Corporate Governance Codes: understanding compliance in UK, Germany and Spain.*

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September, 2009.

Abstract

This paper investigates the voluntary compliance of Code of Corporate Governance by listed firms in Germany, Spain and United Kingdom. Its builds on prior research which postulates that higher quality of corporate governance can reduce some market imperfections. First, we ask why firms voluntarily comply with country-specific codes of corporate governance. Second, we aim to understand which factors determine firm's compliance of Codes of Corporate Governance. Using a dataset of public-listed firms of three European countries with different characteristics [United Kingdom, Germany and Spain] we test empirically the compared levels of compliance and the factors affecting the observed behavior. Our findings show that whatever is the compliance level used, they are a significant signal to separate good from bad corporate governance firms. Moreover, the ownership structure, cross list status and pressure from creditor seems to influence firms on complying with Corporate Governance Codes.

* This is the first version of my "tesina" paper. I would especially like to thank Professor Rafel Crespí for his support and advice on this paper, and my colleagues in the doctoral program and Mariana M.M. de Castro for their collaboration. This study also benefited from financial assistance provided by the Ministry of Science and Innovation of Spain; project SEJ2007-67895-C04-03. All remaining errors are my own.

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I. Introduction

Since 1992, when United Kingdom [hereafter, UK] launched the Cadbury Report[1] - a report that sets out recommendations on the arrangement of company boards and accounting systems to mitigate corporate governance risks and failures, the intense debate about corporate governance enabled the emergence of a great number of codes[2] [see figure 1], which enact self-regulation and set standards for good governance [Werder et al., 2005].

The materialization of self-regulation is justified, in terms of public interest, where three conditions are satisfied [Ogus, 1995, p.97]. First, that the activity is afflicted by some form of market failure, particularly, externalities and information asymmetries. Second, that private law is inadequate or too costly to correct the failure. And third, that self-regulation is a better [e.g. cheaper] method to solve the problem instead of using public regulation.

These are in keeping with the ideas of corporate governance issues by Hart [1995, p.678]. He stated that corporate governance issues arise in an organization whenever (1) there is an agency problem [e.g. due to information asymmetries], or a conflict of interest, and (2) transaction costs are such that this agency problem cannot be dealt through a contract.

Moreover, Hart [1995] describes and evaluates various governance mechanisms in public companies highlighting that the case for statutory regimes is weak while pointing that self-regulation approach [and specifically the Cadbury Report format] could be seen as the best one to educate and persuade firms to make changes.

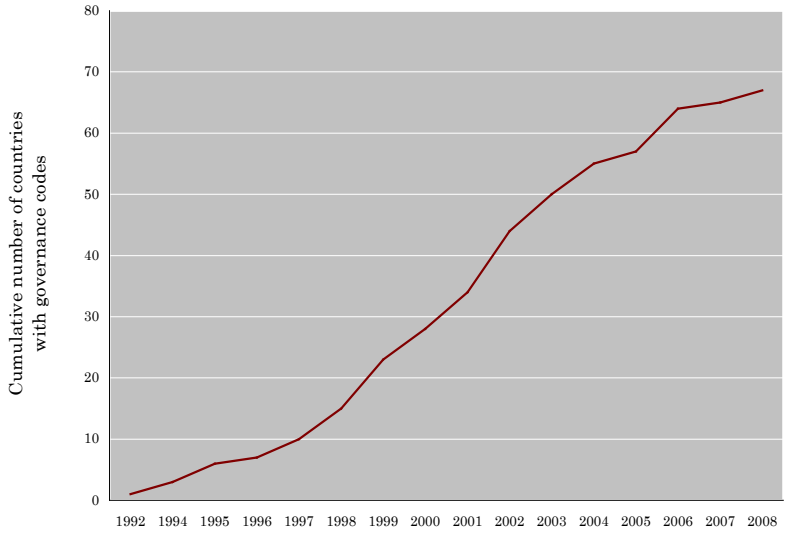

Figure I

CORPORATE GOVERNANCE CODES IMPLEMENTATION AROUND THE WORLD

Source: European Corporate Governance Institute [ECGI], author analysis.

So far, the most of academic research in corporate governance has tended to focus on making predictions about the firm's performance as a result of the governance practices [Coles, 2000; Jog and

Dutta, 2004 apud Anand, Milne and Purda, 2006], rather than on why do firms implement "best practices" and what are the determinants to do so.

To my knowledge, there are few studies conducted on what motivates some firms to adopt corporate governance practices in the absence of any legal or institutional enforcement. For instance, Laan [2009] made an assessment of Dutch firms' compliance motivations under behavioral theories. Anand, Milne and Purda [2006] have done an analysis of firms' governance decisions under voluntary regime in Canada. Whereas Anand, Milne and Purda [2006] consider the tendency for Canadian firms to raise capital to an investment opportunity as the main motivation to voluntary compliance, I propose that compliance is a signal that firms use to identify their type to investors and other stakeholders. Additionally, I examine whether institutional pressures, stakeholders pressures and ownership arrangement affects the level of compliance of firms.

The novel contribution of this study is two-fold: (a) at theoretical level, we introduced the discussion of why do firms comply through the signaling theory. And (b), at empirical level, we aim to understand, in deep, (b.1) the differences and similarities in the content of Corporate Governance Codes in the three of the top-10 stock market capitalization countries, UK, Germany and Spain, and (b.2) what are the determinants or key factors affecting the observed levels of compliance?

The purposes for studying these countries are the following. First, we aim to understand three different corporate governance regimes in Europe. Second, due to specificities of each country, as follows: (a) the seminal code of corporate governance arose from the report of the Cadbury Committee in 1992 set up by the London Stock Exchange, thus UK could not be excluded from this research. (b) Together, London and Frankfurt are the more important financial markets in Europe[3]. (c) We included Spain in order to take advantage of the differences in legal origins, capital markets structures, and in regulatory [hard and soft] codes [La Porta *et al.,* 1998]; enabling considerations to be given whether the results follows a general model or is context-dependent.

The remainder of the paper is organized as follows: Section II describes the concepts and theories that support voluntary compliance to corporate governance codes and presents the hypothesis. Section III presents the model and its variables. Section IV describes the empirical design and presents the data. Section V reports empirical results and Section VI concludes.

II. Prior literature and hypothesis

A corporate governance code is generally a voluntary set of principles, recommendations, standards, or best practices, issued by a collective body, and relating to the internal governance of corporations within a country [Chizema, 2008, p.360]. The pioneering Cadbury Code[4] was a reaction to a sequence of corporate scandals among UK listed companies in early 1990's as Maxwell Communications, Polly Peck and BCCI [Coombers and Wong, 2004, p. 48 and Dedman, 2002, p.335]. It aimed to rebuild the trust of the public and, moreover, investors by providing companies to improve their governance practices.

Aguilera and Cuervo-Cazurra [2004] argue that codes of corporate governance were designed to address deficiencies in corporate governance systems by recommending comprehensive set of norms on good practice to firms.

The content of many of these codes is in keeping with shareholder value maximization, of the Anglo-American variant, stipulating guiding principles for board composition, ownership structures, and number of executive versus non-executive directors, committee structures, and executive compensation schemes.

Unlike a widespread skepticism in the academic community for the lack of a theoretical[5] or empirical[6] rationale of codes of corporate governance, there is a line of research that shows that self-regulation can help to reduce market imperfections [Weil, Gothshal and Manges, 2002, 2003; Franks and Myer, 1996; Barca and Becht, 2001; Combers and Wong, 2004, Aguilera and Cuervo-Cazurra, 2004; Newell and Wilson, 2002].

The later propose that the objective of the introduction of the codes into the corporate governance agenda was [and still is] to increase the efficiency of the capital markets with an aim to mobilize domestic savings and foreign portfolio investments. To do so, the financial system regulators [or other agents, see Aguilera and Cuervo-Cazurra, 2004] introduce a code of corporate governance as a step towards systematic implementation of "best practices" on governance. And, different from formal statutory rules, those codes introduce a flexible regulatory regime where firms voluntarily decide which recommendation best fit its particular context[7] [i.e. the "one size does not fit all" approach]. They are used to be incorporated in the listing regulations of the stock exchanges and are applicable to public-listed companies [e.g. UK, Germany, Pakistan, The Netherlands, Austria, and Spain, among other countries].

Comply-or-explain principle

The innovative approach of UK's corporate governance regulation [Cadbury Report, 1992] to the market failures was the introduction of a not prescriptive legislation, but led the way to a new form of regulation the "comply or explain" principle. As noted by Sir Derek Higgs in the introductory letter of the "Higgs Report"[8]:

> *"The Combined Code and its philosophy of "comply or explain" is being increasingly emulated outside the UK. It offers flexibility and intelligent discretion and allows for the valid exception to the sound rule. The brittleness and rigidity of legislation cannot dictate the behavior, or foster the trust; I believe is fundamental to the effective unitary board and to superior corporate performance." [Highs, 2003, p.3]*

The essence of this principle is that compliance with codes is not mandatory due to the reason that firms are different in terms of size, activity, structure and organization. Thus, the general best practices formalized in the Code may not be suitable to all companies, who can decide to not comply explaining their reasons.

Empirical studies on "comply and explain" devices [Arcot and Bruno, 2006 and 2007; Anand *et. al.,* 2006; MacNeil and Li, 2005; Seidl and Sanderson, 2009] show that companies indeed make

heterogeneous governance choices, and that the flexibility of this approach in corporate governance regulation allows companies to choose the structure that best suits them. Thus, where individual recommendations do not fit the particular organizational setting, firms are expected to deviate.

Compliance as a Signal, the theory

> *"Thou who dare not to comply with the code shall be punished by the capital market."*[9]

The "comply or explain" principle is founded on the assumption that the market will monitor compliance with code and efficiently adjust the allocation of capital according to its beliefs on governance quality [MacNeil and Li, 2005 and Brunsson *et al*., 2000].

The capital market has two functions in this regard: (a) evaluation of possible deviations and (b) enforcement. It is, after all, in their direct interest to assess the significance of deviations [Seidl and Sanderson, 2009, p.6]. In effect, the code exists primarily to protect their shareholders' interests[10].

Besides, if companies have a choice, they can *signal* to the market that they are "good-type" in order to attract external financing, especially in governance regimes that are less transparent and provide less protection to minority shareholders [Arcot and Bruno, 2007, p.4][11]. According to this, the companies have an incentive to comply because of it represents the view of the market of what is good governance.

There are two ways to deal with information asymmetries under an adverse selection problem[12] to influence market agents: (1) market signaling and (2) market screening.

In the signaling mechanism some informed market participants [e.g. board of directors] take certain actions that would reveal private information to others [see Spence, 1974]. On the other hand, the screening device is implemented by the uninformed party [shareholders] using self-selection mechanisms to sort [see Rotchschild and Stiglitz, 1976]. Previous literature on voluntary disclosure [Fung *et al.*, 2007; Prencipe, 2003, Hughes, 1986; Morris, 1987; Ross, 1979] recognize that the signaling theory plays an important role as a motivation to disclose since it states that the companies have incentives to voluntary provide information to the market in order to achieve economic benefits. Seeking to achieve an understanding about board of directors' decision upon compliance to Codes, we will focus on signaling literature[13].

The idea that a *signal* has intrinsic information about the agent type [e.g. board of directors] assumes that the principal [e.g. minority shareholders] has different beliefs depending on the information she receives.

Additionally, the provision of a credible *signal* has to yield outcomes that are more costly for firms with poor corporate governance practices[14] [see Spence, 1973]. Quality governance signals can be transmitted in many forms; so reporting the level of compliance with codes' recommendations is a relevant one. Thus, each recommendation itself is a *signal*, and then, has an intrinsic cost.

To illustrate, we follow a qualitative model proposed by Kirmani and Rao [2000, p.68][15]. Consider the signaling and non-signaling payoffs for good and bad governance firms [table I].

- INSERT TABLE I ABOUT HERE -

Signaling is a feasible strategy when two conditions are accomplished: (a) for the good governance firm, the gains from signaling outweigh the gains from any other strategy[16], A>B; and (2) for the bad governance firms, a non-signaling strategy provides a higher payoff than does signaling, and them, D>C. If both conditions hold, it is possible to reach a 'separating equilibrium'. It means that firms self-select into the more profitable strategy, making it reasonable for investors to infer that the *signal* comes from the firm with good corporate governance practices.

If the bad governance firm wants to imitate good governance firm, it would be worse-off. First, because signaling results in higher costs after investor realize that actually she bought a 'lemon'[17]. And second, due to opportunity costs of missing better strategic choices. It means that the differing cost structure between good and bad governance firms has a key importance to the value of the *signal*.

The cost of obtaining identical *signal* is strictly lower for the good governance companies than it is for the bad ones. If the payoff values above were such that A > B and C > D, both firms would be better-off signaling. In such situation, investors cannot distinguish between good or bad governance, resulting in a mixed result.

Thus, the discretion of firms' boards on complying with codes produces information on, whether or not; they respect investors [or other stakeholders] interests. Hence, given that it is the market itself [e.g. investors] who monitor the firms' compliance; the code can guide firms to what kind of *signal* [e.g. information] they should reveal.

