure discrimination (consisting in paying differently men and women put in exactly the same position and providing the same services). Rather, our results are indicative of some sort of segregation, with key committees being hardly accessible for females entering the market with the quota.

The rest of this chapter is structured as follows. Section 6.2 presents a short literature review on gender diversity and quota, and on director fees. Section 6.3 provides descriptive statistics on the change of directors' pools and board characteristics during the period. Section 6.4 studies how female directors are involved within firm. Section 6.5 analyzes the determinant of director fees and gender gap. Section 6.6 concludes.

6.2 Literature review

This section presents a short literature review on the main issues regarding board diversity, gender quota and the determinants of director fees¹.

6.2.1 Diversity and governance

The importance of board composition in explaining board effectiveness, corporate governance quality and ultimately firm performance is now a standard assumption in board research (see e.g., Adams et al., 2010). Board diversity, then, is expected to impact several dimensions (Carter et al., 2003).

From a dependence theory perspective (Salancik and Pfeffer, 1978), female directors are often considered as bringing new resources and competences inside the boardroom, as well as fresh perspectives on strategic issues (Miller and Del Carmen Triana, 2009; Nielsen and Huse, 2010a; Hillman, 2015). A first reason is simply that they do not belong to traditional "old boys" networks that are so pervasive in corporate governance matter (Smith, 2014). Also, it is often argued that females have different

¹A full literature review on corporate governance has been done by Adams et al. (2010), and about diversity by Terjesen et al. (2009).

preferences, risk attitudes and values than males - even at the board level. Adams et al. (2011) shows that female directors are generally more stakeholder oriented than male directors. In the same vein, (Adams and Funk, 2012) provide evidence that women on board care more about benevolence and universalism, and less about power and achievement. In addition, they are less security and tradition-oriented, as compared to their male counterparts. These observations suggest that increasing board diversity should lead to substantial changes in board functioning and decisions.

From an agency theory perspective (Jensen and Meckling, 1976), it has been suggested that diversity enhances the monitoring ability of the board and firm performance. On the one hand, female directors are often more independent, outside traditional informal networks. Adams and Ferreira (2009) show also for instance that they are more likely to be appointed in monitoring committees (in the S&P500). In Turkey, female representation is also positively related to board monitoring (Ararat et al., 2015). On the other hand, female directors have a better attendance record, at least on U.S. data (Adams and Ferreira, 2009) and this may have a positive peer effect on male directors' attendance within the same firm. Finally, Terjesen et al. (2015b) suggest, in a meta-analysis, that diversity is a necessary condition to have a positive impact of independence on firm performance.

In sum, theory and empirical analysis both make the argument that increasing the fraction of women on board should not be neutral regarding corporate governance - with an overall improvement in governance quality.

However, without any affirmative action, the share of women at the top remains low, in all OECD countries. The existence of a glass-ceiling against women regarding the appointment in large boards is unquestionable (Terjesen et al., 2009; Ferreira, 2010). Like classic labour market discrimination, they are persistent inefficiencies that market forces fail to correct over a reasonable period (Becker, 1957). A quota is expected to fix the problem. In the Norwegian case, Nielsen and Huse (2010b,a) have observed, on the basis of a survey, a positive relation between the share of female directors in the post-quota period and the quality of the strategic decision-making process. Bohren and Staubo (2015) highlight, that the increase of women inside the boardroom following the quota is related to a more independent board. The quota would have improved both the monitoring and advising effectiveness of Norwegian boards. In the French case, the first empirical evidence supports also the improvement of corporate governance thanks to the quota. Using panel regression and frontier regression, Sabatier (2015) reports a positive relationship between gender diversity and firm performance (ROA, ROE and Tobin's Q) for early compliers (belonging to the 40 largest listed companies) between 2008 and 2012.

6.2.2 The effects of a gender quota

However, there are a number of reasons that may undermine the effectiveness of a quota, not for breaking the glass ceiling but for improving corporate governance quality (Smith, 2014). Three potential costs can be identified.

First, at a broad level, economists are often skeptic regarding the efficiency of a regulatory approach, especially in corporate governance. Such an approach does not take into account firm heterogeneity in terms of business models and corporate governance needs Adams et al. (2010).

Second, the implementation of a quota necessarily forces firms to appoint directors from a potential pool that may substantially differ from their usual, male-dominated pool (Hillman et al., 2002; Singh et al., 2008). It is possible, for instance, that the persistence of a glass-ceiling effect has impeded the will of many women to become directors, despite their intrinsic quality. The resulting narrowness of female directors' pool then acts as a short-run obstacle against the improvement of corporate governance following a gender quota. In addition, it might lead to a concentration of power among few female directors that would present the classical, expected characteristics. Seierstad and Opsahl (2011) have provided evidence of such an effect in the Norwegian case, with the creation of a small elite of female directors. Amusingly, it might even generate new old boy (women) network - the quota was intended to destroy. More broadly, the literature on busy directors has highlighted that multi-directorship may hurt shareholder value (Cashman et al., 2012; Falato et al., 2014) and that directors with multiple boards may commit differently across directorships depending on their incentives and reputation effects (Masulis and Mobbs, 2014). In sum, there are reasons to believe that a quota may distort internal equilibrium and then board effectiveness because of the narrowness and characteristics of the potential pool - in terms of age, experience and expertise, independence, etc. This distortion needs to be carefully examined to properly understand the effects of a gender quota. Over the long run however the quota should act as an incentive for women to invest the business, with a resulting enlargement of the pool of potential female directors.

Finally, it is possible that the quota does not substantially alter board functioning, if companies (rather, if top executives and incumbent directors) choose to place new female directors in lower positions inside the boardroom. This kind of window-dressing strategy (Helland and Sykuta, 2004) may in particular consist in keeping female directors at the gate of important, crucial board committees. Committees are sub-structures comprised of few board members, in charge of specific functions (typically audit, compensation design, nomination, strategy and risk policy). Belonging to one of these committees is then highly strategic to influence board decisions and firm performance (see e.g., Reeb and Upadhyay, 2010). Importantly, there are very few constraints to the allocation of directors in the different board committees: the Chairman (and in case of duality, the CEO) decides most of the time the creation of these committees (except the audit one, which is compulsory in many jurisdictions), and their composition.

So far, the vast majority of the literature has focused on the implementation of the the gender quota in Norway - fully enforceable since 2008. Two studies have investigated the relationships between board diversity and firm performance in detail. Ahern and Dittmar (2012) use the heterogeneity of pre-quota female representation inside the boardroom to instrument the exogenous shock that firms experiment. Using the cross-sectional variation in pre-quota female fraction to identify the impact of the change in female representation, they show that Tobin's Q drops off following the quota. Matsa and Miller (2013) use a triple difference-in-difference strategy across Nordic countries and across listed (affected by the quota) and non-listed (unaffected by the quota) in order to identify the impact of gender diversity on firm performance. They demonstrate that treated firms have been less likely to undertake workforce reductions, more likely to have increased their labor costs and employment levels - with negative effects on profitability. They also show that the effect is larger for firms with no female directors before the quota. Both studies are therefore consistent with the idea that the new regulation comes to a cost, making firms deviate from their optimal board composition from a shareholder value perspective.

In line with the argument made previously, there are evidences that the characteristics of newly appointed women differ substantially from incumbent directors; some of these characteristics might drive the reported detrimental effect of the quota on performance. Ahern and Dittmar (2012) show in particular that new female directors are less likely to have an executive experience, especially a CEO experience, and are younger. But they also report that they are more educated. In the French case, the first female directors appointed after the quota (2010, 2011 and 2012) are similar to the male counterparts in terms of education and networks (Allemand and Brullebaut, 2014) but are less business experts or CEOs (Dang et al., 2014). A striking result concerns independence (that is the most common criteria to evaluate board quality). In the Norwegian case, Bohren and Staubo (2015) report that the fraction of independent directors jumps from 40% to 67% following the implementation of the quota. But they show that the stronger the increase in independence, the bigger the economic losses after the quota. This result is consistent with several empirical (Faleye et al., 2011) or theoretical (Adams and Ferreira, 2007) studies pointing to the negative effect of excessive monitoring (associated with a too high fraction of independent board members): intense monitoring may in particular refrain corporate executives from sharing firm-specific information with independent board members, to the detriment of the board advising function and to some extent to the board monitoring function. Nygaard (2011) finds some supportive arguments on Norway. Firms who have a strong information asymmetry between insiders and outsiders - and for which the costs of intense monitoring would be the larger - experiment a negative cumulative abnormal return (CAR) after the announcement of the quota whereas firms with low information asymmetry have a positive CAR. In the French case, Rosenblum and Roithmayr (2015) argue, based on a series of interviews, that board decision-making process has been changed following the quota, most notably because newly appointed female directors are more likely to be outsiders.

In addition to the question of new female directors' characteristics, gender quota effectiveness partly depends on the allocation of board members across committees. To the best of our knowledge, there is no evidence regarding this allocation following a quota. Aside from a quota, there are some disparate evidences on the position occupied by women in committees. Wearing and Wearing (2004) show on British data that female directors are less likely to reach the chair position inside committees. In the French context, Nekhili and Gatfaoui (2012) argue that women may experience a second inner glass-ceiling once being inside the boardroom (the first being their difficulties to enter the boardroom): they show in particular that female directors have some difficulties to access to the most important committees. Whether a gender quota may help to break or reinforce this inner glass-ceiling is an open question - we provide an answer in the rest of this chapter.

From a methodological point of view, it is worth noting that estimating a clear relation between diversity and performance using a quota is not a simple task. Ferreira (2015) convincingly argues that the design of the Norway experiment does not provide a clear identification strategy to estimate the causal link from diversity to performance. First, the choice of the control group is particularly problematic: treated and untreated groups are endogenously determined when the quota applies (as some unobservables necessarily explain that some firms are unlisted or have no female directors, for instance). Second, some confounding effects may affect the result, such as the increase in the fraction of independent board members (Ferreira, 2010; Bohren and Staubo, 2014).

Unfortunately, the French context does not provide a better framework to analyze this relationship. However, it allows observing in detail - for a comprehensive sample of large listed companies - the way firms have complied so far with the regulation, in terms of director appointment and role allocation inside the boardroom. As such, the French framework enables to analyze the crucial question of the impact of diversity on board functioning, director roles and director labor market (Adams et al., 2015). Figure 6.2 presents the research framework to analyze the effectiveness of gender quota. We investigate the individual attributes and the position of female directors before and during the implementation of the gender quota. Importantly, heterogeneity plays a crucial role in determining board functioning and effectiveness. This heterogeneity plays at two levels. At the director level, the literature in economics, finance and management has pointed a multiplicity of individual attributes (age, nationality, expertise, etc.) or board-related characteristics (independence, informal connections, etc.) that all impact on the way individual directors perform their duties. At the position level, there is a multiplicity of committees, some common to nearly all companies (the audit one), some highly specific, directors may sit in. As a consequence, it is not a simple task to perform an overall assessment of the performance of particular directors - associated, by definition, with a bundle of characteristics and positions. To overcome this problem, we use director fees as a proxy for the role of female directors inside the boardroom.

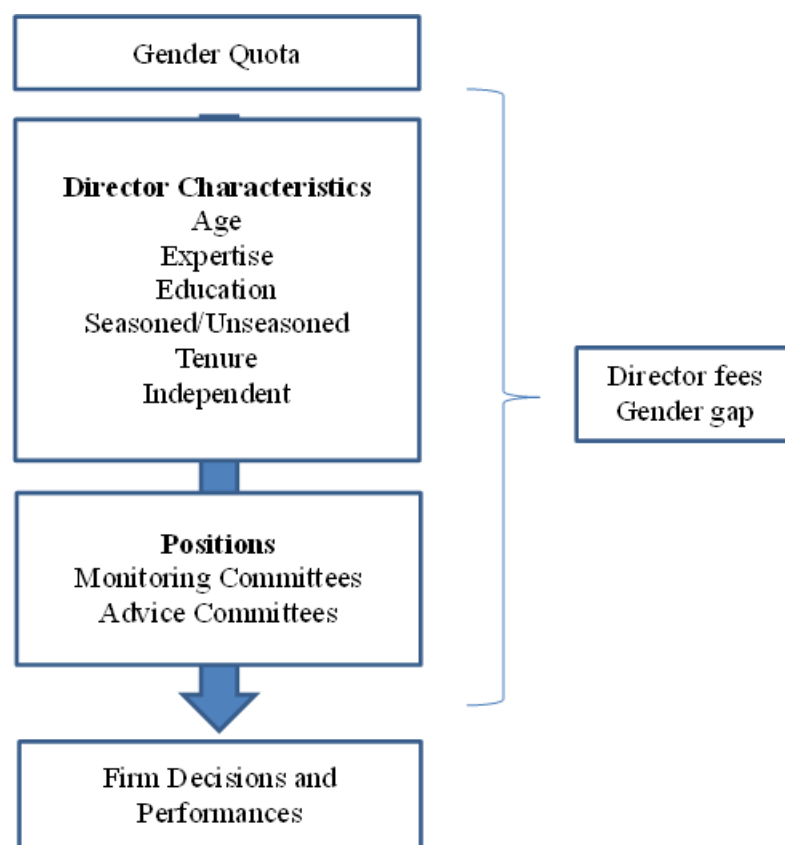


Figure 6.2: The effectiveness of gender quota: What determinants?

6.2.3 The determinants of director fees

So far, relatively little researches has been conducted on director compensation, as compared to CEO compensation. Several papers examine the relationships between director compensation and firm-level or board-level characteristics, on U.S. data. For instance, Ryan and Wiggins (2004) investigate the

relationship between fees and board independence, controlling for other firm characteristics. The idea is to test whether the bargaining power between the CEO and the board influences director compensation level. Brick et al. (2006) model director fees as a function of firm characteristics, CEO characteristics and governance factors (such as the share of internal directors). They examine whether the need for monitoring by board members is related to the level of director fees. In the same vein, Linn and Park (2005) study the relationships between investment opportunities and the level of board member compensation. The common point of all these papers is that they are not interested in differences among directors (for instance gender inequality), as we do. Accordingly, they do not control for any individual director attributes.

There has been a recent interest for the individual determinants of director fees, opening the way to an investigation of inequalities across groups of board members. For instance, Mallin et al. (2015) provides some evidence on UK and Italian data that independent directors are paid more than affiliated ones, especially in the UK. This study suggests that director status is an important driver of individual fees. Goh and Gupta (2015) on a British sample between 2001 and 2012 also show that independence is related to a +11% fees premium; tenure, network and age are also positively related to compensation.

Finally, few papers examine the gender gap. Pucheta-Martinez and Bel-Oms (2015) show on a Spanish sample between 2004 and 2012 that a gender gap exists, that depends on two elements: seniority and the presence of female directors in the compensation committees or in a strategic position. Taking into account firm heterogeneity and some individual characteristics such as compensation committee membership and chair, age and tenure, Gregory-Smith et al. (2014) also shows that female non-executive directors have a gender wage gap around 8%. Goh and Gupta (2015) provide convergent results. Female directors experiment a gender gap of 5% within firm controlling for individual characteristics and positions. Those results suggest either a discrimination against female directors or a problem of attendance which directly reduces director fees.

The application of a quota, which aims to balance the number of male and female directors, may reduce this gender gap in case of success, or exacerbate it in case of some inefficiency (such as inner glass-ceiling). It remains an empirical question.

