

**Title:** **Firm ownership structure impact on Corporate Social Responsibility: Evidence from austerity U.K.**

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**Abstract**

Corporate social responsibility has become an increasingly important sustainable development issue in U.K. The main contribution of this study is to examine how firm ownership structure impacts good corporate governance and corporate social responsibility in U.K. during austerity conditions. Following the financial crisis of 2007/8 the U.K. government introduced austerity conditions which impacted firm CSR activities. From the initial sample of more than 250 firms, fifty consistently remain listed on the FTSE4good index during 2008-2012 and are analysed. The definition of CSR distinguishes voluntary and mandatory CSR construct (Arora and Dharwadkar, 2011). Findings indicate Board ownership structure and satisfactory firm performance impact on the level of voluntary CSR. Board ownership results suggest increased institutional and non-CEO shareholdings support a higher level of voluntary CSR engagement, whilst increased CEO shareholdings lead to a lower level of investment in voluntary CSR. In terms of satisfactory firm performance, results suggest positive attainment discrepancy supports a higher level of voluntary CSR, whereas greater potential organizational slack leads to a lower level of voluntary CSR investment. Effective governance and voluntary CSR association is more pronounced under conditions of high attainment discrepancy and low organizational slack. The findings suggest implications for adapting firm decision-making latitude and government policy between austerity and prosperity conditions.

**Keywords:** Sustainable development, ownership structure, Corporate Social Responsibility (CSR), attainment discrepancy, organisational slack, firm performance.

## **Introduction**

The focus of corporate governance mechanisms has traditionally prioritised the maximizing of shareholders economic value (Freidman, 1962; Williamson, 1975; Kakabadse et al., 2013) more than environmental protection and social sustainability. Within the originating economies of Anglo-American capitalism (Hall and Soskice, 2001; Aguilera and Crespi-Cladera, 2015) progressive governments' increasingly neo-liberal financial policies (Kinderman, 2012; Heyes et al., 2012) as innovations, have supported the rapid growth of an elite cadre of corporate entities (Vitali et al., 2011). Concern about the management of finite world resources by these leading firms and their impact on societies is driving the sustainable development trajectory (WCED, 1987; Casula Vifell and Soneryd, 2012) through greater prominence of discretionary firm corporate social responsibility (CSR) activities (Carroll, 1991). This broadens the fiercely contested debates concerning managerial discretion (Berle and Means, 1932) and monitoring by owners (Jensen and Meckling, 1976) researched within and across academic, economic, behavioural, environmental and legal fields to integrate environmental and social well-being decision-making as sustainable development accountability of the firm.

Regardless, the intensifying regularity of corporate scandals such as Enron, WorldCom, Parmalat, Lehmans, BP, Barclays, VW, Rolls Royce, Tesco (Filho and Balassiano, 2008; Neal and Cochran, 2008, Utz, 2017) has impacted governments that are out of kilter (Ireland, Greece, Spain) and firm control within industries (Knyght et al., 2011, Martínez-Ferrero, and Frías-Aceituno, 2015). In advanced stable economies, the governance attention has shifted towards maturing environmental (E.U. Emission trading scheme, 2005; EPI, 2014) and social

indices (FTSE4Good, 2001;Dow Jones sustainability index, 1999). As such, corporate performance (Coffey and Fryxell, 1991; Waddock and Graves, 1997; Johnson and Greening, 1999; Al-Najjar, and Anfimiadou, 2012) is these days, a more valued outcome of CSR activities (Carroll, 1999; 2008;Amran, Lee, and Devi,2014; Calza, Profuma and Tutore, 2016) which are the critical focus of mature boards' sustainability priorities (Helfaya, and Moussa,. 2017; Kakabadse et al., 2009; Khan and Kakabadse 2014).

Some studies have examined the relationship of CSR with firm financial (Margolis and Walsh, 2003) and social performance (Rehbein, Waddock and Graves, 2004) or towards its assessment in a national context (Skouloudis and Evangelinos, 2012). These elements are of equal importance because businesses exist in and are inter-dependent on society. (McKelvey, 1999). As such, CSR constructs have to equitably promote environmental, social and economic issues for better sustainability judgements and outcomes (Bondy et al., 2012). We note here, a distinction to environment and social issues being understood for firm financial performance! Our contribution tries to be sensitive to how each firm uniquely embeds CSR as equitable construct and to the influence a national context can have on them (Killic et al. 2015).

More particularly, the existing research into firm ownership and CSR is relatively sparse (Cormier and Gordon, 2001). Few studies have examined the relationship of firm ownership structure with specific elements e.g. climate change mitigation (Amran et al., 2014). In advanced markets, institutional ownership influence dominates the leading listed firms. Some scholars assert that dominant institutional owners focus their attention on shorter term goals, that often disregard CSR as a longer term goal (Coffey and Frixell, 1991). Other scholars argue institutional investors are unable to leave the firm early and therefore, they prioritise

mitigation of risk and stronger compliance or disclosure (Neubam and Zahra, 2006). Our contribution is novel in how we integrate the equitable factors that define CSR and uniquely draw attention to voluntary board behaviours (CEO/non-CEO) as complimentary, yet critical to mandatory compliance (Arora and Dharwadkha, 2011) for listed firms, which is pronounced during austerity conditions.

This paper contributes to a research gap examining CSR and firm ownership under emergent austerity conditions. The focus is on understanding how ownership structure influences the decision to invest in CSR activities (Prado-Lorenzo et al., 2009; Oh et al., 2011; Dam and Scholtens, 2012; Ali, Frynas and Mahmood, 2017; Lopatta, Jaeschke and Chen, 2017) by U.K. based corporations, where CEO and non-CEO CSR behaviour is voluntary.

The remainder of the paper proceeds by outlining the critical literature streams of voluntary and mandatory CSR, before sharing the conceptual model and proposition development. This is followed by the methodological approach, inclusive of sample selection and CSR construct as independent, dependent and control variables. In the latter sections of this paper, the findings, discussion and conclusion focus on enabling ownership conditions for enhancing voluntary CSR activities for improving sustainable development. Towards the end of the paper, the limitations of the study and need for future research are also shared.

### **CSR as mandatory and voluntary theoretical construct**

Whilst CSR as aboard agenda is influenced by ownership structure (Ciulla, 1999; Weaver et al., 1999; Aguilera and Crespi-Cladera, 2015; Galbreath, 2017) its relationship as a corporate governance mechanism influencing board performance remains ambiguous. Former research (Kesner and Johnson, 1990; Coffey and Wang, 1998; Johnson and Greening, 1999) has

commonly examined different variable mechanism implications simultaneously (Agrawal and Knoeber, 1996) and in isolation i.e. non-executive directors' ownership; executive directors' ownership; institutional ownership etc. Arora and Dharwadkar (2011) argue that interdependence among various corporate governance mechanisms (Rediker and Seth, 1995) is itself one of the grounds for this ambiguity.