Empirical findings have shown that firms do signal to the market their type. Zajc *et al.* [2007] present that Slovenian firms provide information even when not legally required. Arcot and Bruno [2006, 2007] find an increasing trend of compliance with the provision of the Combined Code in UK. Chizema [2008] and Werder *et al.* [2005] get a significant high level of code conformity in German. Amand *et al.* [2006] results' have seen an increase in the overall level of corporate governance mechanism in Canada. These findings corroborate that corporate governance codes do play a role in the governance agenda. But the question that remains open is whether it is driving to mixed results, where the market can not differentiate between good or bad governance firms, or to a separated one, where there is a clearly difference between the two kind of companies.

Dewatripont and Tirole [2005], on theory of communication, assume that the firms will more likely spend effort on signaling with the increasing payoffs from signaling. The payoff from signaling depend on how the information is [e.g. soft or hard[18]], and its content.

Therefore, it could be argued that the overall or joint compliance is perceived by investors (a) as credible signal or (b) as non-credible signal. Difference from (a) to (b) comes from the implicit cost that companies have to internalize to comply. In case the overall compliance includes costly and non-costly recommendations [like ones of formal *box-ticking*[19]] then the result could be a mixed one. So, the next step is to separate costly from non-costly *signals* for firms, analyzing properties [i.e. costs] of each group of recommendations from a Code of Corporate Governance and identifying market implication of this information. .

Compliance as a Signal, the practice

The application of signaling theory to corporate governance codes compliance has remained untested mainly because the difficulties to operationalize costly signs of compliance. Because compliance involve time, complex processes and opportunity costs, how are we to determine which costly recommendations serve as signals of commitment to good governance?

Here, we focus on an operational definition of the costly requirements that codes of corporate governance impose on firms. We define costly recommendations as exhibiting one of the following characteristics: (a) *processes that are recommended by codes that demand time and resources [e.g. human, in terms of full-time-equivalent*[20]*; physical, in terms of hardware and infrastructure to carry out demanded activities; and financial] that are not directly related to the core business or fiscal/administrative duties of firms; (b) process that are recommended by codes that restrict the use of political influence of social networks to accomplish business goals or (c) processes recommended by codes that impose opportunity costs.* The necessary condition to be considered a costly provision is the discretionary power of the board of director in deciding to comply or not. It means that those recommendations that are regulated and enforced by law do not represent a cost of compliance to the scope of this work.

Considering that, since 1999, the OECD Principles of Corporate Governance[21] [hereafter, *Principles*, OECD, 2004] become an international benchmark for policy makers, investors, corporations and other stakeholders worldwide; and taking advantage of its generality. We are assuming that countries are following these *Principles* as a guideline to develop their own corporate governance codes [Ingram, 2004 and Huse, 2007][22]. Additionally we are using the *Principles* as a benchmark to discuss the costly signaling theory upon codes' compliance.

The *Principles* are divided in five topics, as follows: (a) the rights of shareholders and key ownership functions; (b) the equitable treatment of shareholders; (c) the role of stakeholders in corporate governance; (d) disclosure and transparency, and (e) the responsibilities of the board. Each topic has a list of recommendations to provide guidance and suggestions for stock exchanges, investors, corporations, and other parties that have a role in the process of developing good corporate governance [OECD, 2004].

From these recommendations, we seek to understand the regulatory and non-regulatory costs that are behind practical application of them. This will allow recognizing the differences in costs that firms will face regarding the compliance with codes of corporate governance; and hence, drive the hypothesis of the signaling model.

The role of shareholders and equitable treatment of shareholders

The *Principles* place a greater emphasis on effective shareholder participation in key decisions of a company [i.e. chapter II "The rights of shareholders and key ownership functions", and III "The equitable treatment of shareholders"]. The reason is that shareholders monitoring is an important factor in the effectiveness of that corporate governance. Hence, it facilitates shareholder activism by stating rights shareholders can benefit from. For example, one important statement refers to the

equitable treatment of shareholders aiming to increase the investors' confidence that the capital they provide [e.g. minorities or foreign shareholders] will be protected from misuse or misappropriation by corporate managers, board members or controlling shareholders.

However, small shareholders, in particular, lack the incentives to collect information and oversee managers [e.g. due to free riding problems, see Hart, 1995]. Burkart and Lee [2007] argue that abstracting from the possibility of a takeover, the allocation of votes among dispersed shareholders [e.g. the principle of "one-share, one-vote" adopted by different countries] therefore immaterial. They propose that only if an investor owns a substantial fraction of cash flow rights she has an incentive to incur the monitoring costs to constrain managers' discretion, in that way mitigating the agency problem.

Therefore, the difference in the ownership structure of a firm may drive the necessity of other governance mechanism to ensure the rights of shareholders. Each firm will face diverse reality depending on the ownership typology it operates that will influence the adoption of effectiveness governance practices that may increase its costs.

As have been shown by agency theory literature, the greater the separation between ownership and control the higher agency and transactional costs [Berle and Means, 1932]. As firms moves from an entrepreneur/manager private structure to a public structure [e.g. due to necessity of capital to fund growth projects or even to share firm' specific risks] the agency problem increases. It happens not only because the managers are far from the "eyes" of owners and some level of control is needed to ensure the returning on investment, but also the case where there is a concentrated ownership in a block-holder that could expropriate rents from minorities.

As a result, the *Principles,* seeking to provide some insurance to the shareholders, state a couple of recommendations regarding the role of shareholders and the equitable treatment of them by firms.

Nevertheless, the Europe Commission [EC] issued a directive[23] which sets minimum standards for companies incorporated in the Europe Union [EU] whose voting shares are traded on a regulated market in the Europe Economic Area [EEA]. It deals with notices of meeting and documents available before the meeting, shareholders' rights to add items to the agenda and table resolutions, shareholders' rights to participate, ask questions and vote at meetings, the provisions relating to proxies and provisions on voting and voting results.

This policy removes the voluntary nature of the OECD *Principles* to European companies as it represents a positive law procedure. In fact, firms whose shares are traded on a regulated EEA market will have to consider making further changes until August 2009. Thus, the compliance with *Principles* becomes enforced by EC directive.

In sum, despite the importance of this topic to corporate governance there is no meaning, to our purpose, as all the companies have the obligation to comply and the motivation is cleared defined by law, it leaves little scope to discuss cost and benefits analysis under the signaling theory perspective.

The role of stakeholders

The topic IV of the *Principles* states: "*The corporate governance framework should recognize the rights of stakeholders established by law or through mutual agreements and encourage active co-operation*

between corporations and stakeholders in creating wealth, jobs, and the sustainability of financially sound enterprises." [OECD, 2004, p.21].

It seeks to broaden the perspective of corporate governance practices. The German system of co-determination, in which employees have seats in the supervisory board of the companies, exemplify that shareholders and stakeholders interests can be taken into account simultaneously [Allen *et al.*, 2007]. In fact, Germany is not the only country where the interests of other parties are protected. As well documented by Allen *et al.* [2007], Austria, the Netherlands, Denmark, Sweden, Luxemburg, Finland, France, and Japan pursue the interests of a wide variety of stakeholders.

Nevertheless, the internalization of some potential externalities or pursing a variety of objective functions to attend different parties is still an open discussion on economic literature [Tirole, 2001; Allen *et al.*, 2007].

Regarding the costs associated with these concerns, other studies have looked for non-regulatory costs to explain high compliance rates with hard [e.g. by law regulations] or soft-regulation [e.g. codes of corporate governance]. For instance, Muoghalu *et al.* [1990][24] found that a firm's stockholders experienced a 1,2 % loss in market value when it is publicly announced that a suit has been filed by stakeholders against a firm.

Moreover, because stakeholders act upon their perception of the firm in deciding whether or not to support the organization, the firm's reputation is an important asset to be considered in managerial decision-making [Laan, 2009, p. 67]. Such stakeholders act can be positively materialized, for example, increasing firms' revenues [e.g. customers], or tax reductions or other regulatory benefits [e.g. governments], attract and retain human resources talents [e.g. employees]. Or negatively, like: lawsuits from government, or employees; loss of reputation and consequently impact on market sales, etc.

Thus, compliance with codes can establish a reputation of being well-governed, which allows firms to secure stakeholder support.

The *Principles'* topic related to stakeholders' rights is shaped by six provisions which can be discussed under three mainly groups: (a) general rights of stakeholders, (b) employees rights and (c) creditor rights.

The first defines, in general terms, what firms have to account in protecting stakeholders rights. It focuses on mutual agreements respect, opportunity to stakeholders to redress any violation of their rights, and participation of those agents into corporate governance process, and information sharing.

As it covers a broader perspective of rights, firms have the possibility to address such issues in a flexible way, adapting their practices to the context. Therefore, the costs associated with these practices are directly related to the threat and power of stakeholders around each company's environment. And so, the compliance could be explained by external pressures of stakeholders rather than an internal initiative to be good.

However, the provisions include those rights and interests established by law [e.g. the co-determination in Germany is regulated by the Co-operative Management Law]. In this case, the institutional environment[25] drive the governance structures [Aoki *et al.*, 1990] and costs to carry out them are

associated with activities and outcomes established by law. And so, compliance is a matter of law enforcement.

The second group of provisions includes two statements regarding to the employee participation on corporate governance process. One focused on performance-enhancing mechanism to motivate their participation, and other to ensure a safety and confidential process to communicate to the board illegal or unethical practices in the company. This mechanism does have a cost. Not only related to the process to preserve the confidentiality of information and to establish a safe-harbor for complaints, but also cost to motivate people to participate and effectively disclose illegal or unethical practices. For instance, some companies have established an ombudsman to deal with complaints and/or confidential phone and e-mail to facilitate the reception of allegations [OECD, 2004].

The third set of recommendations manages the interest of creditors. Although most of countries have comprehensive laws to protect creditor rights, the *Principles* highlight the importance of these issues concerning the corporate governance. La Porta *et al.* [1997; 1998] presented evidence indicating that legal rules protecting investors and its enforcement procedures [i.e. equity or debt holders] not only differ greatly and systematically among countries but also can explain differences in the opportunities for external finance and capital markets. Thus, more than a firm' characteristic on respecting or not the contracts with its creditors, the *Principles* is concerned about the legal rules related to the countries and their institutions to provide a safe environment for investors. Hence, the complexity of countries' rules and procedures for ensure investors' rights defines the scope of the cost of compliance.

In sum, although the Principles establish some recommendations to countries and institutions to protect stakeholders' rights, countries' corporate governance codes do not focus in this matter [see Appendix B]. Since there are no specific recommendations in codes regarding to stakeholder rights, we will cover this issue as external antecedent to compliance [see Stakeholder pressures hypothesis discussion].

Disclosure and transparency

Corporate disclosure and transparency are critical for the efficiency of capital markets [Arcay and Vázquez, 2005; Core, 2001]. Moreover, experts generally agree that the main failing leading to the financial crisis stemmed directly from the lack of disclosure and obscure management practices [Cheung *et. al*, 2006]. Such concerns have been driven the corporate governance initiatives reforms that increase the accounting and risk-management disclosures rules, sometimes with a greater enforcement. Consequently, the *Principles* and other regulatory arrangements, brings out the necessity of providing, on timely and accurately manner, information on all material[26] matters regarding the corporation, including: financial situation, performance, ownership, and governance of the company.

However, various governances changes may have unforeseen negative consequences. An example is the introduction of the Sarbanes-Oxley [i.e. SOx] Act in U.S. as a response to Enron, WorldCom, and other public governance failures. Critics of this Act contend that SOx was an unnecessary and costly government intrusion into corporate management that places U.S. corporations at a competitive disadvantage with foreign firms, driving businesses out of the United States. The later is the phenomenon of delisting due to higher compliance cost [Aguilera *et al*., 2007].

Thus, the expected benefits of improving protection for shareholders and stakeholders through greater disclosure, auditing, and control may counteract by over-intervening the corporate governance environment in ways that reducing flexibility and, by consequence, diminishing the effectiveness of entrepreneurial opportunities [Durden and Pech, 2006]. These are some opportunity costs associated with high levels of disclosure imposed by recent hard- and self-regulation around the world.

Meanwhile, the *Principles,* for the purpose of improving governance, present six provisions regarding disclosure and transparency. Part of that are supposed to be voluntary and it opens an interesting discussion on the costs versus benefits to disclose information where firms are not enforced to.

The first step is to separate recommendations that are enforced by law from those that are voluntary and so, depends on the discretionary of executives to be disclosed.

The first set of provisions concerns to the content of information disclosed, like: financial and operation results, company objectives, ownership rights and structure, remuneration policy of board members and key executives, related party transactions, risk factors, etc. Some of these items are enforced by accounting rules and standards, for instance: financial and operational reporting [e.g. International Financial Reporting Standards, IFRSs], and risk factors [e.g. SOx Act]. Although in several countries disclosure of executive remuneration is now mandated [e.g. Australia, ASX Listing Rules, 2003; AASB 1024, 2004; and Section 300A of the Corporations Act, 2004], it still remains voluntarily and under boards´ discretionary.

To our purpose, we will focus on the content where firms have more discretionary on disclosing, like remuneration policies.

Most of prior research on executive compensation disclosure has not been related to corporate governance [Laksmana, 2007], and those studies which does focus primarily on management voluntary disclosure practices [e.g. Ajiinkya *et al.*, 2005 and Karamazov and Vafeas, 2005]. The problem is that board directors are too busy and unable to devote enough time to a lengthy and deeply analysis of executive remuneration. In order to make effective disclosure decisions boards and its committees need to allocate a significant amount of time and resources to carry out their duties. It means, defining disclosure policies, examine the consequences of items disclosed, and achieve a consensus decision, among other activities.