6.3 Who is entering the boardroom?

Before 2010, the average share of female directors was around 9%. In 2010, this share significantly increased, suggesting that firms have anticipated the success of the political debate (the legislative regulation had been adopted early 2011). Since then, the proportion of female directors has steadily grown up. The sample average share of the female directors goes over 20% in 2012. In 2014, only few firms did not comply with the law, waiting for new nominations.

This section explores the change in the pool of directors following the implementation of the gender quota. Four types of directors are distinguished depending on the gender (male and female) and the date of entry in the director labor market (seasoned and unseasoned). Seasoned directors are individuals appointed between 2006 and 2009 in at least one of the SBF120 firm. Unseasoned directors are individuals entering the market starting from 2010, i.e. who had no seat in the SBF120 before 2010.

We collected detailed and comprehensive information on directors for firms belonging to the SBF120 (in January 2011²) over the 2006-2014 period. We exclude firms which have not been observable over the whole period³. The sample is then balanced. Insiders are excluded. Our database contains 114 firms, 2,024 distinct directors and 13,188 director-firm-year observations.

6.3.1 Seasoned or unseasoned directors?

Table 6.1: Directors' appointments and exits over the 2006-2014 period

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
Appointments										
Male	157	163	165	159	105	76	104	87	97	1113
<i>% appointed</i>	<i>92</i>	<i>90</i>	<i>90</i>	<i>86</i>	<i>60</i>	<i>49</i>	<i>56</i>	<i>51</i>	<i>57</i>	
Unseasoned					73	60	81	60	80	354
Seasoned	157	163	165	159	32	16	23	27	17	759
<i>% seasoned</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>30</i>	<i>21</i>	<i>22</i>	<i>31</i>	<i>18</i>	
Female	13	19	19	26	69	79	83	84	73	465
<i>% appointed</i>	<i>8</i>	<i>10</i>	<i>10</i>	<i>14</i>	<i>40</i>	<i>51</i>	<i>44</i>	<i>49</i>	<i>43</i>	<i>29</i>
Unseasoned					56	68	70	73	66	333
Seasoned	13	19	19	26	13	11	13	11	7	132
<i>% seasoned</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>19</i>	<i>14</i>	<i>16</i>	<i>13</i>	<i>10</i>	
Total of appointments	170	182	184	185	174	155	187	171	170	1578
Total of Leavers	-	179	151	187	145	156	187	190	151	1346
<i>% leavers</i>		<i>14</i>	<i>12</i>	<i>14</i>	<i>11</i>	<i>12</i>	<i>14</i>	<i>14</i>	<i>12</i>	

Notes: Number of directorships (couple of firm and director) held by arrivers and leavers in SBF120 companies (114 firms), by year from 2006 to 2014. Total counts the number of observations over the 2006-2014 period. Observations are directorship-year at firm level. Unseasoned directors have been appointed in their first SBF120 firms after the quota (2010). Seasoned directors have been appointed before the quota, meaning having at least one directorship in SBF120 firms between 2006 and 2009. Appointment: There are 1578 appointments over 2006-2014 periods. Leavers: There are 1346 directors who left their directorship over the 2007-2014 periods. For example, in 2010, 174 directors have been appointed in a new directorship and 145 directors left their directorship. Among the appointed directors, 105 (60% new directors) were male and 69 (40%) female. Among male directors, 74 were unseasoned and 32 seasoned. Among female directors, 56 were unseasoned and 13 seasoned. % leavers is the share of directorships relative to the total number of directorships in the SBF120 firms that are left by directors.

The first question is whether firms hired mostly seasoned directors or looked after new candidates. Table 6.1 gives information on the flows of directors (newcomers and leavers) on a yearly basis in the SBF120 firms. Interestingly, the number of appointments is rather stable over the period (approximately 170) and mostly covers the number of leavers. Every year, around 12% of directorships are hold by new directors. We therefore observe a progressive, regular renewal of French boards. Similar to the Norwegian case (Bohren and Staubo, 2015), there is no drastic increase in board size to reach

²Date where the law of Gender quota has been voted by the Parliament.

³Except REXEL which has been listed in 2007. We exclude APERAM, EDENRED, Rhodia, and SILIC.

the quota. The average board size grows up from 12.2 to 12.5 board members between 2009 and 2014. Male directors seem to have been replaced by female directors (substitution process) so as to meet the quota. The gender balance of new appointments has deeply changed, without surprise. In 2006-2009, we observe that roughly one female was appointed for 10 males (157 males appointed in 2006, against 13 women). This strong imbalance ends in 2010, with 105 males and 69 females among new board members. Since then, the number of females and males is rather similar (87 men and 84 women in 2013 for instance). The share of female directors among new directors varies between 49% and 60%.

Female directors appointed since 2010 to reach the quota are of two types. Some of them were already directors in the SBF120, and have, as a consequence, used their board experience to get new directorships (seasoned directors). These seasoned female directors represent however a minor part of new appointments, and a decreasing one: out of 69 females appointed in 2010, 19% were already in the market before. In 2014, this proportion was twice smaller, with only 10% of seasoned among appointed females. The rest is unseasoned individuals, making their first appearance in the pool after January 2010. 288 new female directors and 322 male directors enter the pool of directors after the quota. These figures clearly indicate that to comply with quota French companies had, and still have, to find new faces - the number of seasoned female directors being definitely too small to be used as the only pool. Moreover, the race for these female seasoned talented directors has then not happened in the French case: only 36 among 119 seasoned female directors get at least a new board seat after the regulation. This evidence suggests that the gender quota has had far-reaching consequences on board functioning and corporate governance, as it primarily induces the entry of new faces inside French boardrooms.

Table 6.2: Directors' tenure over the period

			2006	2007	2008	2009	2010	2011	2012	2013	2014
Male			6.1	6.27	6.44	6.69	6.96	7.43	7.65	7.84	7.92
<i>seasoned Male</i>							<i>7.36</i>	<i>8.21</i>	<i>9</i>	<i>9.55</i>	<i>10.19</i>
Female			6.8	6.8	6.81	6.35	4.95	4.39	4.23	4.27	4.48
<i>seasoned Female</i>							<i>6.75</i>	<i>7.25</i>	<i>7.62</i>	<i>8.09</i>	<i>8.69</i>
ttest	Male	-	0.7	0.52	0.37	-0.33	-2.01***	-3.04***	-3.41***	-3.57***	-3.44***
	Female										
ttest	<i>Seasoned</i>						-0.61	-0.96***	-1.38***	-1.46***	-1.5***
	<i>Male-Female</i>										

Notes: Tenure is the number of years that a director holds her directorship. The average tenure is calculated on the annual number of directorships in the SBF120 firms. Seasoned directors had been appointed for the first time between 2006 and 2009 in at least one SBF120 firms. Statistical significance of the t-test in parentheses from two-sample tests assuming unequal variances is reported by stars. The first ttest compare male and female tenure whereas the second compare seasoned male and female tenure. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, ** and *.

Table 6.2 presents the average tenure of board members. Before the quota, seasoned male and female directors had similar board tenure, around 6.6 years, stable over the period. After the quota, male average tenure goes up to 7.9 years, driven by the 4 years jump of the male seasoned directors' average tenure. In the opposite, female tenure decreased of 2 years due to the massive entry of new female directors. This change suggests that the most experienced directors kept their seat inside the

boardroom whereas male leavers were the latest appointed. It also points out that on average female directors have less experienced in their job. Tenure may be therefore a strategic determinant of the role of directors inside the boardroom.

As a conclusion, the quota breaks the glass-ceiling for a significant number of women, creating a new pool of unseasoned directors. However, the seniority of seasoned directors significantly increased after the quota whereas unseasoned directors are, by definition, newbies in their job. All in all, this suggests a growing separation inside the boardroom, between senior and new comers - with allegedly different bargaining power inside the boardroom.

6.3.2 The pool of directors

The second question is whether there is any difference between directors appointed before and after the quota. We evaluate the change in the pool of directors due to the regulation. We restrict here our sample to all directors belonging to companies that were in the SBF120 in 2009 (before the regulation) and in 2014 (when the threshold of 20% has to be reached by firms). In 2009, there were 1176 directors and 1210 in 2014. For every director, we have the following personal information: gender, age (and age of entry in the pool of SBF120 directors), nationality, tenure, past professional experience and educational background. We use past or current professional experience to define expertise (see Dass et al. 2014). An individual is defined as a financial expert if she has or has had professional experience in the insurance or financial service industry.

Table 6.3 provides information on the main characteristics of unseasoned female directors (276 distinct individuals in 2014), as compared to the other three categories, namely unseasoned males (287), seasoned females (109 in 2009) and seasoned males (by far the largest, with 1010 distinct persons). Only time- and individual-invariant characteristics are presented, except for the number of seats: for the latter information, we indicate this number in 2014.

As suggested by Masulis et al. (2012), (independent) foreign directors may have specific costs and benefits for corporate governance quality: they are associated with better merger and acquisition abroad but with a lower sensitivity of CEO turnover to performance and a lower attendance. In Norway, the share of foreigners is around 10% and stable over the period (Ahern and Dittmar, 2012). However, Singh et al. (2008) show that new female directors bring international diversity into Britain's boardrooms. We see in the French case that the share of foreigners among unseasoned female directors is high, at 37%, including 21% coming from a European Union member states and 11% of North American. While this proportion is significantly higher than what we observe for seasoned directors, it is not statistically different from the share of foreigners among unseasoned males (32%). As such, this non-difference suggests that in the second half of our period, large French listed companies have made effort to hire non-national directors (whether males or females), as a way to improve the international expertise of their boards and maybe to answer a supply shortage (Knyazeva et al., 2013). From this point of view, British and North-American women have been particularly favored (with, for instance 11% among unseasoned female directors, against only 4% among seasoned males).

Table 6.3: Characteristics of unseasoned and seasoned directors, by gender

	Unseasoned		Seasoned		Difference (t-test)		
	Women (1)	Male (2)	Women (3)	Male (4)	(1)-(2)	(1)-(3)	(2)-(4)
Nationality							
Foreigner	0.37	0.32	0.18	0.25	0.05 (1.31)	0.19*** (3.65)	0.07** (2.37)
British	0.05	0.01	0.03	0.04	0.04*** (2.97)	0.02 (0.87)	-0.03*** (-2.60)
German, Belgian	0.06	0.07	0.02	0.05	-0.01 (-0.39)	0.04* (1.77)	0.02 (-0.98)
Spanish, Italian	0.05	0.05	0.02	0.05	0.01 (0.49)	0.04 (1.55)	-0.01 (-0.42)
Other EU nationality	0.05	0.06	0.03	0.05	-0.01 (-0.61)	0.02 (1.00)	0.02 (1.03)
North American	0.11	0.08	0.08	0.04	0.02 (1.02)	0.02 (0.67)	0.04*** (2.74)
Other nationality	0.07	0.06	0.03	0.02	0.01 (0.64)	0.04 (1.57)	0.03*** (2.89)
Expertise							
Financial expertise	0.43	0.42	0.5	0.56	0.01 (0.23)	-0.06 (-1.14)	-0.14*** (-4.24)
Education							
Grande Ecole	0.3	0.34	0.31	0.41	-0.01 (-0.28)	-0.04 (0.98)	-0.07** (-2.12)
Ecole Polytechnique	0.06	0.12	0.06	0.14	-0.06** (-2.35)	0 (0.05)	-0.02 (-0.78)
ENA	0.07	0.1	0.08	0.11	-0.03 (-1.09)	-0.01 (-0.17)	-0.01 (-0.53)
HEC-ESSEC-ESCP	0.11	0.15	0.18	0.15	-0.04 (-1.19)	-0.07 (-1.77)	0 (-0.09)
IEP	0.17	0.13	0.15	0.17	0.04 (1.19)	0.02 (0.41)	-0.04 (-1.63)
Directorships							
Number of seats (2014)	1.17	1.09	1.44	1.28	0.08** (2.09)	-0.27*** (-3.79)	-0.19*** (-4.69)
Age of entry	49.66	52.33	46.34	51.1	-2.67*** (-3.76)	3.32*** (3.20)	1.23* (1.92)
Number of directors	276	287	109	1010			

Notes: Averages of individual characteristics of directors in SBF120 companies in 2009 and 2014 (pool of directors in 2009 and 2014). Unseasoned refers to directors that arrive in the pool of directors from 2010 to 2014. Seasoned are directors that were in the pool before 2010 (having at least one directorship in the SBF120 companies before 2010). Observations are persons. Foreigner is a non-French director. Ecole Polytechnique is the leading engineer school. ENA (Ecole Nationale d'Administration) is a specific school for high civil servant. HEC, ESSEC and ESCP are the three leading business school in France. IEP is a school in political science where come from many top managers, civil servant and politicians. Financial Expertise is a dummy equal to 1 if the director has a professional experience in Finance. Number of seats is the number of directorships that the director held in 2014 among SBF120 firms. Age of entry is the age of the director when she was appointed for the first time in one of the SBF120 firms. Statistical significance is reported by t-statistics in parentheses from two-sample tests assuming unequal variances. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, ** and *.

The literature on financial expertise (see for example Defond et al., 2005; Burak Guner et al., 2008; Reeb and Zhao, 2013) shows that such expertise, especially in the audit committee, improves board effectiveness and corporate disclosure. We observe a significant shortage of unseasoned female directors, as compared to seasoned males (43% against 56%). While non-significant at conventional level, the difference with seasoned females is still important. In contrast, there is no difference across gender among unseasoned directors: just like with nationality, this observation strongly suggests that the lack in general expertise among unseasoned female directors is induced by firms' choice, rather than by a supply-shortage (as it could be the case if only the potential pool of female candidates was less expert). At the board level, on average, the share of financial experts drops from 59% to 52% between 2009 and 2014.

Regarding informal connections, Kramarz and Thesmar (2013) and Nguyen (2012) highlight that French educational networks play a strategic role in board debates and may be detrimental to corporate decisions (with a lower sensitivity of CEO turnover to poor performance, higher executive compensation or lower value-creating acquisition). However, the network is also an information channel about directors' ability, and may help to secure the appointment of talented candidates in a short period of time. The network may indeed increase the likelihood for a director to be appointed in a board where the other directors belong to the same network. We may expect that unseasoned female directors are more likely to come from such networks than seasoned directors (Appendix 6.7.3). The only meaningful large difference concerns the Ecole Polytechnique network, which is the leading engineer school: only 6% of unseasoned female directors graduated from the Ecole Polytechnique, and the same holds for seasoned females. In contrast, the share of Ecole Polytechnique graduates is at least twice larger for males (whether seasoned or unseasoned). This is hardly a surprise, insofar as the vast under-representation of women in this prestigious engineer school is well documented (Chauvel, 2004). Clearly, we have here a pure supply-shortage effect. For the other Grandes Ecoles (l'ENA, the school for high civil servant, HEC-ESSEC-ESCP, the leading business schools and IEP the leading school of political science), there is no statistical difference between men and women. The overall pattern of Grande Ecole education (directors graduated from at least one of these top schools) is similar. Unseasoned directors are as well connected as female seasoned directors through education. Only male seasoned directors are more likely to come from such networks. We do not observe any positive or negative side of the regulation on the role of social networks in terms of directors' appointment. In the same vein, the human capital of directors in terms of education seems to be similar across groups of directors, except for male seasoned directors.