Table 1 below summarises the divergence in interpretations of the existing influential representative literature streams, particularly of the dimensional constructs of Mandatory and Voluntary CSR threads. The distinction between Mandatory and Voluntary follows Arora and Dharwadkar (2011), where the development of these constructs can be understood over time:

**INSERT TABLE 1 HERE**

In Table 1 above, the earlier conceptualisations of CSR emphasised the voluntary obligations of executives to behave and reflect the acceptable values of society, as a condition of their professional legitimacy. Meanwhile, the institutional concern supported growth of corporations, whereas economics dominated the rhetoric of ethics. In the 1980s, the weakening of CSR as a stakeholder concern represented a transition towards greater emphasis on institutional intervention and State responsibility i.e. mandatory. By the 1990s, CSR had become a collection of different performance measures that clearly differentiated between the mandatory and voluntary concerns, but in an internationalising marketplace. In the twentieth century, a rise of interconnected social and environmental priorities has focused attention on discrete features between ownership (institution, board, individual shareholder) and managerial demands of the extended supply chains and the local impact of business, relative

to national and industry regulations, or the lack of them. What emerges in the second decade of 21st century is CSR as having different combinations of mandatory and voluntary (Arora and Dharwadkar, 2011; Lund-Thomsen, P. and Nadvi, K., 2010) meanings to the advanced (monitoring and institutional led) and developing (protecting the power base whilst reforming towards advanced nation demands) markets. As such, this study is located amidst pressures of globalisation (Kakabadse and Khan, 2016) in which governments are weakened and corporations are able to more choose where and how they operate (Scherer and Palazzo, 2007: 1101).

The growing consensus followed here, is that voluntary (sustainable development practices; committed employment; philanthropy) and mandatory (meeting of minimum regulations; health and safety; human rights) CSR is better examined separately (Strike et al., 2006; Mattingly and Berman, 2006; Godfrey et al., 2009; Chiu and Sharfman, 2009; Arora and Dharwadkar, 2011). Furthermore, where 'firms cannot be trusted to behave completely ethically on their own' (Arora and Dharwadkar, 2011: 14), this study contributes to a gap in the field, in understanding the impact of corporate ownership structures, particularly on the board (Galbreath, 2017) as CEO and non-CEO prompts and prevention, as influential on voluntary CSR.

Typically, profit-focused corporations are more likely to engage in voluntary CSR when they perform economically well (O'Rourke, 2003, Waddock and Graves, 1997). In this study, firm performance is incorporated into the conceptual model, as attainment discrepancy and organisational slack<sup>1</sup>, underpinned by the behavioural theory of the firm<sup>2</sup> (Cyert and March,

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<sup>1</sup> For literature threads to Attainment and Organisational Slack see Arora and Dharwadkar (2011) Appendix 1 pg14.

<sup>2</sup> Most decisions concerning long-term investments within organizations, including voluntary corporate social programmes, are subject to unresolved conflict between coalition of stakeholders (Cyert and March, 1963).

1963; Arora and Dharwadkar, 2011). *Attainment discrepancy* is the difference between actual and desired performance<sup>3</sup>. It is suggested that when a corporate firm is perceived to be performing well, non-executive directors or institutional owners may feel that there is no need for close monitoring, and are more likely to place a greater trust in management decision-making. Furthermore, it is likely that management will deal with their monitors, in such circumstances, in a more confident manner. Conversely, when a corporation is perceived to be not performing well, management may lack decision-making freedoms e.g. U.K. banks in the 2007/8 financial crisis (U.K. Corporate Governance Code, 2010; Shin, 2009). Following this thinking, we build a parallel argument about the additional behavioural theory of the Firm feature, the term *slack* and how it relates to governance response regarding their engagement in voluntary CSR.

### **Ownership structure**

Effective corporate governance, that promotes monitoring, is positively associated with stringent mandatory CSR, where failure to comply with rules or standard regulations that can result in penalties or erosion of corporate reputation, is avoidable. But, this lens restricts voluntary CSR to a simple cost-benefit analysis (Arora and Dharwadkar, 2011).

A little closer to reality, the voluntary CSR lens associates effective governance with a greater degree of uncertainty where investment interest and potential benefit is preferred by those with a longer-term horizon (Jamali et al., 2008). When governance mechanisms focus on short term performance e.g. institutional owners demand short term returns (Neubaum and Zahra, 1996<sup>4</sup>), this conflicts with and prevents managerial voluntary CSR investment options

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<sup>3</sup> That can be industry comparative or organisational own targets.

<sup>4</sup> Study sample drawn from Fortune 500, America's largest corporations.

(Bushee, 1998). The institutional owner may be perceived as passive (Pound, 1992; Wahal, 1996; Edwards and Hubbard, 2000) or having an agenda that determines value as part of a diversified portfolio (Dharwadkar et al., 2008) as impact on voluntary CSR.

Our study sample is drawn from the FTSE4Good U.K.index (2001) consisting of major U.K. companies, which are dominated by institutional investors owning up to 75 per cent of the stock. Whilst fifty elite institutions act as the core controlling shareholders (Kakabadse and Kakabadse, 2001), it remains worthwhile investigating the impact of such dominant concentrated ownership on voluntary CSR. These U.K. companies earn retained trading profits that amount to more than the share issue and borrowings combined, representing overwhelmingly, the largest source of new financial investments for U.K.innovation and development (McLaney and Atrill, 2010). However, unlike institutional investors of American companies (Neubaum and Zahra, 1996; Porter and Kramer 2006, 2011),the criteria of our FTSE4Good U.K. sample leans in support of the longer term horizon, where the decision to invest by institution pays more attention to voluntary CSR as a means of obtaining competitive position.

*Proposition P1: A greater percentage of institutional ownership has a positive relationship with voluntary CSR.*

Considering the board, a greater number of Non-CEOs are associated with an attention to and legitimacy within, the external marketplace (Pfeffer and Salancik,1978). But where the majority owners in our sample are institutional investors (Oh et al., 2011), they may influence the appointment of Non-CEOs to protect their interests, inclusive of longer term



sustainability, supported by the U.K. stock exchange listing regulations. As such, we propose a greater shareholdings' percentage of Non-CEOs will increase voluntary CSR engagement.

*Proposition P2: Increase in the ownership stakes of Non-CEOs is positively associated with voluntary CSR.*

In this study, corporate board structure includes managerial ownership. Although CEO tenure and incentivisation (Rajan and Zingales, 2000; Kakabadse et al., 2001), such as share options and bonus schemes (Core, et al., 2001; Murphy, 1999) has received much scholarly (Florakis and Balafas, 2014) and regulatory (U.K. corporate governance code, 2012) attention, there remains a gap for the holistic understanding of U.K. based CEOs ownership structures as influential to the promotion of voluntary CSR.

A major literature stream asserts that compensation serves for executive alignment with longer term shareholder interests (Gabaix and Landier 2008, Kaplan, 2008, Kaplan and Rauh, 2010). Others argue that managerial power may complicate the agency problem (Yermack, 1997, Bertrand and Mullainathan, 2001, Bebchuk and Fried, 2003). Past performance has been understood as signalling CEO ability, whilst in the post financial crisis (2008) era, the focus has been on tying executive share option schemes to the longer term future growth of the firm (Grout and Zalewska, 2012). Where management act in opposition to their shareholders (Shleifer and Vishney, 1997) self-interest and shorter-time horizons can adversely affect voluntary CSR (Arora and Dharwadkar, 2011). We propose CEO ownership has a negative impact on voluntary CSR.

*Proposition P3: Increase in CEO ownership stake in the firm is negatively associated with voluntary CSR.*

### **Satisfaction with firm performance**

In this study both features of BTOF (Cyert and March, 1963) that are attainment discrepancy and organizational slack are included as impacts on voluntary CSR.

