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CORPORATE GOVERNMENT AND ECONOMIC AND FINANCIAL RESOURCES CHARACTERISTICS AS DRIVERS OF SUSTAINABILITY IN BRITISH HIGH EDUCATION INSTITUTIONS

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Abstract

One of the ways of higher education institution differentiation is to perform an important level in sustainability. In this sense, this paper analyses social responsibility in high education institutions and examines whether governing board structures and economic and financial resources have a relationship with social responsibility. The authors show the following findings: first, there is a curvilineal relationship with an exponential growth curve between independent governors and social responsibility; and, we find a negative relationship between funding and research grant and social responsibility. This paper may be useful as a guide for performing social responsibility at high education institutions.

1. Introduction

Previous literature has overwhelmingly supported social responsibility in the academic and professional fields (Herrera, Larrán, Martínez, & Martínez, 2016) focusing on measuring social responsibility and exploring its determinant at organizations (Kansal, Joshi, & Batra, 2014). Namely, researches have made efforts to analyses how the role of organizational factors such as resources (Waddock & Graves, 1997), firm size (Fombrun & Shanley, 1990; Hackston & Milne, 1996; Stanwick y Stanwick, 1998; Eng & Mak, 2003; Haniffa & Cooke, 2005; Garde, Rodríguez, & López, 2017), board characteristics (Johnson & Greening, 1999; Hossain & Reaz, 2007) and, so on, affect private corporations' decisions about social responsibility. Nevertheless, few studied have focused on public corporations, such as high education institutions, which are key agents in promoting social responsibility principles within society (Lukman & Glavič, 2007). In this line, Vázquez, Aza, & Lanero (2014) argued that high education institutions have an important role incorporating social responsibility in theirs curricula and researches and also into theirs mission, vision and strategy (Muijen, 2004). Therefore, high education institutions have played a relevant task building a social responsibility future around the world (Setó, Domingo & Rabassa, 2011).

The motivation for this work emerges from realization that most of the previous literature has focused on analyzing social responsibility in private corporations and only a small number of studies have explored social responsibility at public corporations, particularly, in the case of high education institutions. The existing social responsibility literature in high education has become an important debate and research topic for academic around the world (Noeke, 2000; McDonald, 2004; Crowther & Seifi, 2013; Vázquez et al., 2014). However, we should highlight that there have only been descriptive works which show how universities and business schools include social responsibility topics on their curricula; pedagogical research about the implementation of business ethics and social responsibility at high education institutions; and analytical works which show how cultural and ethical knowledge and a responsible behavior influence on students' perceptions (Moon & Orlitzky, 2011). In this vein, as far as we know, there are not studies that analyze which are the determinant factors that affect social responsibility and its dimensions in high education institutions. This investigation contributes to this gap in the literature by exploring which high education institution factors impact on the social responsibility. In particular, we explore around the previous literature and find that corporate governance mechanisms and financial resources are key factors that impact on social responsibility and its dimensions , due to the fact that, first, corporate governance mechanisms have a relevant role in making strategic decision related to social responsibility (Chang, Oh, Park, & Jang, 2017) and, second, resources impact on the achievement of sustainability performance (Waddock & Graves, 1997).

The aspects we describe above provide us an interesting opportunity to analyses with factors affect the achievement of social responsibility in high education institutions. Particularly, the authors focus on how corporate governance and financial and economic resources are related to social responsibility. In this sense, we investigate the following main research question: which factors are related to the social responsibility in high education institutions?

In order to answer our research question, we take the British high education institutions that are included in the Green League sustainability index which assesses their performance on environmental sustainability and ethics.

In this vein, the authors reach the conclusion that our work sheds light on social responsibility by exposing the following findings: i) according to governing board structures, we find that independent governors and social responsibility have a curvilineal relationship with an exponentially growing shape; and, ii) related to economic and financial resources, first, research grant has a negative relationship with social responsibility. Second, tuition fees present a positive relationship with social responsibility practices. Third, staff costs and social responsibility show a positive relationship. In conclusion, we contribute to the literature by providing evidence on the level of relationships which are related to social responsibility practices by British high education institutions.