Multi-directorship is determinant regarding the time devoted to the board and committees (see Jiraporn et al., 2009; Masulis and Mobbs, 2014). It may affect directors' efficiency to perform their duties. Busy directors may then reveal poor corporate governance quality (Fich and Shivdasani, 2006) and hurt shareholder value and firm performance (Cashman et al., 2012; Falato et al., 2014). Regarding the number of seats, we report a significant difference across gender among newcomers: females have more seat on average - because companies need to find somehow urgently female directors to comply with the quota. But the multi-directorship for unseasoned female is less frequent than for seasoned directors. Firms seem to be looking for specific talents regarding their needs rather than chasing the same generic candidates. This observation rejects the hypothesis of a race for the high talented unseasoned female directors. Seasoned directors are more likely to have multi-directorship as a reward

of their experience and success. Female seasoned directors also have a significantly higher number of boards on average than male counterparts (1.44 versus 1.28 boards). However, the multi-directorship seems to be limited to few directors (around 25% of seasoned directors and 13% of unseasoned directors).

Finally, unseasoned female directors are significantly younger than both unseasoned and seasoned male directors when entering the pool (less than 50 years old, against 52 and 51). Interestingly, seasoned female directors entered the pool of French directors at a much younger age than all other categories, at 46 years on average. This observation indicates that the females who have been appointed before the quota had peculiar characteristics, related to the age and explaining that they have been able to break the glass ceiling in the “dark age”. Simply put, they may be highly dynamic individuals, with trail-blazing carriers that have put them at the very top of large companies.

On average, the new female directors are more likely to come from a foreign country and to be less expert than seasoned directors. Also they are as connected through education as female seasoned directors. In terms of number of boards, female directors hold on average more seats than the male counterparts. But multi-directorship does not increase a lot after the quota either for seasoned or unseasoned directors. It undermines the risk of ineffective quota application to break the glass-ceiling through directors business (Adams and Kirchmaier, 2015).

6.3.3 The pool of directorships

Beyond the intrinsic characteristics of directors, some are related to the firm and the board where the director sits. We examine here two such “board-related” characteristics: independence (and its opposite faces: insider and grey) and industry-specific expertise. Both characteristics are usually proposed as criteria of good corporate governance quality (Adams et al., 2010; Faleye et al., 2013), especially for monitoring and advising functions.

We collect status (insider, affiliated or grey, independent - following the standard AFEP/MEDEF code⁴). Insiders are executive directors whereas grey directors are affiliated to the firm, such as employees’ representatives, shareholders’ representatives or directors with business connections. Independent directors have no link with the firms, the managers and the shareholders (see Clarke, 2007). A director is defined as an industry-expert if she has or has had professional experience in the industry (defined with a one-digit code) of the firm where she sits (see Dass et al., 2014).

Table 6.4 reports averages of such director’s board-related characteristics, for the four categories we are interested in. There is a very large, significant differences in the proportion of independent directorships between unseasoned females and unseasoned males: directorships held by women arriving since 2010 are on average 68% independent, against 36% for males. Although the gap is less impor-

⁴This definition is used by the Autorité des Marchés Financiers (which supervises the French stock market). AFEP (Association Française des Entreprises Privées) and MEDEF (Mouvement des Entreprises DE France) are two representative organizations at the national level for private sector. Independence is assumed to be compromised if the director of a company (1) is or has been, within the previous five years, a corporate executive or an employee of that company or of its affiliates, (2) is employed as an executive of another company where any of that company’s executives sit on the board, (3) has been the director of the company for more than twelve years, (4) is a representative of a large blockholder (with at least 10% of stock or voting rights), (5) has a significant business relationship with that company or its affiliates (as customer, supplier, banker or auditor), (6) is related by close family ties to an executive director.

Table 6.4: Board related attributes of unseasoned and seasoned directors, by gender

	Unseasoned		Seasoned		Difference (t-test)		
	Female (1)	Male (2)	Female (3)	Male (4)	(1)-(2)	(1)-(3)	(2)-(4)
Independent	0.68	0.36	0.58	0.53	0.32*** (14.43)	0.10*** (4.7)	-0.17*** (-9.79)
Industry expertise	0.4	0.57	0.46	0.53	-0.17*** (-7.29)	-0.06*** (-2.70)	+0.04** (2.51)

Notes: Averages of director status in SBF120 companies (%). Unseasoned refers to directors that arrive in the pool of directors from 2010 to 2014. Seasoned are directors that were in the pool before 2010. Observations are directorships (person-firm-years). Statistical significance is reported by t-statistics in parentheses from two-sample tests assuming unequal variances. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, ** and *.

tant, we still observe that independence is significantly larger for unseasoned female directors than for seasoned board members (whatever the gender). Regarding industry expertise, we observe the opposite pattern. It is hardly surprising, as there is a negative correlation between independence and such expertise: the definition of independence proposed by corporate governance codes in most of the jurisdictions do not favor industry-specific or firm-specific expertise. Table 6.4 shows that while 68% of unseasoned women directorships are independent, only 40% bring industry expertise - against 57% for unseasoned male directorships.

Unseasoned female directors are, to a large extent, independent - much more independent than seasoned directors and unseasoned males. This observation is consistent with studies on the US or Norwegian cases, where independent positions are over-represented among females. Adams and Ferreira (2009) document this for a sample of large US companies, while Bohren and Staubo (2015) provide similar evidence for Norwegian firms following the gender balance law. In other words, integrating female directors means integrating new and more independent directors with less industry-expertise, whose role is to monitor (rather than advise) corporate executives.

As we will show in the next two sections, this basic evidence of heterogeneity across groups of directors is crucial for understanding the impact of the gender law on corporate governance. The unseasoned female directors differ from seasoned and male unseasoned directors in terms of individual and board-related characteristics as frequently emphasized in the literature (Hillman et al., 2002; Adams et al., 2015).

6.4 What do they do inside the boardroom?

Beyond his individual characteristics, the efficiency of a director is determined by the role she/he plays inside the boardroom. This role depends on three elements: the positions (committees membership and charing), the attendance (Adams and Ferreira, 2009) and, to a lesser extent, what we can call the “function” (vice-chairman, lead independent, etc.). In this section, we focus on the positions. Indeed, committee membership is the only observable and comparable element to evaluate the role of

directors inside the boardroom. In contrast, the individual attendance is not disclosed (and therefore not observable for econometricians) and the functions are very heterogeneous across firms: some of them (yet a minority) use it to put forward a particular director (and disclose the information on their annual report), but without any harmonization or common terminology. We come back on attendance and function in the next section.

Committees are the place where most of the important decisions are taken, by a sub-sample of directors (around 3 individuals on average). These directors are ultimately selected by the chairman. Just like in the U.S. or in the U.K., the audit committee, which controls firm's accounts and annual reports, is the most common one: it has been promoted by the code of corporate governance since 1995 and is compulsory by law for listed firms since 2008. The presence of others committees results from a discretionary choice made by the chairman of the board. Compensation or nominating committees are quite common. More than 98% of SBF120 have a compensation or nomination committees in 2014. They are either a unique committee (64%) or two distinct committees (36%). Those committees are responsible for designing managers' compensation and selecting new directors and managers in case of a turnover. Both committees are dedicated to the monitoring function, just like the audit committee. In addition, more and more "advising" committees are established inside the boardroom to provide advices and outlooks on firm-specific issues: strategy, risk and technology management, corporate social responsibility or other specific committees (like nuclear waste management committee). Those committees are more heterogeneous across firms and are more specific to firms' needs.

We now investigate the relationship between the directors position and individual characteristics in order to identify whether there is a gender bias in the allocation of individuals across positions. The sample includes grey and independent directors over the 2006-2014 period in the 114 firms that constitutes our firm sample. We exclude chairmen because in many cases, the chairman and CEO are the same person (50% of firm-year observations). We also exclude directors who enter or exit the boardroom in the course of the year because they may be less involved in the board workload. We collect the individual information on committees' assignment and chairman positions in the three following categories: audit, compensation-nomination and advice. Compensation-nomination covers committees related to CEO compensation and directors nominations whatever the structure (one or two-tiers). Advice covers all committees which are not dedicated to monitoring functions.

Table 6.5 presents some descriptive statistics. At the director level, 37% belong to the audit committees and almost 40% to the compensation-nomination committee. Only 30% have an advice seat. However, these statistics do not take into account that some firms do not have such committees. On average, there are almost 3 committees per board with a strong heterogeneity among firms from 1 to 6 distinct committees.

We estimate the propensity for a director to be appointed in any of three committee types: audit, compensation or nomination and advice (Table 6.6). We then exclude observations for which the firm does not have the specific related committee. We introduce firm-year fixed effects to be able to measure the propensity to be appointed relative to the other board members sitting in the boardroom. Firm-year fixed effects allow controlling for any idiosyncratic yearly shock at the firm level, and exempt controlling for time-variant and time invariant firm characteristics.

Table 6.5: Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Panel A: Individual characteristics					
Seasoned Female	9016	0.10	0.3	0	1
Unseasoned Female	9016	0.06	0.25	0	1
Unseasoned Male	9016	0.05	0.23	0	1
Independent	9016	0.57	0.49	0	1
Unseasoned independent	9016	0.07	0.25	0	1
Tenure	9016	7.23	6.05	2	64
Foreigner	9016	0.23	0.42	0	1
Busy Director	9016	0.69	1.11	0	7
Age	9016	59.59	9.7	25	95
Grande Ecole Education	9016	0.44	0.5	0	1
Financial Expertise	9016	0.58	0.49	0	1
Industry Expertise	9016	0.48	0.5	0	1
Panel B: Role inside the boardroom					
Audit	9016	0.37	0.48	0	1
Compensation-Nomination	9016	0.39	0.49	0	1
Advice	9016	0.30	0.46	0	1

Notes: Observations are at the director-firm year level. Insider and Chairman are excluded from the sample. Panel A describes individual characteristics: gender, seasoned and unseasoned status, independent, Busy directors, foreigner, age, financial expertise and industry expertise. Table 6.11 (Appendix 6.7.1) provides the definition of the variables. Panel B gives the appointment in the committee. Audit committee is a dummy equal to 1 if the director sits in the audit committee. Compensation/Nomination committee is a dummy equal to 1 if the director sits in the compensation and/or nomination committees. Advice committee is a dummy equal to 1 if the director sits at least in one committee dedicated to strategy, risk, corporate social responsibility or specific firm issues.

The first model shows that financial expertise and independence are positively related with the propensity to be a member of the audit committee. It is consistent with the code of corporate governance - and worldwide practices - which promotes these two characteristics in order to improve audit committee efficiency. Having a Grande Ecole education is also positively related to getting an audit membership. High levels of education and networks may be two resources valuables for this position. Tenure is also positively correlated (marginal effect of 5% in log) with the propensity to be in the audit committee, suggesting that directors need to learn about firms before accessing to this responsibility. However, unseasoned independent are less likely to enter even if we take into account the tenure, at a 10% level. The marginal effect is around 8% for unseasoned independent relative to independent directors. There may be therefore a bias against unseasoned independent directors for the allocation of committees. Busy directors and foreigner are finally less likely to be member of this committee (marginal effect equal to 2.6 per additional boards and 7.6% for foreigner). On the one hand, audit committee requires an important effort. Busy directors and foreigner may not have enough time to provide this service to the firms. On the other hand, these members need to be financially literate in the French context. Taking into account individual characteristics, gender *per se* does not matter in this equation whatever the seasoned or unseasoned status. All coefficients are insignificant.

The second most common committee, compensation/nomination, presents a similar pattern, except for busy director and age. Once again, the longer you are inside the boardroom, the more likely you are to sit in one of these committees. Being independent is also positively related with the propensity of being in this committee, whereas unseasoned independent directors are less likely to sit in at a 10% significant level. The marginal effects are pretty similar to the audit committee, except for tenure (marginal effect of 9% in log). Busy directors are more likely to be appointed as well as older directors. In the end, there is no difference between male and female directors when we take into account status and other individual characteristics.

Model 3, explaining the propensity to be in one of the advice committees, shows a reverse pattern, as compared to monitoring committees: there is a positive and significant relation between unseasoned independent and industry expert, a negative for independent directors, and no relation for tenure. But once again, gender does not play an important role in the propensity to be appointed. Regarding industry-expertise first, this characteristic conveys a significant positive advantage to be appointed in one of the advice committees (marginal effect of 7%). Furthermore, independent directors are less likely to be appointed in an advice committee (marginal effect of 8%). These results are consistent with the idea that advising functions might need some specific information and close relationships with the management (that prevent independence). Surprisingly, unseasoned independent directors are more likely to be appointed (marginal effect of 16%). It is indicative of the existence of a positive bias for unseasoned independent directors in the allocation of advice memberships although independent directors are usually related to monitoring efficiency and functions. Unseasoned independent directors seem therefore to be confined to the advice committees, usually less important in board functioning than monitoring committees. It may appear as a consolation prize. Finally, in contrast with monitoring committees, tenure is non-significantly related to get any advice committees, suggesting a simpler access to this kind of memberships.

Summing up, gender does not play any role in the allocation of committees' memberships among directors, conditional on other individual characteristics. Experience (age), tenure and status are the most important determinants. Models 1 to 3 indicate that there are important differences depending on the type of committees (monitoring or advising). Independent directors are more likely than non-independent to enter monitoring committees. However, unseasoned independent directors are more likely than other independent board members to be appointed in advising committees, as a consolation prize. Non-financial experts and newly appointed (short tenure) directors are also less likely to be appointed in these key positions (audit and compensation-nomination). Basically, firms wait and test their directors, before appointing them in these organs - contrary to advising committees. Interestingly, the characteristics that are negatively associated with monitoring committees (being unseasoned, short tenure and lack of financial expertise) are precisely over-represented among female directors. So even if there is no gender bias per se in the propensity to be appointed in monitoring committees, female directors are defined by a bundle of individual characteristics which lead to a lower representation in those committees, as compared to male directors. This result is suggestive of an inner glass-ceiling experienced by female directors - and especially unseasoned female directors - to reach the most important committees.

Table 6.6: Propensity to be appointed in a monitoring or an advising committee

Committee	(1) Audit	(2) Compensation or Nomination	(3) Advising
Seasoned Female	-0.082 (0.120)	0.003 (0.111)	-0.044 (0.130)
Unseasoned Female	0.152 (0.134)	-0.023 (0.164)	-0.248 (0.194)
Unseasoned Male	0.091 (0.124)	0.113 (0.126)	-0.091 (0.154)
Independent	0.590*** (0.068)	0.525*** (0.076)	-0.240** (0.107)
Unseasoned Independent	-0.229* (0.133)	-0.317* (0.162)	0.461** (0.180)
Tenure (log)	0.153*** (0.054)	0.268*** (0.053)	0.063 (0.076)
Foreigner	-0.135 (0.104)	0.049 (0.089)	-0.050 (0.111)
Busy Directors	-0.085** (0.034)	0.145*** (0.034)	0.043 (0.041)
Grande Ecole Education	0.275*** (0.088)	-0.069 (0.075)	0.089 (0.100)
Age	-0.007* (0.004)	0.012*** (0.004)	-0.003 (0.005)
Financial Expertise	0.201*** (0.071)	0.132* (0.080)	-0.086 (0.075)
Industry Expertise	-0.117* (0.069)	-0.076 (0.073)	0.208** (0.082)
Observations	9,002	8,781	5,589
Firm-Year fixed effect	Yes	Yes	Yes
Nb Firms	114	111	80
R2-pseudo	0.0757	0.120	0.121

Notes: (1) The dependent variables are dummies variables which takes 1 if the director sits in the specific committees for the three models. (2) The independent variables are dummy variables representing gender interacted with the seasoned/unseasoned status, independent, foreigner, financial expertise and industry expertise, independent and unseasoned independent. The other independent variables are age (log), busy directors (number of boards that the director sits in the same year in the SBF120 index), and tenure (log). The board size and number of committees in the boardroom are added in the model 4. (3) Models 1-3 are probit regressions with firm-year fixed effects. (4) Robust standard errors, clustered by firm, in parentheses. (5) Significance level: *** p<0.01, ** p<0.05, * p<0.1 (6) Sample: firms that have the related committee

This analysis however does not provide a global understanding of the role played by directors, especially the interaction between directors' characteristics, committees' multi-memberships and other board functions. To overcome these limits, we use director fees as a proxy of the value of the services provided by the directors to the firm.

