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# Impact of board independence on community disclosure quality

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## Abstract

This study investigates the link between board independence and the quality of community disclosures in annual reports. Using content analysis and a panel dataset from UK FTSE 350 companies the results indicate a statistically significant relationship between board independence, as measured by the proportion of nonexecutive directors, and the quality of community disclosures, while holding constant other corporate governance and firm specific variables. The study indicates that companies with more non-executive directors are likely to disclose higher quality information on their community activities than others. This finding offers important insights to policy makers who are interested in achieving optimal board composition and furthers our understanding of the firm's interaction with its corporate and extended environment through high-quality disclosures. The originality of this paper lies in the fact that it is the first to specifically examine the relationship between outside directors and community disclosures in annual reports. The paper contributes both to the corporate governance and community disclosure literature.

**JEL codes**: M1; M14; L21

**Keywords:** Corporate Governance; Non-Executive Directors; Board Composition; Disclosure Quality; Community Disclosures; Stakeholders Theory; Panel Study.

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# 1. Introduction

This study examines the impact of board composition on corporate community involvement disclosure (CCID) for a sample of UK listed companies. The composition of the board of directors in a company is crucial in providing strategic direction (Chen and Jaggi, 2000; Gul and Leung, 2004). It is therefore not surprising that there have been significant increases in regulation and corporate governance (CG) reforms focusing on board composition following various corporate scandals in the past decades.

Boards of profit-orientated companies are usually composed of individuals that bring considerable expertise, experience and skills, each one within their own specialist field, such as financial experts, lawyers, marketing specialists, top management of other firms and community leaders (Hillman and Dalziel, 2003; Mitchell et al., 1997). Similarly, based on the taxonomy of directors proposed by Hillman et al. (2000), some corporate boards also compose of community leaders. This type of Non-Executive Directors (NEDs) are important to the corporation because they can provide immense information and experience on the impact of organisational activities on the society at large and its relationships with powerful community groups. To this extent, it can be argued that the presence of community leaders on corporate boards can contribute enormously to corporate legitimacy [1] by facilitating the acceptance of the company's operations by its external environment, i.e. the community, ensuring necessary corporate survival and success (Hillman et al., 2000; Hillman and Dalziel, 2003).

Furthermore, evidence on the growing importance of community leaders in the board's strategic decision making has started to emerge [2]. For example, in a study of the impact of environmental changes on board composition, Hillman et al. (2000) show that during shifts from a regulated to a deregulated environment, where business uncertainty increases, firms tend to increase the number of

community influential figures on their boards. As the authors suggest (Hillman et al., 2000, p.252), "*Environmental jolts such as deregulation change the nature of the interdependencies and resource needs faced by the firm, thus altering the needs with respect to the extra-governance roles of directors*".

This strategic move of including community influential figures on the board stems from firms' increasing need to adjust promptly to an uncertain business environment by allowing non-business perspectives and ideas to be heard; as well as, utilising the directors' influence on various community groups  (Hillman et al., 2000). These results, on the influence and growing importance of community representatives on the board, are further corroborated by Hillman and Keim (2001) who show a statistically significant positive relationship between the number of community directors and firm's performance on aspects of diversity [3].

One of the areas in which community leaders on the board could influence corporate actions is Corporate Community Involvement Disclosure (CCID) [4].  CCID is the disclosure, in annual reports, of the involvement of corporations in social initiatives in the communities in which they operate (Moon and Muthuri, 2006). Marquis et al. (2007, p.926) [5], refer to the same idea as corporate social action, describing it as  "behaviors and practices that extend beyond immediate profit maximization goals and are intended to increase social benefits or mitigate social problems for constituencies external to the firm". Similarly, Moon and Muthuri (2006) argue that Corporate Community Involvement (CCI) goes beyond donations to charities to include committing significant time and other company's resources such as money, skills and expertise to community projects and developments, including but not limited to arts, housing, the environment, poverty eradication, health and wellbeing, welfare and general improvements in the quality of life of the community. These CCI activities are undertaken not as a responsibility but as recognition of a deserving action by the corporation to its community of operations (Marquis et al., 2007).

The importance of CCI can be traced to the mid-20th century following the end of the war. Tallon (2010) argues that CCI was one of the strategies adopted for economic and social regeneration by the UK, US and other governments between the late 1940s and early 1960s due to the devastating effects of the World War II, such as poverty, unemployment and homelessness (Bush et al., 2008). Businesses were therefore encouraged to get involved in community development with the intention of increasing the rate of industrial and economic growth (Moon and Muthuri, 2006). Consequently, corporations moved from philanthropic activities prior to World War II, to actual involvement in community development and social rebuilding after the war through corporate social actions (Bush et al., 2008). In this sense, Matten and Crane's (2005) expositions on the pervading roles of corporations in discharging state-like responsibilities such as protecting, enabling and implementing citizenship right, and Scherer and Palazzo's (2011) arguments on the growing political role of firms are indicative of the importance of CCI and the significant roles of firms in the life of their community of operations.

Prior studies have suggested that social disclosure is positively related with increased social concern by the firm (Cho and Patten, 2007; Patten, 2002). Evidently, one of the most important tools for providing corporate legitimacy is the use of corporate disclosure and especially social reporting (Cho and Patten, 2007; Parker, 2011). Consequently, we argue that, pragmatically, firms need to constantly renew their legitimacy with their community of operation and this is achieved through effective communication (e.g. through corporate disclosure). Distrust could arise between a firm and its important stakeholders due to poor communication (Suchman, 1995) that could be counterproductive to the achievement of corporate goals (Bebbington et al., 2008; Mitchell et al., 1997). This is because, according to Clarkson (1995), the community is viewed as an important member of the stakeholder system that can disrupt the corporation's operations (for example, through sabotage or lack of patronage) if their expectations are not met.

Moreover, Bebbington et al. (2008) stress that neglecting the expectations of the community can constitute reputation risk to the firm. Suchman (1995) also argues that companies have to continuously maintain their societal legitimacy and mitigate the threats to it. Stressing the importance of frequent interaction between the company and its conferring public, Suchman (1995, p.596) notes that "*frequent and intense interaction creates dense meaning that can resist, survive and repair disruption in individuals' strands of understanding*". The firm needs to strengthen its societal acceptance through effective interaction with the society in which it operates (Ramadan and Majdalany, 2013). This paper thus argues that the composition of the board provides an important mechanism in enhancing CCID and thereby improving the interactions between the firm and its community of operations. This is consistent with prior findings in the literature that investigate other forms of corporate disclosure (Brammer and Pavelin, 2006; Li et al., 2008; Liao et al., 2014).

This present study can be differentiated from the wealth of literature on corporate governance (CG) and disclosure studies. Firstly, previous studies focus on the role of CG in other types of voluntary disclosures such as; environmental disclosure (Brammer and Pavelin, 2006), Greenhouses gas disclosure (Liao et al., 2014), intellectual capital disclosures (Li et al., 2008; Ramadan and Majdalany, 2013), amongst many others. These studies have generated important insights on the nature of the interaction between the firm and the society resulting, for example, into better understanding of stakeholders' management. However, such understandings are issues specific, and although they all fall under a broad category of social and environmental accounting (Campbell et al., 2006), each subset of this broad category are unique. Campbell et al., (2006, p.97) argue that community disclosure is grossly under-researched "*despite its importance as a broadly conceived stakeholder group*". Yet the literature clearly recognizes the growing importance of CCI (Marquis et al., 2007; Matten and Crane, 2005; Scherer and Palazzo, 2011). Although studies on CCID started to emerge (e.g. Campbell et al., 2006; Yekini and Jallow, 2012), there is still a considerable gap in the literature on the nature of CCID.

It is therefore imperative to understand the determinants of this unique disclosure, but more specifically to understand the impact of board composition in this regard.

Secondly, prior CG literature, especially the subset of this literature that focuses on board composition/NEDs (Ajinkya et al., 2005; Chen and Jaggi, 2000; Peng, 2004) concentrates on how board composition can ensure corporate financial performance. Also a key feature of these studies is the use of US, Singapore, China or Hong Kong data. On the contrary, using a sample of UK firms, this current study focuses on the issue of social performance, and especially the alignment of interests between the corporation and its community of operation

Furthermore, CCID is a distinctive form of corporate social disclosure as it relates to the actual and tangible interaction between the corporation and their community of operation as opposed to the usual broad and general characterization of CSR (Campbell et al., 2006). Given that previous studies (Bebbington et al., 2008; Gray et al., 1995; Guthrie et al., 2004; Hackston and Milne 1996; Hasseldine et al., 2005; Toms, 2002) argue that loose and general definitions and descriptions of CSR make it vague and allow companies to engage in 'Greenwash' (green talk and lack of walk), examining the specific aspects of firm interactions with their environment provides a clearer indication of their corporate social performance. Moreover, understanding the factors that affect such specific disclosure through the lenses of the stakeholder theory is crucial, more so now than before, for the achievement of corporate objectives, due to the growing sophistication in stakeholder social performance disclosure demands (Cooper and Owen 2007; Gray et al., 1988).

