Human Capital Disclosure from the Intellectual Capital and Social Responsibility perspectives: the role of Corporate Governance[1]

Francisca Tejedo-Romero (University of Castilla-La Mancha, Spain)
Joaquim Filipe Ferraz Esteves Araujo (University of Minho, Portugal)

Abstract

Intangible Resources are considered one of the most important elements of a company's competitive advantage and a crucial factor for the creating of a company's sustainable value over time, in particular the Human Resources. These resources have been recognized in the literature as Intellectual Capital, composed of Human, Structural and Relational Capital.

In addition, sustainability address companies to adopt a "triple bottom line" to include economic, environmental and social aspects. Activities undertaken by companies concerning social responsibility create value. This value is of an intangible nature and offers companies the ability to create, share and manage knowledge that supports the creation of sustainable competitive advantages. This could be oriented to the attraction, retention and management of talent people who are part of the company, promoting the creation of knowledge (Human Capital).

In this context, the main objective of our work is to analyse Human Capital disclosure by companies. The main contribution of this study is that it extends previous works considering the Intellectual Capital and Social Responsibility perspectives. Regarding the Intellectual Capital, the study analyses the education, training, experience, skills and competencies at work, values and attitudes of workers and others. With regard to Social Responsibility, it analyses information about social and ethical issues concerning relations between workers and companies, health and safety in the workplace, diversity and equal opportunities, among others. This study provides evidence on whether these categories are reported in integrated annual and sustainability reports, under the framework of the resources and capabilities, legitimacy and stakeholders theories. On the other hand, the information disclosure is considered an integral part of Good Corporate Governance and being transparency a key element for a good system of corporate governance. Information disclosure is an important and efficient means of protecting shareholders, since higher information disclosure could contribute to reduce information asymmetry, to clarify the conflict of interests between shareholders and management. Based on agency theory, our second objective is to examine the importance of corporate governance mechanisms on human capital disclosure. This research conducted a content analysis of integrated annual reports and sustainability reports on a sample of companies listed on the Spanish Stock Exchange (IBEX 35). Balanced panel data analysis techniques were used to test our hypothesis.

Key words:
Human Capital, Intellectual Capital, Social Responsibility, Corporate Governance, Sustainability Report

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1. Introduction

Companies are developing their activities in an environment characterized by knowledge-based economies, with skilled and highly skilled labour. Knowledge has become a strategic resource for companies competing in dynamic environments (Ordoñez de Pablos, 2002, 2003). Human capital is the knowledge, skills, experiences and abilities of people (Beattie & Smith, 2012). In addition, in recent years, Social Responsibility and Corporate Governance linked with sustainable development in business performance are issues that have aroused great interest both in companies and in society in general (Muttakin & Khan, 2014).

Questioning the business conduct of the activities carried out by companies, the damage caused to the environment and human rights abuses, leads companies to implement Social Responsibility strategies. The questioning of companies practices concerning their activities, the damage caused to the environment and the human rights abuses, led companies to implement strategies Social Responsibility. Moreover, the recent financial and accounting fraud carried out by some companies have questioned the credibility of the accounting and economic-financial information and the role of auditors, regulators, analysts and advisors.

Under this scenario, companies' proceedings within the framework of social responsibility generates value of intangible nature. Specifically, the Human Capital is one of the most important resources of intangible nature that companies have to create wealth in a sustainable manner (Tejedo-Romero & Araujo, 2016). Nevertheless, traditional financial statements do not offer a holistic view of the company's value (Lev, 2003; Ordoñez de Pablos, 2003). This generated a loss of useful information leading to information asymmetry problem (Bozzolan, Favotto, & Ricceri, 2003; García-Meca, Parra, Larrán, & Martínez, 2005). Greater asymmetric information leads to higher voluntary information disclosure practices (Healy & Palepu, 2001; Martínez-Ferrero, Ruiz-Cano, & García-Sánchez, 2015). Thus, voluntary disclosure of information is a practice of socially responsible behaviour by companies given the need to a more complete and transparent information from the companies; transparency is a key element of Good Corporate Governance.

Some international organizations recognize that employees play an important role in contributing to the success and performance of companies in the long term, as well as emphasize the importance of information disclosure relating to their employees (EU, 2014; GRI, 2013; OECD, 2015). This will provide investors and other stakeholders with a more comprehensive picture of a company's value (EU, 2014).

This paper uses an analytical frame that comprised legitimacy theory and resource and capabilities based perspective to explore and analyse disclosure of information concerning human capital in integrated annual and sustainability reports by Spanish companies. It uses agency theory to explore the influence of good corporate governance on Spanish companies' human capital disclosure. The study focuses on the Spanish stock exchange's benchmark index, the Ibex-35, which tracks the 35 most traded shares, and which we consider representative of the market as a whole. The Human Capital disclosure in integrated annual and sustainability reports in an eight-year period, 20072014, are investigated using content analysis (creating a disclosure index), and panel data analysis techniques.

We have selected the Spanish context for several key reasons: *a)* the existence of requirements for Spanish listed companies according to Law 26/2003 of July 17th called the 'Transparency Act', such as to have a website through which shareholders and stakeholders can be kept informed about its corporate governance in order to enhance the transparency of listed companies (Tejedo-Romero & Araujo, 2016); *b)* the interest in extending empirical previous evidence, which is generally from Anglo-Saxon settings (Gisbert & Navallas, 2013); *c)* the legal protection of shareholders is not as extensive as that of Anglo-Saxon markets (García, Rodríguez, & Gallego, 2011); Spanish stock markets are less developed and play a far lesser role than British or American markets do (Fernández-Méndez & Arrondo-García, 2007); *d)* it is a leading country in sustainability with one of the highest numbers of CSR reports disclosed by companies (Garrido-Miralles, Zorio-Grima, & García-Benau, 2016); and because Spanish government it is promoting the development of socially responsible practices (Luque-Vílchez & Larrinaga, 2016; Reverte, 2015); *f)* the higher interest in analysing the role of good corporate governance on companies' disclosure practices (García et al., 2011) because Boards of Directors in Spain are one-tiered, which means that Board members manage the company and also supervise its activity (Melle, 1999), thus promoting an active participation in the taking of strategic decisions. For all that, it is necessary to disclose more information, especially human capital disclosure, in order to improve the shareholders' knowledge and trust in the company's behaviour and performance (García et al., 2011).