The rest of the paper is organized as follows. Firstly, we begin by presenting the theoretical and hypotheses. Secondly, we describe our research methodology, which involves the use of ordinary least squares models. Finally, we discuss the main conclusions.

2. Theoretical Background

2.1. Social responsibility

Social responsibility and/or sustainability concepts has been treated in corporations' literature frequently as synonyms due to the fact that there is not an agreement in the theoretical and practical definition of them (Porter & Van DerLinde, 1995; Aras & Crowther, 2009). In this vein, AECA, (2006) argues that corporate social responsibility is the tool to obtain growth and creation of sustainable value into their three dimensions: economic, social and environmental. In this sense, the origins of social responsibility came from the World War II using as a meaning of aligning business interests (Carroll & Shabana, 2010). In the 1950s, social responsibility literature began to be studied. However, we should highlight that the period of changing social awareness and recognition of social responsibility was during the 1960s and 1970s when definitions of corporate social responsibility started publishing by large number of academics (Carroll, 1999). This trend continued in the 1980s, 1990s until nowadays showing significant research advances, especially in the continental Europe and UK (Moon, 2005). In this vein, Carroll and Shabana (2010) explained that there have been many different definitions of social responsibility over the past half century, however, the definitions most used in the literature have been set out by organizations. With this regard, Commission of the European Communities (CEC) in The Green Paper (European Commission, 2002, 6) defined corporate social responsibility as a concept "whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis".

Furthermore, the World Business Council for Sustainable Development developed an alternative, multi-stakeholder and multidisciplinary social responsibility definition arguing that "corporate social responsibility is the continuing commitment by business to behave ethically and contribute to economic developments while improving the quality of life of the workforce and their families as well as the local community and society at large" (Cornelius, Wallace, & Tassabehji, 2007).

According to the above arguments, Latif (2017) affirmed that social responsibility concept highlights the need for all, private and public, corporations to behave in a manner that is conducive for the society. According to the above arguments, this paper is focused on the study of public corporations, specifically high education institutions due to the fact that any relevant change in the corporations toward social responsibility has to involve academic institutions since they act as a drivers of business behavior. High education institutions that have been entrusted with the task of developing norms and socially acceptable behaviors which are implementing social responsibility issues in their management, teaching, and research areas (Vázquez et al., 2014). With this regard, the concept of social responsibility in high institution educations has been widely explained in the previous literature as "a policy of ethical quality of the performance of the university community (students, faculty, and administrative employees) via the responsible management of the educational, cognitive, labor and environmental impacts produced by the university, in an interactive dialogue with society to promote a sustainable human development" (Reiser, 2007, 26).

3. Hypotheses Development

In order to analyze deeply social responsibility, authors highlight the need to know which are the factors that can influence social responsibility at high education institutions. Thus, in this section, we are going to analyze which factors may impact on social responsibility in high education institutions.

3.1. Governing board structures

Focusing on public corporations, Nonell (2006, 15) argued that good government was understood such as "those principles, behaviors and actions of the different governments and public organizations that allow citizens to be more involved in the future of society". With this regard, Núñez, Alonso, & Pontones (2015) explained that when high education institutions' governors decided to develop their social responsibility commitments, they would assume the implications that this implied for the key processes of the corporation. Specifically, in the management process, social responsibility implies a corporate governance approach for the organization focusing on sustainability strategies, which, in addition to the active participation of stakeholders, would lead high education institutions to good government, and therefore, to good social responsibility practices.

With regard to the above arguments, the authors consider necessary to examine several internal governance board mechanisms such us governing board size, independent (lay) governors, governing board diversity and frequency of governing board meetings that may impact on social responsibility in high education institutions

3.1.1. Governing board size and social responsibility in high education institutions

The governing board size has considered the measure of efficiency of the board (Cuadrado, García, & Martínez, 2015). In this sense, there has been two-view points that emerged from the literature. On one hand, from a public accountability viewpoint, smaller governing boards were able to coordinate, communicate and protect the public interest better than larger (Coy & Dixon, 2004; Coy, Fischer, & Gordon, 2001). According to (Arosa, Iturralde, & Maseda, (2013), large boards increased cost of communication and decision making process. This argument was supported through the idea that larger boards had to consider more interests and was more difficult to reach an agreement to satisfy all of them (Brown, Helland, & Smith, 2006). On the other hand, stakeholder theory has argued that "larger governing boards may be advantageous in espousing corporate democracy in terms of being able to represent a wider group of key parties and actors" related to firm's activities (Ntim, Soobaroyen, & Broad, 2017, 77). In the same way, Hambrick & Mason (1984) confirmed that the board contributed better to enhanced strategic decisions and reduced problems when was more diverse because of its multiple perspectives, broader knowledge and multiple networks.