Our paper contributes to the CG, CCI and disclosure quality literature. We find that good CG characterized by more outside directors encouraged more transparent CCI disclosure measured by the quality of the disclosure. Measuring disclosure quality remains a highly contentious issue in the disclosure literature, in which a variety of definitions and measurement exist (Beattie et al., 2004; Beretta and Bozzolan, 2008; Khiari, 2013). This current study contributes to the debate by suggesting a

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three-process measure of CCI disclosure quality that is based on i) specific project identification, ii) clear and traceable evidence and iii) disclosure location. This approach synthesizes previous efforts (Beattie et al., 2004; Beretta and Bozzolan, 2008; Hasseldine et al., 2005; Toms, 2002) to improve disclosure quality and enhances empirical disclosure studies.

The rest of the paper is organized as follows; the next section presents a brief review of the literature and theoretical underpinnings, which also leads to the development of the hypothesis to be tested, while section three discusses the methodology employed. The findings from the study are discussed in section four, while section five summarizes and concludes the study.

## 2. Previous Studies, Theory and Hypothesis

### 2.1. Extant studies on Disclosures/NEDs

Prior studies (Ajinkya et al., 2005; Chen and Jaggi, 2000; Peasnell et al., 2005; Peng, 2004) suggest several reasons why board composition could influence corporate disclosure. These can be broadly categorized as the monitoring and the human capital/litigation risk hypotheses (Fama 1980; Fama and Jensen, 1983; Peasnell et al., 2005). These studies argue that NEDs represent the interest of various stakeholders on the board and provide monitoring oversight of management (Ajinkya et al., 2005; Peasnell et al., 2005). Consequently, as custodians of the company, it is expected that the NEDs on the board, acting individually and collectively, would, as part of their responsibilities, monitor the type and nature of communication emanating from the firm. This is because they have ultimate responsibility for corporate communication. Furthermore, NEDs are likely to suffer human capital depletion if they serve on the board of a company with poor or damaging corporate disclosure (Bebbington et al., 2008; Fama and Jensen 1983). This could also lead to litigation with serious consequences from the point of view of the social and reputational risks (Bebbington et al., 2008). It is

therefore reasonable to expect that the NEDs would be interested in and have an impact on the content of corporate disclosures.

Moreover, the board, being composed of people that are independent of the management and without financial relationship with the firm (Peasnell et al., 2005), is a very crucial internal control mechanism since it protects the interests of the shareholders through its oversight functions on the management including corporate communications. From a stakeholder perspective, Mitchell et al., (1997) argue that NEDs possess power and legitimacy to influence managers' activities including the adequacy of both financial and narrative disclosures. Empirical evidence supports the existence of relationship between NEDs and corporate disclosures even if inconclusive. For example, Chen and Jaggi (2000), in a study of Hong Kong listed firms, report a positive relationship between the proportion of NEDs on the board and the comprehensiveness of the mandatory financial disclosures. They conclude that NEDs precipitate more comprehensive financial disclosure by management in companies with low family ownership and control. Similarly, Patelli and Prencipe (2007) show a positive relationship between voluntary disclosures and the proportion of independent directors, in the presence of a dominant shareholder, for a sample of nonfinancial listed firms on the Italian Stock exchange. Conversely, Eng and Mak (2003) demonstrate that an increase in NEDs leads to lower voluntary disclosure for a sample of companies listed on the Singapore stock exchange based on 1995 data. They suggest that there is a substitution effect between the outside director and disclosure by monitoring managers for their studied sample. However, none of these studies considers the relationship between NEDs and CCI disclosure. CCID are fundamentally different from conventional financial disclosures with regards to their underlying motive and targeted audience.

Forker (1992), Haniffa and Cooke (2002), Ho and Wong (2001), and Webb (2004) all argue that because NEDs are considered outsiders, it is generally believed that their presence on the board represents the interests of other stakeholders such as the local community, employees, suppliers and

government agencies rather than just the shareholders. Thus, they will have more effective monitoring power (Fama, 1980) and hence have a greater influence on the level and quality of disclosures in annual reports regarding other groups of stakeholders (Forker, 1992; Mangena and Pike, 2005) [6]. Furthermore, the responsibility for corporate continuity falls with the board of directors, and as Gul and Leung (2004, p.354) argue, "*Corporate disclosure is primarily a decision that emanates from the board*". However, they also note that many disclosure studies often fail to account for the impact of CG, particularly NEDs in their quest to understand the determinants of corporate disclosures. Gaps thus exist in our collective knowledge of the impact of CG on corporate disclosure generally but also on CCI disclosure in particular. It is therefore important to establish if, indeed, there are any relationships between the quality of CCI disclosures and board independence, defined as the proportion of NEDs to the total board size. Therefore, the research question posed by this study is:

**What impact do independent non-executive directors have on the quality of CCI disclosures?**

To answer this question, we contextualized the influence of NEDs on CCID through the lenses of stakeholder normative theory and especially its integrative and ethical dimensions (Donaldson and Preston, 1995; Freeman and Philips, 2002; Mitchell et al., 1997; Rowley, 1998) discussed in section 2.2 below.

### 2.2. *Theoretical context*

Undoubtedly, stakeholder theory has been extensively reviewed in the literature and various schools of thought have emerged on the subject (Altman, 2000; Clarkson, 1995; Donaldson and Preston, 1995; Freeman, 1984; Jensen, 2001; Mitchell et al., 1997). In its broad sense, stakeholder theory deals with the relationship between the firm and all groups (stakeholders) that have a vested interest in the firm's activities or product. As such, relevant stakeholders can be any person, group,

organisation, institution, society, etc. (Donaldson and Preston, 1995). Moreover, these various stakeholder groups often have diverse and conflicting objectives, hence, it is often companies' management that decides on the various trade-offs between alternative demands under the normative principle of value maximisation [7] (Donaldson and Preston, 1995; Jensen, 2001). Early expositions of the stakeholder theory by Freeman (1984) fail to suggest a strategy for dealing with these trade-offs leaving adequate space for criticism (Mitchell et al., 1997; Rowley, 1998). In addition, as managerial time and resources are often limited, companies most often are unable to fully engage and manage relationship with all stakeholder groups, limiting the practical usefulness of this theoretical framework.

To solve this problem, Mitchell et al. (1997) narrow down the definition of relevant stakeholder groups by proposing a dynamic framework of instrumental stakeholder identification and salience. As the authors suggest, salience accorded to specific stakeholders' claims should be a function of three key attributes, namely i) power to influence the firm, ii) a legitimate relationship with the firm, and/or, iii) urgency of those claims on the firm. Depending on these attributes, stakeholder groups' salience may be low, moderate or high. Managers ought to know what groups or entities in their environment have the power to influence the corporation and as such *"power and urgency must be attended to if managers were to serve the legal and moral interests of legitimate stakeholders"* (Mitchell et al., 1997, p.882). Based on this framework, stakeholders can be distinguished amongst seven typologies (Figure 1 below) ranging from *dormant stakeholders* which are those that possess only the attribute of power and can exercise it via coercive, utilitarian or symbolic means but no urgency of legitimate relationship with the firm, to that of *definite stakeholders,* that possesses all three attributes and require urgent attention and engagement from companies' management.

Furthermore, the dynamic nature of this framework allows every stakeholder group to move from one category to another given the situation. For example a typical *dependent stakeholder* that possesses the attributes of legitimacy and urgency such as a community group can easily become *definite*

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*stakeholder* after acquiring the attribute of power via the acquisition of government support if current conditions dictate to do so [8].