6.5 What do they earn?

Our objective is to assess the importance of the role played by female directors inside the boardroom, following the introduction of the gender quota. The previous analysis faces three main limitations. First, analyzing only the position of directors does not say anything on the relative importance of each committee inside the boardroom. Even if the audit committee appears to be the most important committee, some firms give more value to the compensation or strategy committee. For example, Dexia, a French and Belgian bank, values the audit committee meeting at 2000€, more than the compensation-nomination committee (1500 €). Biomerieux, a pharmaceutical firm, does the opposite (2500 €versus 3000 €). Moreover, the service or effort required in each committee may be very heterogeneous across firms: in particular, the number of meetings for each committee is highly variable across firms and years. Second, most firms do not disclose individual attendance in their annual report. But the attendance is one of the key factors of directors' effectiveness (Adams and Ferreira, 2008, 2009; Masulis and Mobbs, 2014). Finally, individual roles are also dependent on the functions (such as lead director, vice-chairman), which are extremely heterogeneous across companies.

In order to overcome these limitations, we examine director compensation and the fees gap between male and female directors, as well as between seasoned and unseasoned directors. Similarly to standard models in labour economics, we assume that remuneration captures the value or the service individuals bring to the organization. Accordingly, director fees are a common metric that can be used to evaluate the service provided by directors, within and across firms. The allocation of fees among directors precisely depends on the three elements we want to measure to evaluate individual roles. First, on their positions (inside the boardroom), as discussed in the previous section. Second, on their attendance. Only 17% of firms in our sample do not take into account directors' attendance in the fee calculation. Ignoring attendance is in contradiction with the French code of corporate governance, and is decreasing over period, from 26 firms in 2006 to 11 firms in 2014. Finally, most firms also have additional fees for directors who supply some specific services as advised by the code of corporate governance. These specific services could be sitting or chairing in some committees (with sometimes a variable part linked with attendance) or assuring some specific functions such as lead directors or vice-chairman. Importantly, firms have to make their fee policies public. As a consequence, they reward each director according to the same criteria whatever the gender, and these criteria are public. It makes almost crystal-clear the relationship between individual characteristics and positions on the one hand and compensation on the other hand.

This section first analyzes the variation of director fees within firms in order to identify their determinants, and then estimates the gender fee gap, in particular the part due to individual characteristics and the part due to positions. It allows to identify if the role given to female directors is the same as the role given to their male counterparts and to differentiate whether the difference of roles is driven by individual characteristics or positions. Why is it important to examine whether potential gender gaps

are driven by characteristics or positions? To answer this question, we may assume that an effective gender quota should ultimately lead to fees equality between women and men (same role played by female and male directors), that is to the absence of any gender gap. A gender fees gap related to individual characteristics would point out some issues regarding the selection or seniority of directors (for instance due to a supply shortage). A gender gap related to positions would point out some issues regarding board functioning, especially a potential inner-glass ceiling for new directors.

6.5.1 The determinants of director fees

The first observation to be made is that there is a large heterogeneity across firms over time in terms of director fees budget, related to the size and the industry (Goh and Gupta, 2015). In our data, the first decile of the distribution for the individual fees is less than 15000 euros, the median is around 36000 euros and the last decile is higher than 75000 euros. Moreover, there is a temporal trend of the mean director fees over the 2006-2014 period (Figure 6.3, Appendix 6.7.4). Two main reasons may explain this growth. On the one hand, the number of committees (and then the workload) is increasing over the period from 2.2 committees to 2.8 committees on average. On the other hand, the number of meetings related to committees' activity is also significantly increasing from 10 meetings in 2006 to 13 meetings in 2014. Over the period, the duties of directors have significantly increased without any relation with the regulation on gender diversity.

The objective of the following analysis is to compare director fees within firms in order to identify the impact of individual characteristics and position heterogeneity. In order to overcome the temporal growth and firm heterogeneity, the econometrics baseline model is then a firm-year fixed effect model. Following the previous literature (Gregory-Smith et al., 2014; Goh and Gupta, 2015), we also introduce individual characteristics which may impact the service provided by the directors: age, nationality, tenure, number of boards, education and expertise. The estimated model is then:

$$y_{i,j,t} = \beta X_{i,j,t} + \mu_{j,t} + \epsilon_{i,j,t} \quad (6.1)$$

Where $y_{i,j,t}$ is the logarithm of individual director's fees i in a firm j for the time t , $X_{i,j,t}$ are the individual characteristics and $\mu_{j,t}$ are the firm-year fixed effect. The error term are clustered at the firm level.

We focus our attention on grey and independent directors. Insiders usually do not receive any fees for sitting in the boardroom. We also exclude the chairman position for two reasons. First, in many case, chairman and CEO are the same person (50% of firm-year observations). Second, in firms where the chairman is not the CEO, fees may also reward other services than the usual duty of directors. The separation of tasks and roles between chairman and CEO is completely discretionary and may change over time. A classic example is when the previous CEO stays as board chairman in order to ease the transition with the new CEO (Belot et al., 2014). We also exclude directors who do not directly receive the fees such as some shareholders' representative (State for example) or employees' representative. We exclude directors who enter or exit the board during the year because directors receive fees on an annual basis. We exclude two firms which pay directors in dollars and follow the SEC regulation (Arcelor Mittal and SOITEC). Finally, we trim the director fees at 1 and 99% in order to avoid our estimation being driven by outliers. At the end, we have 7904 observations for 106 firms over the 2006-2014 period.

Table 6.7 presents the descriptive statistics of the sample (1493 directors and 7904 observations).

Table 6.7: Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Panel A : Directors' characteristics					
Female	7904	0.16	0.37	0	1
Unseasoned	7904	0.12	0.33	0	1
Seasoned Female	7904	0.1	0.3	0	1
Unseasoned Female	7904	0.06	0.24	0	1
Unseasoned Male	7904	0.06	0.23	0	1
Tenure	7904	7.41	6.13	2	64
Independent	7904	0.63	0.48	0	1
Unseasoned independent	7904	0.07	0.26	0	1
Foreigner	7904	0.23	0.42	0	1
Age	7904	60.18	9.66	23	95
Busy director	7904	0.7	1.12	0	7
Grande Ecole Education	7904	0.44	0.49	0	1
Financial Expertise	7904	0.6	0.49	0	1
Industry Expertise	7904	0.46	0.5	0	1
Panel B: Position inside the boardroom					
Audit committee	7904	0.38	0.49	0	1
Audit committee chair	7904	0.1	0.3	0	1
Number of Audit meeting	7904	1.95	2.87	0	18
Compensation/Nomination Committees	7904	0.4	0.49	0	1
Compensation/Nomination Committees Chair	7904	0.11	0.31	0	1
Number of Compensation/Nomination Committees meetings	7904	1.8	2.82	0	23
Advice committees	7904	0.28	0.45	0	1
Advice committees Chair	7904	0.04	0.21	0	1
Number of Advice meetings	7904	1.13	2.31	0	23
Panel C: Directors fees					
Directors fees	7904	43389	25304	4500	146400
Log(Directors fees)	7904	10.5	0.63	8.4	11.89
Director fees ratio	7904	1	0.29	0.08	3.65

Notes: This table provides descriptive statistics at the director-firm-year level. Panel A provides individual characteristics such as gender, unseasoned and interaction, independent status, tenure, age, foreigner, busy director, financial expertise and industry expertise. Definitions are provided by Table 6.11 (Appendix 6.7.1). Panel B gives the positions inside the boardroom. Audit, compensation-nomination and advice committee dummies reflect the committees where the director sits in. The chair dummies are equal to 1 if the director chairs the committee. The number of meetings gives the annual number of meeting for the related committees. Panel C give the current directors fees, and the logarithm. Director fees ratio is the rate of the annual director fees relative to the annual average director fees.

On Table 6.8, the first model shows that female directors earn on average 5.6% less than their male counterparts in the same firm (around 2500€). Whereas director fees distribution criteria are independent from gender, women are on average less paid than males in the same firm. Model 2 presents the interaction between gender and unseasoned. The first sections highlight that these two types of directors (seasoned and unseasoned) are different in terms of individual characteristics and roles. We take as a reference seasoned male directors. First, seasoned females do not have any significant fees gap as compared to seasoned male directors suggesting that seasoned directors are a homogenous group at the firm level. Unseasoned directors have a fees discount of 15% (around 7500€), as compared to seasoned directors, but there is no significant difference between male and female new comers. This result shows that the fees gap is rather driven by directors who entered in the director labor market after the regulation than by gender. And the gender gap we previously observed (-5.6%) seems to be driven by new unseasoned female directors.

According to the first section, seasoned and unseasoned directors have different characteristics and status. This heterogeneity may drive the fees gap if these characteristics translate into a difference in services provided to the firm. To check this, we introduce the following individual attributes in model 3: the tenure (in log), the independent status, the nationality (foreigner or not), the age (as a proxy for experience), a dummy that takes value 1 if the individual is a busy director (as a proxy for available time to perform their job), education (here, Grandes Ecoles), financial expertise and industry expertise. We observe that independent directors have a premium of 15% relative to affiliated directors whereas more experienced individuals, proxied by the age (0.2% by year), are better off than the others. The tenure is also strongly significant: each supplementary year is rewarded by a 6% increase in the fees. This result is consistent with our previous observation, namely a lower propensity for directors to enter monitoring committees during their first years.

The differences in characteristics across groups explain part of the seasoned-unseasoned fees gap highlighted in model 2. There is however an important difference across gender. Controlling for independence and tenure, male unseasoned directors do not have a significant discount: the fees gap we observed in model 2 was driven by the fact that they are on average less independent and with a shorter tenure. But unseasoned female directors still have an average discount of 5% as compared to seasoned directors. This result is consistent with the observation of an inner glass ceiling: for a given tenure and status, new female directors support a fees discount, in contrast with new male directors. This inner glass ceiling is likely to be due to difficulties to reach the most important committees - as suggested in the previous section.

To check that, we investigate in models 4 and 5 the role of positions in explaining the fees gap supported by unseasoned female directors. We introduce a set of dummy variables that take value 1 if the person sits in the different committee and a set of dummy variables if the person chairs respectively the audit committee, the compensation or nomination committee and the advice committees (see models 4). In model 5, we replace the dummy variable by the number of meetings. In the two models, we also introduce the interaction term between independence and unseasoned: we have shown in the previous section (see Table 6.8, models 1, 2 and 3) that it is significantly correlated with the propensity to be a member of the different committees.

Table 6.8: The determinant of director fees

Variables	Log (Directors Fees)				
	(1)	(2)	(3)	(4)	(5)
Female	-0.056*** (0.019)				
Seasoned Female		-0.033 (0.027)	-0.006 (0.027)	0.013 (0.019)	0.014 (0.019)
Unseasoned Female		-0.142*** (0.022)	-0.051** (0.023)	0.012 (0.028)	0.017 (0.028)
Unseasoned Male		-0.152*** (0.026)	-0.026 (0.028)	0.016 (0.028)	0.015 (0.029)
Tenure (log)			0.065*** (0.013)	0.020* (0.010)	0.025** (0.011)
Independent			0.154*** (0.026)	0.033 (0.022)	0.041* (0.021)
Unseasoned Independent				-0.037 (0.028)	-0.026 (0.028)
Foreigner			-0.028 (0.025)	-0.011 (0.019)	-0.018 (0.020)
Age			0.002** (0.001)	0.001 (0.001)	0.001** (0.001)
Busy Director			-0.004 (0.006)	-0.009* (0.005)	-0.007 (0.005)
Grande Ecole Education			0.019 (0.021)	-0.020 (0.015)	-0.023 (0.016)
Financial Expertise			0.022 (0.017)	-0.003 (0.013)	-0.003 (0.012)
Industry Expertise			0.000 (0.017)	0.004 (0.012)	0.001 (0.012)
Audit				0.282*** (0.024)	
Audit Chair				0.180*** (0.023)	0.201*** (0.021)
Compensation or Nomination				0.210*** (0.017)	
Compensation or Nomination Chair				0.146*** (0.019)	0.164*** (0.019)
Advising				0.177*** (0.017)	
Advising Chair				0.146*** (0.033)	0.138*** (0.032)
Audit meetings					0.049*** (0.004)
Compensation or Nomination meetings					0.039*** (0.003)
Advising meetings					0.038*** (0.003)
Constant	10.509*** (0.003)	10.521*** (0.004)	10.153*** (0.068)	10.121*** (0.053)	10.113*** (0.053)

Observations	7,904	7,904	7,904	7,904	7,904
R-squared	0.774	0.777	0.793	0.866	0.866
R2-adj	0.743	0.746	0.765	0.847	0.847
Nb of firm-year obs.	113	113	13	113	113

Notes: (1) The dependent variable is the logarithm of director fee (2) The independent variables are dummy variables representing gender (model 1), interacted with the seasoned/unseasoned status (models 2-5), independent, foreigner, Grande Ecole Education, financial expertise and industry expertise, independent (models 3-5), unseasoned independent (models 4-5), committees dummy variables (audit, compensation or nomination, advising) which takes 1 if the director sits in (model 5), committees chair variables which take 1 if the director chairs the related committee (models 4-5), and the number of specific committees meeting that the directors should attend during one year (model 5) The other independent variables are age, busy directors (number of boards that the director sits in the same year in the SBF120 index), and tenure (log) (3) Models are firm-year fixed effects. (4) Robust standard errors, clustered by firm, in parentheses. (5) Significance level: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

In model 4, the audit committee is related with a 28% positive difference, followed by the compensation or nomination committee 21% (20%) and the advice committee 18%. This result is consistent with the importance of audit committee in the French code of corporate governance. The same pattern is observable for chairing each specific committee (with a premium going from 18% to 15%). These results show that firms on average value differently the committees. Interestingly, independent director is now not significantly different from zero, just like unseasoned independent directors. This is driven by the result we observed in the previous section: independent directors are more likely to be appointed in the most valued committees (audit) whereas unseasoned directors are less likely to be appointed in these committees. This heterogeneity explains largely the previous positive relationships between independent directors and the intra-firm director fees. Only tenure is still significant. The longer the director stays in the boardroom, the higher the relative intra-firm director fees. Directors may improve their attendance with tenure (there is a selection of the best attendant directors over time) or increase their importance or function (unobservable for the econometricians). Busy directors are related with a lower fee around 1% per extra-board at a 10% significance level. Busy directors may be less involved in the board workload. Model 5 replaces the dummy variables for each committee by the number of meetings to be closer to the required effort. The results are largely consistent. Each audit meeting is related to a 5% increase whereas compensation, nomination committees and advice committees are associated with a 3.9 and 3.8% increase. Age, tenure and independence are positively related at respectively 1%, 1% and 10% levels, showing the importance of individual characteristics in determining the fees.