In this context, resource dependence theory has argued that larger boards were related to increase a set of skills, experiences and expertise that provided access to critical resources, such as resources, capital and contracts (Salancik, & Pfeffer, 1978). Empirically, it is not clear the effect of the board on social responsibility. The most evidence supports that governing board size was positively related to implement social responsibility practices (Siciliano, 1996; Bartkus, Morris, & Seifert, 2002; Bai, 2013; Ntim, & Soobaroyen, 2013; Cuadrado et al., 2015); and social responsibility disclosure (Kent & Ung, 2003; Jizi, Salama, Dixon, & Stratling, 2013). However, there were also studies that found a negative relationship between board size and social responsibility (Hillman & Keim, 2001; Bai, 2013). In the case of British high education institutions, the Committee of University of Chairmen (2009) recommended a board size between 12 and 25 members, suggesting that board size had to be relevant in terms of effectiveness and ability to control university executives. According to the above arguments, we propose that governing board size affects social responsibility. We present the following hypothesis:

H1. There is a systematic relationship between governing board size and social responsibility in high education institutions.

3.1.2. Independent (lay) governors and social responsibility in high education institutions

Independent governors have been one of the most effective ways to control and monitor executive behavior (Walls, Berrone & Phan, 2012). Chang et al. (2017)

explained that independent board tried to encourage social responsibility actions in corporations because their professional reputation depended on them. In this vein, independent governors tried to do their best to perform a long-term success and had a stakeholder orientation in corporations. According to these arguments, stakeholder theory has indicated that corporations should be open and transparent with their stakeholders, then this strategy could be done through the role of independent governors (Ntim et al., 2017). Similarly, the resource dependence theory has argued that independent governors could enhance managerial monitoring and brought more information and legitimacy on the board, then they increased sustainability practices. Empirically, the literature showed that independent governors were positively related to social responsibility practices (Surroca & Tribó, 2008; Harjoto & Jo, 2011; Post et al., 2011; Zhang, Zhu, & Ding, 2013); a few explained that there was a curvilinear an exponentially growing shape relationship between independent governors and social responsibility. Thus, appointing more independent governors than the minimum level legally required had positive effects on social responsibility. negatively related (Arora & Dharwadkar, 2011); and others had a non-lineal relationship (Chang et al., 2017).

With this regard and taking into account that the Committee University of Chairmen (2009) suggested that independent governors should represent at least 50 per cent of the total board governors because they had a relevant role in high educations institutions' governance and decision-making structures, we hypothesize a lineal (positive or negative) or non-lineal relationship between independent governors and social responsibility, and its dimensions, in high education institutions.

H2. There is a systematic relationship between independent governors and social responsibility in high education institutions.

3.1.3. Board meeting and social responsibility in high education institutions

The numbers of board meetings have been one way to measure how active a board was (Vafeas, 1999 and García Osma & Guillamón-Saorín, 2011)and it was necessary for checking the governor's monitoring effort (Vafeas, 1999). From a resource dependence theory, regular board meeting was useful to governors to discuss strategies, plan, activities, and, so on. Arosa et al., (2013) explained that board meetings should be held frequently in order to get firm's situation report and enhance stakeholder representation (Freeman, 1984). In this sense, some research found that the greater number of annual meetings, the more information was offered to others and more intense the monitoring was exerted (García Osma & Guillamón-Saorín, 2011; Arosa et al., 2013).

An opposing viewpoint argued that more meetings did not imply effective monitoring (Andres, Azofra, & Lopez, 2005) and may show an inefficient board affecting negatively to the firm's performance (Vafeas, 1999). Furthermore, routine duties absorbed much of a board's meeting time and take time from the independent governor's tasks to control managers (Jackling & Johl, 2009). Thus, independent governors had short time to do their duties efficiently.