POWER

Dormant

Local residents without legitimate claims – *the Ignored group*

Community Leaders – *the recognized group*

Dominant

Dangerous

Definitive Stakeholders

URGENCY

LEGITIMACY

Dependent

Demanding

Discretionary

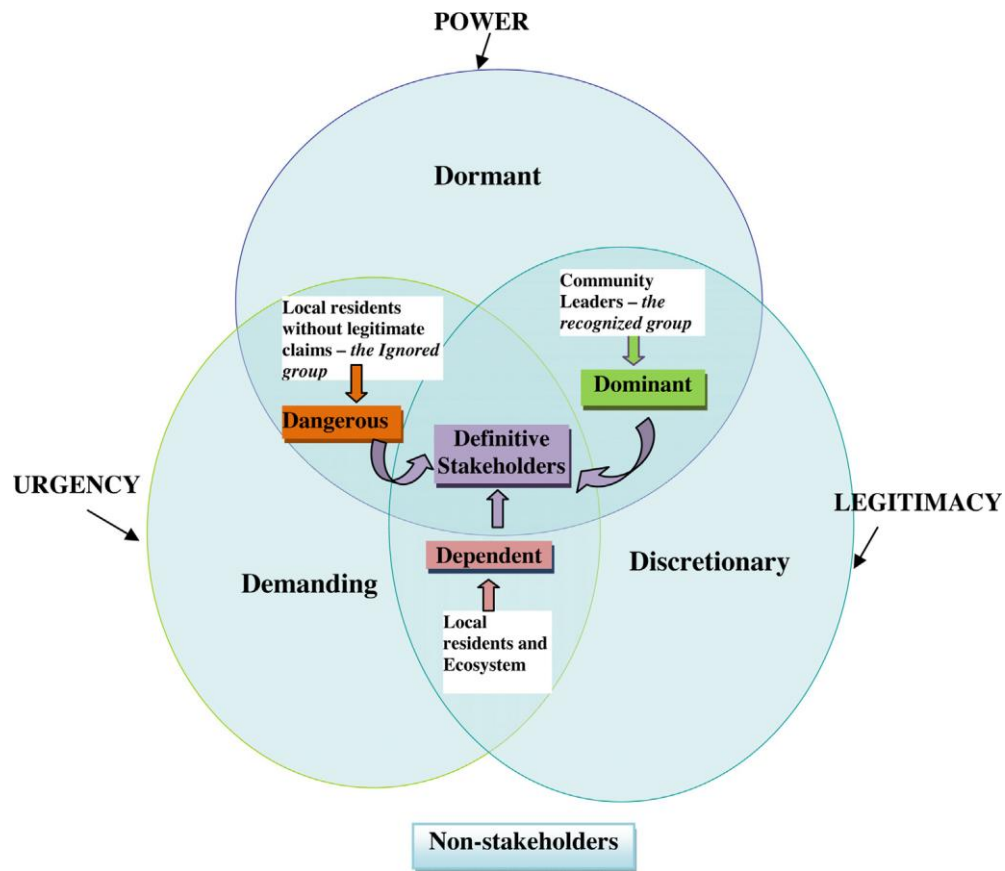Local residents and Ecosystem

Non-stakeholders

Fig. 1. Stakeholder Identification and Salience Model. Source: Adapted from "Toward a theory of Stakeholder Identification and Salience: Defining thePrinciple of Who and What really counts" (Mitchell et al., 1997:874).

As regards the role of community within this theoretical framework, under the economic context, its importance appears to be secondary following all those stakeholder groups that have a priority of claims to the organisation (Clarkson, 1995; Freeman, 1984). Nonetheless, subsequent literature especially the one investigating the normative aspects of the theory, views community as equal to the rest of the key stakeholders, and with legitimate interests, driven theoretically from philosophical concepts such as moral ethics, common good, freedom, fairness and justice (Donaldson and Preston, 1995; Freeman and Philips, 2002). Moreover, as corporate management faces increased pressure from governments, media, communities and non-governmental organisation (NGOs), the broad issue of

corporate social responsibility has become essential in the corporate agenda with actual social performance and disclosures playing an important role (Campbell et al., 2006; Doh et al., 2010; Marquis et al., 2007; Trudel and Cotte, 2009). This importance is demonstrated by the increasing participation of community influential individuals as NEDs within corporate boards, aiming to increase independence and inevitably corporate accountability (Haniffa and Cooke, 2002; Hillman et al., 2000; Spitzeck and Hansen, 2010) [9]. Stressing the importance of community influential NEDs, Hillman et al., (2000), argue that such NEDs possesses immense information and experience on the impact of organisational activities on community of operation and the expectations of powerful community groups. Suffice to say therefore that the presence of these NEDs on corporate boards can contribute enormously to corporate legitimacy by facilitating the disclosure of the company's community activities within its community of operation. The key task of this type of NEDs is to ensure sufficient corporate social action by the company and communication of same through quality disclosure in the annual reports, thus, leading to a good relationship between the firm and the society.

Therefore, the ethical and integrating dimensions of stakeholder's theory discussed above offer the appropriate theoretical support for the effective evaluation of CCI performance and disclosures. This also provides the relevant conceptual framework for this study which lends itself well to establishing the importance of disclosing quality information regarding this particular group of stakeholders, i.e. the society. Consequently, to answer our research question, our conjecture based on the above theoretical literature is that:


***H1: Higher number of NEDs leads to higher quality of corporate community involvement (CCI) activities and disclosures measured by total Community Disclosure Quality Score (CCIDQ) in annual reports ceteris paribus.***

### *2.3. Measuring Community Disclosure Quality (CCIDQ)*

There is a growing body of literature on how to measure or define disclosure quality (Beattie et al., 2004; Beretta and Bozzolan, 2008). Consequently, various methods of measurement are used in the literature as a measure of disclosure quality. While some authors use analyst ratings (Hasseldine et al., 2005; Toms, 2002), others have constructed their own index (Beattie et al., 2004; Freedman and Stagliano, 1992 and 2008; Walden and Schwartz, 1997; Yekini and Jallow, 2012), taking a great deal of factors into consideration. For example, whereas Walden and Schwartz (1997) build their definition of disclosure quality on the location of disclosure, the evidence of items disclosed – that is, monetary or nonmonetary – and the timing of disclosure, studies by Deegan and Gordon (1996) and Deegan and Rankin (1996) define quality by the nature of the news in the disclosure. On the other hand, Gray et al. (1995); Hackston and Milne (1996) and Guthrie et al. (2004) all have in common a definition of quality that includes themes of disclosure, amount (volume) of disclosure and evidence of disclosure. Beattie et al. (2004, p.227) describe disclosure quality as a complex and *"multi-faceted concept"* while also defining it in terms of its attributes: historical/forward-looking, financial/non-financial and quantitative/ non-quantitative.

Following the above discussions, measuring the quality of CCI information disclosed in annual reports therefore depends on a number of factors: first, the form of disclosure (*factual* or narrative) – that is, whether financial, physical, or just narrative (Gray et al., 1995; Hackston and Milne, 1996; Ingram and Frazier, 1980; Toms, 2002). Disclosure is *Physical* where traceable evidence in the form of actual picture of the community activity is displayed to support the narrative or financial disclosure. The inclusion of pictures in a quality measure is considered vital for the purpose of this study. Wilmshurst and Frost (2000) argue that a picture is worth more than a thousand words and will convey more messages than words. They maintain that pictures might be used by management to convey the corporation's approach to environmental issues and therefore regard its exclusion from their study as a

limitation. We consider picture as an important part of CCI disclosure, and include its disclosure in our measure of CCID quality. This is a major departure from previous studies and fills an important gap in the literature.

Second, the *relevance* and *importance* attached to the disclosure, measured by the location of the information in the annual reports. Gray et al. (1995), Kirkman and Hope (1992) and Walden and Schwartz (1997) all argue that information located in the chairman's statements or a separate section of the annual reports demonstrates the importance and weight attached to that information and the desire of management to have it widely read by all. They argue that items disclosed under the chairman's statement are more likely to be read than any other narrative section of the annual reports. Hence, information located in the director's report and/or review of the year section is an indication that such issues are integrated into the mainstream activity or within the core competence of the corporation and thus *relevant* to the business of the corporation (Gray et al., 1995). Furthermore, Kirkman and Hope (1992) suggest that issues that are given the same priority as those of the mainstream of the organisation and are as such fully integrated into the mainstream activities will normally be disclosed in the Directors report and/or the Review of the year sections of the report. Our view is that the quality of information disclosed in annual report can be measured by whether the information is *factual* and by the *importance* and *relevance* attached to it

Finally, given the developmental nature of CCI activities, a detailed description of the specific CCI activities undertaken by the companies within the community of operation is important in measuring the quality of its disclosure. Contrary to Beattie et al.'s (2004, p.230) argument that "*Companies that say relatively more can be expected to provide disclosure of higher quality*", Yekini and Jallow (2012) indicate that specificity and substance rather than the amount of disclosure should characterise quality. Consequently, in this paper, volume is not considered as one of the measures of quality. Because CCI disclosure requires actual involvement in community development, this paper

argues that the quality of such disclosure should include a *specific* description of CCI projects undertaken with evidence provided – financial or photographic wherever possible (Campbell et al., 2006; Hasseldine et al., 2005; Yekini and Jallow, 2012). Measuring disclosure quality will therefore require a weighted scoring system that allows us to give a higher score to verifiable disclosures and a lower score to general statements that have little or no substance in them (Hasseldine et al., 2005).

The vast CSR disclosure literature provides no guidance as to the scoring or allocation of points to classify disclosure such as this. Moreover, Marston and Shrives (1991, p.207), in their comprehensive review of studies that have used a scoring system in accounting disclosure research, conclude that most scoring systems involve *"subjective judgment on the part of the researchers"* and could only measure the extent rather than the quality of disclosures. Nevertheless, to measure quality, Yekini and Jallow (2012) argue that a differential weighting scheme can be justified by the fact that some classifications of disclosure contain more information than others. Consequently, in this paper, we measure the quality of CCI disclosure using a quality score obtained on the five-element index; *specific, factual, important, relevant* and *general* as discussed earlier.