This research contributes to the existing literature in several ways: first, it develops a framework to explain the Human Capital disclosure from the perspective of sustainability (social responsibility) and knowledge generation (intellectual capital); second, to implement our framework on sustainability reports to Spanish listed companies; third, to test the effects of good corporate governance on Human Capital disclosure; finally, allows us to contrast the arguments of the theories of resource and capabilities, legitimacy and agency, at the same time that it obtains some practical implications that can be useful to accounting standard setters and managers responsible for Human Capital disclosure.

The paper proceeds as follows. In the next section, we discuss the theoretical framework of our research and in Section 3 we present the research methodology. The most relevant results are presented in Sections 4 and Sections 5 conclude.

2. Theoretical Background and Hypotheses Development

2.1. Spanish regulatory context

Recently European Commission introduced new requirements for non-financial information reporting through European Directive 2014/95/UE on 22 October 2014 and concerned to information disclosure about social and employee issues. These requirements applies to companies with more than 500 employees, including listed companies as well as other public-interest entities (EU, 2014). This directive will not affect companies until it is transposed into the domestic law in each Member States (Luque-Vílchez & Larrinaga, 2016). Member States laws must comply with the directive before 6 of December of 2016, to be applicable to fiscal years beginning on 1 of January of 2017. This Directive is part of the "renewed EU strategy 2011-2014 for Corporate Social Responsibility" (EC, 2011a), which stressed the need to create conditions favourable to sustainable growth, responsible business behaviour and durable employment generation in the medium and long term.

In this context Spain anticipated possible outcomes of the 2014/95/EU Directive through approval by the Spanish government of the Law 2/2011 of 4 of March, on "Sustainable Economy" (Spanish Parliament, 2011) and that has culminated in the "Spanish strategy on companies' corporate social responsibility practices 2014-2020" (Spanish Ministry of

Employment and Social Security, 2014). This was the response to the recommendations reflected in the renewed "Strategy of the European Union on Corporate Social Responsibility" and aim to promote responsible practices in both in order that they became a significant driver of the country's competitiveness and its transformation to a more sustainable society (Reverte, 2015). Spain Government plays a pivotal role in driving sustainability disclosure at national level. Nevertheless, disclosure of social performance is not mandatory for Spanish companies

Sustainable Economy Law (2011) encourages (does not mandate) Spanish companies to publish a specific voluntary annual report about their social responsibility policies and outcomes. Although it is a recommendation, it specified that in the case of companies with more than 1000 employees, the corporate social responsibility reports should be submitted to the State Council for Corporate Social Responsibility (CERSE). The latter requirement is not implemented due to bureaucratic hurdles, since the CERSE has not made public how or where these reports should be submitted.

The first Spanish document that refers the importance of social information and intellectual capital disclosure was the White Paper for the Reform of Accounting in Spain, compiled by the Spanish Accounting Standard Setting Board in 2002 (ICAC, 2002). This document presents a series of reflections and recommendations related to voluntary publication of a set of elements that by their nature and relevance are useful for stakeholders. The information relates to the following aspects: (a) social information: training and career development of employees; health and safety in the workplace; actions in favour of the local community on the cultural, etc., it is recommended that the memory[1] contains social information, (b) information on intangible resources: vision of the company on its competitive position; management of intellectual capital and representative indicators of the value of its intangible resources and activities, etc. It is recommended that the Intellectual Capital Report contains information about the intangibles.

The implementation of the Directive 2003/51/EC (CE, 2003) through the law 62/2003 of 30 of December (Spanish Parliament, 2003), on "Fiscal, Administrative and Social Measures", amended the contents of the Management Report accompanying the annual

[1] In Spain the annual financial statements are: balance sheet, profit and loss account, statement of changes in net patrimony, actual flow statement and the explanatory notes that are called "memory".

financial statements[2]. Hence, since 2005 the Management Report must contain, among other items, information about the company's human resources, providing it is relevant for understanding the business evolution.

On the other hand, in the Spanish market, company's ownership is highly concentrated and there is a legal system based on French civil law where there is a lesser protection of investors' interests (La Porta, Lopez-De-Silanes, Shleifer, & Vishny, 1997). Consequently, there are possible conflicts of interest between managers and owners of relevance and between majority and minority shareholders (Fernández-Méndez, Arrondo-García, & Fernández-Rodríguez, 2011). Moreover, a single governing body that performs simultaneously supervision and direction tasks composes the Board structure in companies.

By the mid-1990s, there was a consensus regarding the need to rethink the role and nature of the principal organs of Corporate Governance, and especially that of the Board of Directors, in the context of a higher European legal harmonization. Corporate governance in Spain has been mainly driven by several codes of corporate governance: the Olivencia Report was released in 1998, followed by the Aldama Report in 2003, and the Conthe Code or Unified Good Governance Code in 2006 that has been modified in 2013 and 2015. It was characterized by the principle of comply or explain. Companies may comply or not comply to the code recommendations, although they have to explain why they do not comply with the recommendations. The Unified Code of Corporate Governance (CNMV, 2006) distinguishes two types of directors[3]: *internal* or *executive directors*, who perform senior management functions or are employees of the company or its group, and *external directors* which includes *independent directors,* representing minority shareholders and *proprietary directors* (also known as "*grey directors*"), representing majority shareholders.

2.2. Human Capital: the main intangible asset of companies in the knowledge society

Human Capital constitute one of the main assets a company possesses (Bontis, 2001; Edvinsson & Malone, 1999; Sveiby, 1997) which drive value creation (S. Abhayawansa

[2] The annual financial statements and the management report are mandatory in Spain. Other reports are voluntary, such as the Sustainability Report or Social Responsibility Report and Intellectual Capital Report.

[3] Also known as *inside* (those who are directors and managers at the same time) and *outside* (nonmanager directors) directors.

& Abeysekera, 2008) and lead to competitive advantages in the modern knowledge economy. It is “thinking asset” found in the employees of the companies (Roos et al., 2001) and is the combination of knowledge, skills, abilities, creative capability, leadership and experience (Brooking, 1996; Edvinsson & Malone, 1999) which are incorporated to employees during his life. It represents the individual knowledge stock of a company represented by its employees (Bontis, 2001). Companies must do all it can to retain all "good" employees (Roos, Dragonetti, Roos, & Edvinsson, 2001) and seek to acquire, develop, reward, and maintain their key talents (Roos et al., 2001; Sveiby, 1997).