Attainment discrepancy is an 'indication for firm performance' (Lant,1992: p.624). It is the difference between aspired and actual performance, where 'positive' refers to exceeding expectations and 'negative' represents under-performance. The concept has vital implications for long-term decisions such as investing in voluntary CSR. Positive attainment discrepancy makes firm governance feel confident and think broadly about sustainability. Where achieved, shareholders are likely to repose greater trust in management's decisions and permit higher discretion in financial allocation for longer term investment (Arora and Dharwadkar, 2011). Contrastingly, in the case of negative attainment discrepancy, governance will focus on improving performance by cutting corners, including CSR investment or cost reduction. This leads to limitation of managerial discretion as shareholding owners are not satisfied with their decision making (Bromiley et al., 2001).Therefore, we propose that positive attainment discrepancy is positively associated with voluntary CSR.

*Proposition P4: High attainment discrepancy is positively associated with voluntary CSR.*

Organizational slack is able to signify the existence of actual and potential resources which are needed for internal and external necessities for strategic development (Bourgeois, 1981).

This availability enables organizations to commit to social causes (Waddock and Graves, 1997) as well as to respond to stakeholders' demands (Arora and Dharwadkar, 2011).

Some researchers (Waddock and Graves, 1997; Amato and Amato, 2007) have used financial performance as a proxy for organisational slack to examine CSR's level of engagement. This has resulted in contradictory findings (Nohria and Gulati, 1996) and is unclear as performance (Arora and Dharwadkar, 2011). It is recommended to distinguish between high (uncommitted liquid funds) and low discretion (absorbed costs) constituents of slack (Navarro, 1988; Seifert et al., 2004; Arora, 2008; Arora and Dharwadkhar, 2011) where only high discretionary slack (Potential) should be used in investigating CSR, as absorbed costs are harder / unlikely to be recoverable.

Navarro, 1988; Seifert et al., 2004; and Arora and Dharwadkar., 2011; use only high discretionary measures as a proxy for slack to investigate levels of CSR. Navarro (1988) measures' potential slack 'as debt/equity ratio. Higher debt-to-equity ratio indicates greater financial risk, whereas the lack of liquidity will encourage governance to focus on minimizing allocation of resources to voluntary CSR. Therefore, we propose that high organizational 'potential slack' is negatively associated with voluntary CSR.

*Proposition P5: Potential organisational slack is negatively associated with voluntary CSR.*

### ***The integrated voluntary CSR model***

The impact of corporate governance on CSR is dependent on satisfactory firm performance (Arora and Dharwadkar, 2011). Satisfaction focuses attention on relative firm performance

(attainment) and the availability of resources (slack) that have an impact on the shareholder's decision pertaining to voluntary CSR. Hence there is the need for an integrated model. Figure 1 below has been developed from the literature. It offers for the first time, a U.K. perspective in the understanding of how does ownership structure impact voluntary C.S.R. with moderation of firm performance satisfaction.

### **INSERT FIGURE 1 HERE**

Our propositions drawn from the literature, asserts that higher institutional and Non-CEO ownership, the majority of which is institutional shareholdings, has a more positive impact on voluntary CSR, under the condition of low slack (low leverage; low debt to equity ratio) and positive attainment discrepancy. Furthermore, the decrease of CEO shareholdings has less of a negative impact on voluntary CSR under the same conditions. Hence,

*Proposition P6: An increase of Non-CEO shareholdings has a more positive impact on voluntary CSR under conditions of low slack and positive attainment discrepancy.*

*Proposition P7: An increase of institutional shareholdings has a more positive impact on voluntary CSR under conditions of low slack and positive attainment discrepancy.*

*Proposition P8: An increase of CEO shareholdings has a less negative impact on voluntary CSR under conditions of low slack and positive attainment discrepancy.*

Table 2 below, summarises our eight propositions relating to voluntary CSR in this study:

**INSERT TABLE 2 HERE**

### **Study sample and approach**

This is a quantitative deductive research (Blaikie, 2000), designed to investigate the impact of ownership structure on voluntary CSR in the U.K. Fifty companies consistently listed in the FTSE4Good U.K. index during the period 2008-2012 represent the filtered study sample for the research question. FTSE4Good U.K. is part of the FTSE4Good index series, that was established to objectively assess the ethical behaviour of firms towards meeting globally recognised corporate social standards (FTSE, 2012). Whilst the original list constitutes between 250 and 280 companies, out of these, only 50 firms remain listed for the full period under investigation (2008-2012). These 50 companies emerge from across various industries, as identified in Table 3 below:

**INSERT TABLE 3 HERE**

Social performance ratings for all the firms in our sample were collected for the period 2008-2012, in order to investigate CSR engagement during and after the U.K. recession.

In our study, the independent variables predate the dependent variable (Voluntary CSR) - a lag of one year (Arora and Dharwadkar, 2011). As such, the independent variables data

collection was for the period 2007-2011<sup>5</sup>. Data of CEOs ownership, Non-CEOs ownership, and concentrated ownership was collected from the annual publicly published reports.

Initially, the data collection was proposed using the Morningstar Company Intelligence database (formerly Hemscoff Company Guru). This contains information on 300,000 British companies including their financial; share price; board of directors'; director shareholdings, remuneration, and tenure details. However, this resource was found to be less reliable for our longitudinal study i.e. it only provides a snapshot at a particular point in time, whereas we needed a continuous, consistent dataset for 2008-2012. Therefore, we engaged annual reports as substitutes despite this approach being more time consuming. Global Business Browser and BITC (Business in the Community) were additional sources for our data.

### **Dependent variable**

This study aims to investigate the impact of ownership structure on CSR. The sample was deliberately drawn from FTSE4Good U.K. Index, thereby the firms listed met the minimum rules and standards for mandatory CSR, which was therefore not under consideration. The dependent variable was voluntary CSR.

### ***CSR indices and data sources***

Archival ratings have been used as dependent CSR variables by the majority of U.S. studies typically engaging KLD<sup>6</sup> ratings (Arora and Dharwadkar, 2011). Oh et al., (2011) use KEJI<sup>7</sup> Index, Prado-Lorenzo et al., (2009) engage GRI dataset, whilst Ghazali and Nazli (2007) use a CSR disclosure checklist applied to companies on the Bursa Malaysian

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<sup>5</sup>See table 4 below.

<sup>6</sup> Kinder, Lydenberg, Domini Research & Analytics (KLD) ratings

<sup>7</sup> Korea Economic Justice Institute (KEJI)

Composite Index. Typical major social performance indicators have included categories such as governance and transparency, employee issues, diversity, human rights, product quality, environment, community relations, amongst others. Thus, CSR dimensions have a history of being formulated into composite indices or comparative ratings (Waddock and Graves, 1997; Hillman and Keim, 2001; Bloom and Hillman, 2007).

More recently, the growing consensus alerts CSR itself is a composite of voluntary (proactive stakeholder relationship management) and mandatory (violation of regulations and standards) parts, that should be examined separately. One consideration is that the KLD construct is mainly focused on corporate philanthropy, gender and racial diversity, good union relations, green products or processes, and innovation. These parts are not on the same continuum with issues regarding the violations of the regulations set by agencies (Equal Employment Opportunity Commission (EEO); Occupational Safety and Health Administration (OSHA); Environment Protection Agency (EPA); Fair Trade Commission (FTC)) and in this thinking, should not be combined (Arora and Dharwadkar, 2011). With the aid of such exploratory findings, voluntary CSR was examined in this study, as separate to mandatory. Thereby our sample was intentionally drawn from the FTSE4Good U.K. index.