## 3. Research Method

### 3.1. Sample Design

The sampling frame for this study is the list of the FTSE 350[10] companies. This list is used to ensure representativeness. All companies on the list are classified into ten strata [11] using the Industrial Classification Benchmark (ICB) [12] structure and code index. These ten industries include: Oil and Gas, Basic Materials, Industrials, Consumer goods, Health care, Consumer services, Telecommunications, Utilities, Financials and Technology. Each of the ten industrial sectors is represented in our sample. However, only companies listed before January 2002 are included in the sample, as the investigation covers the period 2002 to 2012 inclusive. Ten companies are randomly selected from industries

consisting of more than ten companies, while all companies are selected from industries with ten or fewer companies. For example, all companies under the Health care, Telecommunications and Utilities categories are selected for this reason. This selection procedure gives an initial 95 companies in total. However, a total of 22 companies need to be excluded; 7 companies due to their listing dates been outside the specification mentioned above, and 15 more companies due to problems of data availability. Our final sample consists of 73 companies covering eleven years from 2002 to 2012 (inclusive) giving a total of 803 firm-year observations.

We use only the annual report of companies because we take the view that although firms now have variety of ways to communicate their involvement with the community of operation, the annual report remains the only mandatory and official source of corporate information to many stakeholders. Formal disclosure of CSR activities on firm's annual reports still functions as a signaling tool of company's future intentions and past engagement with society at large as this form of disclosure is often demanded by key corporate stakeholders such as shareholders, community pressure groups, etc. (Campbell et al., 2006).

All data collected are of a panel nature. A panel dataset consists of both cross-sectional and time series elements and offers the advantage of controlling for any unobserved heterogeneity that could also affect CCID, which could otherwise be omitted if only cross-section or only time series data are used (Baltagi, 2005; Halaby, 2004). The panel dataset also lends itself well to rigorous statistical analysis such as the Fixed effect (FE) and the Random-Effect (RE). Unlike a normal pooled regression, both the FE and RE account for individual heterogeneity in the investigation. However, while FE assumes constant individual effects over time, RE in addition assumes the possibility of a time-varying individual heterogeneity (Baltagi, 2005; Halaby, 2004; Wooldridge, 2009). For example, the unobserved endogenous variables (e.g. management leadership style) that may emanate from the very specific culture of the firm and might not have been observed in the course of data collection (Singer

and Willett, 2003) can be accounted for using panel study. Controlling for such variables would ensure the validity of our results.

Table 1 below presents the industry classification and number of companies selected from each industry, and the list of companies included in the study is presented in Appendix A.

**TABLE 1**

*Industrial Classification*

| Industrial Classification Benchmark (ICB) | Number of Companies | No. of Annual Reports examined |
|---|---|---|
| Basic Materials. | 6 | 66 |
| Consumer Goods | 10 | 110 |
| Consumer Services | 8 | 88 |
| Financials | 8 | 88 |
| Health Care | 6 | 66 |
| Industrials | 9 | 99 |
| Oil and Gas | 6 | 66 |
| Technology | 8 | 88 |
| Telecommunications | 5 | 55 |
| Utilities | 7 | 77 |
| | | |
| **Total** | **73** | **803** |

Table 1, however, indicates an uneven distribution between the ten industrial classifications; for instance, though Consumer Goods has as many as ten companies and Industrials has nine companies, Telecommunications has only five companies analyzed. In addition, though Consumer Services, Financials and Technology have eight companies each analyzed, three other industries – Basic Materials, Health Care and Oil and Gas – have six companies each analyzed, and Utilities has seven companies. However, this imbalance does not affect the analysis because the use of a panel dataset corrects for this inadequacy (Baltagi, 2005).

### 3.2. Data Collection Method

For the purpose of this study, we adopt a content analysis data collection method. Weber (1988) describes content analysis as a *data collection method* of codifying the content of a narrative report using selected criteria or decision rules, thereby deriving a quantitative scale, which then permits further analysis. Previous studies on social disclosure (for example, Beattie et al., 2004; Ernst and Ernst, 1978; Gray et al., 1995; Guthrie et al., 2004; Hackston and Milne, 1996; Hooks and van Staden, 2011; Milne and Adler, 1999) have used content analysis as a method of collecting and analyzing data. Content analysis is been used in diverse ways to analyze narrative contents in annual reports; these include: sentence count (Deegan et al., 2000; Hackston and Milne, 1996); word count (Campbell et al., 2006; Gray et al., 1995; Yekini and Jallow, 2012) and the constructing of quality score index (Freedman and Stagliano, 2008; Walden and Schwartz, 1997; Yekini and Jallow, 2012). We follow Milne and Adler's (1999), advice on maintaining clear coding instructions to enhance reliability of this study based on content analysis. Coding was undertaken by three experienced researchers who are particularly familiar with content analysis-based investigations and was done over several months allowing for greater accuracy and consistency. Inter-coder agreement (alpha co-efficient) calculated based on the method outlined in Krippendorff (1980. Pp138-139) is over 85%.

Content analysis is particularly useful in this study as it enables the construction of analytical categories of the content of CCID in each annual report and thus allow for the quantitative analysis of each category of CCID. The categories of CCID are patterned after Ernst and Ernst, 1978 and Gray et al., 1995 (Appendix B). This is to ensure that the categories are mutually exclusive and that classifications into categories are not discretionary (Bryman and Bell, 2007; Ingram and Frazier, 1980) and thus allow for reproducibility.

**TABLE 2**

*Community Involvement Disclosure Classification (Quality measure)*

|   | Disclosure Classification | Max Score |
|---|---|---|
| 1 | **Specific** – Detailed description of any category of CCI (1 point for each category mentioned as per Appendix B) | 4 |
| 2 | **Factual** – Provision of photographic and/or quantitative information about CCI (1 points for each). | 2 |
| 3 | **Important** – Disclosed under chairman's statement and/or separate section of annual reports (1 points for each) | 2 |
| 4 | **Relevant** – Disclosed in the director's reports and/or review of the year section (1 points for each) | 2 |
| 5 | **General** statement of the company's CCI activities (no point allocated) | 0 |
|   | **Community Disclosure Quality** | 10 |

(Adapted from Yekini and Jallow, 2012)

Data are collected on CCI activities as disclosed in the annual reports of sampled companies based on the five-element index displayed in Table 2 above. The index is constructed using content analysis and patterned after Freedman and Stagliano, (1992, p.115 and 2008, p.480-481) and Walden and Schwartz, (1997, p.151). Similarly, the five measures of quality described as *specific*, *factual*, *important, relevant and general;* although unique to this study, they are adopted from the definition of quality measures discussed in detail in Section 2.3 above. To collect the data, the authors identified the specific mention of the CCI activity undertaken as described in the decision rules (Appendix B) and awarded one point for each category described. In addition, the presence of each sub-element of the *Factual*, *Importance* and *Relevant* measures are awarded one point each. Therefore, each CCI disclosure in a particular annual report can receive a minimum of zero points and a maximum of ten points. These scores are then summed to obtain the variable *CCI Disclosure Quality (CCIDQ).*

### 3.3. Control variables

To test the hypothesis, we control for other CG variables demonstrated as important in determining corporate disclosures in general in previous studies such as Song and Windram (2004); Webb (2004); Yermack (1996). These include measures of board activities and efficiency such as board size, board meeting frequency, audit committee size, audit committee meeting frequency and the existence of other standing committees.

Board size represents board monitoring capacity and the potential for varied expertise on the board (Song and Windram 2004; Yermack 1996). Ceteris paribus, a larger board size is primarily indicative of larger board capacity but could also be indicative of the diversity in the skills and expertise that can be brought to the board in its deliberation, as well as in the discharge of its oversight functions. However, a larger board could be counterproductive due to process loss arising from extended discussions and red tape, which may lead to a sluggish decision-making process (Song and Windram, 2004; Yermack, 1996). Previous studies report conflicting results on the impact of board size on corporate disclosure. For instance, Webb (2004) provides evidence that larger boards are more effective in CG processes and could therefore help to ensure thorough consideration of CSR issues. Other studies such as those of Song and Windram (2004) and Yermack (1996) argue that smaller board sizes are more effective on the grounds that they allow for smarter and faster decision making compared to large boards. We anticipate a statistically positive relationship between board size and CCID disclosure. Similarly, there is a theoretical expectation of a relationship between board meeting frequency and disclosure. Board meeting frequency could be indicative of board diligence, and this could have a direct impact on monitoring effectiveness. Board meeting frequency is used in many previous studies (Cormier et al., 2010; Evans et al., 2002; Vafeas, 1999; Webb, 2004) as an important measure of board diligence and effectiveness. Following the argument that boards with outside directors tend to meet more frequently (Jensen, 1993; Vafeas, 1999) and are thus more effective in

handling social issues, we control for board meeting frequency and anticipate a statistically positive relationship with CCID.