At the firm level, there is no significant difference between seasoned and unseasoned directors as well as between female and male directors when we take into account committees. Put differently, differences in positions (but also tenure and age) mainly explain the fees gap we observed for unseasoned female directors - consistent with our identification of an inner glass ceiling. This also means that the different groups of directors do not exhibit specific attendance problems. This result is then different from the observation made by Adams and Ferreira (2009) who show on US data that female directors have a better attendance record and that there is a peer effect on male directors. Two explanations are possible. First the authors used the 1996-2003 period when the attendance issue was more serious than nowadays. Second, attendance issue is more individual specific than group specific here.

To conclude, director fees gap is mainly driven by directors' committee appointment and chairing as

well as tenure and age. More specifically, independent directors are appointed in the most important committees but the unseasoned directors, especially female ones, seem to be less likely to reach these committees, controlling for tenure. These results are convergent with the previous analysis. Unseasoned female, especially independent, directors appear to face an inner glass-ceiling inside the boardroom. Unseasoned male directors are less concerned as the gap they support is mainly due to the short tenure.

6.5.2 Why do female directors fail to be the new key players?

Female unseasoned directors seem to play a secondary role inside the boardroom. In order to confirm that female directors experiment an inner glass-ceiling, beyond the heterogeneity of individual characteristics, we apply a Blinder-Oaxaca decomposition on director fees. Frequently used in labour economics (Oaxaca and Ransom, 1999), Oaxaca model enables to split the wage gap in explained and unexplained parts. Basically, the unexplained part is considered to measure “pure” discrimination against women. The gender wage gap has been largely investigated through this decomposition in order to disentangle the discrimination against women from the difference in terms of individual characteristics and environment (industry, firm size) (Bertrand and Hallock, 2001, Kahn, 2015). Bertrand and Hallock (2001) show that the gender wage gap between female and male top managers is around 45% over the 90’s in US whom 75% is explained by firm size and position inside the firm. Female top managers are less likely to reach the most paid positions such as CEO, chairman or vice-president. 5% remains unexplained after controlling for age and tenure, suggesting the existence of discrimination.

In our set-up, the explained part provides an estimation of the gender gap due to the fact that female and male directors do not have the same observables, here attributes and positions. In contrast, the unexplained part gives an estimation of the differential in return across gender of each observables (as a measure of discrimination), but also an estimation of the effect of unobservable predictors. Regarding director fees, two such unobservable predictors come in mind: the individual attendance and the functions. The Oaxaca decomposition not only allows measuring the importance of positions and individual attributes in fees gap. It also enables us to measure which part of the gender gap is due to individual characteristics (director selection and appointment) and which part is due to the positions (inner glass-ceiling). It therefore complements the fees equation previously estimated, in providing a precise decomposition of the gender gap into the diverse components we have identified so far (individual attributes, positions, unobservables such as attendance and functions).

We focus our attention on gender fees gap within firm. The heterogeneity across firm over the year explains at least 74% of the variance of the logarithm of directors’ fees but does not provide any clue about the application of gender quota within firms. To avoid introducing firm-year fixed effect in the Oaxaca decomposition (and having some singular matrix in the estimation process), we use as a dependent variable the ratio of director fees relative to the annual average firm director fees. It corrects ex-ante for the heterogeneity across firms (every year) and measures the fraction of the firm-average director fees captured by each individual. The range is extensive, from 8% to 365% depending on the role inside the boardroom. Regarding our independent variables, we split them in 3 groups: independent and unseasoned dummies to tackle board-related and regulation related effect, individual characteristics (age, tenure, education, industry expertise, financial expertise and busy directors) and positions (audit, compensation-nomination and advice committees and related chair positions).

More specifically, the Oaxaca decomposition explains the mean outcome difference between two groups (here male and female) (see Jann, 2008, for further explanation). First, we estimate for each group the model explaining the ratio ($R_{i,j,t}^G$, $G=F$ (female) or M (male)) by independence, unseasoned, individual characteristics (age, tenure -log-, education, industry expertise, financial expertise) and positions (audit, compensation-nomination, advice and chair positions) ($X_{i,j,t}$).

$$R_{i,j,t}^M = \beta_M X_{i,j,t}^M + \epsilon_{i,j,t} \quad (6.2)$$

$$R_{i,j,t}^F = \beta_F X_{i,j,t}^F + \epsilon_{i,j,t} \quad (6.3)$$

Where $R_{i,j,t}^M$ is the director fees ratio for male or female, $X_{i,j,t}$ is the vector of dependent variables, and $\epsilon_{i,j,t}$ the error term. $E[\epsilon_{i,j,t}] = 0$ by assumption.

Second, the Oaxaca model decomposes the mean outcome difference (D) in two parts: the explained (Q) and the unexplained (U) parts.

$$D = E[R_{i,j,t}^M] - E[R_{i,j,t}^F] = E[X_{i,j,t}^M]' \beta_M - E[X_{i,j,t}^F]' \beta_F = Q + U \quad (6.4)$$

The Q, or “explained” part, measures the differential due to the group difference in the dependent variables depending on male coefficients (β_M). Here we assume indeed that if there is discrimination, it is directed towards female directors. Then Q can be written as follow:

$$Q = (E[X_{i,j,t}^M] - E[X_{i,j,t}^F])' \beta_M \quad (6.5)$$

The U “unexplained part” measures the differential due to all potential effect of unobservable mechanisms such as discrimination but also different returns of observables (seniority, positions, etc.).

Table 6.9 provides the Oaxaca decomposition of the director fees ratio by gender over the period and restricted to the period of implementation of the quota. The difference between the predicted male and female fees is around 5%. It is very close to the discount for female directors of 5.6% estimated in our previous regression (Table 6.8, Model 1). This difference is divided in 4.2% explained by the predictors and 0.8% unexplained. The unexplained part is insignificant, meaning that there is no pure discrimination (different return of individual characteristics) or no effect of unobservable predictors. It confirms that attendance problem plays a minor role to account for differences across gender, just like differences in function. Accordingly, it gives credence to our previous (log) fees equation, which are unlikely to suffer from omitted variables bias. The fact that on average there are more independent female directors is related to an increase of 0.1% of female fees relative to male fees. In the opposite, the difference in terms of individual characteristics between male and female directors is associated with 1.5% of gender fees gap. Almost one third of the gender fees gap is related to the fact that female directors do not have on average the same characteristics than male directors. Within individual characteristics, the two main determinants are age and tenure. Note however that we are not able to conclude whether these driving differences in tenure and age are due to a supply shortage or to a strategic choice made by firms in the appointment of new female directors.

Table 6.9: Oaxaca model explaining fees gap between female and male directors

Variables	All sample			After quota		
	(1) Differential	(2) Explained	(3) Unexplained	(4) Differential	(5) Explained	(6) Unexplained
Predicted Male Wage	1.008*** (0.003)			1.013*** (0.005)		
Predicted Female Wage	0.958*** (0.007)			0.955*** (0.008)		
Difference	0.050*** (0.008)	0.042*** (0.007)	0.008 (0.008)	0.057*** (0.010)	0.046*** (0.008)	0.011 (0.010)
Independent		-0.001** (0.001)	0.009 (0.012)		-0.002* (0.001)	0.019 (0.015)
Unseasoned		0.004 (0.004)	0.007 (0.008)		0.001 (0.005)	0.012 (0.012)
Individual Characteristics		0.015*** (0.003)	0.033 (0.045)		0.015*** (0.004)	0.03 (0.053)
Positions		0.024*** (0.005)	0.014 (0.010)		0.032*** (0.006)	0.016 (0.013)
Constant			-0.054 (0.048)			-0.066 (0.060)
Observations	7,904	7,904	7,904	4,559	4,559	4,559
Nb of firm-year obs.	958	958	958	544	544	544

Notes: Oaxaca two fold decomposition. (1) The dependent variable is the rate of directors fee relative to the annual average firm directors' fees. (2) The independent variables are: independent status, unseasoned status. Individual characteristics covers age, tenure (log), industry expertise (dummy), financial expertise (dummy), Grande Ecole Education (dummy) and Busy directors (number of other boards). The position covers the membership to audit, compensation-nomination or advice committees and the chair positions. (3) The reference regression is the one driven on male observation (4) Sample: the first Oaxaca decomposition is done on all observation (Columns 1-3), the second is restricted to observations over the application of the gender quota (Columns 4-6). (5) Standard errors are clustered at the firm level. (6) Significance level: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

The difference in position is responsible for two third of the gender fees gap, mainly driven by differences in chairing audit committees and sitting in audit or nomination-compensation committees. The access to the monitoring committees seems to be responsible for the main part of gender fees gap. We confirm here the existence of an inner glass ceiling for female directors. Restricting the sample to the years of quota implementation yields similar results. The gender fees gap is around 5.7% of which 4.6% is explained by the observable differences between female and male directors. One third of the gender fees gap is explained by individual characteristics and two thirds are explained by positions. The implementation of the quota has not helped to reduce the gender gap.

Table 6.10 presents the Oaxaca model on the sample of observations related to seasoned directors. The objective is to evaluate whether the quota have any impact on female directors who had already broken the glass-ceiling before the quota. Before the quota, the gender gap is around 3.7%, lower than on the full sample. However, the structure is similar. There is no significant unexplained part and the

Table 6.10: Oaxaca model explaining gender fees gap among seasoned directors

Variables	Seasoned Before Quota			Seasoned After Quota		
	(1) Differential	(2) Explained	(3) Unexplained	(4) Differential	(5) Explained	(6) Unexplained
Predicted Male	1.003***			1.026***		
Wage	(0.005)			(0.005)		
Predicted	0.966***			1.001***		
Female Wage	(0.015)			(0.013)		
Difference	0.037**	0.046***	-0.008	0.025*	0.029***	-0.004
	(0.016)	(0.010)	(0.014)	(0.014)	(0.008)	(0.012)
Independent		0.002	-0.030		-0.001	0.031
		(0.001)	(0.022)		(0.001)	(0.024)
Individual		0.007	0.001		0.006*	0.059
Characteristics		(0.004)	(0.098)		(0.003)	(0.078)
Positions		0.037***	0.004		0.023***	-0.012
		(0.010)	(0.018)		(0.007)	(0.019)
Constant			0.017			-0.082
			(0.094)			(0.079)
Observations	3,345	3,345	3,345	3,610	3,610	3,610
Nb of firm-year obs.	414	414	414	541	541	541

Notes: Oaxaca two fold decomposition. (1) The dependent variable is the rate of director fees relative to the annual average firm director's fees. (2) The independent variables are: independent status, unseasoned status. Individual characteristics covers age, tenure (log), industry expertise (dummy), financial expertise (dummy), Grande Ecole Education (dummy) and Busy directors (number of other boards). The position covers the membership to audit, compensation-nomination or advice committees and the chair positions. (3) The reference regression is the one driven on male observations (4) Sample: the first Oaxaca decomposition is done on seasoned directors after the quota (columns 7-9), the second is is done on seasoned directors after the quota (Columns 10-12). (5) Standard errors are clustered at the firm level. (6) Significance level: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

explained part is around 4.6%, very close to the previous estimation (on the whole sample and the whole period). This explained gender gap is due for one quarter to the individual characteristics and three quarters to the position. However, for individual characteristics, only age is really significant. For positions, audit and advice committees and the related chairs drive the gender gap. After the quota, the gender gap is decreasing, from 3.7% to 2.5%, of which 2.9% is explained. The unexplained part is still insignificant. One quarter is related to individual characteristics, mainly age. Three quarters is related to positions, especially audit and advice chair positions. This analysis highlights that seasoned and unseasoned female directors may not experience the same issues inside the boardroom. The audit committee is the most difficult committee to reach for female directors. However (female) seasoned directors also face difficulties in being appointed in the advice committee, while in the case of unseasoned (female) directors, difficulties rather concern the compensation-nomination committee (a monitoring committee).

As a conclusion, the gender gap analysis suggests that female directors ultimately have a smaller role inside the boardroom, as compared to male directors. Before the quota, female directors experienced a gender fees gap of 3.7%, explained by the difficulties to enter audit and advice committees and by some individual characteristics. On average, after the quota, we observe a gender gap of 5.7%. For the seasoned female directors, the gap is decreasing but still persistent (2.5%). For the unseasoned female directors, the gender gap is larger and mainly driven by the lack of monitoring committees memberships and individual characteristics. While we do not have evidence of a pure discrimination (only driven by gender), our results indicate that despite the quota, women are still not key players inside French boards. For one reason, it is because they lack, on average, the individual attributes most valued by companies (the age, in particular). For another reason, it is because they face an inner glass ceiling to reach monitoring committees - that however would be the most appropriate given their propensity to be independent. Last but not least, female directors, and especially unseasoned female directors (massively used to comply with the law), often have a short tenure: apparently, this is discriminant in the current functioning of French boards, where (monitoring) committees' and leader functions' (vice-chairman, lead directors) access is highly dependent on (within firm) seniority. At a face value, it indicates that expecting from a quota a quick remedy of gender inequalities is highly speculative.

6.6 Conclusion

Gender diversity in the boardroom has come to the front of the public debate, when the EU adopted in 2014 a Directive promoting a target of 40% of female directors by 2020. While several countries have enacted gender quota, the efficiency of a regulatory approach to promote gender diversity is under strong scrutiny. All studies so far have examined the Norwegian case; this chapter provides new evidence based on the French quota. We investigate the way large listed companies have coped with the regulation: who have they appointed? To do what? Ultimately, what is the role played by female directors following the quota? We contend that answering these questions is a prerequisite to assess the overall efficiency of a quota in terms of corporate governance. In particular, it circumvents the difficulties inherent with a direct estimation of the relationship between board diversity and firm performance (problem of causal inference, first compliers, changing board structures, etc.).

We report evidence that compliance with the law has been mainly driven by the appointment of new, unseasoned female directors, rather than by the use of seasoned females. Multi-directorships for female board members has not dramatically increased following the quota. Crucially, we show that the pool of unseasoned female directors presents specific characteristics, due for a part to a supply shortage: they are, in particular, younger and more independent than male directors and seasoned women. In addition, they have less financial literacy and a shorter tenure than seasoned directors. Their lack of financial literacy and experience (proxied by the age), as well as their short tenure make them less likely to enter monitoring committees - despite the fact that they are more independent on average. However, the unseasoned independent directors are in addition less likely to reach the monitoring committees when controlling for individual characteristics heterogeneity, but more likely to enter advising committees, maybe used as a consolation price. We have interpreted these results as evidence of a new, inner glass ceiling supported by unseasoned female directors. It results in a within firm gender gap of roughly 6%. Two third of the gap is explained by positions (committee

memberships and chairing) and one third by individual attributes (age and tenure). While we do not report evidence of pure discrimination against women in French boards, we rather observe a process of segregation, with unseasoned female directors somehow confined to advising committees, less strategic and less rewarding than monitoring committees. Importantly, this segregation is driven not only by differences in attributes characterizing unseasoned female directors but also by discretionary choices made by companies not to promote them as key players. The quota has been unable until now to bridge the gender gap in terms of role inside the boardroom; at best it helps the seasoned female directors to jump over the first step by reaching the nomination or compensation committees.