The other five provisions concern to the disclosure process, like: accounting standards procedures, annual independent audit, channels for disseminating information, and corporate governance framework, and are related to the disclosure regulations of countries and international standards. The objective is to reinforce the importance of disclosure procedures in the quality and reliability of information. Such procedures and standards are mandatory bylaw and firms are enforced to comply, leaving little discretionary to managers or to the board.

In sum, the Principles chapter on disclosure and transparency focus on a broader perspective of information asymmetries among internal and external agents. Some of the recommendations established by them are already covered by mostly of commercial rules, listing rules and other regulatory frameworks. One that remains opened to voluntariness of boards' decisions is the remuneration policies

information. Such processes represent not only direct cost related to their activities but also, proprietary and political costs that could influence the motivation, and consequently, decision on compliance.

Board responsibilities and remuneration

The *Principles* reinforced the area of board responsibilities by requiring boards to apply high ethical standards. There is a clear statement that the duties of board members are fiduciary in nature and are owed to the company and shareholders [Ingram, 2004]. Boards have responsibility for oversight of the internal controls and risk management systems of companies and to provide confidential access to whistleblowers [i.e. employees]. Board members must also be prepared to commit themselves effectively to the job, meaning that they should not be overburdened with multiple directorships and should devote sufficient time and energy to the performance of their duties.

This is where the major cost structure resides. The board structure, their relationship, size, remuneration and process do influence the governance quality and have intrinsically cost not only due to process, but also, indirect cost like conflicts of interests, network relations, etc. [Laan, 2009; Aguilera and Cuervo-Cazurra, 2004, Akkermans *et al.*, 2007, Iturriaga and Carmo, 2006]. So, costly provisions appear where shareholders and managers, or minority and controlling shareholders, may have conflict of interests. For example, in a family firm the election of an outside director increase the agency costs.

In sum, it is expected that the differences among firms on compliance refers mostly to the structure of boards' responsibilities and remuneration. Not only because of the amount of resource firms have to spent to complete these recommendations, but also due to the fact that such process decrease the discretionary power of board members, and consequently, manager to perform their goals.

- INSERT TABLE II AROUND HERE -

The table II presents a summary on discussion of costly recommendations and discretionary power of boards regarding compliance to codes' provisions. Of the total recommendations of the OECD *Principles* those that represent more representative cost of compliance and subject to the discretionary of boards are related to disclosure of directors and executives' remuneration and the organization of the boards, respectively chapters V and VI of the *Principles*.

Signaling hypothesis

The discussion outlined above arguments about the differentiation in costs regarding different aspects of compliance [or opportunity costs of managing relations with investors]. It justifies firms' variation on decision-making upon compliance level and, thus, some specific recommendations are not complied. Actually, empirical evidences have shown that non-compliance is observed for a specific set of recommendations in several countries [e.g., Akkermans *et al.*, 2007, in the Netherlands; Fernández-Rodríguez *et al.*, 2004, in Spain; Werder *et al.,* 2005, in Germany]. Recalling the signaling theory, good corporate governance firms know that they ought to have recognition for their governance, so they are willing to provide the signal — in this case, high compliance level. The key assumption is that *good-type*

companies [those who have good governance practices] have lower marginal cost of compliance than *bad-type*. This means that the value of the signal has a different cost structure between good and bad firms. So, the cost of obtaining identical levels of compliance [i.e. to the bad firms mimic the good ones] is strictly lower for the good company than it is for the bad one. This difference among cost structures does not need to preclude the bad firms to comply with codes. For the signal to be credible and informative the necessary conditions is that it has to be positively correlated with the unobservable attribute [e.g. governance quality] and it is directly related to its value [e.g. market perception of good governance]. Hence, we propose that:

H1a: Ceteris paribus, overall compliance with the codes of corporate governance cannot capture differences among good or bad governance firms.

H1b: Ceteris paribus, compliance with a set of costly recommendations can separated the good and bad governance firms.

The hypothesis above drives the phenomenon where firms perceive the preferences of stakeholders by signaling their commitment to good corporate governance. In this case, they volunteer *signal* to stakeholders their intentions [Ross, 1979].
However, it could be the case that firms respond to actual institutional arrangements [Chizema, 2008] where external pressures pull corporate governance practices. Hence, we intend to show other factors that combined with the arguments outlined can improve or, even, determine, the compliance level of firms. To do so, we will build the hypothesis upon the argument of agency theory [e.g. separation between ownership and control], and organizational and institutional theory [e.g. institutional pressure and stakeholder pressure], as follow.

Understanding the determinants of compliance

The objective to develop other hypothesis based on organizational and institutional theories is to understand in which extend the organizational setting [e.g. internal and/or external] can influence their level of compliance. In other words, we expect that, the compliance is an endogenous outcome that is explained by a set of characteristics, rather than a conscious decision of manager or board executives [Dewatripont and Tirole, 2005]. Thus, the degree of information costs increases with the firm's compliance effort and stakeholders attention [endogenous factors], as well as exogenous features such as commonality of the parties, the number of shareholders and their ability and power to evaluate the information provided by corporate governance practices [Dewatripont and Tirole, 2005; Zajc *et. al.*, 2007]. Such factors and their relation to the quality and content of information embedded in the compliance levels are explained through the agency theory and institutional theory background, as follows [see figure II].

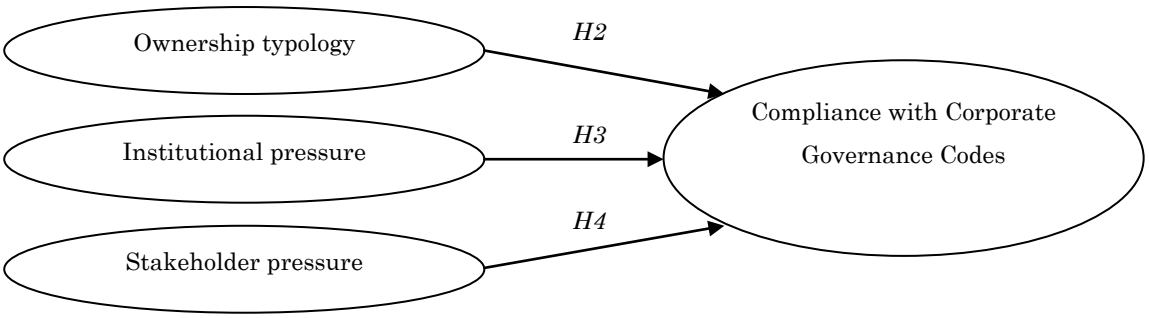

Figure II
DETERMINANTS OF COMPLIANCE

Ownership structure hypothesis

The degree of ownership and control concentration plays a key role in the relationships between the different corporate stakeholders. In countries where widely-held companies prevail, the main function of corporate governance mechanisms is to protect shareholders from being expropriated by the management [agency problem, type I][27]. In countries where a vast majority of companies have a concentrated ownership and control structure, the function of corporate governance mechanisms is to minimize the extent of agency problems between majority and minority shareholders [agency problem, type II] and that between shareholders and creditors. [Martanynova and Renneboog, 2008, p.7]. Recent empirical research indicates that in many countries the relevant corporate finance issue is not the traditional agency problem between management and shareholders, but rather the agency problem between the controlling shareholders and minority shareholders. This problem can arise for two main reasons: (1) the corporate structure of public companies protects large shareholders[28] from takeover threats or monitoring[29]; and (2) the legal system does not protect minority shareholders as a consequence of either poor regulation or enforcement.

Most of corporate governance mechanisms used in the world – including large shareholdings, relationship banking, and even takeovers – can be viewed as examples of large investors exercising their power [Shleifer and Vishny, 1997, p. 739]. Thus, it is expected that those mechanisms are, in some extent, substitutes to codes of corporate governance as they can reduce agency costs. While large investors still rely on the legal system, they do not need as many rights as the small investors do to protect their interests. Hence, I would argue that codes are adopted to make up for the lack of minority shareholder protection in the legal system and would be more likely to be adopted by well-dispersed ownership firms. Therefore, I propose that:

H2a: Ceteris paribus, the compliance levels decrease with the concentration of shares.

Regarding to the institutional investors, Thomsen [2006] argue that these institutions play an important role in shaping the corporate governance codes. This is in keeping with the ideas expressed

by Huse [2007, p.24] who notes that the first wave of corporate governance and shareholder activism was led by major long-term institutional investors such as Dale Hansson in the California Public Employees Retirement System [CalPERS]. Moreover, Chizema [2008] states that, one way to seek legitimacy with institutional investor is to be seen adopting management practices that enhance shareholder value. Thus, we expected that:

H2b: Ceteris paribus, larger institutional investor stockholdings, higher compliance levels with corporate governance codes are expected.

Institutional pressure hypothesis

So far, we have study the compliance with corporate governance codes under the perspective of agency theory. Nevertheless, country's social-cultural characteristics also have an important influence on governance structures [Li and Harrison, 2008, p.608].

The compliance with codes of governance is influenced not only by the endogenous need to increase effectiveness and hence compensate for potential deficiencies in the corporate governance system, but also by exogenous pressures to introduce practices that are socially legitimate or widely perceived as appropriate and effective [Tolbert and Zucker, 1983]. Moreover, in order to survive, organizations conform to what is societal defined as appropriate and efficient, largely disregarding the actual impact on organizational performance [Meyer and Rowan, 1977, p. 353; Zucker, 1982]. Regarding the codes of corporate governance, Aguilera *et al.* [2007] state that they are often adapted to local contexts of firms or 'translated' across diverse national institutional settings in order to address the diversity of corporate governance arrangements across different contexts. It leads to:

H3: Ceteris paribus, the more the external institutional pressure the higher the compliance.

Stakeholder pressure hypothesis

According to stakeholder theory the organization has a pluralistic view, and is concerned with balancing and managing among different interests [Huse 2007; Donaldson and Preston 1995; Mitchell *et al.* , 1997; Allen *et al.,* 2007; Tirole, 2001]. Thus, the scope of corporate governance is expanded from a narrow focus on shareholder's interest protection to a broader perspective on managing the relationships among various stakeholders [e.g. creditors, employees, suppliers, customers, and society].

Reviews of stakeholder theory show that there are three main streams to understand the argument of this theory [Eesley and Lenox, 2006; Huse, 2007]. First, a normative stream debates the legitimacy of each stakeholder into the environment of the firm. Second, a descriptive stream presents the stakes and power of these stakeholder groups. And finally, an instrumental stream arguing that a firm that focus on the various stakeholder' demands gains both a favorable reputation and access to the resources that

stakeholders control. This behavior leads to a competitive advantage by reducing opportunism and enhancing trust and cooperation.

Additionally, to this strategic behavior of firms, when stakeholders are dissatisfied with management they may take a different actions against the firm. Dissatisfied stakeholders can take small position of stocks' to increase their power against the firm, may trigger a lawsuit against the management and board, and may influence regulators to increase external control. These actions can increase the cost of the firm, either direct to advocate against a suit or, indirectly, due to a loss on reputation. This leads to the following hypothesis.

H4: Ceteris paribus, in response to stakeholder concern about corporate governance, firms increase the level of compliance with codes.

Table III provide the proxies used for exploratory variables and the predicted direction of the relation with compliance extent for each hypothesis.

- INSERT TABLE III ABOUT HERE -

III. Models and variables

We next discuss the econometric models used in our analysis and the variables used to measure and test our theoretical hypothesis.

Compliance level variables

Codes' provisions were used as primary data where firms have the discretionary to comply with. Firms in all countries announce their compliance statements through annual reports[30]. The method of content analysis [Weber, 1985] was used to examine compliance declarations of firms and the *overall compliance level* [hereafter, OCL] variable was derived. If a firm complies with a recommendation the variable was coded 1 and 0 otherwise; to compound the *OCL*, we take the mean of all recommendations compliance.

Next, following the theoretical reasoning about the cost of compliance, we discard those recommendations related to the Topics II, III and IV of the *Principles*. After this adjustment, the number of provisions considered to compound the variable are 47, 41 and 67, respectively for Spain, UK, and Germany, instead the originals, 58, 48, and 76 recommendations [see Table IX][31], from this manipulation the *adjusted compliance level* [hereafter, ACL] was derived.

Moreover, based on previous literature on executive compensation disclosure and board of director independence and responsibilities [Chizema, 2008; Laksmana, 2007; Werder *et al.*, 2005], and aiming to increase control for cost of compliance, we have built another variable, *costly compliance level* [hereafter, CCL]. In constructing this variable we take the following OECD provisions: (a) V.A.4, disclosure of remuneration policies and board of directors information; (b) VI.D.2, corporate governance monitoring; (c) VI.E.1, independence of the board; and (d) VI.E.2, formation of committees [see, tables

XIII and XIV]. Now, the compliance level is more severe in terms of costs and so, it is expected to have more variability and less compliance among firms. As previous variables, if a firm complies we code 1 and, 0 otherwise.

An alternative approach to define the compliance level variables, as other studies [Arcot and Bruno, 2007], would have been to consider the explanations firms disclose not to comply with provisions. To do so, this would involve an analysis and classification of the explanations provided for non-compliance. This method requires some qualitative judgment with intrinsically subjectivity that we tried to avoid.