The audit committee is an important part of the internal CG mechanism in the firm, with oversight function on management. This is primarily in financial reporting and auditing but also in the issues surrounding internal control and risk management. The impact of audit committee characteristics such as size and meeting frequency is researched extensively in studies on financial reporting and auditing. However, there are a handful of studies that consider the impact of the audit committee on corporate social disclosures. This may be because they are perceived not to be directly related to corporate financial performance. However, there are several extant studies (Bebbington et al., 2008; Mitchell et al., 1997; Clarkson, 1995) that highlight the importance of corporate social activities and disclosures, especially in relation to corporate risk management, which is one of the remits of the committee. Although there is a dearth of empirical evidence on the impact of audit committee size on CSR disclosures, the evidence on the impact of audit committee size on disclosures in annual reports is generally mixed. While some studies report no significant relationship (Abbott et al., 2004; Bedard et al., 2004; Mangena and Pike, 2005), some suggest a positive relationship (Forker, 1992; Persons, 2009) and Song and Windram, (2004) report a negative one. Nevertheless, we control for audit committee size following the recommendation of both the Blue Ribbon Committee (1999) and the Smith committee (2003). Both recommend that audit committees should contain at least three (3) outside directors. We anticipate a statistically positive relationship between this proxy and CCID.

Furthermore, the frequency of meetings of the audit committees is found to have a great effect on the committee effectiveness. For instance, Abbott et al. (2004) suggest that audit committees that meet at least four times annually are more effective in reducing financial reporting re-statements than those with lower meeting frequency. Similarly, Persons (2009) finds that firms with earlier voluntary ethics disclosures are those for which audit committees met at least four times annually, with at least three

audit committee members. Carcello (2008) argues that audit committee meeting frequency can be a good measure of audit committee diligence and effectiveness in the monitoring of management activities and calls into question the diligence of an audit committee that rarely meets. Li et al. (2008) also finds a strong association between the disclosure of intellectual capital and both audit committee size and audit committee meetings' frequency. The current paper argues that the presence and activities of the audit committee should be complementary to the activities of the board in enhancing corporate social action, thus resulting in more CCI disclosure, and therefore should be controlled for. We thus anticipate a statistically positive relationship between audit committee meeting frequency and CCID.

Although there is a lack of literature on the effect of the existence of other board committees on social disclosures, Cowen et al. (1987) examine the effect of the existence of social responsibility (CSR) committees, arguing that there is a higher tendency for more social disclosure with the existence of such committees. Their findings also indicate that the existence of a CSR committee is associated with human resource disclosure. They therefore argue that past studies on the determinants of social disclosure with the omission of this variable are misleading because different types of disclosure may be motivated by the presence of certain committees. This finding is consistent with that of Petrovic-Lazarevic (2010), who suggests an enhanced CG structure encompassing a board-level CSR committee. The author argues that such a committee "*ensures that the social values of the organization are aligned with those of the community*" (Petrovic-Lazarevic, 2010, p.115) and consequently, the existence of a CSR committee may also influence the quality of CCI disclosures. Against this background, in this study we control for the effect of standing committees on CCI disclosure by including the CSR, Disclosure and Risk committees in our model. We anticipate a statistically positive relationship between the presence of these committees and CCID. Consequently, all other things being equal, we hypothesized in the null form as follows:

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*H2a: There is a statistically significant positive relationship between Community Disclosure Quality and board activities and efficiency measured by board size.*

*H2b: There is a statistically significant positive relationship between Community Disclosure Quality and board activities and efficiency measured by the frequency of board meetings.*

*H3a: There is a statistically significant positive relationship between Community Disclosure Quality and the audit committee activity measured by the size of the audit committee.*

*H3b: There is a statistically significant positive relationship between Community Disclosure Quality and the audit committee activity measured by the frequency of the audit committee's meetings.*

*H4: There is a statistically significant positive relationship between Community Disclosure Quality and the existence of other board standings committees measured by the presence of a Disclosure Committee, Risk Committee and CSR Committee.*

As regards firm-specific characteristics, this study uses four proxy variables – size, profitability, leverage level and listing age. These variables are used extensively in the literature (see, for example, Deegan and Gordon, 1996; Garcia-Castro et al., 2010; Gray et al., 1995; Hackston and Milne, 1996). These studies argue that larger firms are under more pressure to disclose social information, as it is expected that their activities will have a greater impact on society than smaller companies. Their levels of operations are higher and consequently more likely to create more negative externalities. Additionally, the societal stake is higher for these companies as they have more visibility than smaller ones. We proxy firm size with the natural log of turnover and anticipate a statistically positive relationship between firm size and CCID.

Although findings on the relationship between firm performance and disclosure performance are inconclusive, some studies suggest an association between performance and social disclosure (Galbreath et al., 2008; Haniffa and Cooke, 2002), though others did not (Hackston and Milne, 1996;

Hasseldine et al., 2005; Ho and Wong, 2001). Nevertheless, this paper argues that good economic performance is a good incentive for more disclosure, as profitable companies have better stories to tell and are more able to afford the cost of disclosure. In addition, Hackston and Milne (1996) argue that a CSR/performance relationship could be an indication of management ability to respond to and meet social pressure. We proxy firm performance with return on equity and anticipate a statistically positive relationship between the proxy and CCID.

Similarly, prior literature also reports conflicting results on the relationship between leverage and corporate disclosure. Some studies suggest a positive relationship (Galbreath et al., 2008; Tsamenyi et al., 2007), while others find no statistical relationship at all (Garcia-Castro et al., 2010; Mangena and Pike, 2005). However, we anticipate a statistically positive relationship between leverage and CCID because highly geared companies are likely to disclose more to pacify their lenders and signal transparency in reporting. Furthermore, the authors control for listing age because previous studies found a statistically significant relationship between disclosures in annual reports and the length of time a corporation has been listed on the stock exchange (Li et al., 2008). However, an earlier study (Haniffa and Cooke, 2002) found no significant relationship between disclosures and listing age. Nevertheless, this paper argues that the age of a corporation may influence its interaction and involvement with its community of operation. We therefore control for this variable and anticipate a statistically positive relationship between listing age and CCID because older companies are more likely to take corporate social disclosure seriously and are more likely to have the mechanisms and system in place to foster this compared to younger companies. Accordingly the hypothesis for these firm specific characteristics is stated in null form below:

**H5:** *There is a statistically significant positive relationship between Community Disclosure Quality and firm-specific characteristics measured by the companies' Size, Profitability, Leverage Level and Listing Age.*

Based on the above arguments, our RE regression model is algebraically formulated as:

$$CCIDQ_{it} = \alpha_0 + \beta_1 NEDs_{it} + \beta_2 BoardSize_{it} + \beta_3 BoardMeeting_{it} + \beta_4 AuditMeeting_{it} +$$
$$\beta_5 AuditSize_{it} + \beta_6 CSRCommittee_{it} + \beta_7 DisclosureCommittee_{it} +$$
$$\beta_8 RiskCommittee_{it} + \beta_9 LnTurnover_{it} + \beta_{10} ROE + \beta_{11} Leverage_{it} +$$
$$\beta_{12} Age_{it} + \varepsilon_{it} \qquad\qquad (Eq.1)$$

where [13], *CCIDQ* is the Corporate Community Involvement Disclosure Quality score; *NEDs* is the proportion of total independent non-executive directors to the total number of directors on the board; *BoardSize* is the total number of directors on the board; *BoardMeeting* is the number of board meetings in a given year; *AuditMeeting* is the number of audit committee meetings in a given year; *AuditSize* is the number of Audit committee members; *CSRCommittee* is a dichotomous variable with 1 for a presence of a CSR committee and 0 for otherwise; *DisclosureCommittee* is a dichotomous variable with 1 for presence of a disclosure committee and 0 for otherwise; *RiskCommittee* is a dichotomous variable with 1 for presence of a stand-alone risk committee and 0 for otherwise; *LnTurnover* is a proxy of company's size, measured by the natural logarithm of turnover (DataStream mnemonic code WC01001); *ROE* is a proxy for corporate financial performance (DataStream mnemonic code of WC08301); *Leverage* is the company's gearing ratio representing their exposure to short and long term risk and measured by the ratio of total debt to total capital (DataStream mnemonic code WC08221); and finally, *Age* is the number of years since a company first listed on the London Stock Exchange.