Indubitably, the gender quota has had a positive effect by opening the doors of the boardroom to new women. However, the latter still face an inner glass ceiling to reach strategic committees. It could just be a temporary issue if seasoned directors, which held the positions inside these committees before the regulation, keep them until they leave the board - with firms deciding to replace first male cheerleaders (directors without any committee) by female directors. In addition, tenure of unseasoned directors is mechanically bound to increase, which appears to be one of the keys to enter monitoring committees in French boards (contrary to advising committees). The overall effect of the gender quota should then be analyzed after a few years, especially in light of the next 40% threshold in 2017. The pool of potential candidates should indeed grow up and reach new profiles. Anyhow, in the short run, our results indicate that it is dubious to observe major improvements in corporate governance quality following the implementation of the gender quota.

From the policy maker perspective, the quota has been successful insofar as new women, and not only seasoned female directors, have been appointed in French boards. It first opens new career perspectives for talented women and could have some positive externalities on the likelihood to become chief executive officer (Oakley, 2000; Wang and Kelan, 2013; Mohan, 2014). However, the frictions in the short term within the corporate governance system, due to the fast compliance of firms to the law, have to disappear in the next years. In particular, the access of female directors to the audit or compensation-nomination committees, major organs in the decision-making process at the top of the firm, should be a specific concern for politicians, practitioners and academics.

From a research perspective, several questions remain to be investigated on the French case. First, corporate governance has largely changed after the regulation. However, our project does not evaluate how firms' decisions change after the law, especially in terms of investment in innovation (Miller and Del Carmen Triana, 2009), risk management and strategy (Francoeur et al., 2008). More broadly, women may be more able to take into account the demands of strategic stakeholders in the decision-making process such as employees, customers or suppliers through Corporate Social Responsibility policy (CSR). Post et al. (2011) and Harjoto et al. (2014) show for example that gender diversity is positively correlated with CSR performance. Further causal relationships should be investigated thanks to the French framework. In particular, there is one major issue we do not deal with in this chapter: the impact of the quota on gender equality on the labour market and within workplaces, through top-down effects. The most recent empirical results on the Norwegian case do not confirm the presence of such top-down effect (Bertrand et al., 2014). In the French case, we lack for the moment reliable evidence.

Second, there is an internationalization of directors. To our knowledge, this phenomenon has not been highlighted in the Norwegian case. Further research is needed to understand why these directors decide to enter the French market, what their incentives (reputation, career) are and which positions they hold in the home countries. Is this internationalization always related to improvements in corporate governance quality or to a need for French firms to expend their activities abroad by merger and acquisitions for example? Masulis et al. (2012) provide mixed effects of foreign directors on American corporate governance.

Third, firms don't seem to have any problem to comply with the gender quota. Nevertheless, voluntary approach (i.e. code of corporate governance) was unsuccessful before the law, with a low and stagnant fraction of female directors in large French listed companies. Now, European commission has given a clear objective to each country but with flexible methods. It would therefore be interesting to compare the effectiveness of both approaches (voluntary and legislative) across European countries.

6.7 Appendix

6.7.1 Variables

Table 6.11: Definition of variables

Variables	Definition
Panel A : Directors' characteristics	
Female	Dummy equal to 1 if the director is a woman
Unseasoned	Dummy equal to 1 if the director got the first seat in the SBF120 after the quota
Seasoned Female	Dummy equal to 1 if the female director got her first seat in the SBF120 before the quota
Unseasoned Female	Dummy equal to 1 if the female director got her first seat in the SBF120 after the quota
Unseasoned Male	Dummy equal to 1 if the male director got his first seat in the SBF120 after the quota
Tenure	Number of years the director has been seated in the boardroom
Independent	Dummy equal to 1 if the director complies with the AFEP/MEDEF definition (Corporate Governance code) of independent director.
Unseasoned independent	Dummy equal to 1 if the director complies with the AFEP/MEDEF definition (Corporate Governance code) of independent director and got the first seat in the SBF120 after the quota.
Foreigner	Dummy equal to 1 if the directors is not French
Age	Directors' age
Busy Director	Number of seats that the director have the same year in the SBF120
Financial Expertise	Dummy equal to 1 if the director has an experience in Finance
Industry Expertise	Dummy equal to 1 if the director has an professional experience in the same industry as the firm where the director seats
Ecole Polytechnique	Dummy equal to 1 if the director is graduated from Ecole Polytechnique, dominant engineer school in France
ENA	Dummy equal to 1 if the director is graduated from Ecole Nationale d'Administration, school in political sciences, accounting and finance for high civil servant
HEC-ESSEC-ESCP	Dummy equal to 1 if the director is graduated from HEC, ESSEC or ESCP, the three leading business school in France
IEP	Dummy equal to 1 if the director is graduated from Institut d'Etudes Politiques, leading school in political sciences.
Grande Ecole Education	Dummy equal to 1 if the director is graduated from either Ecole Polytechnique, ENA, HEC-ESSEC-ESCP or IEP

Variables	Definition
Panel B: Role inside the boardroom	
Number of Committees	Number of committees where the director seats
Number of Committees Chairs	Number of committees that the director chairs
Number of meetings	Number of committees meetings
Audit committee	Dummy equal to 1 if the director sits in the audit committee
Audit committee chair	Dummy equal to 1 if the director chairs the audit committee
Number of Audit meeting	Number of audit meetings that the director shall attend
Compensation/Nomination Committees	Dummy equal to 1 if the director sits in the compensation and/or nomination and/or corporate governance committees
Compensation/Nomination Committees Chair	Dummy equal to 1 if the director chairs the compensation and/or nomination and/or corporate governance committee
Number of Compensation/Nomination Committees meetings	Number of compensation and/or nomination and/or corporate governance meetings that the director shall attend
Advising committees	Dummy equal to 1 if the director sits in the advising committee
Advising committees Chair	Dummy equal to 1 if the director chairs the advising committee
Number of Advising meetings	Number of advising meetings that the director shall attend
Panel C: Directors fees	
Directors fees	Annual mount in nominal euros that the director earns to do director's duties
Log(Directors fees)	Logarithm of directors' fees
Directors fees ratio	Rate of director's fees with respect to firm average directors' fees

6.7.2 Gender policy in Europe

Table 6.12: The share of female directors in European Union and Country policy

Country code	Date of decisions	Date of implementation	Target of implementation	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
European Union	EU	2014	2020	40	Code of Corporate Governance	20	18	16	14	12	11	10	11	11	10	10	10	10	10	10
Finland	FI	2010	No	No	29	30	29	26	26	26	24	20	20	18	20	20	20	20	20	20
Sweden	SW	2010	No	Firm level	28	26	26	25	25	26	27	27	27	24	24	24	24	24	24	24
Denmark	DE	2010	2013	Firm level	24	23	21	16	16	18	18	17	17	15	15	12	12	12	12	12
United Kingdom	UK	2012	2015	25	24	21	19	16	16	13	12	12	12	12	12	12	12	12	12	12
Austria	AU	2012	2018	35	17	13	12	11	11	9	7	6	6	5	6	6	6	6	6	6
Poland	PO	2010	2015	30	15	12	12	12	12	12	10	10	10	12	9	9	9	9	9	9
Luxembourg	LU	2009	No	Firm level	12	11	10	6	6	4	3	3	3	3	1	1	1	1	1	1
Ireland	IR	2012	2015	25	11	11	9	9	9	8	8	7	7	6	5	5	6	6	6	5
Norway	NO	2003	2008	40	38	42	44	41	41	39	42	43	43	34	35	35	35	35	35	35
France	FR	2011	2017	40	32	30	25	22	22	12	10	9	9	9	8	8	8	8	8	8
The Netherlands	NE	2011	2016	30	25	25	22	18	18	15	15	14	14	14	8	8	8	8	8	8
Germany	GE	2013	2016	30	24	21	18	15	15	13	13	13	13	11	11	11	11	11	11	11
Italy	IT	2011	N.D.	33	24	15	11	6	6	5	4	4	4	3	4	4	3	4	4	4
Belgium	BE	2011	2018	33	22	17	13	11	11	10	8	7	7	6	6	6	6	6	6	6
Spain	SP	2007	2015	40	17	15	12	11	11	10	10	8	8	6	4	4	6	6	6	4

Country code	Date of decisions	Date of implementa- tion	Target	2014	2013	2012	2011	2010	2009	2008	2007	2006
No specific policy												
Latvia				32	29	28	27	23	17	16	17	21
Slovenia				20	22	19	14	10	10	18	14	19
Bulgaria				18	17	12	15	11	17	12	15	17
Slovakia				18	24	14	15	22	18	18	24	10
Lithuania				17	16	18	14	13	15	16	18	16
Hungary				12	11	7	5	14	13	16	11	12
Romania				11	8	12	10	21	12	12	18	13
Cyprus				9	7	8	5	4	3	3	2	6
Greece				9	8	8	6	6	5	6	11	8
Portugal				9	9	7	6	5	4	3	3	7
Estonia				7	7	8	7	7	6	8	10	13
Czech Republic				4	11	16	16	12	13	13	11	8
Malta				3	2	4	2	2	4	4	4	4

Notes: (1) Table provides the share of female directors in the largest firm in the European union. Largest firms are defined by market capitalization and market trade. (2) Date of decision give the year when a specific policy about gender diversity has been adopted. Year of implementation gives the date when the decision is fully enforceable. Target gives the optimal share of female directors from the policy maker point of view. (3) The historical record of the share of female directors in each country is provided in the columns 2014-2006. Sources: Eurostat, European Commission Project Women in the decision-making

6.7.3 The French elite network

The sociological literature on business elites in France commonly highlights two main networks: engineers and (former) high civil servants (see Kadushin, 1995; Bauer and Bertin-Mouro, 1995; Frank and Yasumoto, 1998). These networks are connected to Grandes Ecoles system. In France, after high school, students may choose to go to classic university system for either a bachelor or a master degree, or to apply for Grandes Ecoles program. In the first case, there is no selection of students and only a minimal grade is required to pass the exams. In the second case, students are selected based on their grades after high school and during the program (after 2 and 5 years) in order to have access to the best and most well-known schools in France. The “Grandes Ecoles” system is divided in three groups: engineer schools, business schools and political science schools (Instituts d’ Etudes Politiques). The Ecole Nationale d’ Administration (ENA, political science school) and the Ecole Polytechnique (Engineer School) are the most prestigious and give access to high level civil servant positions at least for the best students. The ENA is a training school for high civil servants in economics, political science, accountability and finance. All students have a master of arts or sciences, before entering ENA thanks to a very selective competitive exam. After graduation, all students have to take a high-level civil servant position and then belong to the “Grand corps de l’ Etat” (Kadushin, 1995). Ecole Polytechnique is the most well-known engineer school with a very selective entry competitive exam. The most talented ones are able to get a high-civil servant positions (scientific Grand corps de l’ Etat) and the others join the private sector. All students are fast tracked to high level positions in government, state and private sectors. Both schools lead to prestigious bureaucratic career such as cabinet advisor, head of ministries, government position or top management of private and state owned companies. 20% of French largest listed firms are managed by Ecole Polytechnique or ENA graduates over the 1992-2003 period (Kramarz and Thesmar, 2013). Two complementary networks might be pinpointed: the first is formed by the three top French business schools (HEC, ESSEC and ESCP) and the second by political science schools (IEP). As shown by Nguyen (2012), between 1992 and 2001, 61% of the SBF120 CEOs are graduated from a Top Grande Ecole previously mentioned (29% from Ecole Polytechnique and 21% from ENA).

6.7.4 Trend in directors' fees over the 2006-2014 period

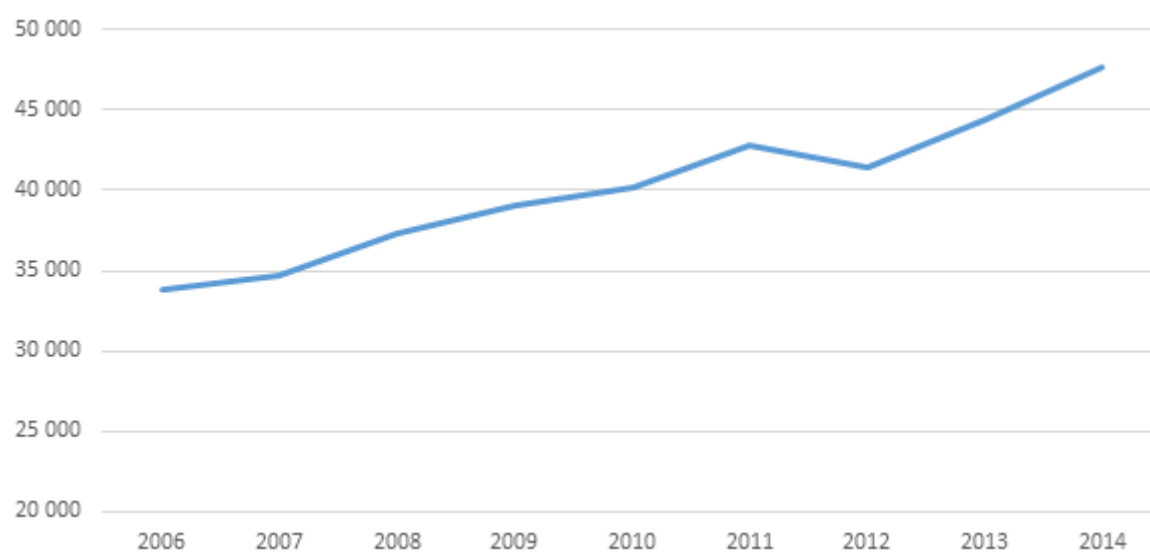


Figure 6.3: Average director fees (Nominal €), 2006-2014

Notes: This figure presents over the 2006-2014 period the firm average director fees. The sample includes 114 firms belonging to SBF120 (120 first firms listed in the stock market) in 2011 and listed over the whole period, except REXEL listed from 2007. Insiders and chairmen of the board have been excluded, as well as state's or shareholders' representatives and workers' representatives.

Conclusion

This dissertation investigates, within its 5 original chapters, the relationships between corporate governance, CSR commitment and firm performance, thanks to theoretical and empirical approaches based on original French data-sets. The chapters contribute to the literature in economics and finance, especially in corporate governance and corporate social responsibility. They also describe the French corporate governance model, a hybrid model between the shareholder and the stakeholder models. This section sums up the main results and provides some insights how corporate governance may be a mediator between CSR and firm performance from the research and policy-maker perspectives. It concludes on the new research avenues.

Main findings

Regarding the CSR literature, chapter 2 provides an overview of CSR practices implemented by the small, medium and large French firms in the environment, social and societal dimensions. On average, firms claiming to do some CSR actions go beyond greenwashing. More interestingly, firm CSR motivations (defensive, pro-social or strategic) to adopt a CSR policy condition their awareness of CSR issues. The strategic CSR firms are more aware of hard CSR practices (monitoring tools, labels) in any dimension than the defensive CSR firms, whereas the pro-social CSR firms are more likely to be aware of soft CSR practices (policy, objectives) in the environment dimension. Firm CSR motivation is then an important determinant of firm specific multi-dimensional CSR strategy, and could mediate the relationship between CSR and firm financial performance. In particular, this evidence helps understanding the complementarities and substitutions between the different CSR dimensions with regard to financial performances. Chapter 5 presents the variations in CSR commitment intensity depending on board composition from the shareholder and stakeholder perspectives. The results support the stakeholders' conflict resolution hypothesis, and provide evidence that CSR is a value enhancing strategy implemented by the firms. CSR is also a responsibility delegated by various stakeholders (at first, the shareholders and the employees) to firms, in particular to managers. Moreover, this chapter enables to compare two extra-financial ratings and to demonstrate that the empirical results depend on the choice of the ESG information provider. It recommends for future research to test the robustness of the relationships with independent data sets coming from different providers. To sum up, both chapters show how firm objectives and board composition may affect firm CSR outputs. They highlight the importance of corporate governance as a mediator between CSR and firm performance. Both chapters converge on the role of stakeholders in CSR awareness and commitment. Indeed, strategic CSR firms, which take into account stakeholders' demands in their business, are associated with the highest CSR awareness, whereas stakeholders' representation inside the boardroom modulates CSR commitment. Both chapters shed light on the link between firm objectives and performance through the board of directors.