Ownership structure

In order to test the hypothesis on ownership structure, we construct four variables. Institutional ownership [INST SHARE] is the percentage of total outstanding shares held by institutional investors. For the purpose of this paper we consider institutional investors entities which professionally invest substantial assets in international capital markets, such as investment companies, mutual funds, brokerages, insurance companies, pension funds, investment banks, and endowment funds.

The second ownership variable is FREE FLOAT. This variable captures the total amount of outstanding shares available to market trade. The third and fourth ownership structure variables are, respectively, the first owner shareholdings [TOP 1st] and first five owner's shareholdings [TOP 5th] as proxies for concentration ownership.

The Amadeus database was the principal source of ownership data, with some additional checks from firms' annual reports.

Cross-listing in U.S.

Non U.S. companies can cross-list on U.S. markets mainly by two ways. First, directing listing in New York Registered shares or, issuing an American Depositary Receipt [ADR][32].

We downloaded valuable information from depositaries websites regarding ADRs and New York Exchange listing companies in order to evaluate which firms are listed outside their home-country. And if so, the type of share they issue and the market where their shares are trade. Mostly, the data come from the Bank of New York Mellon, JP Morgan and New York Stock Exchange [NYSE]. This data was checked with supplement information from Amadeus database.

Our sample includes only shares traded in U.S. stock market and over-the-counter [OTC] type of ADRs. The variable, *CROSS-LIST,* captures if a firm is listed in any U.S. stock market, for instance, NYSE, Nasdaq, AMEX. If it is the case the variable was coded 1 and, 0 otherwise. It represents firms that have to comply with the Securities and Exchange Commission's [SEC] corporate governance standards that are well known to be more severe than other Commission's standards worldwide.

The second type of share, OTC, allows companies to combine the benefits of publicly trade programs [e.g. raining funds] without complying with SEC's rules. The reasoning to include this variable resides on the fact that if companies want to get access to US financial markets they have to comply with their home-country codes in order to signal to the US investor they can trust on executives.

As European Stock Exchange markets have less stringent corporate governance rules compared with U.S., to build *CROSS-LIST* variable we have only deal with U.S. shares.

Moreover, IBEX-35 firms that cross-list in Europe chooses Germany and UK Stock Exchange markets, and those countries do not impose out-side firms to disclose how compliant they are with UK and Germany corporate governance Codes [Chizema, 2008]. In Germany' DAX, besides U.S.' markets, firms usually go abroad to list shares in Switzerland, Italy and UK, and in those countries the corporate governance codes are not as rigorous as U.S. At last, in UK, FTSE-30 firms' cross-list in U.S., Germany, Switzerland, South Africa, Sweden and, Ireland, no one of this country has more rigorous compliance procedures than U.S. SEC's.

Debt index as a creditor pressure proxy

Previous empirical literature on stakeholder pressure and regulation [Eesley and Lenox, 2006; Kassinis and Vafeas, 2002, Carleton et al., 1998] use, for instance, law suits from stakeholders, resource-base of the stakeholders relative to the resource-base of target firm, legitimacy of stakeholder measured through public opinion, urgency of demands measured by boycotts, number of inspection and negotiations with regulators. However, such variables were not possible to be gather from the available dataset we have up to date.

To operationalize the fourth hypothesis we focus on the firm's capital structure and its effect on compliance. Jensen [1986] argues that debt financing reduces free cash flow and therefore has a disciplinary effect on management. Moreover, as firms have more debt indexes, it is supposed that financial pressure from creditors influence executives and the board of directors to have better corporate governance practices, which may increase the levels of compliance. Therefore, as a proxy from stakeholder pressure, we use the DEBT index measured by the quotient of total liabilities over total assets.

Firms attributes and home-country control variables

As control variables, we consider two categories of variables: (a) firm attributes and (b) home-country.

All accounting information is downloaded from Amadeus and Annual Reports for the year ending in December 2007. Information about membership of Stock Exchange Indexes is obtained from FTSE, BME, and Deutsch Börse, for UK, Spain and Germany, respectively.

Following previous literature in corporate governance [e.g. Crespí et al., 2004; Chizema, 2008, Arcot and Bruno, 2007] regarding the firms' attributes, we consider:

(a) Accounting and financial data.

(a.1) FIRM SIZE is the natural logarithm of total assets. A higher firm may have a larger set of stakeholders and, consequently, more market pressure for good governance and may be perceived to be more likely to comply.

(a.2) AGE is the age of the company taking into account the year of incorporation. An older firm may have a larger customer base and a stronger brand reputation; such characteristics could increase the pressure for compliance and affect positively the likelihood of compliance.

(a.3) ROA is the return on total assets, calculated as the profits/ losses before taxes over total assets.

(b) Home-country

(c.1.) COUNTRY is the respective country where each firm incorporated, respectively, Germany, Spain and UK. It is expected that institutional settings regarding shareholder and investor protection and legal origins could affect the level of compliance.

In line with previous literature on countries investor protection and legal origins [e.g. La Porta et al., 1997, 1998, 2000], we predict that UK firms, with a common law home-country, are likely to have higher levels of compliance compared with German or Spanish counterparts. Additionally, in spite of having a civil-law institutional setting, we expect that German firms have higher levels of compliance when comparing with Spanish firms. This is due to a more mature environment regarding financial market and corporate governance issues.

Univariate model

Signaling theory implies discrimination among *good* and *bad* corporate governance firms. Thus, the signaling prediction is that there is a difference between compliance levels for *good* and *bad* corporate governance firms.

To test this prediction, we carried out a *t-test* to compare means upon different groups to test the difference between compliance levels. The expected result is to reject the null hypothesis on equality of means.

Thus:

$$H_0: \quad \overline{x}_i = \overline{x}_j$$
$$H_a: \quad \overline{x}_i \neq \overline{x}_j \text{ ,}$$

Where H_0 , H_a , $\overline{x}_{i,j}$ are, respectively, the null-hypothesis, the alternative hypothesis and the compliance level mean for each group.

In order to classify firms into *good* or *bad* corporate governance, we first take the average of compliance levels for each country. Then, we compare the *compliance level* at the firm level with the country average. Those firms who present a *compliance level* equal or above the country mean were classified as having *good* governance and, *bad* otherwise.

Multivariate model

A very common problem in microeconomic data is censoring of the dependent variable [Greene, 1997:959]. Censored data can be characterized as a sample defect in the sense that if the censoring were not there, then presumably the data would be representative of the population. There are a couple examples on previous economic literature [McDonald and Moffitt, 1980]. For instance, data on hour of work have by women in the labor force are clustered at zero value; household purchase of durable goods often have the same clustering [Greene, 1997]. An alternative to solve such problem was proposed by Tobin [1958]. Tobin's model [i.e. censoring regression model or Tobit model] assumed that the dependent variable has a number of its values clustered at a limiting value.

In our study we identify that a significant number of firms are fully compliant with their country codes. It represents a cluster of observations with compliance levels with value 1. Then, following the stochastic model proposed by Tobin, we consider the latent relationship:

$$y_i^* = x_i^{'} \cdot \beta + u_i, \quad u_i \sim N\left(0, \sigma^2\right) \tag{1}$$

where y^* is the latent dependent variable, x' is the vector of the independent variables, β is the vector of coefficients, and the u 's are assumed to be independently normally distributed, and the observed dependent variable, y, [i.e. compliance levels] conforms to:

$$y = y^*.1\left(y^* < d\right) + d.1(y^* \geq d) \tag{2}$$

The value d represents the maximum level of compliance [i.e. fully compliant firms, d=1.00].

To interpret the estimation results, the marginal effects of the independent variables on some conditional mean functions should be examined. In the ordinary least square [i.e. OLS] model, $y = x \cdot \beta + \varepsilon$, there is only one conditional mean function, $E(y) = x \cdot \beta$, and, $\frac{\partial E(y)}{\partial x} = \beta$, where x is the independent variable. This makes interpretation straightforward; β measures the marginal effect on y of the independent variables. However, in the Tobit model, though, there are three different conditional means [Greene, 1997:963]. First, those of the latent variable y^*, then the observed dependent variable y, and finally, the uncensored observed dependent variable, $y|y < d$. Accordingly, interpretation depends on whether one is concerned with the marginal effect of x on y^*, y, or $y|y < d$.

From Greene [1997], the three marginal effect expressions[33] are the following:

$$\frac{\partial E[y^* \mid x]}{\partial x} = \beta \tag{3}$$

$$\frac{\partial E[y \mid x]}{\partial x} = \beta\phi\left(\frac{\beta' x}{\sigma}\right) \tag{4}$$

$$\frac{\partial E[y \mid y < d, x]}{\partial x} = \beta\left(1 - \delta\left(-\frac{\beta' x}{\sigma}\right)\right) \tag{5}$$

To the purpose of this paper the objective is to understand the determinants of the actual compliance by firms, including those who are fully complaints [e.g. censored firms]. Thus, the marginal effect expression to consider is estimated by the equation (4).

IV. Data

Following we discuss the dataset composition, the source of information and the gathering process. Further, we make some comments on observations not included in the sample and the reasons to drop-out them from the analysis.

Sample

We obtain data on compliance levels analyzing the annual reports of each firm for the year 2007. The ownership structure and, accounting and financial variables were downloaded from Amadeus Database for year ending in 2007. For a firm to be included in the sample it had to be listed on the FTSE 100 and the top 30 market capitalization firms of FTSE 250; DAX, MDAX and SDAX; and IBEX 35 and top 100 market capitalization firms' traded in the "Bolsas y Mercados Españoles", for UK, Germany and Spain respectively[34].

In constructing the dataset we omit financial companies [e.g. banks and insurance firms]. As previous work in corporate governance, financial firms have significant differences with respect to corporations in other economic sectors, particularly in the regulatory environment [Crespí *et al.*, 2004; Chizema, 2008, Arcot and Bruno, 2007]. Crespí *et al.* [2004], for example, state that it is generally agreed that the external controls coming from takeovers and product-market competition turn out to be weaker in banks than in other firms. Moreover, Levine [2004] affirms that the specific regulation for financial firms, although not part of the corporate governance codes, may interact with its provisions and have implications for corporate governance.

Moreover, we drop out those observations that, despite they are constituents of one of each indexes used to build the dataset in 2007, the Amadeus database did not have detailed information on variables used to test our hypothesis.

After this adjustment, the actual sample consists of 322 firms drawn from industrial and service sectors, where 94 are from UK, 111 are from Germany and 117 are from Spain.

Descriptive statistics

Table IV, panels A, B, C, and C, provides summary statistics of variables used in the empirical analyses. Panel A shows the three compliance levels measures by country, the mean values of compliance with country codes are greater from UK than others civil-law countries, as Germany and Spain. Such values are supported by early studies on institutional settings comparing countries around the world [La Porta *et al*., 1997, 1998, 2000]. As expected, German firms are more compliant than their counterparts in Spain. Other important observation is that the mean values of compliance decrease as the cost of compliance increases. It is what we expect from the signaling theory and, in some extent, is supported by the data.

Panel B shows the independent variables used as proxies for the theoretical hypothesis. First, we notice that UK's firms present the higher dispersion of ownership than German and Spanish firms. This result is in line with previous studies on ownership concentration in Europe [Faccio and Lang, 2002]. The

same we can say from the concentration of ownership in the greatest shareholder or in the top five shareholders.

Regarding the cross-list behavior of firms, we detect that UK's firms are have their share listed in US market in a higher level than Spanish and German firms. It is real for true-shares in the stock exchange but, such difference is not so high when considering over-the-counter [OTC] markets. The purpose of this paper is not to fully discuss these differences but one can infer that the size of capital market in US and UK can explain such behavior, and also the relationships between these countries over time.

On the subject of leverage, firms are highly levered in all countries. So, we expected that such variable will be important to explain part of the variance of compliance levels as stated in hypothesis 4.

Panel C shows the control variables. From previous literature on corporate governance [e.g. Arcot and Bruno, 2006, 2007; Chizema, 2008; Crespí et al., 2004] we focus on size, ROA, and age as controls for firms characteristics. As firms belong to the FTSE, (D, M, S)AX, and IBEX indexes, not surprisingly, there are big and mostly of them are profitable. Concerning the age, German present older firm mainly because there merger and acquisition [M&A] processes of family firms are not so intense there, compared with the recent decades movement on M&A in Spain and, UK. So, although one could expected some old firms in UK, the incorporation date takes into account the new institution formed after M&A process.

Finally, Panel D demonstrates the pair wise correlation coefficients among the variables, with respective significant values.

V. Results

Here, we discuss the results found from the models described in previous sections.

Univariate analysis

We perform a t-test in order to test for the difference between the compliance means of *good* and *bad* corporate governance firms. All variables on compliance were tested and table IV, panels A, B, C and D, presents its results. We predicted that there are no differences [or, more precisely, that the differences are not statistically significant at 90% of confidence] in compliance averages between groups of firms for OCL and ACL compliance levels [i.e. those that consider the overall compliance levels, the latter adjusting for discretionary power]. However, the statistical test shows a significant difference between those averages [e.g Germany's OCL and ACL differences are, respectively, 8% and 9%, both significant]. It means that potential tick-box behavior of firms to comply with those non-costly and not comply with costly recommendations is not useful because such differences can be capture by the overall compliance levels. And thus, they do separate *good* and *bad* firms.