The analysis is carried out using the Random Effects (RE) estimator with Generalized Least Square (GLS) regression after performing the Breusch-Pagan Lagrange Multiplier (LM) test. The test

produces a significant result at the 1% level (see Appendix C), indicating that the RE estimator is valid and efficient in handling this analysis. The Breusch-Pagan LM test is a diagnostic test that was specifically designed to test the appropriateness of the RE models in addressing unobserved heterogeneity (Breusch and Pagan, 1980). Although the result of the test are significant at the 1% level in favor of the RE estimator, in addition to the Breusch-Pagan LM test, the regression was run with the robust standard errors, which automatically adjust all standard errors and p-values for any possible effect of heteroskedasticity, outliers and any other irregularities. This improves the validity of our findings.

## 4. Results and Analysis

### 4.1. Descriptive Statistics

The descriptive statistics for the total quality score for CCI disclosure (CCIDQ) and the proportion of NEDs by industry are reported in Table 3, Panels A and B. Similarly, the statistics for all continuous independent variables and the dichotomous variables are presented in Tables 4 and 5, respectively. Table 3, Panel A reveals that a typical company in the sample has an average *CCIDQ* Score of 3.71, with companies in Technology having the lowest average score of 1.98 (median score of 2) and companies in Financial having the highest average score of 4.7 (median score of 5). In addition, whereas some companies in the Consumer service industry were able to obtain the highest quality score of 10, the highest quality score obtained in the Technology industry was 6.

These statistics suggest that companies in certain industries such as Consumer goods, Consumer services and Utilities are able to make very high-quality CCI disclosures as against companies in industries such as Technology and Industrials.

**TABLE 3**

*Descriptive Statistic by Industry*
**Panel A**

| | Community Disclosure Quality | | | | |
|---|---|---|---|---|---|
| **Industries** | **Mean** | **Std Dev** | **Min** | **Max** | **Median** |
| Basic Materials | 3.71 | 2.25 | 0 | 7 | 4 |
| Consumer Goods | 3.94 | 2.20 | 0 | 9 | 4 |
| Consumer Services | 4.53 | 1.91 | 0 | 10 | 5 |
| Financials | 4.70 | 2.02 | 0 | 8 | 5 |
| Health Care | 3.86 | 2.45 | 0 | 8 | 4 |
| Industrials | 2.89 | 2.22 | 0 | 7 | 3 |
| Oil and Gas | 3.44 | 2.27 | 0 | 8 | 4 |
| Technology | 1.98 | 2.09 | 0 | 6 | 2 |
| Telecommunication | 3.42 | 2.48 | 0 | 8 | 4 |
| Utilities | 4.67 | 2.16 | 0 | 9 | 5 |
| **Total** | **3.71** | **2.34** | **0** | **10** | **4** |

**Panel B**

| | Non-Executive Directors (Outside Directors)[*] | | | | |
|---|---|---|---|---|---|
| **Industries** | **Mean** | **Std Dev** | **Min** | **Max** | **Median** |
| Basic Materials | 0.67 | 0.165 | 0.40 | 0.93 | 0.66 |
| Consumer Goods | 0.61 | 0.170 | 0.00 | 0.88 | 0.63 |
| Consumer Services | 0.60 | 0.131 | 0.33 | 0.82 | 0.59 |
| Financials | 0.60 | 0.097 | 0.38 | 0.80 | 0.59 |
| Health Care | 0.73 | 0.076 | 0.50 | 0.88 | 0.75 |
| Industrials | 0.57 | 0.103 | 0.33 | 0.80 | 0.56 |
| Oil and Gas | 0.61 | 0.140 | 0.33 | 0.82 | 0.60 |
| Technology | 0.54 | 0.133 | 0.26 | 0.80 | 0.56 |
| Telecommunication | 0.68 | 0.135 | 0.40 | 0.89 | 0.67 |
| Utilities | 0.60 | 0.112 | 0.30 | 0.90 | 0.57 |
| **Total** | **0.61** | **0.139** | **0.00** | **0.93** | **0.60** |

*Outside Director is measured by proportion of total independent non-executive directors to total directors on the board per industry

This could be because these industries usually locate their companies within close proximity to consumers, which is consistent with the findings of Campbell et al., (2006) who found that companies with close proximity with consumers tend to disclose more CCI. Similarly, Panel B indicates that companies in the Technology and Industrial sectors have the lowest average percentage of NEDs, thus indicating that the companies with lower quality disclosure also have a lower proportion of NEDs.

**TABLE 4**

*Descriptive Statistic for Continuous Independent Variables*

| Variables | Mean | Std Dev | Min | Max | Skewness | Kurtosis |
|---|---|---|---|---|---|---|
| NEDs | 0.61 | 0.14 | 0 | 0.93 | -0.435 | 4.336 |
| BoardSize | 10.3 | 2.94 | 5 | 18 | 0.409 | 2.640 |
| BoardMeeting | 8.37 | 2.68 | 2 | 16 | 0.562 | 3.034 |
| AuditMeeting | 3.75 | 1.26 | 1 | 6 | 0.283 | 2.199 |
| AuditSize | 4.00 | 1.192 | 2 | 8 | 0.793 | 3.623 |
| Turnover (£'m) | 7,427.25 | 17,747.3 | 6.955 | 196,057.3 | 6.130 | 49.36 |
| ROE (%) | 16.50 | 17.92 | -25.32 | 53.42 | 0.054 | 3.151 |
| Leverage (%) | 39.09 | 25.59 | 0 | 98.8 | 0.249 | 2.406 |
| Age (yrs) | 23.08 | 19.04 | 1 | 65 | 0.782 | 2.253 |

Table 4 above indicates that the board members of the majority of the companies sampled comprises of an average of 61% NEDs, with a maximum of 93% in some companies, while *BoardSize* ranges from 5 to 18 members, with an average of 10 board members. Similarly, many companies in the sample have an average of 4 Audit Committee members, with some companies having as many as 8 members. The average for audit committee meetings is 4, with some having as many as 6 meetings in a year. Board meeting frequency ranges from 2 to 16 meetings in a year, with an average of 8 meetings per year. Turnover for companies sampled ranges between £6.9m and £196bn, with the average in the region of £7bn. In addition, the profitability measure (ROE) is approximately 16% for the majority of companies in the sample. The gearing ratio for many companies is in the region of 39%. The average

listing age of companies in the sample is 23. Table 5 below reveals that approximately 32% of companies sampled have a CSR committee during the period covered in the investigation, while only 21% of sampled companies have a disclosure committee and 31% have a risk committee.

**TABLE 5**

*Descriptive Statistic for Dichotomous Independent Variables*

| Variables | Mean | Std Dev | Counts 0 | 1 | N |
|---|---|---|---|---|---|
| CSR Committee | 0.322 | 0.467 | 545 | 258 | 803 |
| Disclosure Committee | 0.211 | 0.408 | 634 | 169 | 803 |
| Risk Committee | 0.313 | 0.464 | 552 | 251 | 803 |

Furthermore, Table 4 displays the presence of outliers [14] in turnover. Further tests conducted to confirm this include plotting the box plot [15] of turnover data. Our checks confirmed the presence of outliers (see Appendix D for the graphical results of the box plot). Turnover was therefore log-transformed to correct the problem (Tabachnick and Fidell, 2007). Other tests conducted to ensure the datasets meet the normality assumption included the visual analysis of the studentized residuals (*r*) using a histogram (Appendix E). The histogram indicates *r* as normally distributed.

### 4.2. Correlation Matrix

Table 6 presents the correlation matrix for the explanatory variables. The table indicates low correlation between all the variables. This is suggestive of the fact that collinearity, if at all present, should be minimal among the independent variables. Nevertheless, the variance inflation factor (VIF) was computed for all variables to check for the existence of collinearity.

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**TABLE 6**

*Correlation Matrix of the Explanatory Variables*

| Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.NEDs | 1.000 | | | | | | | | | | |
| 2.BoardSize | 0.191 | 1.000 | | | | | | | | | |
| 3.BoardMeeting | -0.025 | 0.048 | 1.000 | | | | | | | | |
| 4.AuditMeeting | 0.360 | 0.383 | 0.240 | 1.000 | | | | | | | |
| 5.AuditSize | 0.324 | 0.451 | 0.091 | 0.246 | 1.000 | | | | | | |
| 6.CSRCommittee | 0.199 | 0.243 | 0.106 | 0.319 | 0.223 | 1.000 | | | | | |
| 7.DisclosureCom | 0.254 | 0.334 | 0.147 | 0.411 | 0.143 | 0.340 | 1.000 | | | | |
| 8.RiskCommittee | 0.078 | 0.039 | 0.043 | 0.253 | -0.003 | 0.082 | 0.152 | 1.000 | | | |
| 9.LnTurnover | 0.205 | 0.635 | 0.221 | 0.540 | 0.461 | 0.294 | 0.347 | 0.164 | 1.000 | | |
| 10.ROE | -0.009 | 0.069 | 0.077 | 0.083 | 0.051 | 0.110 | 0.149 | 0.011 | 0.197 | 1.000 | |
| 11.Leverage | 0.038 | 0.192 | 0.102 | 0.131 | 0.236 | 0.088 | 0.076 | 0.062 | 0.361 | 0.129 | 1.000 |
| 12.Age | 0.052 | 0.191 | 0.074 | 0.264 | 0.298 | 0.096 | 0.107 | 0.076 | 0.433 | 0.094 | 0.229 |