There is a growing concern with socially responsible behaviour, ethics and the respect for labour rights. It aims improve workers’ quality of life and social conditions in areas important for them as employment, health and safety, non-discrimination, disciplinary practices, freedom of association, society, etc., (Gallego-Alvarez, 2008; Tejedo-Romero & Araujo, 2016). This behaviour generates value, intangible value, which provides businesses with the ability to create, share and manage knowledge, enhancing the generation of sustainable competitive advantages (Castilla & Gallardo, 2008; TejedoRomero, 2016).

We believe that the competitive advantage of a company resides in the resources, particularly, in its human resources and the information on Human Capital to the many stakeholders interested in the company's resources. However, the value of human resources may not be adequately reported to stakeholders partly due to limitations of traditional accounting system (IASB, 2004; PGC, 2007). The strict recognition criteria for intangible assets do not allow Human Capital to be shown as an asset in the balance sheet (Abeysekera, 2007; Beattie & Smith, 2010; Tejedo-Romero & Araujo, 2016). Therefore, it not reflect the company's true value, causing a decrease in the usefulness of the accounting-based information (Bozzolan et al., 2003; Lev & Zarowin, 1999; Ordoñez de Pablos, 2003). Accordingly, investors and other stakeholders cannot fully ascertain their investment objects’ value-adding potential (Lev, 2003; Lev & Zarowin, 1999). The results are information asymmetries between capital market participants and corporate managers (Beattie & Smith, 2010), as well as possible market inefficiencies (Gamerschlag, 2013; Healy & Palepu, 2001). Information asymmetry decreases with an increase in voluntary disclosure. The opportunity to report Human Capital through voluntary disclosures exists within corporate annual reports and other channels of corporate communication (Beattie & Smith, 2012).

2.3. An integrated framework for Human Capital Disclosure from the Intellectual Capital and Social Responsibility perspectives

Adequate Human Capital Disclosure is important since: *a)* it affects a company's ability to recruit and retain the best people (Choo Huang, Luther, Tayles, & Haniffa, 2013); *b)* reduces information asymmetry between management and investors (Beattie & Smith, 2010; Lev & Zarowin, 1999); *c)* conveys a company's potential to create value (Beattie & Smith, 2010; Choo Huang et al., 2013); *d)* improves market efficiency (Gamerschlag, 2013); *e)* establishes trustworthiness with stakeholders (Beattie & Smith, 2010); *f)* enhances corporate image, reputation and prestige (Tejedo-Romero & Araujo, 2016). However, there are some disadvantages on human capital disclosure. The costs of providing the information, the risk of losing the competitive position (Curado, Henriques, & Bontis, 2011), and the risk that the information is misinterpreted by external stakeholders, such as employees and labour unions (Samudhram, Sivalingam, & Shanmugam, 2010), etc. To wrap up, the benefits are assumed to exceed the costs when a company chooses to disclose voluntary information (García-Meca et al., 2005). The reasons why companies disclose voluntary information on Human Capital can be explained based on several theories: *a)* from the perspective of the *Theory of Resources and Capabilities* (Hall, 1992) the success and survival of the company depends heavily on the resources and capacity owned by the company. It is considered the most important resource because of its strategic potential to generate competitive advantages in companies (Abeysekera, 2007; Oliveira, Rodrigues, & Craig, 2010; Sonnier, 2008), therefore, many companies voluntarily report as a response to information asymmetry between management and investors in order to receive the support from investors in the capital market (Sonnier, 2008); *b)* based on the principles of *Legitimacy Theory*, companies are interested in disclosing information to legitimize their actions with employees and the society in general (Nurunnabi & Hossain, 2011; Tejedo-Romero & Araujo, 2016); and *c)* according to *Stakeholder Theory*, companies' success and survival are subject to approval by their stakeholders, hence companies will reveal information about Human Capital in order to increase the perceived value by stakeholders (Abeysekera & Guthrie, 2005; Bozzolan et al., 2003; Tejedo-Romero, 2016).

Human Capital Disclosure has been studied under two approaches: Knowledge Management/Intellectual Capital and Social Responsibility/Sustainability. From the perspective of Knowledge Management/Intellectual Capital, it has advanced towards the elaboration of intellectual capital reports and the building of international standards on intellectual capital identification, measuring and reporting (Ordoñez de Pablos, 2003). Human Capital is recognised to be one of the three main categories of Intellectual Capital (EC, 2006; Meritum, 2002). It considers aspects related to education, training, experience, skills and competencies in the workplace, values and attitudes of workers, among others (Joshi, Ubha, & Sidhu, 2012; Li, Pike, & Haniffa, 2008; Nurunnabi & Hossain, 2011; White, Lee, & Tower, 2007). Several conceptual frameworks have been used to define, classify and record information Human Capital (Brooking, 1996; Edvinsson & Malone, 1999; Kaplan & Norton, 1997; Meritum, 2002; Sveiby, 1997). The vast majority of empirical research has been based on the initial framework of Sveiby (1997) which has subsequently been modified in various studies (Abeysekera & Guthrie, 2005; Bozzolan et al., 2003; Brennan, 2001; Guthrie & Petty, 2000; Joshi et al., 2012; Nurunnabi & Hossain, 2011). In addition, several initiatives have produced guidelines for the disclosure of information on Intellectual Capital, such as DATI (2000), Nordika (2001), Meritum (2002), and directing their attention to a new type of report called Intellectual Capital Reports. Some companies elaborate and publish this report separately from the financial report or annual report. In Spain, most companies which produce the intellectual capital report include it as part of their annual report (Ordoñez de Pablos, 2002, 2003). From the perspective of Social Responsibility/Sustainability, they have been considered socio-labour aspects, considering that information on social and ethical issues concerning relations between workers and companies, health and safety in the workplace, diversity and equal opportunities, etc. (Martínez-Ferrero et al., 2015; Muttakin & Khan, 2014; Rashid & Lodh, 2008). Guidelines and orientations were developed to guide the disclosure this information (AECA, 2004, 2005; EC, 2001; GRI, 2013; UN, 1999), aimed to provide information on companies' practices on the triple aspects: economic, environmental and social (Tejedo-Romero, 2016). In recent years, there has been a big boost from agencies and organizations in developing sustainability reports or social responsibility reports, being a useful tool for communicating with stakeholders (Arvidsson, 2010). These reports have become an increasingly important instrument for company disclosure (Oliveira et al., 2010; Tejedo-Romero, 2016). Recent research has shown that sustainability reports are a good mechanism for disclosing intellectual capital information[4] (Cinquini, Passetti, Tenucci, & Frey, 2012; Tejedo-Romero, 2016).