BITC (Business in the Community) was found to be the most useful data source of CSR ratings for our study. It charts the activities of 117 U.K. companies as impacting local communities and philanthropic impacts reported within Corporate Responsibility (CR) index<sup>8</sup> (FT, 2010). The CR index (2015) has become the leading U.K. voluntary benchmark for responsible business. The CR Index (2012) rates performance as four bands: Platinum (lists companies scored  $\geq 95\%$ ); Gold (lists firms scored  $\geq 90\%$ ); Silver (lists companies scored  $\geq$

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<sup>8</sup><http://www.bitc.org.uk/services/benchmarking/cr-index>

80%); and Bronze (lists firms scored  $\geq 70\%$ ). In this study, CSR involvement, taken from the CR index (2008-2012) classified companies into five groups (Table 4 below) ranking them from 4 to zero. Platinum (4) indicated the highest and Not rated (0) was the lowest possible score; Table 4below shares the CSR ranking classifications adopted in this study:

**INSERT TABLE 4 HERE**

In the next section, the independent and control variables are shared.

### **Independent and Control variables**

The independent and control variables are identified in Table 5below. Each variable is supported by previous literature studies, and the measure in consideration of this study:

**INSERT TABLE 5 HERE**

#### ***Ownership structure (financial independent variable)***

In order to identify the relationships between ownership structure and CSR ratings, three approaches were adopted. Firstly, concentrated ownership (Figure 1 above) may be the most effective mechanism of corporate governance, as financial institutions have more incentives and more means to monitor this performance (Morck et al., 1988; Kang and Sorensen, 1999; Hoskisson et al., 2002). To test propositions P3 and P8 (Figure 1 and Table 1 above), all institutions that owned 3 per cent or more shares in a firm (Table 4 measure above) were considered. The greater the ownership percentage by institution, the more likely it will be incentivised to monitor firm performance (Laidroo, 2009). According to the Financial



Services Authority's Disclosure and Transparency Rules (FSA's DTRs, 2012), companies are required to disclose all institutional shareholdings of 3 per cent and above.

Secondly, CEO stock ownership has a significant, positive impact on enhancing mandatory CSR (Mitra and Hossain, 2011). However, with regards to voluntary CSR, evidence suggests that the CEO acts in opposite favour (Shleifer and Vishny, 1997). To test this propositions P1 and P6 (Figure 1 and Table 1 above), empirically tested CEO shareholdings, where CEO ownership was the percentage of total equity owned by CEO (Chen, 2008).

Thirdly, existing literature (Johnson and Greening, 1999; Ahmed and Duellman, 2007) asserts that the greater representation of Non-CEOs provides better governance and enhances seeking external legitimacy for the corporation. Thus, as a mean of identifying the impact of Non-CEOs ownership on voluntary CSR, the propositions P2 and P6 (Table 1 and Figure 1 above) examine shareholdings of Non-CEOs as an ownership variable. Non-CEOs were those directors that neither worked for nor were affiliated in any other way to the company (Chhaochharia and Grinstein, 2007; Arora and Dharwadkar, 2011) beyond this role.

#### ***Attainment discrepancy (independent variable)***

To calculate attainment discrepancy in financial performance, return on assets (ROA) was calculated and used as an accounting measure of performance. This follows the approach in previous studies (Waddock and Graves, 1997; Arora and Dharwadkar, 2011).

After calculating the ROA, following Bromiley, (1991) and Arora and Dharwadkar, (2011), attainment discrepancy was measured against the industry average as a benchmark. For companies that performed above the benchmark, their past performances were multiplied by

1.05 (5% increase) and the historical difference between industry and firm actual performance was represented as attainment discrepancy. Positive attainment discrepancy signified actual performance above aspired (industry) and conversely, in the case of negative discrepancy. In the case of exceeding aspired performance, we expect that high attainment discrepancy is positively associated with voluntary CSR and as such, we include this variable to test proposition P4 (Table 1 and Figure 1 above) in our conceptual model.

### ***Organisational potential slack (independent variable)***

Different to Amato and Amato's (2007) use of financial performance to measure total slack, in this study the debt-to-equity ratio was adopted to measure 'potential' slack (Navarro, 1988; Arora and Dharwadkar, 2011). However, we believe that high debt-to-equity ratio is negatively associated with long-term investments such as voluntary CSR. To test this, proposition P5, (Table 1 and Figure 1 above) was included in our conceptual model.

### **Control variables**

This study adopted an appropriate methodology that allowed the examination of a multi-dimensional ownership structure of endogenous and controlling variables. The control variables in this study were firm industry, firm size, board size, CEO age, gender and tenure – those factors that have been controlled in earlier studies (Arora and Dharwadkar, 2011).

### ***Firm-industry (control variable)***

There are diversified social responsibility practices across different industries (Bowman and Haire, 1975; Spencer and Taylor, 1987; Griffin and Mahon, 1997). Heavy manufacturing and chemical industries are criticised for being major pollution culprits (Cole et al., 2005; Kneller and Mandersen, 2012); innovation fosters firm rise and decline within industry e.g. record,

cassette, CD, digital storage formats in the music industry; whilst regulations and their enforcement may drive changes in certain sectors more than others e.g. recycling, packaging, the health or car industry. Main stream studies (Ullman, 1985; McWilliams and Siegel, 2001) have argued that Firm-industry is a factor that affects both firm performance and CSR. As such, empirical studies need to redirect the relationship between social and financial performance, where Firm-industry variable should be controlled for (Margolis et al., 2007). The industry classifications of Waddock and Graves (1997) has been engaged by scholars (Tsoutsoura, 2004; Arora and Dharwadkar, 2011) to control varied industrial munificence. In this U.K. study, rather than scholarly segmentation (Waddock and Graves, 1997), the Standard Industry Classification code (SIC) is engaged, that is, widely accepted and provided by U.K. Office for National Statistics.

#### ***Firm-size (control variable)***

Previous literatures (Ullman, 1985; Burke et al., 1986; McWilliams and Siegel, 2001) suggest that firm-size as a factor, affects firm performance including CSR and it should be controlled for. Moreover, firm-size has received more attention where there is a greater pressure on larger firms to respond to the stakeholders' demands for responsibility (Burke et al., 1986). The majority of earlier studies that engage 'total assets' to measure firm-size are criticised, as this can cause statistical multicollinearity (Arora and Dharwadkar, 2011). In this study, we follow the guidance to use employees' number to represent firm-size measure, which avoids such statistical problem without loss of information. Furthermore, as Firm-size can be skewed and may violate the assumption of normality (Arora and Dharwadkar, 2011), therefore, in this study, the control variable has been log transformed.

### ***CEO age and tenure (control variable)***

CEO age (McKnight et al., 2000) and tenure (Rejchrt and Higgs, 2014) reflect a need for experience and maturity in leadership decision-making (Korac-Kakabadse et al., 2002), that reflects balance of CEO power and their own accountability (Kakabadse and Van den Bergh, 2013) for strategic development, particularly in high discretion environments (Kakabadse, 2015; Arora and Dharwadkar, 2011; Finkelstein and Hambrick, 1990; Haleblan and Finkelstein, 1993; Hambrick et al., 1993). As such, this study controlled for CEO age and tenure.

### ***Board size and gender (control variable)***

Influential to the implications of CEO's decision power, earlier studies (Yermack, 1997; Eisenberg et al., 1998; Brammer et al., 2007; Campbell and Mínguez-Vera, 2008; Fernandez-Feijoo, et al., 2012; Alexandrina, 2013; Oba and Fodio, 2013) found that board size and gender have an impact and therefore we controlled for these in our study.