Regarding the corporate governance literature, the chapters investigate the board functioning and director selection by innovative methods (AKM and Oaxaca decomposition for example). Chapter 3 theoretically investigates the emergent question of the trade-off between board monitoring and advising functions from the shareholder perspective. Two main board characteristics are examined: the independence and the expertise. The expertise is indeed a good proxy for directors' knowledge and competencies, as well as a proxy for the informational gap experienced by directors, especially outsiders. The chapter shows that depending on the independence and expertise levels, a monitoring board can be less efficient than an advising board. This chapter justifies therefore the importance of expertise as a determinant of board quality, and highlights non-linear relationships between independence, expertise and firm performance. More importantly, the theoretical model demonstrates that the independent-performance nexus should integrate the expertise level of the board. Chapter 4 analyzes the individual determinants of directors' effectiveness. It argues that both intrinsic ability and board-related attributes modulate the ability of independent directors to perform their duties. Independent directors are on average better selected than affiliated directors in terms of intrinsic economic ability. When the independent directors enter the boardroom, their informational gap seems to impede their ability to monitor and advise the CEO. However, some board-related attributes, such as expertise and social connections with board members, may help to bridge this gap. On the contrary, sharing the same educational background as the CEO may increase the agency cost. The overall benefit of independent directors in the French context is then close to zero. This chapter suggests also that some feedback mechanisms (here the information sharing) may jeopardize the expected benefits of independent directors. Chapter 5 suggests a new typology of stakeholder directors and analyzes how board composition from the shareholder and stakeholder perspectives is related to firm CSR outcomes. It shows that the determinants of firm commitment in the social, environment or societal dimensions are specific to each dimension, and depend either on the balance between insiders and independent directors, or on the stakeholder board representation. This chapter confirms the importance of the board of directors in the decision-making process, even regarding sustainable issues.

Chapter 6 provides the first investigation of the French gender quota inside the boardroom. In particular, we are able to evaluate the role of seasoned (entered in the director labour market before the quota) and unseasoned (entered in the director labour market during the enforcement of the quota) directors by gender. The quota enables to effectively break the glass-ceiling experienced by women. 50% of new appointments concern female candidates, and the pool of female directors has increased by 208% over the 2010-2014 period. The new female directors are more likely to be independent, less financial expert but more international than the seasoned directors. However, the quota may come at a cost for female directors, especially the unseasoned ones. They suffer from an inner glass-ceiling that makes them unable to reach the monitoring committees (audit, nomination and compensation committees). As a consolation prize, the unseasoned independent directors are more likely to get in the advising committees. The chapter 6 demonstrates that the role of the directors is very heterogeneous inside the boardroom, and is certainly a determinant of directors' effectiveness and bargaining power. To sum up, board composition affects firm outcomes and may foster CSR commitment. Chapters 3 and 4 confirm that board functioning depends on board composition and directors characteristics. In addition, the chapter 6 suggests that the effective role of directors inside the boardroom matters in the equation. Chapters 4 and 6 show also that the directors are characterized by a bundle of attributes rather than a single one such as independence. This bundle of characteristics is more likely to affect

directors' effectiveness than a single attribute. The interaction between directors selection (how firms decide directors' bundle of characteristics) and board functioning (how the bundle of characteristics affect directors' effectiveness) is therefore a key issue to understand the full impact of the directors on firm decisions and outputs.

Regarding the gender literature, chapter 6 provides an analysis of the gender fees gap in the French boardroom. Female directors earn 6% less than male directors on average. This gender gap is explained by the differences between female and male board members in terms of individual characteristics (especially tenure and age) and positions (committees' memberships and chairings). This evidence reinforces the idea that female directors experience an inner glass ceiling, certainly slightly lighter for the seasoned ones. The quota misses therefore the objective of balancing the role between male and female directors inside the boardroom. It also suggests that the way firms comply with the law is a CSR issue. Indeed, in order to comply with the quota in a responsible way, the role of female and male directors should be equal for the same individual characteristics. Moreover, the female directors should not be selected in such a way that the bundle of their characteristics can make them less likely to reach the strategic positions inside the boardroom. The success of the gender quota is then related to both director selection and director allocation in the various board committees. In the future, gender equality inside the boardroom should go further than an equal number of male and female directors in order to achieve the objective of the quota to make firms more responsible.

As a conclusion, in order to answer the broad research question of this dissertation, corporate governance may affect firm output by integrating the interests of the shareholders and the stakeholders in the decision-making process. The first level is defining firm's objectives especially regarding CSR policy. CSR motivation leads indeed to the implementation of specific CSR strategy and practices, with various impacts on firm performance. Moreover, the board composition is a determinant of firm's ability to achieve its objectives and a way to answer some stakeholders' demands regarding the corporate governance CSR dimension. The independence of directors, the stakeholder representation or the diversity modify the face of the board in the aim of improving corporate governance quality. However, the consequences on firm financial and extra-financial performances, highlighted in this dissertation, are mixed. The relationships between board composition and firm performance are not so straightforward. In particular, firms may adapt both their board structure and functioning in response to these external requirements, leading to ambiguous effects on firm performance. From this perspective, it is really difficult to design good corporate governance practices to foster CSR and to improve firm performance.

From a policy perspective

Corporate governance is a way of fostering corporate social responsibility and green competitiveness for policy makers. Most governance issues are regulated by law (legislative approach) or code of corporate governance (voluntary approach) via a “comply or explain” approach. This dissertation provides some interesting insights for policy makers regarding firm CSR practices and the potential regulatory issues.

Regarding the code of corporate governance, the paradigm of independence has been promoted since 1995 and the Viénot report in France. Chapters 3 and 4 demonstrate that independence should not be the single criteria of board adequacy to protect the minority shareholders’ interests and, at some extent, the stakeholders’ interests. The practitioners and the academics have focused their attention on the monitoring board function and the related optimal board composition. But, following the important literature on the topic (Adams and Ferreira, 2007; Faleye et al., 2011), both theoretical and empirical chapters highlight that independent board may be sub-optimal from the shareholder perspective. Chapter 3 suggests that the informational gap experienced by independent directors reduces their ability to advise the CEOs and makes sometimes friendly expert boards more efficient. Chapter 4 provides empirical evidence about the cost of the informational gap and the benefits of complement attributes such as industry expertise and social connections. Without relaxing the independence criteria regarding social connections, the code of corporate governance could establish the industry expertise as a second criterion of board quality. Nowadays, financial literacy is promoted at least for independent directors holding an audit membership. In the future, industry expertise could improve independent directors’ efficiency. The main limit would be the thin border between independence industry expert and affiliated directors. Nevertheless, the increasing interest in board independence has had a positive externality on corporate governance quality. By increasing the attention from the minority shareholders on the director selection, the intrinsic quality of independent directors has been improved relative to the intrinsic quality of affiliated directors. At least, it reflects a choice made by firms in the interest of the minority shareholders. From the CSR perspective, independent directors also seem to be more able to integrate stakeholders’ demands than insiders or affiliated directors. However, it could also be interesting to promote other types of directors such as employees’ representatives or business directors if policy makers wish to better integrate the environmental, social and societal concerns in the decision-making process. To sum up, independent directors do not have the expected straightforward impact on corporate governance. Some additional attributes could be promoted by the code of corporate governance as well as other type of stakeholder directors such as employees’ representatives and business directors.

Regarding the law about the corporate governance, the French Zimmer-Copé law requires a gender balance inside the boardroom to improve the decision-making process and gender equality at the work place. Chapter 6 demonstrates that this law has been successful in opening the doors of the boardroom to new women without any previous board experience. However, female directors experience an inner-glass ceiling that constitutes a new barrier to reach the most important (monitoring) committees inside the boardroom. This mechanism may jeopardize in the short run the expected benefit of improving gender diversity regarding firm decisions and behavior. In particular, gender diversity should, beyond improving board quality, affect CSR commitment, especially regarding within firm discrimination and gender equality at the workplace (Bertrand et al., 2014, for the Norwegian case)

and regarding the environmental concerns (Harjoto et al., 2014; Post et al., 2011). By reducing the role of female directors relative to their male counterparts inside the boardroom, the implementation of the law may in the short run miss some secondary objectives that a gender quota implies, especially the top-down effect of gender equality to the different levels of management. Policy makers and politicians have to be careful in the future to break this inner glass-ceiling, either by changing the code of corporate governance or by adapting the gender diversity law. In the long run, policy makers should care about the evolution of women's professional trajectory, which could lead them to Chief Executive Officer positions (Mohan, 2014). Nowadays, only 4% of CEOs are women in the SBF120 index. Opening broadly the boardroom to women should incentivize them to continue their path to this kind of jobs (directorships and CEO) and help them acquire the relevant experience for getting CEO position in the largest firms. These effects should be properly evaluated after a few years of implementation. From a European perspective, the commission and the Parliament have set up the objective of 40% of female directors by 2020, but they let the choice to countries between the voluntary and legislative approaches. The quota may come at a cost as shown in chapter 6. However, the success of the voluntary approaches has not been evaluated from an economic perspective (Terjesen et al., 2015a; Adams and Kirchmaier, 2015). According to descriptive statistics, in the European Union, the average share of female directors in countries with quotas is however higher than the average proportion in countries with only a code of corporate governance in 2014. Without making any statement on the most efficient way to foster gender equality inside the boardroom, the quota solution has to be carefully considered as an economic solution.

Regarding the employees' representation inside the boardroom, this dissertation does not provide any direct evaluation or insight on the law of employment securization (requiring some employees' representatives for the largest firms with at least 5000 employees by including subsidiaries). We are just able to follow the implementation of the law by firms in the data collected during this PhD. However, some promising effects could be expected, especially regarding CSR objectives. Chapter 5 suggests some positive relationships between the environmental, social and societal commitments and the representation of employees inside the boardroom. Policy makers should then evaluate the law by integrating such positive externalities on CSR. The better representation of workers in the decision-making process, characterizing the French hybrid corporate governance model, could be an effective trigger of CSR inside firms. However, the dissertation is not able to provide any argument in favor of the German co-determination system and its efficiency to foster CSR.

Regarding the CSR policy and information, chapter 2 shows first that all firms take into account at least a few CSR practices, but half of them do not label it as a CSR policy. Furthermore, CSR is well spread in large firms, but only a few small and medium enterprises (SME) are aware of the concept. It suggests that there is still a need to educate about CSR and its related impacts, for firms, managers and investors, especially in the SME. Moreover, the largest awareness arises when firms adopt a strategic CSR, meaning that firms integrate CSR objectives in their business model as an opportunity to please the stakeholders and to create the shared value. Policy makers may promote CSR and firm competitiveness at the same time. Furthermore, the National Institute of Statistics and Economic Studies (INSEE) should frequently repeat the first national survey on sustainable development, in order to investigate the dynamics of CSR practices in a large representative sample of firms beyond the classic spectra of extra-financial rating agencies. Limited information is indeed available for small

and medium unlisted firms, while they represent the largest part of the French economic system. A better understanding of the determinants of CSR commitment may help to design well targeted policies regarding CSR objectives.

Regarding rating agencies, chapter 5 demonstrates that the informational content of the extra-financial ratings are different and leads to divergent results. The inconsistency of extra-financial ratings depending on the providers urges for collecting direct data from firms and for developing transparent and robust methodologies to proxy firm responsible behavior. The normalization process is then an important step in the future, especially regarding the ESG disclosure and multi-dimensional data aggregation. The law about CSR disclosure, voted by French Parliament in 2013 followed by the European Directive in 2014, is a way to better understand firm commitments and outputs. However, it should clarify what firm activities should be included in the reporting and specify which indicators firms should disclose. Indeed, the law gives the issues on which the firm should provide the information but without any specific indicators and perimeter. Regarding corporate governance, some criteria could be for example better disclosed by firms in annual reports, such as the individual attendance, the appointment process or the education and professional backgrounds of directors.

For policy makers, corporate governance could be a strategic trigger to foster corporate social responsibility in small, medium and large firms. The actions could be at three levels: regulation, code of corporate governance and education towards the social, environmental and societal issues. Regarding CSR disclosure, policy makers could help regulating the business in order to improve the quality of ESG information, and could collect and provide more information, especially for SME thanks to INSEE.

From a research perspective

This dissertation provides new insights on the relationships between corporate governance, CSR and firm performance, but suffers from some limits, highlighted in the concluding section of each chapter, especially due to the lack of data (chapters 2 and 5) or to the chosen methodology (chapters 3,4 and 6). In particular, the endogeneity issue is the most severe limit in many chapters (chapters 2, 4 and 5) because of the lack of exogenous shock. However, this dissertation also presents new methodologies coming from labour economics (AKM -Abowd, Kramark, Margolis- framework applied to board of directors, Oaxaca decomposition to measure women discrimination inside the boardroom) to overcome the endogeneity issue by investigating board mechanisms and the related consequences on performances (chapters 4 and 6) (Hermalin and Weisbach, 1998; Wintoki et al., 2012; Adams et al., 2010). This final part of the dissertation aims to draw some new research avenues.

This dissertation analyzes how corporate governance may foster CSR inside firms (Jamali et al., 2008). However, corporate governance is also a CSR dimension by it-self, as demonstrated in the introduction section. One of the specific characteristics of this CSR dimension is the difficulty to define good practices, contrary to the environment or the social dimensions. This dissertation fails to provide any definition of the “responsible” corporate governance from the shareholder and the stakeholder perspectives (Van den Bergh and Louche, 2011). Most of our empirical results are indeed mixed and raise more questions on how firms comply with the recommendation of good practices promoted by code of corporate governance or law. Rather than looking for a definition of responsible governance, future research should focus on understanding the mechanisms mediating the relationship between CSR and performance. Moreover, this dissertation analyzes both legislative (gender) and voluntary (independence) approaches to improve corporate governance quality. We show that in both cases, corporate governance regulation comes at a cost. On the one hand, independent boards reduce the incentive for the CEO to share firm-specific information. On the other hand, the gender quota does not break the inner glass-ceiling and firms may face a supply shortage of qualified candidates. From an economic point of view, the legislative approach appears as a new costly constraint on firms. However, the quota could also be an effective way to improve corporate governance by changing the firm equilibrium and optimum. The choice between the two methods should be therefore carefully evaluated and compared in terms of costs and benefits (Terjesen et al., 2015a; Adams and Kirchmaier, 2015). The European Union will provide in the future an excellent empirical framework to compare both voluntary and legislative approaches on the gender diversity case. Each country has the choice to achieve the European target of 40% in 2020.

This dissertation also highlights the crucial question of how measuring of CSR firm responsible behavior. This issue is a clear limit of chapters 2 and 5. We use two types of information sources: a national survey (EnDD), which provides data on firm CSR knowledge and practices, and the extra-financial ratings (two independent providers, Vigéo and Asset4), which analyze firm responsible behavior.