For the purposes of this paper it takes a wider concept of Human Capital. We believe that the information related to Human Capital should include aspects related to knowledge generation and some categories of social type linked to socially responsible behaviour by companies. Companies' behaviour within the framework of social responsibility creates value, a value of intangible nature (Castilla & Gallardo, 2008; Tejedo-Romero, 2016) that enables the company the ability to create, share and manage knowledge underlying the generation of sustainable competitive advantages (TejedoRomero & Araujo, 2016). Hence, the framework to provide information on the Human Capital should be configured according to the following intangible elements:

I. Employees, under this category it should be considered aspects related to: employee profile; equality and diversity; health and safety; labour relations and union activity; involvement of workers in the community; employee recognition; important employees; employee commitment; employee motivation; employee behaviour; and economic data.
II. Education, information related with regulated education and professional qualification.
III. Training and Development, information concerning: education and training policy; education and training expenses; policy on competence development; career opportunities; job rotation opportunities; and recruitment policies.
IV. Work related Knowledge, collect information about: know-how; employee quality and experience; performance and results of top management.
V. Entrepreneurial Spirit, under this category information is collected about: employees' innovative ideas; and system to collect employees' suggestions.

In this context, we propose the following hypotheses

H1: Companies are providing information on Human Capital in integrated annual and sustainability reports.

[4] The International Integrated Reporting Council, IIRC, (2013) is promoting the integrated report as the next generation of corporate reporting. Integrated reporting is concerned with providing a holistic view of company value creation by connecting financial and non-financial information, including Intellectual Capital information, within a single report (Subhash Abhayawansa, 2014; IIRC, 2013).

H2: The amount of information on Human Capital, supplied by companies in integrated annual and sustainability reports varies over time.

2.4. *Good Corporate Governance: determinants of transparency on human capital disclosure*

Transparency is a key element of a Good system of Corporate Governance that helps to provide a degree of market confidence necessary for its proper functioning. By transparency we mean the disclosure of information by companies to stakeholders for the purpose of enhancing their decision making. Better transparency reduces information asymmetry between managers and stakeholders. Transparency is considered an important mechanism to aligning interests (García et al., 2011; Healy & Palepu, 2001) and mitigate agency problems (Fama & Jensen, 1983) between owners and managers; owners (majority shareholders) and owners (minority shareholders); and also between managers or owners and potential investors or other stakeholders. Corporate Governance has a role instrument to supervise and monitor managers not only to reduce agency cost but also to uphold companies' public image and reputation.

From the agency theory perspective, a mechanism of corporate governance is the Board of Directors that is regarded relevant in the oversight of managerial actions (Babío & Muíño, 2005; García-Meca & Sánchez-Ballesta, 2009) and manage information disclosure in annual reports (García et al., 2011; Li et al., 2008). Board can act as an exceptionally relevant information system for stakeholders through voluntary disclosure to help investors to come closer to the company's affairs (Gul & Leung, 2004), and hence, reducing the gap between management and potential investors, and other stakeholders. For these reasons, it is necessary to disclose more information, especially about human capital, in order to improve stakeholders' knowledge and trust about the company's behaviour and performance (García et al., 2011), as well as reduce investor uncertainty about the impact of human capital on the company's value. Managers should therefore be willing to disclose human capital information in order to enhance the company's value by providing investors with a better assessment of the financial position of the company and help to reduce the volatility of stock returns (Li et al., 2008). It is expected that high human capital disclosure will provide a more intensive monitoring package for a company to reduce opportunistic behaviour and information asymmetry (Li et al., 2008).

In light of this, we focus on the analysis of several features of the Board concerning to its internal structure, composition and functioning, such as CEO duality, independence, gender diversity and activity that may enhance monitoring quality in critical decisions about human capital disclosure. These are likely to reduce the scope for managerial opportunism and reduce benefits from withholding information (Li et al., 2008) and, as a consequence, human capital disclosure in company' reports should be improved.

CEO Duality

CEO Duality refers to situations in which the same person is both the chairman and chief executive officer (CEO). The person who occupies both roles would tend to withhold unfavourable information to outsiders (Ho & Wong, 2001). This situation can lead to inefficient and opportunistic behaviour (Jensen & Meckling, 1976) as a result of the concentration of power. CEO duality may constrain Board independence and reduce the ability of boards to execute monitoring and control roles (Fama & Jensen, 1983), affecting disclosure policy of the company (Barako, Hancock, & Izan, 2006; Cerbioni & Parbonetti, 2007; Li et al., 2008). Following these theoretical arguments, we propose the following hypothesis:

> **H3:** There is a negative relationship between CEO duality and the level of human capital disclosure.

Board Independent

Board Independent is considered an essential mechanism to monitor and control the actions of executive directors (Fama & Jensen, 1983; Jensen & Meckling, 1976) who may engage in opportunistic behaviour and also to ensure that managers are working in the best interest of the principal (Lim, Matolcsy, & Chow, 2007). It is associated with the number of independent directors to the total number of directors on the Board (Haniffa & Cooke, 2002).

According to Fama and Jensen (1983), independent directors act as a reliable mechanism to diffuse agency conflicts between managers and owners, which may occur in the decision to disclose information voluntarily (García-Meca & Sánchez-Ballesta, 2010). We extend the arguments of Li et al. (2008) to human capital, that suggest that the wider expertise and experience of non-executive directors on the Board will encourage management to take a disclosure position beyond a ritualistic, uncritical adherence to prescribed norms, to a more proactive position reflecting the value relevance of human capital to stakeholders.

Nevertheless, previous research obtained mixed results. Some scholars find there is positive relation between Board independent and voluntary disclosure decisions (Cerbioni & Parbonetti, 2007; Chen & Jaggi, 2000; Li et al., 2008), others find no relationship (Hidalgo, García-Meca, & Martínez, 2011; Ho & Wong, 2001), and yet others observe a negative relationship (Eng & Mak, 2003; Haniffa & Cooke, 2002). Li et al. (2008, p. 139) suggest that may be that non-executive directors are not necessarily independent because they are typically individuals with relevant expertise and professional reputations to defend, with no management role or links with the company.