### *4.3. Regression Results and Discussions*

The regression results are presented in Table 7. The results indicate that our model is able to explain approximately 28% of the overall variation in the quality of CCI activities disclosed in the annual reports of the sampled companies. In addition, the model is able to explain 17% of variation within an entity from one year to another and approximately 40% of the variations between one entity and another entity. The results also indicate a *rho* of 0.359. The *rho* measures the intergroup correlation (Greene, 2008). The results reveal that approximately 36% of variations in CCI disclosure quality cannot be explained by differences across entities. Whilst our overall $R^2$ is low it is generally consistent with the results from previous studies in this research area. For example, Ajinkya et al. (2005); Cormier et al. (2010); Chen and Jaggi (2000) document $R^2$ of 20%, 27% and 30 % respectively. The low explanatory power in our model may be due to the exploratory nature of our investigation.  However, before placing total reliance on these results in testing our hypothesis, further post-estimation tests were

conducted to examine the validity of the results by checking the suitability of the RE GLS estimator

(see discussion in section 3.3 above).

**TABLE 7**

*RE-GLS Regression Results with all independent variables*

| Variables | Coefficients | Robust Std. Error | z – start | P-value | VIF |
|---|---|---|---|---|---|
| Constant | -2.305 | 0.570 | -4.04 | 0.000*** | |
| NEDs | 2.403 | 0.670 | 3.59 | 0.000*** | 1.31 |
| Board Size | 0.053 | 0.044 | 1.20 | 0.230 | 1.94 |
| Board Meeting | -0.009 | 0.028 | -0.30 | 0.761 | 1.13 |
| Audit Meeting | 0.223 | 0.076 | 2.93 | 0.003*** | 1.81 |
| Audit Size | -0.217 | 0.083 | -2.60 | 0.009*** | 1.55 |
| CSR Committee | 0.513 | 0.187 | 2.74 | 0.006*** | 1.22 |
| Disclosure Committee | -0.331 | 0.222 | -1.49 | 0.136 | 1.38 |
| Risk Committee | 0.399 | 0.219 | 1.82 | 0.068* | 1.09 |
| | | | | | |
| **Firm specific characteristics:** | | | | | |
| LnTurnover | 0.423 | 0.085 | 4.97 | 0.000*** | 2.74 |
| ROE | 0.002 | 0.004 | 0.54 | 0.586 | 1.07 |
| Leverage | 0.006 | 0.004 | 1.44 | 0.151 | 1.18 |
| Age | 0.021 | 0.009 | 2.43 | 0.015** | 1.31 |

| $R^2$: | Within | = | 0.170 | $\chi^2$ | = | 204.57*** |
|---|---|---|---|---|---|---|
| | Between | = | 0.403 | Rho | = | 0.359 |
| | Overall | = | 0.275 | N | = | 798 |

Notes: This table reports the results of our examination of the link between Community Involvement Disclosure score (CCIDQ) and various independent variables estimated as $CCID_{it}= a1+ b1NEDs_{it}+ b2BoardSize_{it}+ b3Boardmeeting_{it}+ b4AuditMeeting_{it}+ b5AuditSize_{it}+ b6CSRCommittee_{it}+ b7DisclosureCommittee_{it}+ b8RiskCommittee_{it}+ b9LnTurnover_{it}+ b10ROE_{it}+ b11Leverage_{it}+ b12Age_{it}+ e_{it}$; where, CCIDQ is the Community Involvement Disclosure score; NEDs is the pro-portion of total independent non-executive directors to the total number of directors on the board; Board Size is the total number of directors on the board; Board Meeting is the number of board meetings in a given year; Audit Meeting is the number of audit committee meetings in a given year; Audit Size is the number of Audit committee members; CSR Committee, Disclosure Committee and Risk Committee are dichotomous variables with 1 for the presence of such committee and 0 for otherwise. LnTurnover is a proxy for company's size, measured by the natural logarithm of turnover; ROE is a proxy for corporate financial performance; Leverage is the company's gearing ratio representing their exposure to short and long term risk and measured by the ratio of total debt to total capital; and finally, Age is the number of years since a company first listed on the London Stock Exchange. CCIDQ is the dependent variable.

   (p > 0.10) = Not Significant
  *(p ≤ 0.10) = Significant at 10%
 **(p ≤ 0.05) = Significant at 5%
***(p ≤ 0.01) = Significant at 1%

### *4.4. Community Disclosure Quality and Outside Directors (NEDs)*

Our results reveal that NEDs have a coefficient of 2.403 indicating a strong positive relationship with *CCIDQ* and highly significant at the 1% level, thus confirming hypothesis H1. The positive relationship implies that companies with a board constituting a proportion of NEDs of 60% and greater are likely to disclose higher quality CCI activity than those with fewer NEDs. This explains why companies in the Technology and Industrial sectors disclosed very low-quality CCI activities as indicated by the descriptive statistics in Table 3, Panel A. This positive relationship is consistent with the findings of previous studies such as Ajinkya et al., (2005), Webb (2004), and, Yekini and Jallow (2012). The results appear to confirm the arguments of Forker (1992), Galbreath et al. (2008), Haniffa and Cooke (2002), Ho and Wong (2001) and Webb (2004) that because directors are outsiders, they are on the board to represent the interests of other stakeholders such as community stakeholders and would therefore influence management to disclose more CCI activities in the interests of the community stakeholders. This is also consistent with the argument of Mitchell et al. (1997) that outside directors possess *power* and *legitimacy* by virtue of their standing in the company and would therefore have an influence on board decisions, which was why Altman (2000) described them as the community group that cannot be *ignored* in the stakeholder system.

### *4.5. Other CG Measures*

The regression results indicate that board size (coeff 0.05; p-value 0.230) and board meetings (coeff -0.009; p-value 0.761) are inconsequential in CCI disclosure. Although these relationships are not statistically significant and thus require cautious interpretation, a possible explanation for the inverse relationship between board meeting frequency and *CCIDQ* may be that board meetings only increase following low-quality CCI disclosures in annual reports. The result is consistent with the findings of Vafeas (1999) and confirms the assertion by Jensen (1993) that boards in performing

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corporations are generally inactive and only become active in the incidence of crisis. The positive *BoardSize*/*CCIDQ* relationship may be consistent with the argument that larger boards allow for rigorous debate in the consideration of issues, which lends itself to a better resolution of conflicting issues (Galbreath et al., 2008). Nonetheless, the result supports the findings of Webb (2004) and Galbreath et al. (2008), who found evidence that larger boards are more effective in CG processes than smaller boards, as opposed to Yermack, (1996) and Song and Windram, (2004), whose evidence was in favor of smaller boards. These empirical findings indicate that both hypotheses H2a and H2b should be rejected.

Equally, we find a statistically significant negative (coeff -0.217; p-value 0.009***) relationship between audit committee size and *CCIDQ* consistent with Song and Windram (2004). On the other hand, we report a statistically significant positive relationship between audit committee meeting frequency (coeff 0.223; p-value 0.003***) and *CCIDQ*. This suggests that the frequency of the meeting of the committee is associated with an increase in the quality of CCI disclosures, whereas audit committee size is associated with less CCID quality. This may be because the committee is more concerned with financial reporting than corporate community involvement. Therefore, hypothesis H3a is rejected but hypothesis H3b is accepted.

### 4.6.   The Existence of Other Standing Committee

The results indicate a significant positive relationship (at the 1% level, with a co-efficient of 0.513) between the existence of CSR comm0ittees and CCIDQ. The possible implication is that the CSR committees have a stronger influence on CCIDQ because they are established for the administration of CSR issues. This result is consistent with Cowen et al. (1987), who report CSR committee having a strong association with human resources information. Similarly, the standalone risk committee is found to have a marginally significant positive relationship with CCIDQ. Furthermore,

the existence of a disclosure committee is not significantly related to the quality of CCI disclosure. This could be because it is not a prerequisite to listing in the UK. Hence, H4 is accepted for the case of the CSR committee but rejected for the case of all other standings committees, i.e. the risk and disclosure committees.