Empirically, the main literature showed that board meetings impacted positively on voluntary disclosure (Laksmana, 2008) and social responsibility in private corporations (Cuadrado et al., 2015). However, Ntim et al., (2017) found not relationship between board meetings and voluntary disclosure in high education institutions. According to those arguments and taking into account that the Committee of University of Chairmen (2009) recommended governing boards to meet at least four times a year, we suggest that board meeting affects social responsibility, and its dimensions, in high education institutions. Thus:

H3. There is a systematic relationship between board meeting and social responsibility in high education institutions.

3.1.4. Gender diversity and social responsibility in high education institutions

Resources dependence theory was used to explain that there was a positive relationship between gender diversity and social responsibility. Female board increased social responsibility practices because they offered a broad perspective in racial, ethnic, gender aspects and so on. In this vein, Hoffman & Meier (1961) explained that board diversity had better problem-solving capacity and creativity. Therefore, diversity was considered a useful resource for the stakeholder management in firms (Chang et al., 2017).

Most empirical evidence brought that the more female members on the board the more social responsibility practices firms obtained (Williams, 2003; Surroca & Tribó, 2008; Boulouta, 2013; Jia & Zhang, 2013; Zhang et al., 2013). However, there were also studies that found no relationship between gender diversity and social responsibility practices (Coffey & Wang, 1998; Bear, Rahman, & Post, 2010) or reported negative effects of diversity related to emotional and relational conflicts (Goodstein, 1994)

According to the above argument and following the idea that women on the boards were considered significant to corporations (Jamali & Mirshak, 2007), the authors suggest a relationship with social responsibility, and its dimensions, in high university institutions. Thus, we suggest the following hypothesis:

H4. There is a systematic relationship between gender diversity and social responsibility in high education institutions.

3.2. Economic and financial resources and social responsibility in high education institutions

The primary sources of resources for nonprofit corporations, such as high education institutions, are (1) *private contributions*, in the form of individual donations, corporate gifts, and foundation grants. With this regard, Froelich (1999) argues that a high share of funding from private sources provides a measure of legitimacy for the organization, a prerequisite for securing future contributions; (2) *public support* (government grants), in which are earned by successful grant application rather than extensive fundraising effort, are generally portrayed as the most stable revenue source for nonprofits (Froelich, 1999). In many cases, government grants are renewed without contest, provided the organization has adequately met application requirements (Kelly, 2012). That said, while government grants provide stability for a nonprofit corporation, this advantage tends to be offset by the bureaucratic demands associated with grant administration; and (3) *private sector payments* (commercial activity) in the form of user fees, membership fees, government contracts, and the sale of products and service.

According with the above arguments, we should highlight the resource dependence theory, which is focused on that each funding source offers a different set of advantages and disadvantages, and each creates a different level of dependency on external corporations (Brooks, 2000). Those ideas are based on the idea which explains that "the key to organizational survival is the ability to acquire and maintain resources" (Salancik, & Pfeffer, 1978, 2). This task is problematic due to environmental conditions of scarcity and uncertainty; broadly speaking, resources are not adequate, stable, or assured. In this sense, the resource imperative results in the adaptation of organizations to requirements of resource providers. Therefore, corporations are not autonomous, but are rather constrained by a network of interdependencies with other corporations as they seek to access the relevant resources, such as financial and human resources, information and legitimacy, to continue operating (Pfeffer, 1987).

Concerning to the previous literature is known that there has been a significant change in the way that high education institutions appear to have attempted to manage their dependencies and interdependencies with public funding and regulatory reforms (Nagy & Robb, 2008; Parker, 2002, 2011, 2012; Taylor, 2013), adopting those aspects in their practices and strategies. In this sense, in the British context, there have been some policy reforms in the high education industry which are focused on promoting a right financial management through public accountability, transparency and strong performance (Parker, 2012; Ntim et al., 2017) which are ones of the pillars of social responsibility.