In the next section, the panel data approach adopted for analysis in this study is shared.

### **Panel data analysis**

In order to avoid the biases and misleading estimates that come from traditional cross-sectional studies (Finkelstein and Boyd, 1998), this study employs panel data - the random effects model for analysis. The use of a longitudinal methodology enables this study to isolate the effects of specific actions and treatments over time and across sections (Hill and Phan, 1991; Arora and Dharwadkar, 2011). In this study, the methodology is adopted to allow for the examining of the multi-dimensional ownership construct in respect of the endogenous variables and taking account of the controlling variables.

In support of lagging the data, Hambrick (2007) asserts that when researchers include temporal lags and controls for the historical or prior states of variables, this will support the empirical establishment of causality mechanisms, closer to reality. In consideration of generalisation of findings, Maddala (2002) prefers the use of Random effects model.

### ***The Voluntary CSR Random-effects regression model***

The Random-Effects regression approach is most effective to use when the variables of interest for each firm are constant (Dougherty, 2006). The group of firms under consideration is a random sample rather than full population (fixed) and the individual specific effects are uncorrelated (Barter, 2017; Schmidheiney, 2016). In this case, the random-effects model is most appropriate for generalising the findings that go beyond the studied samples (Maddala, 2002). Furthermore, a sensitivity analysis is employed using Hausman-Taylor panel data regression for endogenous covariates (Hausman and Taylor, 1981) - among CG, CSR and other variables used as a measure for firm performance. The equation below outlines the modelling in our study:

$$VolCSR_{i,t} = \beta_0 + \beta_1 CEOOWN_{i,t-1} + \beta_2 Non-CEOOwn_{i,t-1} + \beta_3 InstOwn_{i,t-1} + \beta_4 AttainDisc_{i,t-1} + \beta_5 OrgSlack_{i,t-1} + \beta_6 FSize_{i,t-1} + \beta_7 DFI_i + \beta_8 CEDAge_{i,t-1} + \beta_9 Tenure_{i,t-1} + \beta_{10} BoardSize_{i,t-1} + \beta_{11} Gender_{i,t-1} + \alpha_i + \delta t + \varepsilon_{i,t}$$

*VolCSR* is the dependent variable (Voluntary CSR). *CEOOWN*, *Non-CEOOwn*, *InstOwn*, *AttainDisc*, *OrgSlack*, *FSize*, *DFI*, *CEDAge*, *Tenure*, *BoardSize*, and *Gender* are the observed independent variables (CEOs Ownership, Non-CEOs Ownership, Institutional Ownership, Attainment Discrepancy, Organisational Slack, Firm Size, Dummy variables for Firm Industry, CEO Age, CEO Tenure, Board Size, and Board Gender respectively).  $\alpha_i$  is the

unobserved effect on the depending variable;  $\beta_0$  is the intercept or constant, and the point at which the regression line cuts the vertical axis.  $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7, \beta_8, \beta_9, \beta_{10}$ , and  $\beta_{11}$  are the non-standardised regression coefficients. The index  $i$  refers to the unit of observation (the study sample of 50 firms),  $t$  refers to the time period (2008-2012), and  $\varepsilon_{i,t}$  is a disturbance term assumed to satisfy the usual regression model conditions.

A trend term  $t$  has been introduced to allow for a shift of the intercept over time. If the implicit assumption of a constant rate of change seems too strong, the trend can be replaced by a set of dummy variables, one for each time period, except for the reference period (Dougherty, 2006).

### **Study Findings**

The means, standard deviations, and correlations are reported in Table 6, below. The mean value for voluntary CSR is 1.607 with a standard deviation of 1.783. Voluntary CSR is correlated with CEO ownership, Non-CEO ownership, Institutional ownership, attainment discrepancy, organizational slack, firm size, CEO age, CEO tenure, board size and gender at  $p < .05$ :

**INSERT TABLE 6 HERE**

Where findings may be of concern due to potential multicollinearity between the variables, our regression analysis (Table 7 below) indicates no such concern, as our VIF is close to 1 (Burns and Burns, 2008). The Variance Inflation Factor (VIF) statistically describes the level of multicollinearity, the correlation between predictors, that exists in regression analysis. If  $VIF = 1$ , the status of predictors is not correlated; if  $1 < VIF < 5$ , predictors are moderately correlated; and if  $VIF > 5$  then there is high correlation. The VIF statistic in our study is well

below 5 and very close to 1, hence indicating no multicollinearity problem (Burns and Burns, 2008).

Findings of the random effect regression model on standardized (normalized) variables for the period 2008-2012, are reported in Table 7 below. The firms with higher Non-CEO ownerships, higher percentages of institutional ownerships, higher attainment discrepancy, larger size and gender diversity, with more women sitting on their boards, are more likely to invest in Voluntary CSR. Contrastingly, firms with higher CEO ownership percentages and greater debt to equity ratios, are less likely to engage in Voluntary CSR. These are interesting results which further studies may like to explore in more detail.

#### **INSERT TABLE 7 HERE**

The findings in Tables 6 reject a null hypothesis. There is sufficient statistical evidence to conclude significant linear relationships. Table 7 indicates that shareholdings' percentage of CEOs has a significant, negative, linear relationship with voluntary CSR (proposition 3). Together these findings suggest opportunities for a better balance which could be reached via more diverse ownership (as suggested by proposition 1 & 2). Whilst employee corporate ownership or their board representation has been debated, it remains suppressed by existing board-level stakeholders. Meanwhile, we note that issues in public-private arrangements (e.g. Carrilion) remain and the taxpayer funded bail outs as ownership (e.g. RBS 2007/8) may serve more political purpose than individual shareholder losses<sup>9</sup>. The findings assert executive ownership alone may not be the solution to the separation of ownership and control (Jensen and Meckling, 1976). Executive directors

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<sup>9</sup> £60bn losses over 10 years – RBS first profit in 2017/18 announced.

are hired by the principals (shareholders), mainly to protect their interests and may, therefore, endeavour to eliminate philanthropic or other CSR activities (Coffrey and Wang, 1998). Furthermore, directors are hired mainly for their financial experience (Fligstein, 1991) and prefer to evaluate historical financial information rather than investing in uncertain, long-term activities such as entrepreneurship, innovation, research and development, and investing in the community (e.g. investing in voluntary CSR) (Lorsch and MacIver, 1989; Baysinger and Hoskisson, 1990; Deutsch, 2005). The above findings are analysed next in relation to the 8 propositions that were being tested in the conceptual model.

### **Analysis of the Voluntary CSR propositions**

The results demonstrate a strong support for our propositions (Table 1 above). Proposition 3 predicted that the increase of CEOs ownership has a negative impact on Voluntary CSR. The regression analysis (Table 7 above) reveals that high CEO ownerships ( $\beta = -.058$ ) has a significant negative impact on the levels of Voluntary CSR. Proposition 8 predicted that an increase in CEO shareholdings has less of a negative impact on Voluntary CSR, under conditions of low debt to equity ratio and high attainment discrepancy. Our statistical model that integrates CEO shareholdings as an element of ownership structure and behavioural theories, in order to examine the interaction effects over time (2008-2012) -see regression results in table 7 above, strongly supports this prediction.