When we test for the CCL [i.e. costly compliance levels] such differences is still greater and significant. Taking the case of German firms, the difference between mean value increases from 9 to 15 per cent and is significant at 99% of confidence level. With these results, the hypothesis 1a is not accepted while we do accept the hypothesis 1b.

Moreover we can consider that the overall compliance level is, *per se,* a signal of good or bad governance.

Robustness Check

One important objective of the paper is to test, empirically, the signaling theory using as signal of good governance the levels of compliance. After observing that both, overall and costly, compliance levels are significant to separate firms that have implemented good corporate governance practices from those who do not; it remains to test the non-costly compliance level.

To do so, we construct a CLCL [non-costly compliance level] variable which is composed by recommendations expected those included in CCL index. We expect that there is no difference between averages from both, good and bad, firms. However, panel D. shows statistically significant difference among them. Hence, the difference in OCL and ACL incorporate not only the costly recommendations but even those considered as non-costly.

We have also built more severe variations for CCL [by consequence, relaxing CLCL] but we the same results. Moreover, the created three groups, separating fully compliant firms from the initial sample and run a one-way ANOVA to check for differences. The output shows the same results with significant differences in means. Thus, not only costly compliance is a signal, but also, overall and non-costly can separate firm's behaviors.

Multivariate analysis

Table VI, panels A, B and C, shows the results of our analysis relating to the multivariate model expressed in the equation 1. The model aim to understand the determinants of compliance conditioning on the fact that the sample present fully complaints firms [i.e. censored at level 1.0]. Previous literature [e.g. Davis, 2002] argues that the effectiveness of corporate governance typically requires, among other things, the presence of large investors, be they banks, other companies, or institutional investors. Such institutions have the leverage to compel managers to distribute profits to providers of external finance and that they are need because individual investors find it difficult to enforce their rights. From, this discussion and the arguments stated in the hypothesis 2.a., we expected that institutional shareholdings could explain the variance of compliance levels. However, the results show a statistical non-significance of this variable [see table VI.]

Nevertheless, one argument to explain this result is the fact that, having stocks of firms, institutions shareholders will pressure for their rights through other mechanisms. For instance, (a) taking a seat at the board of directors, (b) influencing the hiring process of executives, or (c) making direct controls not necessarily the compliance levels. It means that those shareholders do not need signals of good governance to adjust their behavior; instead, they impose direct controls to protect their rights.

On the contrary, the concentration ownership coefficient, TOP 5^{th}, shows negative and significant [at 5%] relation to the compliance levels [Table VI, panel A.]. It was not only expected but also confirms a widespread discussion on concentrated ownership by which block-holders usually have a negative effect on good corporate governance practices.

Arcot and Bruno [2006] states that firms opt to cross-list in US, among other purposes, to commit themselves to higher standards of corporate governance. The OTC variable presents a positive and significant [at 5%] effect on compliance [Table VI, panel A]. It is consistent, in some extent, such behavior. The obligation to follow high standards is only for those firms with listing stocks in any stock exchange market; OTC shares did not include SEC obligations. It strengths the argument on that compliance is a signal. As they do not need to follow US rules, they do it in their home country as a signal of good governance.

The coefficient of DEBT variables is also positive and significant [at 5%] reflecting the reasoning that firms with more debts have higher pressure to have good corporate governance practices, and they do.

We then add the control variables, SIZE, AGE, ROA [Panel B]. Including SIZE we have to quit OTC variable due to multi-colinearily problems [table IV, panel D.]. The coefficient of TOP 5th remains negative and significant but DEBT, do not. Although not significant the effect of performance, ROA, presents a negative influence on compliance [Table VI, Panel C.]. In the literature on corporate governance is plenty of criticism regarding the relation between performance and compliance due to endogeneity concerns. Nevertheless, an explanation to this direction on compliance is because the performance itself is a good signal for investor, making compliance levels a less important issue for firms and markets.

We expected that older firms by having a larger customer base and a stronger brand name would have a higher pressure for compliance. However, AGE, besides to be non-significant, has a negative effect on compliance [Table VI, Panel C.]. Such effect could be explained by the substitution effect of signaling by the reputation effect constructed by companies throughout the years. As older companies have more reputation it substitutes the necessity for signals.

The SIZE presents a positive and significant effect [at 1%] consistent with our prediction [Table VI, Panel C.] and previous literature [e.g. Werder et al., 2005].

Robustness Checks

After observing a positive and significant effect of country controls we decide to check for the effect of variables on countries, individually [table VI, Panel C.]. Including the firm-characteristic controls, the results show that only SIZE presents positive and significant [at 1%] effect on compliance for all countries. However, for Germany, the ownership concentration remains significant [at 5%]. If we quit the controls of the models, now the results are more consistent with the all sample model. Nevertheless, for Spain all explanatory variables do not present significant effects, but remain the predicted signals.

VI. Conclusions

In this paper we analyze the signaling theory applied to a corporate governance, namely, the compliance with Codes of Corporate Governance. Additionally, we carefully compared three country institutional settings under the benchmark of OECD Principles of Corporate Governance and then, analyze the determinants of compliance levels to these codes. To do so, first, we perform a content analysis of four codes [OECD, UK's, German and Spanish] to identify the differences and communities.

From this qualitative analysis, we manually constructed a dataset on compliance levels for the first 130 high capitalized firms in Germany, Spain and UK. We are the first to compare those three countries under different theoretical perspective and to explore in a deeper detail the country codes' provisions compared to an internationally accepted benchmark.

Our main contributions are the discussion of signaling theory to Corporate Governance Codes, the comparative analyze of country codes recommendations and the usage of a comparative dataset to understand the determinants of compliance.

To sum up our findings, we found that the recommendations have a high degree of acceptance among each country. Consistent with the differences in the institutional settings, the size of the financial market and the experience with self-regulation on corporate governance, UK's firms present the highest levels of compliance followed respectively by German and Spanish companies.

After analyzing in detail the characteristics of recommendations, and defining those critical provisions that inherently are costly [e.g. disclosure of policies and compensation of the board of directors and executives; structure of the boards and they independence], we found that whatever is the measure of compliance, they all represent a signal and can be used to separate good from bad governance firms. We only expected that costly recommendations would be enough to separate *good* from *bad*. But, still there are some firms that even do not comply with most "non-costly" recommendations, making such index also significant as a signal.

Using the methodology of Tobit [Tobin, 1958], we examine three possible determinants of compliance [ownership structure, institutional pressure and stakeholder pressure] under the case where there are fully compliant firms in the sample.

As expected, the ownership concentration presents a negative and significant effect on compliance. However, under robust checks Spanish firms are not affected by this variable, remaining only the direction of the effect.

Other important findings are that cross list behavior and creditors' pressure affect positively the compliance levels of firms. Again, if we control for size, as this variables is highly correlated with compliance levels it distort the coefficients of other variables.

Limitations

Rationality behavior

The signaling model and the hypothesis developed assume a rationality behavior of organizations in order to maximize an objective function, either profit or other stakeholder function. This approach precludes for other explanations to compliance, like deontological reasons, or business ethics behavior of the board members, that cannot be captured by an econometric methodology. As a future research, one can use an experimental or field research approach to understand deeply the decision-maker structure to compliance inside the boardroom.

T-test

We did not check the changes in groups when changing compliance levels. One can notice that groups [i.e. good or bad] for each compliance level present different number of firms. One interesting research is to understand firms that when we change the index they split to other groups. For the purpose of this paper, however, we did not perform any analytical technique on it.

Compliance as governance quality

The present research on the Codes' compliance is limited to the content analysis of compliance statement. As highlighted by Werder et al.[2005], and other authors, these words and written communications of firms cannot give the whole picture of governance reality is like. Not only because that we cannot control for what they say against what they really do, but also because, as self-regulation norms and intrinsically verbalization and subjectivity, Codes do not establish a definite guideline where firms can be measured as a binary variable, yes or no. An exception could be the Spanish Unified Code that made some progressions on establishing a template where firms have to disclose their compliance practices. However, even for Spain, the problem on information reliability remains.

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Table I

FIRMS' PAYOFFS UNDER A SIGNALING MODEL.

Payoff Values	Signal	Do not signal
Good governance firm	A	B
Bad governance firm	C	D

Source: Adapted from Kirmani and Rao [2000]

Table II

OECD PRINCIPLES ANALYSIS SUMMARY

This table presents a summary of the discussed chapters of OECD Principles regarding the cost of compliance and level of discretion to compliance.

OECD Code, Chapter	Discretionary	Cost of Compliance
II. The rights of shareholders and key ownership functions	Low	High
III. The equitable treatment of shareholders	Low	High
IV. The role of stakeholders in corporate governance	High	High/ Low
V. Disclosure and transparency	High	High/ Low
VI. The responsibilities of the board	High	High/ Low

Table III

PROXIES AND PREDICTED SIGNS FOR HYPOTHESIS

This table presents the proxies used for exploratory variables and their expected signals with respect to the hypothesis proposed.

Hypothesis	Predicted signs	Proxies
H2: Ownership typology	+ / - / - / -	Institutional ownership/ top 1st / top 5th concentrations/ free-float
H3: Institutional pressure	+ / +	Cross-listing / OTC status
H4: Stakeholder pressure	+	Debt

Table IV

DESCRIPTIVE STATISTICS

The following tables show compliance levels, financial and correlation characteristics of non-financial firms from UK, Germany and Spain over the year 2007.

Panel A: Compliance levels

Panel A shows compliance level of firms used as dependent variables on censored regression models. The OCL [overall compliance level] capture the total country average for Codes' provisions compliance. The ACL [adjusted compliance level] measure the country average for compliance levels correcting for the OECD *Principles'* topics regarding the cost of compliance and discretionary power of executives. The CCL [costly compliance level] measure the country average compliance with those recommendations considered costly to firms.

Panel A.1. Germany					
Variable	Obs.	Mean	Std. Dev.	Min	Max
OCL	111	0.939281	0.052091	0.773333	1
ACL	111	0.933593	0.057287	0.761194	1
CCL	111	0.915702	0.092981	0.571429	1
Panel A.2. Spain					
OCL	117	0.722222	0.138071	0.196429	946429
ACL	117	0.714286	0.140985	0.204082	979592
CCL	117	0.653846	0.178081	0.125	958333
Panel A.3. UK					
OCL	94	0.98094	0.025315	0.916667	1
ACL	94	0.979761	0.026918	0.902439	1
CCL	94	0.968617	0.044591	0.85	1

Panel B: Independent variables

Panel B shows the explanatory variables used in the censored regression models, according to the hypothesis. The INST_SHARE measure the average institutional shareholdings. Top 1st and 5th are the concentration measures of the first shareholder stocks and first 5 shareholdings. The FREE FLOAT measures the shares that are free to trade in the market. CROSS LIST and OTC take value 1 if the company cross-lists in US capital market and 0 otherwise. DEBT is calculated by the quotient between the total liabilities and total assets.

Panel B.1. Germany					
Variable	Obs.	Mean	Std. Dev.	Min	Max
INST_SHARE	108	19.29139	17.71505	0	69.71
TOP 1st	108	28.45935	21.07437	2.5	73.64
TOP 5TH	108	48.24009	24.78809	4.5	100
FREE FLOAT	110	46.03182	25.86473	0	93.87
CROSS LIST	108	0.046296	0.211106	0	1
OTC	108	0.240741	0.429526	0	1
DEBT	111	0.620721	0.148151	0.15	0.97
Panel B.2. Spain					
INST_SHARE	117	13.67128	17.52469	0	88.22
TOP 1ST	117	37.04538	24.26799	0.04	99.33
TOP 5TH	117	56.34538	21.73407	0.04	99.33
FREE FLOAT	117	39.45564	21.39847	0.67	99.96
CROSS LIST	117	0.017094	0.130179	0	1
OTC	117	0.205128	0.405532	0	1
DEBT	117	0.616838	0.198149	0.09	0.91
Panel B.3.UK					
INST_SHARE	92	24.95946	14.9021	0	65.77
TOP 1st	92	13.83076	13.14307	1.19	70
TOP 5th	92	31.29391	18.34158	3.12	95.27
FREE FLOAT	92	63.60022	21.77451	0.06	96.88
CROSS LIST	94	0.148936	0.357935	0	1
OTC	94	0.276596	0.449713	0	1
DEBT	94	0.62883	0.179137	0.13	0.99

Panel C: Control variables

Panel C shows the control variables used in the censored regression models. Total Assets [€ million], Return on Assets [ROA] is calculated by the profits/losses before taxes over total assets. Age is calculated by the difference of 2007 and the year of incorporation of the firm.

Panel C.1. Germany					
Variable	Obs.	Mean	Std. Dev.	Min	Max
TOTAL ASSETS	111	15,296.2	36,255.13	74.94	235,466.00
ROA	111	9.40009	8.233755	-2.86	49.87
AGE	111	59.48649	55.70586	1	249
Panel C.2. Spain					
TOTAL ASSETS	117	6,663.688	15,546.06	35.33	105,873.00
ROA	117	5.853675	11.05675	-49.31	46.98
AGE	117	40.90598	28.26201	3	115
Panel C.3.UK					
TOTAL ASSETS	94	17,243.32	30,999.84	832.3	184,379.90
ROA	94	9.937128	10.13872	-13.11	65.24
AGE	85	33.56471	35.70062	0	121

Panel D: Correlation between variables

Panel D shows the pair wise correlation coefficients and their significance levels. Due to normality and standardizing concerns we take the SIZE variable as the natural logarithm of total assets, instead of taking the absolute value of total assets, and the natural logarithm of age. We also take the square of compliance levels to adjust normality and heteroskedasticity problems.