Boards in Spanish companies are characterised by the strong power of executives through CEO duality (García et al., 2011). Hence, it is possible that independent directors do not participate enough in disclosure policy of the company due to their limited presence. Accordingly, the following hypothesis is presented:

> **H4:** There is a relation between the Board independence and the level of human capital disclosure

Gender Diversity

From the EU Corporate Governance Framework (EC, 2011b), Gender Diversity is considered important in enhancing the collective intelligence of a Board of Directors. On the other hand, it is recommended the commitment of publicly listed companies belonging to EU member states to voluntarily increase the number of women on their Boards by 30 per cent by 2015 and 40 percent by 2020 (EC, 2012). Spanish companies have been pressed by the *Equality Law* (Law 3/2007) to increase the proportion of women on Boards to 40 percent by 2015. Additionally, Corporate Governance Code (CNMV, 2006) recommends the inclusion of women in the Board of Directors, not only by ethical, political and corporate social responsibility question, but also as an efficiency objective.

Research suggests that female leaders tend to adopt a leadership style distinct from male leaders in organizations (Kim & Shim, 2003). Women leaders' styles of communication are more open, accessible, transparent (Eagly, Johannesen-Schmidt, & Van Engen, 2003) and positively influences the socially responsible behaviour of the company (Barako & Brown, 2008; Prado-Lorenzo & Garcia-Sanchez, 2010). Women's stereotype seems to be more favourable to increase communication and attempt to influence others. We expect that women representation on Boards should have an impact on information disclosure. This leads to the following hypothesis:

> **H5:** There is a positive relationship between gender diversity on the Board and the level of human capital disclosure.

Board Activity

Board Activity is related to the annual frequency of Board meetings as a measure of the dynamics of decision-making and communication between the directors and managers. Board meetings can be considered a measure of the effectiveness to monitoring and controlling (Kanagaretnam, Lobo, & Whalen, 2007; Lipton & Lorsch, 1992). This may show greater interest in disclosing information and thus keep stakeholders informed of their efforts (Allegrini & Greco, 2013; Frias-Aceituno, Rodriguez-Ariza, & GarciaSanchez, 2013) reducing the problems of asymmetric information between the managers and directors. Thus, an active Board of Directors is likely to provide more effective management control of Human Capital and disclose more information. We formulate the sixth hypothesis as follows:

> **H6:** There is a positive relationship between Board activity and the level of human capital disclosure.

3. Research design: data, variables, model and analysis

3.1. Population and sample

The starting population comprises listed companies on the Spanish stock market included in the IBEX 35 index. This choice was made because these companies have a greater number of stakeholders interested in them (de los Ríos, Torres, Tirado, & Carbonell, 2009), are more transparent (Briano & Rodríguez, 2013), and the Law 26/2003 requires them to have a website to information disclosure.

To select the sample, we have conducted non-probabilistic sampling which is a technique based on subjective selection criteria of companies from the study population. Thus, we have selected those companies included in the IBEX 35 at 31 December 2014 and have always been in the index since 31 December 2007[5]. Our final sample is formed by 23 companies, representing 65.7% of the starting population for the period of 2007–2014.

We used a balanced panel data with 184 observations (company-year) for 23 companies for 8 years. Panel data permitted the control of unobserved individual and/or timespecific heterogeneity that is correlated with included explanatory variables (Baltagi, 2014; Wooldridge, 2010); moreover, it minimizes potential problems of endogeneity of variables (Cheung, Jiang, & Tan, 2010, p. 277). Table 1 shows the distribution of the sample by sector.

Table 1. Percentage of participation by sector

Sector	Initial Population in 2008		Final Sample	
	Companies	**Percentage**	**Companies**	**Percentage**
	2	5,71%	1	4,35%
Consumer Goods				
Basic Materials/Industry and Construction	10	28.57%	6	26,09%
Petrol and Energy	6	17.14%	5	21.74%
Consumer Services	4	11.43%	2	8,70%
Financial and Real Estate Services	9	25.71%	7	30.43%
Technology and Telecommunications	4	11.43%	2	8,70%
TOTAL	**35**	**100%**	**23**	**100%**

All sectors of the starting population are presented on the sample.

3.2. Variables and data collection

The variables listed below were selected to corroborate the hypothesis set out in the theoretical framework.

Dependent variable

Our dependent variable is the amount of information about Human Capital. To quantify this variable were created indexes of disclosure (Abeysekera & Guthrie, 2005; TejedoRomero & Araujo, 2016) by content analysis methodology (Beattie & Thomson, 2007;

Krippendorff, 2004). It is a technique of data collection that seeks to codify qualitative and quantitative information in predefined categories in order to obtain reporting patterns (Guthrie & Abeysekera, 2006; Krippendorff, 2004).

[5] There are 27 companies listed on the IBEX 35 over the years under study. In four companies, it was impossible to obtain integrated annual or the social responsibility reports for the 8 years of study. The information is available for a total of 23 companies from 2007 to 2014.

For classification and coding of information we followed the original framework of Sveiby (1997) and the modifications that several authors have done in the same (Abeysekera & Guthrie, 2005; Bozzolan et al., 2003; Brennan, 2001; Guthrie & Petty, 2000; Joshi et al., 2012; Nurunnabi & Hossain, 2011). The subcategories and elements of human capital will allow us to encode the information to be analyzed (see Table 2). Finally, our framework for coding the information was set in 5 categories and 24 intangible elements (items).

Table 2. Subcategories and elements

EMPLOYEES (11 ítems):
1. Employee profile
2. Equality and diversity
3. Health and safety
4. Labour relations and union activity
5. Involvement of workers in the community
6. Employee recognition
7. Important employees
8. Employee commitment
9. Employee motivation
10. Employee behaviour 11. Economic data **EDUCATION (2 ítems)**:
12. Regulated education
13. Professional qualification

TRAINING AND DEVELOPMENT (6 ítems):
14. Education and training policy
15. Education and training expenses and hours
16. Policy on competence development
17. Career opportunities
18. Job rotation opportunities
19. Recruitment policies

WORK RELATED KNOWLEDGE (3 ítems):
20. Know-how
21. Employee quality and experience 22. Performance and results of top management **ENTREPRENEURIAL SPIRIT (2 ítems):**
23. Employees' innovative ideas
24. System to collect employees' suggestions

We have considered the following units of analysis: *a)* sampling units were the integrated annual and social responsibility reports, *b)* units of context that allowed analyzing the information at the sentence level, and *c)* registration units that have been the presence or absence of information.