In the Spanish context, Larrán, López, & Andrades (2010) argue that Andalusian high education institutions have to manage significant changes such as quality, adoption to the new regulatory reforms (Spanish Organic Law of Universities and Andalusian Law of High Education Institutions), financing by objectives (Contracts-Programs), strategic planning, progressive adaptation in contents and methods of the curricula, new definition of degrees and masters for adaptation to the European Higher Education Area, and so on. In this vein, the authors explain that high education institutions should also meet the requirements of fund providers, however, whether in those requirements there are not sustainability aspect, high education institutions do not take them into account. Thus, the more funds a high education institution wants to perceive, the lower is the concern for sustainable behaviors, given that obtaining them not depend on sustainability aspects. Similarly, in the German context, Burgard & Grave (2013) explain that high education institutions carry out proposals on social responsibility only when those institutions receive considerable amount of public fund. Thus, according to the relevance that resources have in social responsibility in high education institutions, we propose the following hypothesis:

H6. There is a relationship between funding and social responsibility in high education institutions.

4. Methodology

4.1. Data considerations

To build our sample, we take the British high education institutions that are included in the People and Planet's University Ranking in 2016, which is its last publication. This raking shows how good British high education institutions are at sustainability during an academic year. In this sense, we get a sample of 150 British high education institutions during two continuous academic years, 2013-2014 (publication in 2015) and 2014-2015 (publication in 2016), resulting in a balanced panel of 300 observations (150 universities x 2 years). The sampled British high university institutions represent around 85 per cent of the entire British high education institution population. The data uses in the analysis is taken from the sampled high education institution's annual reports, which are available from their websites, People and Planet's University League and the complete University Guides.

4.2. Definition of variables and model specifications

Regarding to the variables, we present how they are measured in the Table 1.

Table 1: Variable definitions

Variables	Definitions
Dependent variable	
Social responsibility	It is measure through a sustainability index which is divided in the following factors: *environmental aggregate factor* which includes human resources, environmental audits, carbon management, energy sources, waste and recycling and carbon and water reduction; *staff, student and worker aggregate factor* gets the staff and student engagement and worker rights; *education factor* that controls education; *ethical factor* which gets the ethical investment; and *sustainable food factor* contemplates the sustainable food aspects.
Independent variables	
Governing board structures	
Board size	It is the natural logarithm of the total number of board members.
Independent governors	It is the percentage of independent governors on the board members.
Board meeting	It is the natural logarithm of the number of annual board meeting.
Gender diversity	It is the percentage of females on the board members.
Economic and financial resources	
Tuition fees	It is measure as the proportion of total tuition fees (from abroad students) to total income.
Funding grant	It is measure as the proportion of total funding grant to total income.
Research grant	It is measure as the proportion of total research grant to total income.
Staff cost	It is measure as the proportion of staff cost to total income.
Control variables	
High education institution size	It is the natural logarithm of the total student size; natural logarithm of the total staff; natural logarithm of the total incomes.
Pre-1992 high education institution	It is a dummy variable which takes value 1 for pre-1992 high education institutions and value 0 otherwise.

To analyses our research question, ordinary least squares models (OLS) are applied. Following this methodology, we define the following main model:

$$SOCIAL\ RESPONSIBILITY = \alpha_0 + \beta_i \sum_{i=1}^{4} CG_i + \beta i \sum_{i=1}^{4} RESOURCES_i + \sum_{i=1}^{2} CONTROL_i + \varepsilon i \qquad \text{(Equation 1)}$$

Where β_i are the intercept terms, εi is the error term, CG refers to the four corporate governance variables, called, boar size, independent governors, board meeting and gender diversity, resources refers to the economic and financial resources, including, tuition fees, funding grant, research grant and staff cost, and control are the control variables, namely, size and pre-1992 high education institutions.

4.3. Empirical results

4.3.1. Descriptive results.

In this section, we report the descriptive statistics and correlation analyses. The Table 2 shows descriptive statistics on all British high education institutions, such as mean, standard deviation, minimum and maximum, for the studied independent variables.