Proposition 2 predicted that the increase of Non-CEO ownerships has a positive impact on Voluntary CSR. Table 7 reveals that high Non-CEO ownerships ( $\beta = .010$ ) has a highly significant impact on the levels of Voluntary CSR. Our finding here contradict studies that find a negative relationship between CSR and non-CEO ownership ((Kesner and Johnson,



1990; Wang and Coffey, 1992; Coffey and Wang, 1998; Johnson and Greening, 1999; Kassinis and Vafeas, 2002; Arora and Dharwadkar, 2011). Similarly, Proposition 1 predicted that the greater percentage of institutional ownership has a positive impact on Voluntary CSR. It is revealed in the regression analysis (Table 7 above) that high institutional ownership ( $\beta = .013$ ) has a highly significant relationship with Voluntary CSR.

Propositions 6 and 7 predicted that an increase of Non-CEO and institutional shareholdings have a more positive impact on Voluntary CSR under conditions of low debt to equity ratio and high attainment discrepancy. Our statistical model integrates Non-CEO and institutional shareholdings, as the other two elements of ownership structure and behavioural theories, in order to test the interactive effects over the period 2008-2012. The results demonstrate a strong support for these predictions.

Proposition 4 predicted that positive attainment discrepancy is associated with Voluntary CSR. The results in Table 6 above revealed consistency with this prediction. Attainment discrepancy ( $\beta = .021$ ) using return on assets as the accounting measure, is highly significantly associated with Voluntary CSR.

Proposition 5 predicted that 'potential slack' is negatively associated with Voluntary CSR. The results show that potential slack ( $\beta = -.065$ ) represented by debt,-to-equity ratio, is highly negatively associated with Voluntary CSR.

The results show that diversity board characteristics (gender) ( $\beta = .310$ ) are significantly associated with Voluntary CSR. Board gender has a positive and significant, linear relationship with voluntary CSR. These results support the theory which suggests that female directors are atleast twice as likely as male directors to be highly qualified (hold a doctoral degree), have gained a broader experience within smaller firms and bring with them diverse

perspectives to the board (Hillman et al., 2002). However, CEO age, board size and tenure did not reveal statistically significant findings.

## **Discussion and conclusion**

The aim of this study was to understand the impact of ownership structures on corporate social responsibility of U.K. firms during government emergent austerity conditions of 2008-2012. As such our ownership structure in conceptual modelling (Figure 1 above) took account of institutional concentration along with Board member ownerships as CEO and non-CEO. Our conceptual model included satisfaction with firm performance, which supported by behavioural theory of the firm (Cyert and March, 1963) constituted attainment discrepancy and slack. Following Arora and Dharwadkar (2011), our understanding of CSR distinguished between mandatory and voluntary parts of CSR. Where all our sample was taken from U.K. FTSE4Good index, the mandatory CSR conditions were met and our 8 propositions could test *How does ownership structure impact corporate social responsibility?* for governance mechanisms /conditions beneficial for the enhancing of Voluntary CSR, as critical to sustainable development.

Our preferred approach engaged Random-effects regression to the panel data of U.K. firms during 2008-2012. In our conceptual model the dependent variable was Voluntary CSR and we controlled for firm-industry, firm-size, board size, CEO age, gender and tenure.

Our results indicate that increasing institutional and Non-CEOs shareholdings fosters a higher level of Voluntary CSR engagements. In the U.K. institutions have high shareholdings and may appoint Non-CEOs to represent their views and closely monitor their investments. Thus,

there is the need for widening of stakeholders power to affect social sustainability, or more independent Non-CEO shareholdings that may support higher Voluntary CSR accountability. Contrastingly, an increase of CEO shareholdings as concentrated power leads to lower level of investment in Voluntary CSR. This brings attention to a need for re-orientating or broadening the motivations and ethical mind-set of the organisational leader (CEO) in the case of benefits of Voluntary CSR during government led austerity periods. Alternatively, government policy or regulation should greater incentivise voluntary CSR in such periods. Ajmal et al. (2017) most recently identify that economic and environmental firm sustainability can be driven together through social factors within the organization. The firm leader's motivations and perspective influences strategic alignment and impact of sustainable development outcomes.

Our findings suggest that positive attainment discrepancy leads to a higher level of Voluntary CSR engagement, and potential slack leads to a lower level of Voluntary CSR investment. Our findings imply an association of effective governance with Voluntary CSR relies on the level of attainment discrepancy and organisational slack. That is, the impact of effective governance on Voluntary CSR is more pronounced under conditions of greater attainment discrepancy (higher return on assets) and lower organizational slack (lower debt to equity ratio). We note here the longer term shift in the U.K. towards neo-liberalism that whilst enabling potential availability for established firms to raise finance, also promotes a higher risk of debt culture, which may have a psychological impact on organisational leaders. Under government austerity conditions, firm is less likely to equitably prioritise environmental and social factors above economic. Yet, the environmental mitigation and social impacts become more important (Ajmal et al. 2017). Looking ahead, at the potential impacts of Brexit – the

U.K.'s exit from the European Union are unclear and will impact CSR policy and firm decision making as sustainable development.

In this paper we have presented the case of CSR as a voluntary and mandatory construct. In our modelling, whilst distinguishing between the two, we assert a complimentary rather than substitution relationship. However, we argue that the substitution effect can be evident during most stable or post-crisis periods, in cases where regulation may lead to change or prevent known problems from reoccurring. In reality, voluntary CSR leads to mandatory CSR and is therefore more important, because there is a time lag and because there are differences between the practice and reporting of CSR. The need for discretionary capacity becomes more critical in handling uncertainty during periods of austerity. Mandatory CSR emerges from the learning of Voluntary CSR and then it becomes a requirement for firms in industry to comply with as standards of acceptance. There may be opportunity for more pro-active governance in shaping firm outcomes. This is an interesting discussion that will benefit from case studies and contributions.

Further studies may like to explore our results and findings in more detail. There seems to be an opportunity for understanding CEO behaviours towards Voluntary CSR; How could the current typical board structure of large U.K. firms make better use of Non-CEO contributions? Would broadening ownership concentration or Board structure enhance Voluntary CSR? Where the U.K. State prefers voluntary 'comply or explain' for business, what effects are legislation or industry standards, as mandatory, having on Voluntary CSR? Where CSR is conceptualised as parts of a whole, what does this mean internally at different levels of the organisation – grass roots; management; board? And where CSR asserts business responsibility to society, how can Voluntary CSR initiatives engage across different

industries for greater effect and impacts? (Ajmal et al., 2007). Future studies may consider what does the regulator prefer – Voluntary or Mandatory CSR? and How does the relationship between Voluntary and Mandatory CSR influence the regulator's decision? It may also be interesting to focus on what powers and remit a regulator has and needs on the firm. More broadly, such questions point to *what type of governance system does a society prefer in terms of shaping the Government, regulator and firm relationship?*

This study may also offer support to institutional policy and organisational CSR relational studies of other less developed and culturally different national frameworks or contexts (Ali, Frynas and Mahmood, 2017; Kilic, Kuzey and Uyar, 2015; Soliman, Din and Sakr, 2013; Skouloudis and Evangelinos, 2012; Dam and Scholtens, 2012; Li and Zhang, 2010; MohdGhazali, 2007; Oh, Chang and Martynov, 2011) seeking improved equity and alignment of social, environmental and economic factors for eco-sustainable development.