The quantification system for the index of Human Capital disclosure has been made by the following rule count: 1 if the company has reported a particular item and 0 otherwise. In addition, we developed sub-indixes of disclosure for the five subcategories of Human

Capital. We compute rates of disclosure unweighted by aggregating the score on each of the items (Beretta & Bozzolan, 2008), this approach is consistent with that used in other studies (Oliveira et al., 2010; Tejedo-Romero & Araujo, 2016). Weighted indexes were not used because of the degree of subjectivity attached to them, once there are not a table of weights universally accepted (Marston & Shrives, 1991; TejedoRomero, 2016), therefore each of the informational items are assigned a different score depending on the importance established by the researcher. Finally, we made an adjustment by dividing the index by the maximum number of intangibles that could be reported in each subcategories of human capital. This adjustment, according to Botosan (1997) and Marston and Shrives (1991), is made to not penalize those companies that for some reason can not disclose any of the items considered (see Table 3).

Table 3. Sub-indexes and Index of Human Capital Disclosure

$Subindex\ Employees_j = \frac{1}{11}\sum_{i=1}^{11} X_{ij}$
$Subindex\ Education_j = \frac{1}{2}\sum_{i=1}^{2} X_{ij}$
$Subindex\ Training\ and\ Development_j = \frac{1}{6}\sum_{i=1}^{6} X_{ij}$
$Subindex\ Work\ related\ Knowledge_j = \frac{1}{3}\sum_{i=1}^{3} X_{ij}$
$Subindex\ Entrepreneurial\ Spirit_j = \frac{1}{2}\sum_{i=1}^{2} X_{ij}$
$Index\ Human\ Capital_j = \frac{1}{24}\sum_{i=1}^{24} X_{ij}$

Where the Human Capital Index is the unweighted index of disclosure of company *j*, *i* is the element, X_{ij} is the score obtained by the company *j* of element *i*. Consequently, X_{ij} will take the value 1 if the company *j* has disclosed the element *I*, and otherwise will take the value of 0 if it has not been disclosed. The total of items that make up the framework of the information on the Human Capital is 24. Data encoding was performed manually. Both authors performed an initial coding for a pilot sample of 5 reports of social responsibility and obtained a value of alpha Krippendorff of 0.80, which suggests an acceptable level of agreement between coders (Beattie & Thomson, 2007; Krippendorff, 2004). Both authors conducted content analysis of all reports to be analysed.

3.2.1. Independent Variables

Data were collected from the annual reports of corporate governance.

CEO Duality: is a dummy variable that takes the value 1 when both functions are carried out by the same person and zero when functions are separated (Barako et al., 2006; Cerbioni & Parbonetti, 2007; Li et al., 2008).

Board Independent: is the ratio between the number of independent directors and the total number of directors (Barako et al., 2006; Cerbioni & Parbonetti, 2007; Li et al., 2008).

Gender Diversity: is the ratio between the total of women Board members and the total of Board members (Barako & Brown, 2008; Prado-Lorenzo & Garcia-Sanchez, 2010).

Board Activity: it is measured as the number of Board meetings held during the financial year (Prado-Lorenzo & Garcia-Sanchez, 2010).

3.2.2. Control variables

To avoid skewing results, we have considered a number of variables related to companies' features.

Industry: is represented by a dummy variable with a value of 1 if a company is in a sensitive industry, and 0 otherwise. Consistent with Sierra-García et al. (2014), sensitive industries were regarded to be ‘Financial Services and Real Estate’; ‘Oil and Energy’; and ‘Technology and Telecommunications.’ All other industries classified by the CNMV were considered non-sensitive (‘Basic Materials’, ‘Industry and Construction’; and Consumer Goods’). More voluntary information about Human Capital was expected to be disclosed by companies in sensitive industries (Kolk & Perego, 2010).

Company's Age: some scholars have considered that the age of the company can be a determining factor to provide voluntary information (Cerbioni & Parbonetti, 2007; Rashid & Lodh, 2008). A more mature company is concerned about its reputation and will disclose more information voluntary (Muttakin & Khan, 2014). This variable represents the seniority of the company in the market and is measured by the number of years from the date of establishment.

3.3. Research model

This study uses a balanced panel data regression method to examine the relationship between corporate governance variables and the extent of Human Capital Disclosure.
The regression equation is provided below:

$$Human\ Capital_{it} =$$

$$\square+\square_1 Duality_{it}+\square_2 Independent_{it}+\square_3 Gender_{it}+\square_4 Activity_{it}+\square_5 Industry_{it}+\square_6 Age_{it}+\square_{it} \quad (1)$$

$$\square_{it} = \square_i + \square_t + \square_{it} \quad (2)$$

Where: $\square$ is a scalar ; $\square_{1}$, ……,$\square_2$ are the estimable parameter vectors; i =1,…..,23; t = 2007, ….., 2014; $\square_i$ represents the unobservable company-specific effect; $\square_t$ represents the unobservable specific time effect (common to all companies); $\square_{it}$ is the remainder stochastic disturbance term.

The dependent variable takes values ranging from 0 to 1, and so the panel data methodology used must be appropriate for variables presenting double censored characteristics. Therefore, the analysis technique is based on a Tobit regression that, in contrast to linear models, allows us to take particular consideration of the extremes of the rating scale (0 and 1), censoring at 0 those companies expressing the lowest preference for human capital disclosure, and at 1 for those opting to supply maximum information. The Tobit models estimate efficiency and consistency coefficients through the method of maximum likelihood (Baltagi, 2014; Wooldridge, 2010).

Two possible estimation approaches will be applied: a pooled Tobit and a Tobit random effects model. To statistically compare the two models, a *Likelihood-ratio test* is conducted We use the *Jackknife* method to estimate standard errors.

The data were processed using the STATA 13.1 program, which is justified by its robustness.