On the one hand, the survey collects primary information to map CSR practices over the territories. We are then able to investigate the SME decisions regarding CSR objectives, whereas, in most cases, we suffer from a lack of data on this kind of firms. However, EnDD is only a cross-section declarative survey and the questions are only qualitative. The materiality of CSR awareness and engagement is

unverifiable and untestable. Future research should investigate this materiality and the dynamic of CSR spread at each level of the French economy. To this latter purpose, INSEE is planning to survey again the CSR firm practices in 2017. On the other hand, the extra-financial ratings agencies focus their attention on listed and large firms, but collect a lot of various data to analyze firm responsible behavior. The robustness of our results is however limited by the small number of observations. These two types of data (survey or ratings) give an example of the classic trade-off between the spectra of analyzed firms on the one hand and the quantity and the quality of collected information on the other hand (Crifo et al., 2014). To solve these collection and data issues, some research could focus on identifying some key CSR indicators, similar to the Human Development Indices (HDI) or E-index in corporate governance. These key CSR indicators should be easily collectable and representative of firm responsible behavior.

Furthermore, chapter 5 shows that different extra-financial ratings, divergent regarding CSR theorization and commensurability, lead to slightly inconsistent results (Chatterji et al., 2009, 2014). Several issues are arisen by this observation. First, the collection of robust information (consensual quantitative and qualitative indicators) seems to be determinant in order to make ratings more reliable. The ESG disclosure requirement (law Grenelle II in France, art.225) could help to collect primary information on several CSR issues. Second, the method of aggregation should be normalized. The literature highlights at least two methods: DEA (Data Envelopment Analysis) and fuzzy logic analysis to produce robust multi-dimensional analysis and aggregation methods depending on shareholders' or stakeholders' preferences (Chen and Delmas, 2011; Escrig-Olmedo et al., 2010). Future research should evaluate such methods, especially regarding corporate governance, to improve the proxy of firm responsibly. More importantly, we need to move from qualitative ratings to quantitative data in order to measure tangible and material firm outputs such as the carbon emission.

Regarding the board of directors, the dissertation highlights the importance of the monitoring-advising trade-off and two main related issues: board functioning and directors selection as determinants of corporate governance quality (chapters 3, 4 and 6). The monitoring-advising trade-off determines first the incentives of the CEO to share some firm specific information and the overall bargaining power of each board member (chapter 3). Based on an original application of the AKM framework to disentangle board-related attributes (whom independence), directors and firm fixed effect (Abowd et al., 1999; Huang and Wang, 2015), this dissertation provides evidence of the costs and benefits related to independency with crude proxies (independent, industry expertise and social network). Further research is needed to better evaluate the informational gap experienced by independent directors and the relative consequences on firm performance. It could also help to understand the board monitoring-advising trade-off (Faleye et al., 2011, 2014). Moreover, chapter 6 highlights an emerging problematic in the board literature: the role of directors inside the boardroom that we proxy with simple indicators (committee memberships and chairings). For example, female directors, especially the unseasoned ones, are less likely to reach the monitoring committees, but more likely to have an advising membership. Female directors could have less bargaining power inside the boardroom, and less influence on firm decisions because of this inner-glass ceiling (Nekhili and Gatfaoui, 2012). That may impede female directors' efficiency. This dimension should be integrated in the future empirical researches. These results also reveal the trade-off between monitoring and advising functions in terms of board organization and directors' efforts. Firms mostly decide what kind of committees they create inside

the boardroom, how they allocate the directors across committees and what is the effort dedicated to these duties by directors (number of meetings...). The impact of this organizational trade-off on firm outputs such as CEO compensation, director selection, strategy (merger and acquisition) is still an under-investigated research question (Guthrie et al., 2012; Deng et al., 2013). Understanding the determinants of board functioning could help to clear the unsolved board-performance equation.

The second determinant of board efficiency is the selection of directors (Adams et al., 2010; Withers et al., 2012). Chapter 4 demonstrates that director selection may induce heterogeneity among directors in terms of intrinsic ability. Chapter 6 shows that selecting directors according to a bundle of characteristics may impede their efficiency inside the boardroom. Indeed, there is no pure discrimination of female directors to reach committees but they mostly do not have the right characteristics to get in. The director selection appears as the first step to improve corporate governance. Our methodologies help to identify the director selection issue. However they fail to specify the determinants of director selection related to the candidates and to the firms. A broader investigation, based on the gender quota implementation for example, could provide new insights on director selection and board dynamic. Moreover, an extension of the model developed in chapter 3 could help to understand the link between the constraint on the director selection (costs to hire an expert board or an independent board related to the director labour market) and the board functioning (monitoring and advising trade-off).

To sum up, one of the main outputs of this dissertation in corporate governance is moving the attention from the board level to the director level, at least in our empirical investigations (chapters 4, 5 and 6). The heterogeneity among directors urges us to focus on this level. The main remaining questions are: how directors are selected, why they do their jobs, how their position inside the boardroom affects their individual and board outputs on firm management. Moreover, it also suggests using dynamic modeling to understand the temporal evolution of corporate governance (chapter 6). It is highly unlikely that firms adopt the same behavior over time, while the beliefs of investors and the financial world, the legal context and the firm-specific environment change (Wintoki et al., 2012; Adams et al., 2010; Terjesen et al., 2015a).

From this perspective, this dissertation also demonstrates the importance of the director labour market. However, the knowledge is very scarce, especially at the international level. Chapter 6 and, at some extent, chapter 4, show the need to understand the supply and the demand for directors. Indeed, one of the crucial issues about the gender quota is the supply of new female directors. Our investigation shows that the new female directors have specific characteristics relative to other directors, which affect directors' effectiveness. But our identification strategy does not enable us to differentiate between the supply shortage effect (due to a lack of potential suitable candidates) and the strategic choice of firms to select such specific candidates (to replace the leavers). This issue should be exacerbated by the objective to reach 40% of female directors in 2017. A better knowledge about the potential candidates is then necessary to understand who gets inside the boardroom. Interestingly, 22% of directors come from abroad, even after the quota. It suggests either that the French pool is limited or that firms need some international profiles. But, what are the incentives for foreigners to get in a French board? Exacerbated by the quota, this internationalization of the directors in France is therefore a promising research question (Masulis et al., 2012). Regarding the demand side, we need

to understand what kind of directors are replaced during the implementation of the quota and how it affects the board functioning. It is more likely that the less involved male directors are the first to leave the boardroom. The new female directors are then just able to reach the available positions of the board, and have a more modest role inside the boardroom. A gender quota is then an interesting case study to model and understand the supply and the demand for directors, and the frictions at the market and firm levels that are in play in the short run.

The last question relative to directors is how some directorships play a role in the professional trajectories of women and men. It is highly recognized that insiders may get other directorships as a reward for their accomplished professional experience (Masulis and Mobbs, 2011). Because of the glass-ceiling, women have some difficulties to get high management positions in the largest firms. Could the directorship be a way for them to show their ability, to increase their network and to get some top management positions afterwards? In particular, directorships may modulate professional trajectories between 40 and 60 years-old. Moreover, female directors are on average younger than male directors. Often explained by the supply shortage of female directors, this difference could also reflect beliefs of firms and directors about who is a suitable candidate for directorships and top management positions. Because of the glass-ceiling effect, female managers are less likely to get high management positions at the same age than male managers, leading to a negative signal for older female candidates. However, young female candidates suffer less from the glass-ceiling effect, and are able to provide the same signal than their male counterparts. It could make it easier for young female candidates to get inside the boardroom than for older female managers. After reaching some boardrooms, these women could be perhaps more able to be hired as CEOs or in the other top management positions. A longitudinal analysis of female and male professional trajectories could help to understand both director and managers (even CEO) labour markets.

Finally, the French context and corporate governance model create a specific framework in order to analyze the governance-CSR-performance nexus. First, as a hybrid model of corporate governance model, the French system could be an alternative to the Anglo-saxon model and the German co-determination model. In particular, it could interestingly balance the interests of various stakeholders. Following Martynova and Renneboog (2011), further research should focus on the main difference between the different models and the determinants of effectiveness regarding CSR objectives. The French context is also characterized by two quasi-natural experiments: the gender quota and the compulsory employees' representation. Ferreira (2015) demonstrates that such regulation is not a good exogenous shock for applying difference in difference strategy to evaluate the effect of board composition change, because of the previous firm specific strategy. However, these regulations may help to understand governance mechanisms and to investigate some interactions between corporate governance and firm outputs. In particular, it would be interesting to analyze the top-down effect of board gender diversity on gender equality at the work place following Bertrand et al. (2014) investigation of the Norwegian case. In addition, it would be also interesting to analyze the effect of board change on other firm outputs such as CSR commitment and CEO compensation. Regarding employees' representation, a major change in the social dialogue may be expected. Towards the CSR objectives, firms may also be more likely to take into account the environmental and social issues afterwards. Further analysis should focus on the application of these laws. All these characteristics make the French corporate governance model a promising research framework.

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Corporate Governance and Firm Performance: the Sustainability Equation?

In order to achieve a sustainable growth and to respond to external pressures (regulation, society), firms take more and more frequently into account their social and environmental externalities in the decision-making process, through the development of their Corporate Social Responsibility policy (CSR). Corporate governance appears here as a way to integrate shareholders' and stakeholders' objectives. Is corporate governance a strategic mediator between CSR objectives and firm performance? Is corporate governance a key stone of CSR firm commitment? This dissertation provides both theoretical and empirical evidences in the French case where corporate governance is defined as a hybrid model between the shareholder and stakeholder models. After introducing the dissertation, chapters 2 and 3 investigate the link between firm objectives and performance. From an INSEE national survey on sustainable development, Chapter 2 shows how firm motivations (defensive, pro-social or strategic) is a key determinant of their social, societal and environmental CSR awareness. In particular, firms implementing strategic CSR commit more to the issues related to their strategic stakeholders. CSR motivations may therefore mediate the relationship between CSR commitment and financial performance. Integrating firm objectives, the decision-making process at the top is driven by the board of directors. Chapter 3 theoretically demonstrates how board composition may affect firm outcomes. In particular, the model determines the optimal board functioning (monitoring or advising) depending on the relative cost and benefit of board expertise and independence. After highlighting that board composition is a key determinant of governance effectiveness, the three last chapters explore how corporate governance, and in particular board composition, may achieve some CSR demands from shareholders, stakeholders and society and affect firm outcomes. These chapters rely on empirical studies based on listed companies (SBF120) over the 2006-2014 period. Chapter 4 studies the link between independent directors and operating performance in order to evaluate their efficiency. The independence of directors is indeed usually considered as an answer to shareholders' demands to reduce the conflict of interest with management. We show that in France, independents directors are better selected than affiliated directors in terms of intrinsic ability but suffer from an informational gap. However, this gap may be shortened by industry expertise and/or social connections. Chapter 5 investigates from the shareholder and stakeholder perspectives how board composition is related to CSR commitment. We show that CSR engagement is driven by the reduction of conflicts with stakeholders rather than the creation of private benefit for managers. Stakeholder representation inside the boardroom may therefore affect investment in the different CSR issues. Chapter 6 analyzes how firms comply with the French gender quota of women inside the boardroom in 2014. The quota has indeed broken the glass-ceiling experienced by female managers and increased the number of women in the director labor market. However, female directors earn 6% less in fees than their male counterparts, one third due to their characteristics (age, expertise, tenure..) and two thirds due to their positions (committees) inside the boardroom. Female directors have then experienced an inner glass-ceiling which may jeopardize the positive expected effects of board diversity on firm policy and performances. In conclusion, the discussion provides the main new prospects and research avenues opened up by this dissertation. It focuses attention on the role of corporate governance in the development of CSR and the possible applications in terms of public policy and regulation.

Gouvernance d'Entreprise et Performance : Quelle Équation de Durabilité ?

Afin de participer à une croissance durable de la société, les entreprises développent leur Responsabilité Sociale et Environnementale (RSE). La gouvernance d'entreprise, et en particulier le conseil d'administration, jouent un rôle central en intégrant les objectifs environnementaux et sociaux dans la prise de décisions. La gouvernance est-elle un médiateur stratégique entre objectifs RSE et performances des entreprises ? Est-elle la clé de voûte de l'engagement RSE ? Cette thèse présente des arguments théoriques et empiriques dans le cas français défini comme un modèle hybride (actionnarial-partenarial) de gouvernance. Après un chapitre introduction, les chapitres 2 et 3 analysent le lien entre objectifs et performances des entreprises. A partir d'une enquête INSEE sur le développement durable, le chapitre 2 montre que la motivation RSE (défensive, pro-sociale ou stratégique) détermine le niveau de prise en compte des enjeux sociaux et environnementaux. En particulier, les entreprises mettant en place une RSE stratégique investissent davantage dans les enjeux liés à leurs parties prenantes. Ces résultats suggèrent que la motivation RSE pourrait être un médiateur de la relation RSE-performance. Intégrant les objectifs de l'entreprise, le processus de décision au sommet de l'entreprise est contrôlé par le conseil d'administration. Le chapitre 3 démontre théoriquement comment la composition du conseil affecte les performances de l'entreprise. Le modèle prédit le fonctionnement optimal du conseil (surveillant ou conseiller) en fonction des coûts et bénéfices relatifs de l'expertise par rapport à l'indépendance. Après avoir mis en exergue la composition du conseil d'administration comme facteur déterminant de l'efficacité de la gouvernance, les trois chapitres suivants analysent comment la composition du conseil d'administration peut répondre aux demandes RSE de la part des actionnaires, des parties prenantes et de la société, et affecter les performances de l'entreprise. Ces trois chapitres reposent sur des analyses empiriques fondées sur les entreprises cotées françaises (SBF120) sur la période 2006-2014. Le chapitre 4 évalue l'efficacité des administrateurs indépendants. En effet, ce type d'administrateurs est une réponse aux pressions des actionnaires pour réduire les conflits d'intérêts avec le management. En France, les administrateurs indépendants sont mieux sélectionnés que les administrateurs affiliés mais ils souffrent d'un déficit informationnel. Ce déficit peut être réduit par de l'expertise et des relations sociales. Le chapitre 5 étudie le lien entre la composition du conseil et l'engagement RSE des entreprises. Les résultats montrent que cet engagement est davantage motivé par l'objectif de réduire les conflits avec les parties prenantes que de constituer des bénéfices privés pour le management. La représentation des parties prenantes au sein du conseil peut donc affecter l'engagement RSE des entreprises. Le chapitre 6 analyse comment les entreprises se mettent en conformité avec le quota de genre au sein des conseils d'administration en 2014. Le quota a cassé le plafond de verre en accroissant le nombre de femmes sur le marché des administrateurs. Cependant, elles gagnent 6% de moins que les hommes. Ce différentiel est dû pour un tiers aux caractéristiques (âge, ancienneté,...) des administratrices et pour deux tiers aux positions qu'elles occupent au sein du conseil (comités). Les administratrices se heurtent donc à un plafond de verre interne, ce qui peut annihiler les bénéfices attendus de l'accroissement de la diversité au sein des conseils sur les choix stratégiques et les performances de l'entreprise. En conclusion, la discussion décrit les nouvelles perspectives de recherche s'ouvrant à la suite de cette thèse. Elle met l'accent sur le rôle de la gouvernance dans le développement de la RSE et les potentiels enseignements en termes de politiques publiques et de réglementations.