In conclusion, this study highlights how vital it is to integrate firm sustainability performance and leverage it in examining the impact of governance on decision making regarding long-term strategy and in our case, Voluntary CSR in particular. Our study strongly supports the need to integrate insights of the behavioural theory of the firm (Cyert and March, 1963) into corporate governance theory for determining CSR engagement (Arora and Dharwadkar, 2011). Our study has drawn attention to Non-CEOs on Voluntary CSR as key to enabling conditions for better CSR engagement. Similarly, the findings call for restricting CEO financial incentivising, that do not align with longer term sustainable development strategies (such as Voluntary CSR).

## **Limitations**

In spite of a number of methodological improvements to our research design, this study is not free of limitations. This study relies on BITC ratings that ranks only 117 U.K. firms in terms of philanthropic activities and local community engagements (FT, 2010). Furthermore, those companies below 70% were given rating of 0, regardless that they maybe making contribution to Voluntary CSR. Thus, our results assume zero rating as non-engagement. Our study leans to CSR as positive, where good intentions do not necessarily mean good impact. Our study does not consider the potential for negative social impacts of CSR in the communities. Further, our selection criteria of sample firms are those that already are engaging in some kind of Voluntary CSR pro-actively. We acknowledge our data-set focuses on a time-period post-financial crisis emergent in the U.K. and is limited to CSR during recession conditions and government austerity programme.

In considering the board, our study only distinguishes between institutional, CEO and Non-CEOs financially. Future studies may focus in more detail on Board members (Chairman; Finance; NEDs) where CEO/Chairman relationship has been much researched. Essentially our study was driven by available quality data. There remains scope for better indexes and more contextually dynamic CSR and governance for improving longer term equitable economic, environmental and social sustainable development.

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**Table 1: Emergent constructs of Mandatory and Voluntary CSR**

<u>Literature streams</u>	<u>Voluntary CSR</u>	<u>Mandatory CSR</u>
Barnard (1938) Bowen (1948; 1953)	Professionalization of management - 'social responsibility' of executives to meet values of society.	Growth of corporation as a state concern of liberalising capitalism.
Walton (1967); Manne & Wallich (1972); Davis (1967; 1973)	Ethically altruistic, strategic, purely voluntary; free agent; as social responsibility owed to society	Ethics as a moral concern for self-interest- Avoiding societal harm, in strategic directing of business conduct
Drucker (1984); Freeman (1984); Porter (1985)	Extending the direct impacts of corporate practice responsibilities relative to impact on unique influential stakeholders.	CSR as a business opportunity; wealth creation and competitive advantage as a mechanism of power.
Carroll (1979; 1991; 1999)	Ethical as firm discretionary, philanthropic and corporate citizenship responsibility.	Legal, economic - firm has rule designed responsibility to society.
Wood (1991)	Corporate social performance as attribute of CSR particular to the organisation in context.	Corporate social performance as institutional policy mechanism for firm direction in society.
Lantos (2001)	Broad Ethics - altruistic, shared strategic.	Narrow ethics - as protecting self.
Crane and Matten (2004), Crane et al. (2004), Andriof and McIntosh (2001)	Civil society demands and needs as empathetic concern.	Business responsibility to State; as a moral obligation. Democracy and corporations as non-empathetic citizens.
Naylor, (1999); Fraser, (2005)	Obligations of managers to choose and act in interests of organisation within society	Compliance to the demands of others as a negotiation with society.
Waddock et al. (2005)	Diversity as opportunity for Corporate exploitation	Universal human rights and citizenship
Jones et al. (2005)	Philanthropic and managerial concern of employees and community -workplace as extension of community	Environments as distinct features of the marketplace with different obligations.
Jamali, (2007)	Discretionary responsibility as inherent concern of self as part of others.	Ethical, legal, economic components of the marketplace.
Matten and Moon (2008)	Implicit - informal values, norms and behaviours. National diversity and corporate discretions	Explicit - formal policies. Conformance to industry standards and Regional controlling regulations.
Kakabadse and Kakabadse (2009; 2011)	Board leadership qualities- director motives and concerns of CSR as consensus building for value.	CSR as strategic and institutional tailoring of the evidence as part of constrained governance processes.
Zile (2011)	Broad voluntary value adding business initiatives as drivers to meeting the needs of emerging markets.	Government / State / Acts driven CSR designed agendas as best interest - requiring project funding in developing countries.
Gamerschlag et al. 2011	Declining financial returns forcing need for policy change and renewed innovation of new markets demands.	Political cost and benefits ; political bottom line implications as renewal of closed networks.
Hung, Shi and Wang (2013)	Informal business practices, discrete lobbying as shaping the agenda as proactive.	Reported CSR information in China. Government setting standards and crafting of evidence mindful of public image.
Ioannou and Serafeim, (2011; 2014)	Individual firm practices; bribery and corruption. Weakness of consensus building in developing countries - call for shared engagement as a concern.	Global sustainability reporting and enforcement. Strength of developed countries as it politically increases responsibilities of business leaders.
Arora and Dharwadkar (2011)	Attainment as above aspired; Organisational slack as potential - non-financial performance and opportunities.	Meeting the regulations as conditional to conformance - ticking the criteria box.

Source: Designed by authors (see Arora and Dharwadkar, 2011 for Voluntary and Mandatory CSR construct).

**Table 2: Voluntary CSR propositions**

P1- A greater percentage of institutional ownership has a positive relationship with voluntary CSR.

P2- An increase in the ownership stakes of Non-CEOs in the firm has a positive association with voluntary CSR.
P3- An increase in the ownership stake of the CEO in the firm has a negative association with voluntary CSR.
P4 - High attainment discrepancy is positively associated with voluntary CSR.
P5 - Potential organisational slack is negatively associated with voluntary CSR.
P6-An increase of Non-CEO shareholdings has a more positive impact on voluntary CSR under conditions of low slack and positive attainment discrepancy.
P7- An increase of institutional shareholdings has a more positive impact on voluntary CSR under conditions of low slack and positive attainment discrepancy.
P8-An increase of CEO shareholdings has a less negative impact on voluntary CSR under conditions of low slack and positive attainment discrepancy.

Source: designed by authors from the literature informing Figure 1

**Table 3: Industry sectors FTSE4Good U.K. sample (2008-2012).**

Number of Firms (Total 50 firms)	Industry sector (2008-2012)
9	Support Services
5	Media and entertainment
5	Gas; water; multi-utility
2	Oil and gas
3	Telecoms
5	Travel and leisure
2	Banking
5	Financial services
2	Insurance
5	Food and drug retailers
2	Home furnishing retailers
5	General retailers

Source: compiled by authors.