4. Results and discussion

4.1. Descriptive Analysis

Table 4 shows that the Ibex 35 companies are providing information on its Human Capital, with higher values than the median (≥ 0.5). These values vary relatively little over the years under study, although it seems that during the crisis period the companies have maintained their levels of information, showing a slight increase in 2014, year of crisis recovery. This may be because, from point of view cost-benefit analysis, in times of crisis companies have a more austere policy of information disclosure (the costs due to the development and dissemination of information may outweigh the benefits).

However, according to the Theories of Resources and Capabilities, Legitimacy and Stakeholders, we can say that companies are providing information in social responsibility reports about Human Capital. Information related to training and development of employees is the category most disclosed. Thus companies provide this type of information as a way to legitimize a behavior responsible to stakeholders associated with the generation of knowledge. On the other hand, the category less disclosed is information on work-related knowledge as consequence of that companies may consider that their human capital is the most valuable resource and are afraid that competitors could attract its more skillful employees.

Table 4: Descriptive statistics for the Human Capital and sub-indexes

	2007	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2007-2014**
Human Capital									
Mean	0.623	0.639	0.625	0.634	0.643	0.661	0.681	0.701	0.651
Standard deviation	0.158	0.106	0.139	0.102	0.090	0.104	0.094	0.096	0.114
Max	0.875	0.833	0.833	0.833	0.833	0.833	0.833	0.875	0.875
Min	0.25	0.458	0.208	0.333	0.458	0.458	0.5	0.5	0.208
Employees									
Mean	0.668	0.692	0.676	0.7	0.711	0.723	0.743	0.763	0.71
s	0.187	0.128	0.155	0.104	0.105	0.115	0.101	0.109	0.13
Max	1	1	1	0.909	0.909	0.909	0.909	1	1
Min	0.182	0.454	0.273	0.545	0.454	0.454	0.454	0.454	0.182
Education									
Mean	0.674	0.63	0.63	0.63	0.652	0.674	0.652	0.652	0.649
Standard deviation	0.286	0.224	0.224	0.27	0.235	0.243	0.235	0.235	0.241
Max	1	1	1	1	1	1	1	1	1
Min	0	0.5	0.5	0	0.5	0.5	0.5	0.5	0
Training and Development									
Mean	0.783	0.804	0.775	0.804	0.797	0.826	0.841	0.855	0.811
Standard deviation	0.17	0.13	0.185	0.205	0.188	0.191	0.184	0.183	0.179
Max	1	1	1	1	1	1	1	1	1
Min	0.5	0.667	0.167	0.167	0.333	0.333	0.333	0.333	0.167
Work related Knowledge									
Mean	0.304	0.319	0.319	0.275	0.261	0.261	0.261	0.304	0.288

Standard deviation	0.199	0.213	0.213	0.192	0.2	0.2	0.245	0.244	0.211
Max	0.667	0.667	0.667	0.667	0.667	0.667	0.667	0.667	0.667
Min	0	0	0	0	0	0	0	0	0
Entrepreneurial Spirit									

Hence, we can accept our hypothesis H1 and we must reject the hypothesis H2 assumed in the theoretical framework.

Mean	0.326	0.348	0.348	0.304	0.37	0.413	0.522	0.543	0.397
Standard deviation	0.416	0.411	0.411	0.419	0.458	0.443	0.439	0.45	0.431
Max	1	1	1	1	1	1	1	1	1
Min	0	0	0	0	0	0	0	0	0
N (Observations)	**23**	**23**	**23**	**23**	**23**	**23**	**23**	**23**	**184**

Table 5 display descriptive statistics and the independent and control variables. Data shows a moderate average increase in the percentage of independent Board members in the Board of Directors. This increase can be motivated by the recommendation of the Unified Code of Good Corporate Governance (CNMV, 2006, 2015) to increase the percentage of independent members to make the Boards of Directors more independent and neutral.

Of note is the increase in women directors in the Boards. The Code of Corporate Governance (CNMV, 2006, 2015) recommended the inclusion of women in the Board of Directors as a challenge, not only in terms of ethics, politics and corporate social responsibility, but as an efficiency objective of this body. This increase may also be associated with the adoption in 2007 of the Law on Gender Equality in Spain. However, we find companies that have not incorporated women in their Boards (minimum equal to zero) over 8 years.

Concerning the activity of the Board of Directors, data shows that have maintained the same number of meetings over time, with an average of 11 meetings per year. In this regard, the Boards of Directors have meetings at least once a month. The Code of Corporate Governance (CNMV, 2006, 2015) does not establish limit meetings, but recommends regular meetings to carry out functions effectively in the Board.

Along the period, there is CEO duality in 83% of the companies of the sample. There is only separation of the functions of chairman and chief executive officer in 17% of companies. This situation may jeopardize the functions of control and supervision of the Board (Li et al., 2008), affecting voluntary disclosure policy of the company.

Finally, the average age of companies is 63 years, although there is a wide dispersion from the average (42.7 years) with companies 158 years old and young companies with 6 years old. In addition, 61% of companies belonging to sensitive sectors.

Table 5: Descriptive Statistics for Independent and Control Variables

Panel A: Continuous variables	2007	2008	2009	2010	2011	2012	2013	2014	2007-2014
Independent									
Mean	0.417	0.424	0.441	0.44	0.44	0.447	0.469	0.449	0.441
Standard deviation	0.169	0.174	0.171	0.178	0.179	0.17	0.154	0.146	0.165

Max	0.786	0.786	0.8	0.786	0.786	0.786	0.714	0.786	0.8
Min	0.067	0.067	0.077	0.071	0.056	0.067	0.214	0.214	0.056
Gender									
Mean	0.071	0.086	0.102	0.113	0.132	0.147	0.156	0.181	0.123
Standard deviation	0.068	0.086	0.083	0.080	0.084	0.092	0.095	0.12	0.095
Max	0.238	0.273	0.3	0.273	0.308	0.364	0.364	0.5	0.5
Min	0	0	0	0	0	0	0	0	0
Activity									
Mean	11	10.5	10.8	10.8	11.3	11.1	11.2	11	11
Standard deviation	3.21	2.78	3	2.66	3.28	3.3	2.91	3.24	3.01
Max	17	14	17	16	18	17	15	18	18
Min	5	5	6	5	5	5	5	5	5
Age									
Mean	59.7	60.7	61.7	62.7	63.7	64.7	65.7	66.7	63.2
Standard deviation	43.5	43.5	43.5	43.5	43.5	43.5	43.5	43.5	42.7
Max	151	152	153	154	155	156	157	158	158
Min	5.83	6.83	7.83	8.83	9.83	10.8	11.8	12.8	5.83
N (Observations)	**23**	**23**	**23**	**23**	**23**	**23**	**23**	**23**	**184**