Table 2. Descriptive Statistics on all British high education institutions

Variables	Mean	Std. Dev.	Min	Max	Mean difference
Panel A: Independent variables					
Corporate Governance					
Board size	22.083	4.222	6	35	-5.164**
Independent governors	0.554	0.153	0	1	4.085***
Board meeting	4.748	1.345	2	12	-1.201
Gender diversity	0.314	0.107	0.04	0.833	-1.481
Economic and financial resources					
Tuition fees	0.115	0.121	0	1.791	-2.100**
Funding grant	0.192	0.116	0.242	0.858	3.602***
Research grant	0.092	0.110	0	0.636	-10.878***
Staff cost	0.530	0.619	0.122	0.697	0.246
Control variables					
High education institution size	9.184	1.092	5.460	10.940	-4.961***
Pre-1992 high education institution	0.3	0.459	0	1	-

Note: *** Significant at the 1% level; ** Significant at the 5% level; * Significant at the 10% level are used for the mean difference between pre and post-1992 high education institutions.

According to the corporate governance variables, our findings show that British high education institutions have a mean of 22 membership on the governing board. This result is in line with the Committee of University of Chairmen's recommendations which suggests that a governing board should be between 12 and 25 members. The Committee of University of Chairmen's suggestion about independent governors says that they have to be at least 50 per cent of the board, our results are in line with this suggestion because present a mean of 50 per cent of independent governors. With regard to the female representation on the board, table 3 presents a mean of 31 per cent. Finally, figures about board meeting show that governing board meets around 5 times a year.

Table 2 also reports figures about the economic and financial resources, the findings show that tuition fees report a mean of 11.5 per cent and funding grant a mean of 19.2 per cent over the total income. According to the research grant, we should highlight that they represent a mean of 9.2 per cent of the total income. Furthermore, the control variables show that pre and post-1992 high education institutions are presented in a 30 and 70 per cent respectively.

Additionally, we examine the correlations between the variables in the studied model through Spearman's rho correlations. The results are generally lower than 0.90. Furthermore, we check the variance inflation factors (VIF) which are lower than 10. These analyses indicate that collinearity problems are minimal.

4.3.2. Hypothesis testing

With regard to the OLS models, Table 3 presents the results that show how corporate governance and economic and financial resources impact on the social responsibility in the British high education institutions. Model 1, 2 and 3 try to explain our hypothesis with social responsibility as dependent variable.

Table 3: Results of ordinary least squares model (OLS) I

Variables	**Model 1 Social responsibility**	**Model 2 Social responsibility**	**Model 3 Social responsibility**
Board size	-0.201 (0.058)	-0.014 (0.058)	-0.013 (0.065)
Independent governors	**-0.748** (0.319)**	**-0.615** (0.272)**	**-0.878** (0.363)**
Independent governors-squared	**0.740*** (0.294)**	**0.666*** (0.258)**	**0.889*** (0.326)**
Board meeting	-0.005 (0.039)	-0.028 (0.041)	-0.001 (0.049)
Gender diversity	-0.072 (0.973)	-0.043 (0.101)	-0.153 (0.118)
Tuition fees	**0.176** (0.086)**	**0.174*** (0.732)**	**0.160** (0.084)**
Funding grant	-0.179 (0.136)	-0.169 (0.129)	-0.083 (0.136)
Research grant	**-0.183* (0.112)**	**-0.372*** (0.127)**	**-0.373*** (0.152)**
Staff cost	**0.424** (0.205)**	**0.382** (0.194)**	0.325 (0.221)
High education institution size Total students	**0.048*** (0.011)**	**-**	**-**
High education institution size	**-**	**0.060*** (0.014)**	**-**

Total Incomes			
High education institution size **Total staff**	**-**	**-**	**0.064***** **(0.015)**
Pre-1992 high education institution	**0.052*** **(0.031)**	0.050 (0.031)	0.047 (0.038)
Cons	0.034 (0.248)	-0.232 (0.275)	0.006 (0.038)
R-squared	0.249	0.239	0.265
ANOVA (F statistic value)	4.67***	4.92***	4.48***
Sample	185	186	137

Note: *** Significant at the 1% level; ** Significant at the 5% level; * Significant at the 10% level; our dependent variable is social responsibility.

According to the hypothesis 1 which proposes that board size is related to social responsibility, as shown in all models, there is not a significant relationship between both variables. Thus, we can not accept Hypothesis 1.