	OCL	ACL	CCL	INST SHARE	TOP 1st	TOP 5th	FREE FLOAT	CROSS LIST	OTC	DEBT	SIZE	ROA	AGE
OCL	1												
ACL	0.9603	1											
	0												
CCL	0.9433	0.8315	1										
	0	0											
INST SHARE	0.2135	0.217	0.1834	1									
	0.0001	0.0001	0.001										
TOP 1ST	-0.3458	-0.3393	-0.3318	-0.1361	1								
	0	0	0	0.0153									
TOP 5TH	-0.357	-0.3498	-0.3467	-0.0139	0.8452	1							
	0	0	0	0.8059	0								
FREE FLOAT	0.3052	0.2887	0.31	-0.1444	-0.7193	-0.9277	1						
	0	0	0	0.01	0	0							
CROSS LIST	0.1769	0.1818	0.1703	-0.0197	-0.1718	-0.2292	0.2586	1					
	0.0015	0.0011	0.0023	0.7279	0.0022	0	0						
OTC	0.1283	0.1359	0.134	0.0535	-0.1175	-0.1617	0.1773	0.4747	1				
	0.0219	0.0151	0.0166	0.3442	0.0372	0.004	0.0015	0					
DEBT	0.0674	0.0948	0.0614	0.0381	-0.0013	-0.025	0.0058	0.0372	0.1114	1			
	0.2275	0.0893	0.2721	0.4993	0.982	0.658	0.9173	0.5076	0.0469				
SIZE	0.4608	0.4764	0.4425	0.1968	-0.1765	-0.2187	0.1939	0.401	0.562	0.278	1		
	0	0	0	0.0004	0.0016	0.0001	0.0005	0	0	0			
ROA	0.1194	0.0794	0.1309	0.0259	0.0252	0.0073	0.03	0.146	0.1258	-0.3434	-0.0468	1	
	0.0322	0.155	0.0187	0.6462	0.6555	0.8968	0.5939	0.009	0.0246	0	0.4028		
AGE	0.0419	0.0441	0.0411	-0.0052	-0.0273	-0.057	0.0301	-0.0332	0.0019	0.0509	0.1225	-0.0306	1
	0.4605	0.4372	0.4691	0.9275	0.6326	0.3183	0.5968	0.5598	0.9738	0.3695	0.0302	0.5896	

Table V

COMPLIANCE AS A SIGNAL

The following tables present the t-test results on comparing means between good and bad corporate governance firms, using the compliance levels as signals to distinguish between the quality of corporate governance.

Panel A: Overall Compliance Level

Panel A shows the test of difference in means between good and bad governance firms, for overall compliance level [OCL]. Means and standard errors are reported, where *** denote that the difference in means is statistically significant at 1 percent levels respectively.

Panel A.1. Germany			
Group	Obs.	Mean	Std. Error.
GOOD	60	0.9793858	0.00243
BAD	51	0.8920986	0.0051463
COMBINED	111	0.9392808	0.0049442
DIFERENCE		-0.0872872***	0.0054251
Panel A.2. Spain			
GOOD	64	0.8203125	0.0075132
BAD	53	0.6037737	0.0150519
COMBINED	117	0.7222223	0.0127647
DIFERENCE		-0.2165388***	0.0159858
Panel A.3. UK			
GOOD	50	1	0
BAD	44	0.9592804	0.0033152
COMBINED	94	0.9809398	0.0026111
DIFERENCE		-0.0407196***	0.0031076

Panel B: Adjust Compliance Level

Panel B shows the test of difference in means between good and bad governance firms, for adjusted compliance level [ACL]. Means and standard errors are reported, where *** denote that the difference in means is statistically significant at 1 percent levels respectively.

Panel B.1. Germany			
Group	Obs.	Mean	Std. Error.
GOOD	61	0.9768561	0.0027169
BAD	50	0.8808122	0.0057329
COMBINED	111	0.9335931	0.0054375
DIFERENCE		-0.0960439***	0.0059921
Panel B.2. Spain			
GOOD	57	0.8270677	0.0078992
BAD	60	0.6071429	0.0139888
COMBINED	117	0.7142858	0.0130341
DIFERENCE		-0.2199248***	0.0162888
Panel B.3. UK			
GOOD	52	1	0
BAD	42	0.954704	0.0033837
COMBINED	94	0.9797614	0.0027764
DIFERENCE		-0.045296***	0.0030371

Panel C: Costly Compliance Level

Panel C shows the test of difference in means between good and bad governance firms, for costly compliance level [CCL]. Means and standard errors are reported, where *** denote that the difference in means is statistically significant at 1 percent levels respectively.

Panel C.1. Germany			
Group	Obs.	Mean	Std. Error.
GOOD	68	0.9753152	0.0031973
BAD	43	0.8214286	0.0124651
COMBINED	111	0.9157015	0.0088254
DIFERENCE		-0.1538866***	0.0106748
Panel C.2. Spain			
GOOD	67	0.7773632	0.0089736
BAD	50	0.4883333	0.0194904
COMBINED	117	0.6538462	0.0164636
DIFERENCE		-0.2890299	0.0197685
Panel C.3. UK			
GOOD	55	1	0
BAD	39	0.924359	0.0060564
COMBINED	94	0.968617	0.0045992
DIFERENCE		-0.075641	0.0050885

Panel D: Non-costly Compliance Level

Panel D shows the test of difference in means between good and bad governance firms, for non-costly compliance level [CLCL]. Means and standard errors are reported, where *** denote that the difference in means is statistically significant at 1 percent levels respectively.

Panel D.1. Germany			
Group	Obs.	Mean	Std. Error
GOOD	65	0.9823642	0.0022377
BAD	46	0.8923647	0.0057024
COMBINED	111	0.9450671	0.0050088
DIFERENCE		-0.0899994***	0.005479
Panel D.2. Spain			
GOOD	58	0.8772414	0.0083401
BAD	59	0.6691525	0.0126391
COMBINED	117	0.7723077	0.0122693
DIFERENCE		-0.2080888***	0.0151952
Panel D.3. UK			
GOOD	55	1	0
BAD	39	0.952381	0
COMBINED	94	0.9903749	0.001983
DIFERENCE		-0.047619	0

Table VI

DETERMINANTS OF COMPLIANCE

Panel A: All Sample, All Hypothesis

Panel A shows the outputs of Tobit regression models of compliance levels considering all sample and only the explanatory variables. We only control for country differences. The coefficients reported are the marginal effects for the expected values of the dependent variable conditional on being uncensored. Robust standard errors are reported in parentheses, where ***, **, * denote that the coefficient is statistically significant at 1, 5 and 10 percent levels respectively. We also run a model tying Top 1st and Free Float instead of Top 5th proxy. The latter present the same signal and significance as Top 5th. Free Float has no statistical significance, but presents a positive signal, following the theory.

Dependent Variable	OCL	ACL	CCL
INST_SHARE	0.0002811	0.0002382	0.000416
	(0.00038)	(0.00039)	(0.00046)
TOP 5TH	-0.0004702**	-0.0005046*	-0.0007328**
	(0.00028)	(0.00029)	(0.00035)
OTC	0.0331589**	0.0410079**	0.0451259**
	(0.0137)	(0.01427)	(0.01765)
DEBT	0.0608359*	0.0714978*	0.102221**
	(0.03577)	(0.03678)	(0.04294)
Controls			
Dummy_Germany	-0.0928338***	-0.1035157***	-0.0987768***
	(0.01605)	(0.0171)	(0.0239)
Dummy_Spain	-0.3662869***	-0.3766286***	-0.4068589***
	(0.02028)	(0.0171)	(0.02579)
Sample	All	All	All
Observations	315	315	315
$R^{2\dagger}$	0.63868545	0.59043802	0.50725713

† The pseudo-R^2 from the model output is McFadden's pseudo-R^2 [44] and it may not be the best measure of fit. Thus, we calculate the R^2 between the predicted and observed values. We present the models that have better adjustments. For further detail on all model we run contact the authors.

Panel B: All Sample, Hypothesis, Controls

Panel B shows the outputs of Tobit regression models of compliance levels considering all sample and only the explanatory variables. We control for AGE, SIZE and ROA, and also for country differences. The coefficients reported are the marginal effects for the expected values of the dependent variable conditional on being uncensored. Robust standard errors are reported in parentheses, where ***, **, * denote that the coefficient is statistically significant at 1, 5 and 10 percent levels respectively. We also run a model tying Top 1st and Free Float instead of Top 5th proxy. The latter present the same signal and significance as Top 5th. Free Float has no statistical significance, but presents a positive signal, following the theory. We omit the variables related to hypothesis 2 due to high correlation with SIZE control.

Dependent Variable	OCL	ACL	CCL
INST_SHARE	0.0001121	0.0000619	0.0002186
	(0.00038)	(0.00039)	(0.00046)
TOP 5TH	-.0005536**	-0.0006005**	-0.0008285**
	(0.00028)	(0.00029)	(0 .00034)
DEBT	-0.0002421	0.0039219	0.0065746
	(0.04355)	(0.0446)	(0.05097)
Controls			
SIZE	0.0184736***	0.0208785***	0.025313***
	(0.00428)	(0.00445)	(0.00527)
ROA	-0.0004142	-0.0004325	-0.0011364
	(0.00076)	(0.00077)	(0.00081)
AGE	-0.0001267	-0.000097	-0.0001574
	(0.00015)	(0.00015)	(0.00021)
Dummy_Germany	-0.0665407***	-0.0753865***	-0.0648137***
	(0.0169)	(0.01787)	(0.02476)
Dummy_Spain	-0.332956***	-0.3394506***	-.0363044***
	(0.0223)	(0.02316)	(0.02823
Sample	All	All	All
Observations	309	309	309
$R^{2\dagger}$	0.62148898	0.60949024	

† The pseudo-R^2 from the model output is McFadden's pseudo-R^2 [44] and it may not be the best measure of fit. Thus, we calculate the R^2 between the predicted and observed values. We present the models that have better adjustments. For further detail on all model we run contact the authors.

Panel C: Country Analysis

Panel C shows the outputs of Tobit regression models, UK and Germany and OLS regression, Spain of CCL compliance level considering subsample by country, the explanatory variables and controls. For Tobit models, the coefficients reported are the marginal effects for the expected values of the dependent variable conditional on being uncensored. Robust standard errors are reported in parentheses, where ***, **, * denote that the coefficient is statistically significant at 1, 5 and 10 percent levels respectively. It important to notice that as UK as a high number of fully compliant firms, there are 49 censored firms.

	Germany	Spain	UK
Dependent Variable	CCL	CCL	CCL
INST_SHARE	0.0003139	-0.0003178	0.0004439
	(0.00053)	(0.0010334)	(0.00049)
TOP 1st			
TOP 5TH	-0.0007205**	-0.0011888	-0.0001523
	(0.00036)	(0.000893)	(0.0004)
FREE FLOAT			
DEBT	0.0139199	-0.010229	0.0118965
	(0.09629)	(0.1100791)	(0.03792)
Controls			
SIZE	0.0288371***	0.0249204***	0.0103724***
	(0.0059)	(0.0114391)	(0.00585)
ROA	-0.0013394	0.0006934	-0.0007934
	(0.00152)	(0.0020495))	(0 .00048)
AGE	-0.000012	-0.0011205	-0.0001689
	(0.00019)	(0.0008148)	(0.00018)
Sample	German firms	Spanish firms	UK's firms
Observations	108	117	84
$R^{2\dagger}$	0.10604767	0.0675	0.07224264

† For UK and Germany where do exist fully compliant firms we run Tobit models, while to Spain we run OLS models. The McFadden's pseudo-R^2 from the Tobit models output may not be the best measure of fit [44]. Thus, we calculate the R^2 between the predicted and observed values. We present the models that have better adjustments.

VIII. Appendix

A. Comparative analysis of Corporate Governance Codes

The purpose of this paper is to understand the Corporate Governance Codes' compliance in UK, Germany and Spain. To do so, we carried out a comparative analysis to further understand the commonalities and differences in corporate governance codes, and to a limited extent, elements of the legal framework and institutional settings.

These three countries exhibit a rich diversity in corporate governance practices, structures and participants, reflecting differences in culture, financing options, corporate ownership models, and legal origins and frameworks. This diversity, in some extent, complicates the comparisons among nations. Nevertheless, the codes that have been issued present significant similarities.

This chapter presents a comparative analysis regarding differences and similarities of UK, Germany and Spain codes. The method of content analysis was employed for examining the codes through the following steps. First we review the antecedent history of corporate governance of each country in order to establish key criteria for benchmarking institutional arrangements of corporate governance codes. From this procedure and based on both theoretical and empirical studies [Ingram, 2004 and Huse, 2007][35], we define the OECD *Principles* of Corporate Governance as the benchmark to compare the country codes.

Table VII

CODE CHARACTERISTICS ACROSS SELECTED COUNTRIES

This table presents the main characteristics of each code in order to understand some differences regarding its evolution and the institutional setting where it is placed. [*] Although the German Corporate Governance Code and The Combined Code were amended in 2008, we have considered, respectively the 2006 and 2007' amendment in order to align the information set and data to the same period.