Panel B: Dummy variables

	2007		2008		2009		2010		2011		2012		2013		2014		2007-2014	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Duality																		
Percentage (%)	83	17	87	13	87	13	87	13	87	13	83	17	78	22	74	26	83	17
Industry																		
Percentage (%)	61	39	61	39	61	39	61	39	61	39	61	39	61	39	61	39	61	39
N (Observations)	**23**		**23**		**23**		**23**		**23**		**23**		**23**		**23**		**184**	

To solve the problems of absence of normality in the variables age and activity of the Board of Directors the natural logarithm of these variables is used. However, a Tobit regression does not have to meet as many requirements and assumptions as linear regression.

4.2. Multivariate analysis

Table 6 shows the results of Tobit regression model. Thus, the third and fourth columns show the Pool Tobit results and the random Tobit model for panel data, respectively. The value of Likelihood ratio test (p-value = 0.000) shows that for our data is preferable a random Tobit model.

Table 6: Results of Panel-Regression Model

Independent variable: Human Capital Disclosure

Dependent and control variables	Hypothesis/ predict sign	POOLED TOBIT (Jacknife standard errors)	RE TOBIT (Jacknife standard errors)
Duality	H3(-)	-0.067 (0.046)	-0.046*** (0.015)
Independent	H4 (?)	-0.072 (0.139)	-0.027 (0.050)
Gender	H5 (+)	0.171 (0.197)	0.159** (0.076)
Activity	H6 (+)	0.108* (0.061)	0.043* (0.022)
Industry		0.046 (0.058)	0.042* (0.022)
Age		0.022 (0.033)	0.070*** (0.008)
(Constant)		0.348** (0.138)	0.292*** (0.042)
sigma		0.101 (0.014)	
sigma_u			0.086*** (0.007)
sigma_e			0.071*** (0.010)
rho			0.594 (0.088)
Observations		184	184
Log-likelihood		161.22504	195.10585
F(6, 22)		2.29 (p-value=0.0719)	37.18 (p-value=0.000)
Likelihood-ratio test: □2 (probability)		chibar$^2_{(01)=}$ 67.76 *** (p-value=0.000)	

Jackknife–robust standard errors are in parentheses. * p<0.1; ** p<0.05; ***p<0.01.

The results of the Tobit panel data reflect the existence of a significant and negative relationship at level of significance of 1%, with the existence of duality in the Boards of Directors. Therefore, in those companies where the roles of chief executive and chairman of the Board is in the same person, the Human Capital disclosure is minor. These results are consistent with those obtained in previous studies (Allegrini & Greco, 2013; Barako & Brown, 2008; Cerbioni & Parbonetti, 2007; Gul & Leung, 2004; Li et al., 2008), thus confirming the third hypothesis (H3).

Gender diversity has a positive significant relationship at 5%. That is, Boards of directors with more women provide more information on the Human Capital. We confirm that woman presents a more responsible behaviour concerning voluntary disclosure of information (Prado-Lorenzo & Garcia-Sanchez, 2010). In this sense, we accept the fifth hypothesis (H5).

We can also confirm the sixth hypothesis (H6) on the activity of the Board of Directors for a significance level of 90%. Thus, a greater number of meetings reduces potential problems of asymmetric information, since regular meetings makes more efficient the functions of supervision and control attributed to the Board (Kanagaretnam et al., 2007). This result is similar to that obtained in the work of Allegrini and Greco (2013).

The control variables have been significant. Thus, there is a positive relationship to a level of 5% with the sensitive sector. They are sectors with socially responsible behaviour on its disclosure policy (Kolk & Perego, 2010). In addition, the age variable has a positive significant relationship at 1%, revealing that those companies who disclose more information were the more mature (Muttakin & Khan, 2014).

Finally, we could not verify the fourth hypothesis (H4) because it was not significant.

5. Conclusions

The aim of this study was to apply the Human Capital disclosure framework to analyze the policy of information disclosure on Human Capital conducted by companies in their integrated annual and sustainability reports. As well as to determine the mechanisms of good governance that can affect the supply of information.

This study offers a number of interesting ideas for literature on Human Capital disclosure and presents several theoretical and policy implications. We want to contribute to the study of Human Capital disclosure from the perspective of knowledge generation and social responsibility through a longitudinal study of 8 years (2007-2014) using panel data in order to study the trend that companies show in respect to that issue. Under the tenets of the theory of resources and capabilities, legitimacy and stakeholders, the results show that companies are disclosing voluntary information on Human Capital and has maintained the level of disclosure provided throughout those years. While we have observed that in the years under study there are very similar levels of information disclosure, there are a slight increase in the amount of information provided in 2014. This may be due to the "crisis effect", where in times of crisis companies have a more austere policy because the costs associated with the development and provision of information. May be with the economic recovery started in 2014 companies begin to increase the amount of information disclosed. Information on the training and development of employees has been the most disclosed and information on work-related knowledge has been the less revealed.

However, the disclosure of human capital information has been conditioned by certain determinants. The companies which disclose more information have more women on the Board of Directors, the Board of Directors meets more frequently, belong to sectors most sensitive to public opinion and are companies more mature. However, the existence of duality in the position of chief executive and president leads to lower levels of human capital disclosure. Finally, we have found no significant relationship between the amount of information provided and the existence of independent directors on the Board of Directors.

This paper attempted to provide evidences that it is advisable to implement mechanisms for good corporate governance and ethical behaviors in order to increase companies' transparency. It contributes to the implementation of an alternative framework for the recognition of disclosure of human capital of companies. These results can be transferred to other Spanish companies, and other countries once they allow them to know the practices carried out by companies in the Ibex 35, which are a good reference in the Spanish capital market. They can also help organizations and institutions in the development of common guidelines for presenting information on Human Capital. For instance, the European Commission recently introduced new requirements for nonfinancial information reporting with the Directive 2014/95/UE.

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