**Table 4 :Voluntary CSR ranking**

CR Index Performance Band (t)	Platinum	Gold	Silver	Bronze	Firms not included in CR Index
Percentage (%)	95 and over	90 – 95	80 – 90	70 – 80	Less than 70
Rank	4	3	2	1	0

Source: compiled by the authors from CR index

**Table 5: Independent and Control variables.**

Independent Variables	Literatures	Measure
<b>Ownership structure</b>		
Financial institutions (t-1)	Morck et al., 1988; Kang and Sorensen, 1999; Hoskisson et al., 2002; Laidroo, 2009; Arora andDharwadkar, 2011.	Total percentage of all institutions that own 3 per cent or more shares in the firm.
CEO (t-1)	Johnson and Greening, 1999; Ahmed and Duellman, 2007; Chen (2008); Mitra and Hossain, 2011.	Total percentage of all CEO shareholdings.
Non-CEO (t-1)	Chhaochharia and Grinstein, 2007; Arora andDharwadkar, 2011.	Total percentage of all non-CEO shareholdings.
Attainment discrepancy(t-1)	Bromiley, 1991;Waddock and Graves, 1997; Dutta et al, 2005; Richard et al, 2007;. Arora andDharwadkar, 2011.	Return on Assets ratio (ROA).
Organisational slack(t-1)	Navarro, 1988; Arora andDharwadkar, 2011.	Potential slack is represented by debt-to-equity ratio.
<b>Control variables</b>		
	<b>Literatures</b>	<b>Measure</b>
Firmindustry(t-1)	Bowman and Haire, 1975;Ullman, 1985;Spencer and Taylor, 1987; Griffin and Mahon, 1997; Waddock and Graves, 1997; McWilliams and Siegel, 2001; Tsoutsoura, 2004;Margolis et al., 2007; Arora andDharwadkar, 2011.	The Herfindhal-Hirschman Index; down to two-digit code industry level as defined in the U.K. Standard Industrial Classification (SIC 2007). Provided by the Office for national statistics.
Firmsize(t-1)	Ullman, 1985; Burke et al, 1986; McWilliams and Siegel, 2001; Arora andDharwadkar, 2011.	The number of full time employees.
CEOage(t-1)	Finkelstein and Hambrick, 1990; Haleblian and Finkelstein, 1993; Hambrick et al, 1993; Arora andDharwadkar, 2011.	Average age of CEOs and Non-CEOs.
CEOtenure(t-1)	Finkelstein and Hambrick, 1990; Haleblian and	The average of the number of years since CEOs and Non-

	Finkelstein, 1993; Hambrick et al, 1993; Arora and Dharwadkar, 2011.	CEOs were appointed to the board.
Boardsize(t-1)	Yermack, 1996; Eisenberg et al, 1998; Alexandrina, 2013.	The total number of members in the board.
Boardgender(t-1)	Dutta and Bose, 2007; Campbell and Mínguez-Vera, 2008;. Oba and Fodio, 2013.	The ratio of females to males in the board.

Source: compiled by the authors

**Table 6: Correlation matrix**

	Mean	S.D.	<u>VolCSR</u>	<u>CEOOwn</u>	<u>Non-CEOOwn</u>	<u>InsOwn</u>	<u>AttainDiscROA</u>	<u>OrgSlackD/E</u>	<u>FSize</u>	<u>CEOAge</u>	<u>Tenure</u>	<u>BSize</u>	<u>Gender</u>
<u>VolCSR</u>	1.607	1.783	1.000										
<u>CEOOwn</u>	0.918	3.383	-0.199*	1.000									
<u>Non-CEOOwn</u>	0.957	4.616	0.184*	-0.042	1.000								
<u>InsOwn</u>	34.929	18.830	0.105*	0.021	0.407*	1.000							
<u>AttainDiscROA</u>	6.826	8.458	0.302*	0.161*	0.136*	-0.085*	1.000						
<u>OrgSlackD/E</u>	4.335	3.546	-0.110*	0.177*	-0.167*	-0.165*	-0.027	1.000					
<u>FSize</u>	4.208	0.676	0.499*	-0.203*	-0.236*	-0.181*	0.176*	0.239*	1.000				
<u>CEOAge</u>	55.116	2.569	0.116*	-0.106*	-0.173*	-0.182*	0.004	0.365*	0.165*	1.000			
<u>Tenure</u>	5.916	2.147	-0.232*	0.280*	-0.079*	-0.166*	0.276*	-0.050	-0.193*	0.262*	1.000		
<u>BSize</u>	10.460	2.738	0.127*	0.011	-0.181*	-0.285*	-0.064*	0.384*	0.248*	0.081*	0.035	1.000	
<u>Gender</u>	0.177	0.120	0.120*	0.102*	0.397*	-0.036*	-0.070*	0.386*	0.199*	0.105*	-0.060*	0.114*	1.000

Note: The Table shows Pearson correlation coefficient: \* ≤ .05

Source: Findings by authors from Figure 1



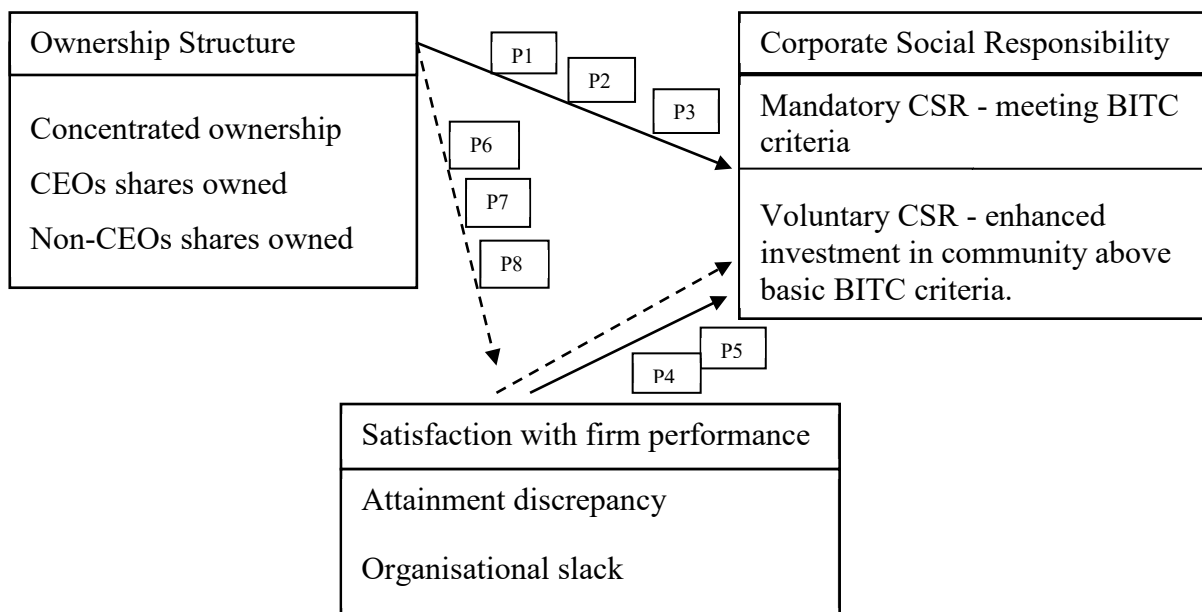
**Table 7: Regression results for 2008-2012.**

VolCSR	Coef.	Outcomes
Industry dummy coefficients		
CEOOwn	-0.058*	Significant relationship
Non-CEOOwn	0.010**	Significant relationship
InsOwn	0.013**	Significant relationship
AttainDiscROA	0.021**	Significant relationship
OrgSlackD/E	-0.065*	Significant relationship
FSize	0.796**	Significant relationship
CEOAge	0.066	Insignificant relationship
Tenure	-0.102	Insignificant relationship
BSize	0.016	Insignificant relationship
Gender	0.310*	Significant relationship
R <sup>2</sup>	0.621	
F significance	51.77***	
No. of observations	250	

Source: findings of authors

Note: The table shows the standardised coefficients ( $\beta$ ), the value of  $R^2$ , and the value and significance of the  $F$  change. The levels of significance are: \*\*\* $p < .01$  \*\* $p < .05$ , \* $p < .10$ . Coefficients for dummy industry variables not reported for the sake of brevity

**Figure 1: Integrated model of Voluntary CSR**



Source: Designed by authors