Code Characteristics	OECD	UK	Germany	Spain
Code Name	OECD Principles of Corporate Governance	The Combined Code on Corporate Governance	German Corporate Governance Code	Unified Code on Good Corporate Governance
Date of introduction	1999, reviewed 2004	1998, reviewed 2003, 2006 and 2008*	2002, reviewed 2003 and 2007, 2008*	2005
Antecedents		Cadbury Report, 1992; Greenbury Report, 1995; Hampel Report, 1998; Turnbull Report, 1999; Higgs Report, 2003; Smith Report, 2003.	Baums Commission Report [Bericht der Regierungskommission Corporate Governance], 2001; Berlin Initiative Group - German Code of Corporate Governance [GCCG], 2000; Corporate Governance Rules for German Quoted Companies, 2000; DSW Guidelines, 1998; Gesetz zur Kontrolle und Transparenz im Unternehmensbereich [KonTraG], 1998	Código de Buen Gobierno ['The Olivencia Code"], 1998; The Aldama Report, 2003
Issuing body	Intergovernmental organization	Committee related to stock exchange, and business, industry and/or academic association	Committee organized by the government	Committee organized by the government
Objectives	Improve firms' performance,	Improve quality of the board and	Improve firms' performance,	Improve firms' performance,

Code Characteristics	OECD	UK	Germany	Spain
	competitiveness and access to capital	its governance and supervisory; improve quality of governance-related information available to equity markets	competitiveness and access to capital	competitiveness and access to capital
Compliance Mechanism	Voluntary, encourages creation, assessment and improvement of appropriate legal and regulatory framework; encourages voluntary adoption of best practices standards	Comply or Explain: creates mandatory disclosure framework [in connection with listing rules] to encourage improved practices	Comply or Explain: creates mandatory disclosure framework [in connection with listing rules] to encourage improved practices	Comply or Explain: creates mandatory disclosure framework [in connection with listing rules] to encourage improved practices
Scope of companies considered	Focus primarily on publicly listed companies but do not exclude private held and state-owned firms	All companies incorporated in the UK and listed on the main market of the LSE	German listed companies	Spanish public-listed companies
Legal origins	-	Common law	Civil law, German Origin	Civil law, French Origin

Sources: La Porta *et al.* [1998], Weil *at al.* [2002, 2008], ECGI, Mallin [2006], author analysis.

To carry out the comparative analysis we begin with an overview of the relevant institutional setting for corporate governance in each country[36].

Codes' recommendations

Taking the *Principles* as a reference, we deeply analysis each recommendation structure and compare with the OECD provisions. In order to substantiate the reliability of the comparative table, we not only evaluate the word sentences but also took into consideration the Annotations of the *Principles* [OECD, 2004], and other references of country code that could help to correctly correspond each provision [for example, the Appendix 2 of the Spanish Unified Code and previous comparative studies like Weil *et al*., 2002, 2003 and 2008].

The first difference among codes is the number of provisions defines as good governance practices that firms shall comply. Table VII presents the number of recommendations and topics by which the codes are developed.

Table VIII

NUMBER OF RECOMMENDATIONS

This table presents a comparative table regarding the number of recommendations for each code. (*) The German Code has 73 recommendations and considering those that are enforced to be disclosed, shall recommendations, the number increases to 76 provisions.

	OECD	UK	Germany	Spain	Total
# of Recommendations	28	48	76*	58	207
# of Topics	5	4	6	4	19
# of Subtopics		14	14	30	58

The German Code of Corporate Governance presents a particular characteristic regarding the framing of each recommendation. The recommendations are marked in the text by use of the word *shall*. Companies can deviate from them, but are then obliged to disclose the reasons to do so. This recommendation embedded the principle of "comply or explain" and so, enables companies to reflect sector and enterprise-specific requirements. Additionally, the code contains suggestions which can be deviated from without disclosure; for this the Code uses terms such as *should* or *can*. And finally, the remaining passages not marked by these conditions contain provisions that enterprises are compelled to observe bylaw. For comparison reasons, we have considered only the "real" recommendations, those defined by *shall* terms. An after counting the amount of shall terms in the Code, it summed 76 recommendations.

It seems to present more recommendations than the UK`s or Spanish self-regulation, 36.84% and 31.03% respectively. Actually, those codes are conformed in general terms and sometimes include a list of statements under the same recommendations. However, the comparative still maintain the integrity and reliability because the content analysis take into account the sentence as the unit of analysis to compare against the benchmark.

Table IX

NUMBER OF RECOMMENDATIONS BY OECD TOPIC

This table presents a comparative analysis of country recommendations distribution upon the OECD structure.

OECD TOPIC	Spain	UK	Germany	Total	%	Accum. %
VI	46	34	41	121	67.22%	67.22%
V	3	7	27	37	20.56%	87.78%
II	6	7	1	14	7.78%	95.56%
III	1	-	7	8	4.44%	100.00%
Total	56	48	76	180		

Table X

NUMBER OF RECOMMENDATIONS BY OECD PROVISIONS

This table presents a comparative analysis of country recommendations distribution upon the OECD provisions.

OECD PROVISIONS	Spain	UK	Germany	Total	%	Accum.%
VI.D	17	15	23	55	30.56%	30.56%
VI.E	24	15	15	54	30.00%	60.56%
V.A	3	6	16	25	13.89%	74.44%
II.C	4	5	1	10	5.56%	80.00%
III.C	-	-	7	7	3.89%	83.89%
VI.F	4	2	1	7	3.89%	87.78%
V.E	-	-	6	6	3.33%	91.11%
V.C	-	-	4	4	2.22%	93.33%
II.F	-	2	-	2	1.11%	94.44%
V.D	-	1	1	2	1.11%	95.56%
VI.A	1	1	-	2	1.11%	96.67%
VI.C	-	1	1	2	1.11%	97.78%
II.B	1	-	-	1	0.56%	98.33%
II.E	1	-	-	1	0.56%	98.89%
III.A	1	-	-	1	0.56%	99.44%
VI.B	-	-	1	1	0.56%	100.00%
Total	56	48	76	180		

Table XI

DISTRIBUTIONS OF RECOMMENDATIONS BY OECD TOPICS

The table presents the distribution of recommendations by OECD Principles' topics for each country. (*) For a specific country, it represents distribution of recommendations by topic. (**) For a specific OECD topic, it represents the distribution of recommendation by country.

	OECD Topics				
Country	II	III	V	VI	Total I
	6	1	3	46	56
Spain	10,71%*	1,79%	5,36%	82,14%	100%
	42,85%**	14,29%	8,33%	38,02%	31,46%
	7	0	7	34	48
UK	14,58%	0,00%	14,58%	70,83%	100,00%
	50,00%	0,00%	19,44%	28,10%	26,96%
	1	6	26	41	74
Germany	1,35%	8,11%	35,14%	55,40%	100,00%
	7,15%	85,71%	72,22%	33,88%	41,57%
	14	7	36	121	178
Total II	7,87%	3,93%	20,22%	67,98%	100,00%
	100,00%	100,00%	100,00%	100,00%	100,00%

B. Corporate Governance Codes Comparison

Table XII

THE RIGHTS OF SHAREHOLDERS AND KEY OWNERSHIP FUNCTIONS

The table presents the similarities and differences among codes' provisions related to "The rights of shareholders and key ownership functions" from the OECD Principles. The references in each column represent the country classification of recommendations. The text of each provision was omitted to facilitate the reading.

OECD	UK	Germany	Spain
II.A.[basic shareholder rights]	-	-	-
II.B.[decision participation]	-		3.[competences of GSM]
II.C.[participation on GSM]			
II.C.1.[timely information]	D.2.4 .[timely information]	2.3.1. and 2.3.2.[timely information]; 6.7.[timely information]	4.[prior circulation of proposals]
II.C.2.[ask questions]	D.2.3.[committee answers]		-
II.C.3.[board structure decisions]	A.7.1.[board re-election decisions]; B.2.4.[remuneration approval]	-	5. [separate votes on GSM]; 27.[selection of the board]; 40.[the advisory vote at GSM]
II.C.4.[vote in person or proxy]	D.2.1.[proxy forms]; D.2.2.[proxy recording]	2.3.3.[voting rights]	-
II.D.[capital structure and control]	-	-	-
II.E.[market for control]	-	-	-
II.E.1.[transactions rules]	-	-	-
II.E.2.[anti-takeover]	-		1.[voting caps and anti-takeover]
II.F.[exercise of rights]	D.1.1. and D.1.2.[dialogue with shareholders]	-	-
II.F.1.[institutional investors corporate governance]	Section 2	-	-
II.F.2.[institutional investors conflict of interest]	Section 2	-	-
II.G.[consultation b/w shareholders]	-	-	-

Table XIII

THE EQUITABLE TREATMENT OF SHAREHOLDERS

The table presents the similarities and differences among codes' provisions related to "The equitable treatment of shareholders" from the OECD Principles.

OECD	UK	Germany	Spain
III.A.[equally treatment]	Preamble 6. and D.1 [dialogue with institutional shareholders]		
III.A.1.[same series, same rights]	-		
III.A.2.[minority protection]	-	-	-
III.A.3.[custodians or nomimees of votes]	-	-	6.[split votes]
III.A.4.[cross-border voting]	-	-	-
III.A.5.[cheap processes]	-	-	-
III.B.[insider trading]	-	-	-
III.C.[disclose conflicts of interest from director or executives]	-	4.3.4.[disclose conflicts of interest]; 5.5.3.[disclose conflicts of interest]	-

The Chapter IV of the OECD Principles refers to "The Role of Stakeholders in Corporate Governance". The objective is to stimulate countries to recognize the rights of stakeholders and encourage the co-operation between companies and stakeholders. The reasoning is the fact that corporate governance is also concerned about stimulating several stakeholders to invest in the firm, e.g. due to firm-specific human capital [employees] or physical capital [suppliers, clients and creditors]. Hence, companies must recognize the importance of those resources to firms' competitiveness.

Nevertheless, the country codes we selected to study do not provide much information regarding this issue. Actually, such rights were considered in other legislative devices and regulations, for example, employment regulation and labor law, commercial law and regulation, and public listed regulation and securities market law.

As prescribed by law for German stock corporations, companies with more than 500 or 2000 employees must have employee representation at the Supervisory Board. It is composed of employee representatives to one third or to one half respectively. For firms with more than 2000 employees the Chairman of the Supervisory Board has the casting vote in the case of split resolutions. Thus, the German Corporate Governance Code does only mention its rights on the foreword and does not make any specific recommendation at Codes' body

In the Spanish case, the group responsible to develop the code [working group] stated at the introduction of the code:

> *"[…] In drawing up its recommendations, the Group elected to confine itself to: The internal governance of listed companies, i.e. without venturing too far into the terrain of "corporate social responsibility", which mainly refers to companies' dealings with stakeholders other than shareholders, is not circumscribed to listed companies and is being dealt with independently by a parliamentary sub-commission."[Stressed by author]*

The preamble clearly states that the objective of the code is not to deal with such broaden perspective. Despite, in the seventh recommendation it states that board directors should ensure that the company abides by the regulations in its dealings with all stakeholders.

In the UK, the groups, which probably have the most influence, are banks and other debt holders, followed by employees [Filatotchev *et al.*, 2007]. As La Porta *et al.* [1997] have show the UK legal environment, as described by legal rules and enforcement, are very powerful to protect external finance stakeholders. Thus, it could explain why the combined code leaves to specify other stakeholders' rights.

Consequently, there is no meaning to make a comparative analysis of codes' provision regarding to this chapter – "*The role of stakeholders".* Nevertheless, an institutional analysis on corporate governance regulatory frameworks and law of each of these countries would be useful to understand how they manage the relationship among those agents.

Table XIV

DISCLOSURE AND TRANSPARENCY

The table presents the similarities and differences among codes' provisions related to "Disclosure and transparency" from the OECD Principles.

OECD	UK	Germany	Spain
V.A.[general disclosure]			
V.A.1.[financial and operating results]	C.1.1.[financial report]; C.1.2.[business report]		-
V.A.2.[company objectives]	-		-
V.A.3.[share ownership and voting rights]	-	6.6.[boards share ownership]	-
V.A.4.[remuneration policy and information about board members]	A.1.1.[board operation]; A.1.2.[board structure and organization] A.3.1.[disclose independence of directors] A.4.6.[nomination committee work] B.1.4.[remuneration report]	4.2.5.[management board, compensation disclosure] 5.4.7.[supervisory board, compensation disclosure] 7.1.3.[stock option programs]	28.[directors information] 41.[individual remuneration]
V.A.5.[related parties transactions]		4.3.4.[management board, disclose conflicts of interest]; 7.1.4.[disclose third party companies]; 7.1.5.[related parties]	2.[listed companies from the same group];
V.A.6.[risk factors]	-	-	-
V.A.7.[issues regarding employees and other stakeholders]	-	-	-
V.A.8.[governance structure]	-	-	-
V.B. [accounting standards]	-	-	-
V.C. [independent audit]	C.1.1.[financial audit report]	7.2.1.S1,S2[audit election]; 7.2.3.[board audit procedures]	-
V.D.[accountable auditors]	C.3.7.[audit accountability]	7.2.1.S3[audit accountability]	-
V.E.[timely and cost-efficient channels of info]	-	6.4.[suitable communication media] 6.5.[timely information]; 6.8.[internet site] 7.1.2.[timely info]	-

OECD	UK	Germany	Spain
V.F.[provision of analysis]	-	-	-

Table XV

THE RESPONSIBILITIES OF THE BOARD

The table presents the similarities and differences among codes' provisions related to "The responsibilities of the board" from the OECD Principles.