Hypothesis 2 suggests a relationship between independent governors and social responsibility. As shown in Models 1 to 3, independent governors (negative) ($p<0.05$) and its squared-term (positive) ($p<0.001$) are significantly related to the social responsibility. These results indicate that when board governors reach to a certain point of independent members its relationship with social responsibility is positive and significant. In order to be a bit more precise about when this occurs, we can say that the value that maximizes the function is when the board has around 46 per cent of independent governors. So adding a new independent governors increases the development of activities in social responsibility. Therefore, we can corroborate our Hypothesis 2.

With regard to the Hypothesis 3, we do not find a relationship between the number of board meeting and social responsibility. Furthermore, when we test the Hypothesis 4, the findings do not present a significant relationship between gender diversity and social responsibility. Thus, Hypothesis 3 and 4 are not accepted.

Concerning to the Hypothesis 5 with proposes a relationship between economic and financial resources and social responsibility, Models 1, 2 and 3 show that there are a negative relationship between funding grant and research grant to social responsibility. However, we only find a significant ($p<0.05$) relationship between research grant and social responsibility. Furthermore, the findings indicate that tuition fees and staff cost have a positive and significant ($p<0.05$) relationship with social responsibility. Therefore, we can accept Hypothesis 5 which verify that there is a significant relationship between economic and financial resources and social responsibility concerning tuition fees, research grant and staff cost.

According to the control variables, we find a positive and significant relationship between the high education institution size and social responsibility. We test this relationship through student size, total staff and total incomes and, in all cases, the figures present a powerful positive and significant ($p<0.001$) relationship. Moreover, with respect to pre-1992 high education institution, in Model 1, the results show that there is a positive and significant relationship with those high education institutions and social responsibility.

Finally, models indicate that the overall model is significant (F= 4.76; F= 4.92; F= 4.48; *p<0.001*) and the variables explain 24.9%, 23.9% and 26.5% (R^2) of the variations in social responsibility in high education institutions.

5. Discussion and Conclusions

In this paper, we examine whether governing board structures and economic and financial resources are related to social responsibility in British high education institutions.

Overall, the study validates a number of interesting and relevant findings. According to the governing board structures, first, it seems that governing board size does not influence social responsibility. In this vein, previous studies have revealed positive (Cuadrado et al., 2015; Ntim, Soobaroyen, & Broad, 2017) and negative (Bai, 2013) relationship between having a specific number of board members and social responsibility practices. Maybe, the key questions here is: do boards know what their role is to perform in a social responsibility way in high education institutions? Perhaps when board members know which are exactly the duties of performing in a proper social responsibility way, they would try to adopt them in their role.

Second, regarding the independent governors, we present a curvilineal relationship with an exponential growth curve with social responsibility in high education institutions. In this vein, this finding contrasts with previous studies carried out (Chang et al., 2017) that also find a curvilinear relationship between independent governors and corporate social responsibility. We may say that the role of independent governors should work actively in pursuing social responsibility when the percentage of them on board exceeds the regulatory requirement. Therefore, when the proportion of independent governing board exceeds the regulatory requirement they should be able to play a role which tends to enhance the social responsibility practices in high education institutions.

Third, the number of board meeting and gender diversity do not appear associated with social responsibility aspects. These results are in line with Coffey & Wang (1998) and Bear et al. (2010) who do not find any relationship between those aspects.

Concerning to economic and financial resources, first, we find a negative and significant relationship between research grant and social responsibility. With regard to those results, we may say that high education institutions are not autonomous and dependent on external corporations which provide sources as dependence resource theory says. In this vein, those external corporation rarely require that high education institutions perform in a social responsibility way to get funding, thus, this situation tends to forget social reputation actions of those high education institutions due to the fact that social responsibility actions are not required as conditions to access to funding. These results are in line with previous works in the Spanish and German contexts (Larrán et al., 2010; Burgard & Grave, 2013).

Second, the tuition fees appear positively associated with social responsibility practices. It seems that the resources that come from students are used properly to perform actions in a social responsibility way.

Third, regarding the relationship between staff cost and social responsibility, we may say that a greater investment in professional training and salary conditions results in greater social responsibility activities.

Finally, there is not a significant relationship between funding grant and social responsibility practices. As previously stated, British high education institutions are worried about obtaining external funding that forget the aspect related to social responsibility because they are not required in the granting of funds.

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