OECD	UK	Germany	Spain
VI.A.[diligence act of board members]	-	-	7.[good faith act]
VI.B.[fairly treatment of all shareholders]	-	6.3.[equal treatment of shareholders in respect of information]	-
VI.C.[ethical standards]	A.1.5.[directors' liability insurance]	3.8.[directors' liability]	-
VI.D.[key functions]	-		8.[competence of the board]
VI.D.1.[corporate strategy and plans]	-	7.1.2.[disclose financial info]	-
VI.D.2.[monitoring corporate governance]	A.1.3.[independent performance evaluation]; A.6.1.[performance evaluation]	3.10.[corporate governance report]; 5.6.[examination efficiency] 4.1.3.[management board, compliance]; 5.1.3.[supervisory board, issue rules]	18.[board actions concerning to governance practices]; 22.[regular evaluation]
VI.D.3.[monitoring key executives]		5.1.2.[supervisory board, monitoring]	
VI.D.4.[remuneration alignment]	B.1.1. to B.1.3.[remuneration policy]; B.1.5. and B.1.6.[service contract compensation]	4.2.2. and 4.2.3. [management board, compensation] 5.4.7.[supervisory board, compensation]	35.[board of director remuneration approval]; 36.to 39.[remuneration guidelines]
VI.D.5.[transparent board nomination]	A.4.1. to A.4.5.[appointment process to the board] A.7.1 and A.7.2.[re-election process]	4.2.1.[management board composition]; 5.4.1.[supervisory board, nomination criteria] 5.4.3.[supervisory board, election criteria]	9.[size of the board]; 14.[explaining the nature of directors]; 18.[the secretary nomination]; 27.[selection, appointment and renewal]; 30. to 34. [removal and resignation of directors]
VI.D.6.[monitoring conflicts of interests]	-	5.5.2.[supervisory board, conflicts of interest]	-
VI.D.7.[risk management]	C.2.1.[internal control]		47., 48., 49. [internal audit control and risk management]
VI.D.8.[disclosure and communication process]	-	-	-

OECD	UK	Germany	Spain
VI.E.[independent judgment]	-	-	-
VI.E.1.[non-executive members]	A.2.1. and A.2.2. [duality: CEO x Chairman]; A.3.1., A.3.2. and A.3.3.[independent directors]	5.2.[supervisory board, chairman cannot be the chairman of audit committee]; 5.4.2.[supervisory board, number of independents] 5.4.4.[supervisory board, duality: CEO x Chairman]	10.[non-executive directors] 11.[other directors] 12.proportion b/w directors] 13.[sufficient number of independent directors] 17.[duality: CEO x Chairman] 29.[rotation of independents]
VI.E.2.[committees process disclosure]	B.2.1., B.2.2. and B.2.3.[remuneration committee] C.3.1., C.3.2, C.3.3., C.3.4., C.3.5 and C.3.6.[audit committee]	5.2.[supervisory board, chairman also the chairman of remuneration committee]; 5.3.[supervisory board, committees formation], from 5.3.1 to 5.3.5	42., 43., 44., 45., 46., 50., 51., 52., 53., 54., 55., 56., 57 and 58. [on committees]
VI.E.3.[commitment]	A.1.4.[directors concerns recording] A.5.1.[professional development]]	4.3.5.[sideline activities]; 5.4.5. [supervisory board, directors dedication]; 5.4.8.[supervisory board, assistance on meetings]	19.[regular board meetings] 20.[directors absence control] 21.[directors specific concerns] 26.[directors dedication]
VI.F.[access to relevant info]	A.5.2.[professional advice]; A.5.3.[secretary advice]	3.4.[sufficient information]; 5.2.[supervisory board, chairman always informed]	16.[chairman should ensure that director have sufficient information]; 23., 24., 25. [information to directors]

[1] See, Arcot and Bruno [2005].

[2] The European Corporate Governance Institute [ECGI] present more than 70 countries and institutions that have defined their own Codes of Corporate Governance see http://www.ecgi.org/.
For a detailed analysis of the evolution of Codes of Corporate Governance around the world, see Aguilera and Cuervo-Cazurra [2004 and 2009].

[3] According to the World Federation of Exchanges members [see http://www.world-exchanges.org], the London Stock Exchange and the Deutsche Börse are, respectively, the first and the second greatest market capitalization.

[4] Although most of Corporate Governance literature states that the seminal Code was the Cadbury Report from UK, Aguilera and Cuervo-Cazurra [2004 and 2009] consider the beginning of Codes to a set initiatives carried out by in the USA by the Securities Exchange Commission, the New York Stock Exchange, and the Roundtable, in the late 70's. Those initiatives were followed many years later by the Hong Kong Stock Exchange who, in 1989, issued its first "Code of Best Practice, Listing Rules", and by the Irish Association of Investment Managers, who drafted the "Statement of Best Practice on the Role and Responsibility of Directors of Publicly Listed Companies", in 1991.

[5] Nuñez [2007] present a theoretical model to investigate the performance of self-regulation mechanisms.

[6] See Thomsen [2007], Hart [1995], Daily *et al.* [2003] and De Jong *et al.*[2004].

[7] The OECD Principle of Corporate Governance [2004] defines that countries should follow a flexible regulatory regime on their corporate governance codes. Moreover, Hart [1995] states that the case for statutory rules on corporate governance issues is weak and so the Cadbury approach ["comply or explain" approach] of trying to educate and persuade firms to make changes is probably the best one.

[8] The Higgs Report was a report chaired by Derek Higgs on corporate governance commissioned by the UK government, published in January 2003. It reviewed of the role and effectiveness of non-executive directors and of the audit committee, aiming at improving and strengthening the existing Combined Code.

[9] See Novak *et al.* [2004, p.3, 2006, p.2], where they directly quoted Mr. Gerhard Cromme, the Chairman of the Code Commission [Wer den Kodex nicht einhält, den bestraft der Kapitalmarkt], in: Frankfurter Allgemeine Zeitung, December 19, 13.

[10] "It is for shareholders and others to evaluate the company's statement", quoted from the Combined Code on Corporate Governance [Financial Reporting Council, 2006, p.1). Similarly, about the German code, "It is left to the capital market to evaluate the equivalence of any deviations [to the code provisions]" [Seidl and Sanderson, 2009, p.6]. The role of stakeholders' pressure [e.g. employees, credit holders, etc.] will be discussed in the following sections.

[11] For instance, the Brazilian Stock Exchange, Bovespa, launched a new market segment, "Novo Mercado", which allows companies to differentiate themselves in terms of governance practices.

[12] Adverse selection problem occurs when one party cannot accurately assess the quality of the product that they are buying; it is likely that the marketplace will contain generally poor quality products. See, Akerlof [1970].

[13] In some game theoretic formulations, signaling and self-selection [screening] models are differentiated by the order of moves, with the informed party moving first in signaling models, and the uninformed in screening models [Stiglitz, 2000].

[14] For convenience, I refer to good governance firms those who have good corporate governance practices and bad governance firms otherwise.

[15] See Appendix B for the formalization of the model.

[16] We understand gains by net value of the benefits of the signal minus its cost.

[17] A classical example of adverse selection problem was first developed by Akerlof [1970] using the used car market. To represent how adverse selection works, Akerlof assumed that the owners of used cars know the true quality of their cars while potential buyers do not. At any given market price, owners, knowing the true quality of their cars, will offer for sale only those cars actually worth less then market price, "the *lemons*" while keeping any car actually worth more, "*the peaches"*.

[18] See, Dewatripont and Tirole [2005, p.1218 and 1219]. Soft information cannot be substantiated, and so its validity can never be assessed by the receiver [it is just *cheap talk*]. However, hard information looks at information that can be verified by the receiver, but it usually assumes that its disclosure and absorption are both costless.

[19] According to Arcot and Bruno [2006, p.7] companies often believed that the Codes was too prescriptive, in the sense that shareholders would be interested only in the comply box - yes or no-, without paying attention to the explanation related to the diversity of circumstances and experience among and within companies. Stating *no* was usually interpreted as a signal of bad corporate governance. In order to overcome the box-ticking approach, the report aimed at securing adequate disclosure such that investors and shareholders were sufficiently informed when assessing the companies' governance practices, including the cases of departure from best practice. In fact, in this paper we do interpret the *no* as a bad signal, but making a deeper analysis on which recommendations do firms usually say *no*. This analysis permits to overcome the interpretation that the box sticking is a simplistic way to anal size compliance. For instance, if a company does comply with all recommendations, and part of these recommendations reflects high cost of compliance, it means this firm is signaling that they are committed to good governance. In the other hand, if a firm does comply with some recommendations that do not reflect any marginal cost to the firm; it can be interpreted as a box-ticking and do not reflect good governance.

[20] Full-time equivalent [FTE] is a way to measure a worker's involvement in a project.

[21] The Principles were developed to address three mainly problems that its country-economies were facing then. First, there was a general consensus that many players in the system, whether they are directors, auditors, analysts or brokers, seemed to lack independence or be tainted by inherent conflicts of interest. Second, poor disclosure practices were becoming increasingly prevalent. And

third, the incentive structures in the system were not always working effectively and institutional investors, who have the market power to influence board behavior, were often passive.

[22] Moreover, the IMF and World Bank have been using the Principles as a benchmark in their country Reports on the Observance of Standards and Codes.

[23] "The Commission Action Plan on modernizing company law and enhancing corporate governance in the European Union set the improvement of the rights of shareholders of companies across the Member States as a priority. After it carried out two public consultations, the Commission, therefore, proposed on 5 January 2006 a directive which was formally adopted in June 2007. The Directive that has to be transposed into Member States' laws by summer 2009 will ensure in particular that shareholders have timely access to the complete information relevant to general meetings and facilitates the exercise of voting rights by proxy. Furthermore, the directive provides for the replacement of share blocking and related practices through a record date system." [Europe Commission, available at http://ec.europa.eu/internal_market/company/shareholders/indexa_en.htm, accessed on June 26, 2009].

[24] This study investigates the relationship between hazardous waste lawsuits and stockholder returns.

[25] According to Davis and North [1971, p. 6:7], the institutional environment is the set of fundamental political, social, and legal around rule that establishes the basis of production, exchange and distribution. Rules governing elections, property rights, and the right of contracts are examples.

[26] Material information can be defined as information whose omission or misstatement could influence the economic decisions taken by users of information [OECD, 2004, p.50]

[27] Ali, Chen and Radhakrishnan [2007] propose two main agency relationships within listed firms. A type I agency relation concerns shareholders and managers whereas type II agency relationship involves majority and minority shareholders.

[28] The majority shareholders are those with a majority of votes and, frequently, a high involvement in the firm's management. Taking this into account they can be seen as an agent, rather than a principal.

[29] See, La Porta, Lopez-de-Silanes and Shleifer [1999] and Franks and Mayer [1990,1994].

[30] In Spain firms have to fulfill a specific report on corporate governance practices defined by stock-exchange regulator [i.e. Informe Anual de Gobierno Corporativo]. In Germany firms have to disclose in a specific form [i.e. Declaration of Compliance] which are the recommendation they are following, or not, and why. In UK, the disclosure of compliance is a chapter on Corporate Governance into the Annual Report.

[31] For Germany and Spain, other 2 recommendations were discarded because their refer for country specific purposes, and so, could bias the results.

[32] American Depositary Receipt [or, simply, ADR] represents ownership in the shares of a non-U.S. company and trades in U.S. financial markets.

[33] Here we only introduce the marginal effect expressions, further detail on the censured regression model [i.e. Tobit analysis] its marginal effect and estimations can be gather on Greene [1997] and other econometrics text books. One important consideration is that those marginal effects are considered in a model censored at the bottom. Our purpose in only to highlight the differences between the Tobit model we use and OLS regressions regarding the interpretation of parameters.

[34] FTSE 100 represents 100 large market capitalization firms listed in the London Exchange. The DAX [Deutscher Aktien IndeX] is a blue chip stock market index consisting of the 30 major German companies trading on the Frankfurt Stock Exchange. The MDAX includes the 50 prime standard shares from sectors excluding technology that rank immediately below the companies included in the DAX index. The SDAX is the selection stock market index for 50 smaller companies in Germany, terms of market capitalization rank directly below the MDAX shares. The IBEX 35 is the benchmark stock market index of the "Bolsa de Madrid", Spain's principal stock exchange.

[35] Moreover, the IMF and World Bank have been using the Principles as a benchmark in their country Reports on the Observance of Standards and Codes.

[36] An effective corporate governance framework is supported by and dependent on countries' environmental conditions, including securities regulation, company law, accounting and auditing standards, bankruptcy laws, judicial enforcement and the nature of the market for corporate control. To understand one nation's corporate governance practices in relation to another's, one need to understand not only the corporate governance codes but also the underlying legal and enforcement framework. However, a full comparative analysis of this legal and regulation structures that shape economic trade under each country is beyond the scope of this work.