### *4.7.* *Firm-Specific Characteristics*

The result indicates that CCIDQ is significantly associated with turnover and listing age at the 1% and 5% significance levels, with coefficients of 0.423 and 0.021 respectively. We find no significant relationship between CCIDQ and leverage and firm performance. The regression results indicate an insignificant relationship with ROE and leverage. This could mean larger firms that are well established will more likely disclose high-quality CCI activities than younger and smaller ones who are highly geared and less profitable. Nevertheless, the insignificant CCIDQ/ROE relationship is consistent with studies such as Hackston and Milne (1996); Ho and Wong (2001); Hasseldine et al. (2005); Yekini and Jallow (2012), who also documented no statistical relationship. Similarly, the positive Age/disclosure relationship is consistent with the findings in Haniffa and Cooke (2002) and Galbreath et al. (2008), although these studies reported no statistical relationship between social disclosure and listing age. Furthermore, the positive but insignificant leverage/disclosure relationship is consistent with findings from Tsamenyi et al. (2007) and Galbreath et al. (2008). These results are indicative of the ambiguity in the relationship between firm-specific variables and disclosure measures. Based on these findings, H5 is rejected.

### 5. Summary and Conclusion

The primary aim of this study is to investigate the relationship between non-executive directors (NEDs), also known as outside directors, and the quality of the CCI activities disclosed (CCID) in

annual reports. This was necessitated by the fact that outside directors constitute for the most part community leaders in the majority of large corporations (Mitchell et al., 1997). Accordingly, Mitchell et al. (1997) argued that it is their responsibility to represent the interests of their community at the board level and to *"maintain good relationships"* between the corporation and its local community and the government (Mitchell et al., 1997, p.877). Therefore, the authors expected a relationship to exist between NEDs and not just with the extent of CCID but also with the quality of CCID (*CCIDQ*). The findings from this study not only confirm this expectation but also suggest that *CCIDQ*, responds to other CG monitoring mechanisms such as audit committee activities and the existence of other standing committees. Indeed the study revealed that *CCIDQ* responds more to some of the standing committees, such as the CSR committee, than to board activities. The plausible explanation for this may be in line with the argument of Vafeas (1999) that many of the monitoring tasks of the board have been delegated to the standing committees; therefore, the boards are left with the coordination of standing committee activities rather than the direct monitoring of management, which explains why NEDs was the only significant variable among the other variables measuring board activities.

The paper is novel in that it is the first to specifically examine the link between outside directors and CCID in annual reports and contributes both to the CG and CCID literature. We find that good CG, characterised by more NEDs, encourages higher disclosure quality and transparency. Our study also provides a clear synthesis of previous disclosure studies, and contributes to quality measurement by proposing a three-process system. This is based on specific project identification, clear and traceable evidence and disclosure location. Future disclosure studies should consider using this three-process approach in arriving at a disclosure quality measurement. Other disclosure quality measurements documented in literature, focused predominantly on the extent rather than the real quality and substance of the disclosure (Yekini and Jallow 2012). Our three-process approach addresses this limitation by

ensuring that disclosure quality measurement is verifiable rather than based on subjective judgments with minimal or no substance in them (Marston and Shrives, 1991).

In addition, given the recent global demand for transparency in governance and accountability, this paper is timely as it addresses the issue of governance structure, pointing to the need and importance of including more independent non-executive directors in the governance process. Furthermore, it offers rich and important insight to policy makers who are interested in achieving optimal board composition and those who are interested in the interaction of the firm with its corporate and extended environment through high quality disclosures.

One limitation of this study, however, is the fact that the study focused on disclosures in annual reports alone. Future research may consider data from other corporate communication media such as standalone CSR reports or press releases. Again, the study concentrates on UK companies alone and therefore may not be applicable to other countries, especially developing countries, which are characterised by little or no CG structure in place. This is because most markets and institutions in developing countries are informal and quite different from markets and institutions in developed countries like the UK. We therefore suggest that future research examine the link between *CCIDQ* and outside directors using samples from developing countries. Finally, other factors might have influenced *CCIDQ*, which we have not considered. Overall, this study shows that having community influential NEDs on the board provides an important mechanism in enhancing *CCIDQ* and thereby improving the interactions between the firm and its environment.

**NOTES**

[1] The term corporate legitimacy as elegantly defined by Suchman (1995, p.574) " is a generalised perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs and definitions".

[2] In contrast to the literature on board composition for profit-orientated organisations, the role and contribution of community leaders in non-profit organisations is well documented (Provan, 1980; Garonzik, 1999; Alexander et al., 2000; Ingram, 2003).

[3] In the study of Hillman and Keim (2001), the variable 'Diversity' reflects issues such as the employment of women and minorities, existence of outstanding benefit programs addressing work/family concerns, taking over of innovative hiring initiatives or other programs directed at employment of the disabled, etc.

[4] Other ways through which community leaders could impact corporate action include corporate philanthropic decisions, appreciation of the impact of corporate action on community of operation and consequently leading to change in corporate strategy.

[5] We used corporate community involvement and corporate social action interchangeably in this paper because they essentially are referring to the same issue(s).

[6] This is consistent with their classification as dominant stakeholders by Mitchell et al. (1997) examined in section 2.2.

[7] As Jensen (2001) argues, at theoretical level stakeholder theory appears to be consistent with the value maximisation principle. This principle dictates that any additional \$1 spent should result in a minimum of \$1 long-term value added to the business. Hence, under the stakeholder theory framework any amount spent by the company on each constituent should aim to maximise the financial benefit of this expenditure in the long term.

[8] A characteristic example is the case of British Petroleum Plc where the company was forced by the US government to set up a \$20bl Trust Fund and already has paid \$11bl to individuals and local businesses that are affected by the Deepwater Horizon oil spill disaster in the Gulf of Mexico in 2010.

[9] A more recent example is the case of Ireland where following the financial crisis of 2007, the government introduced, via the Credit Institutions Financial Support Scheme 2008, compulsory 'public interest directors' to all institutions that needed government's financial support. Their task was to enhance independence in the corporate decision by aligning the views of the existing BoDs to that of the outside stakeholders (Spitzeck and Hansen, 2010).

[10] The FTSE indices are produced quarterly by the FTSE Group. The group is owned jointly by the Financial Times and the London Stock Exchange. The indices are intended to provide investors, financial advisers, fund managers, etc. with information to enable them to identify and track market trends and make investment decisions. The companies in the FTSE 350 index are ranked as the largest 350 UK companies, with their primary listing on the LSE based on their market capitalization. Only companies with a full listing on the LSE are eligible to be included in the ranking.

[11] This method of sampling is referred to as the Stratified Sampling technique; it involves dividing the population into homogeneous subgroups and then taking a simple random sample in each subgroup (Trochim, 2006).

[12] The Industry Classification Benchmark (ICB) is jointly owned by the FTSE International Ltd and the Dow Jones and Co (DJ). The ICB structure and code index is used in both the FTSE and DJ indices for the classification of companies into sectors and industries. For the purposes of this study, the structure and code was accessed on 7 October 2012 and downloaded from http://www.icbenchmark.com/Site/ICB_Structure

[13] All data were sourced from company annual reports, Thompson Reuters Datastream and Lexis Library.

[14] Outliers are unusual observations found in datasets due to the existence of very large and very small data with very wide and unequal variations. The presence of outliers in datasets may lead to the violation of some of the assumptions of the least squares regression.

[15] A box plot summarizes the $25^{th}$ percentile (that is the $1^{st}$ quartile), the $50^{th}$ percentile, also known as the median, and the $75^{th}$ percentile (the $3^{rd}$ quartile) using a box and lines. A normally distributed variable will have its $25^{th}$ and $75^{th}$ percentile symmetrical, while its median and mean will be located at the same point in the center of the box (Park, 2008).

**APPENDICES**

**Appendix A: Companies Included in the Final Sample**

| | | | | |
|---|---|---|---|---|
| 1 | 3i Group | 38 | Marks and Spencer Group |
| 2 | Amec | 39 | Melrose Resources |
| 3 | Antofagasta | 40 | National Grid |
| 4 | ARM Holdings | 41 | Pace |
| 5 | AstraZeneca | 42 | Pearson |
| 6 | Aveva Group | 43 | Pennon |
| 7 | Barclays | 44 | Premier Oil |
| 8 | BBA Aviation | 45 | Provident Financial |
| 9 | BHP | 46 | Prudential |
| 10 | BP | 47 | Rio Tinto |
| 11 | British Airways | 48 | Rolls-Royce Group |
| 12 | British American Tobacco | 49 | RSA Insurance Group |
| 13 | BT GROUP | 50 | SABMiller |
| 14 | BTG | 51 | Severn Trent |
| 15 | Cairn Energy | 52 | Shire |
| 16 | Carillion | 53 | Smith and Nephew |
| 17 | Centrica | 54 | Soco International |
| 18 | Computacenter | 55 | Spectris |
| 19 | Cookson Group | 56 | SSL International |
| 20 | Dairy Crest Group | 57 | Tate and Lyle |
| 21 | Diageo | 58 | Tesco |
| 22 | Dimension Data Holdings | 59 | Tomkins |
| 23 | Dominos Pizza | 60 | Unilever |
| 24 | Fidessa | 61 | United Utilities Group |
| 25 | FirstGroup | 62 | Vodafone Group |
| 26 | GlaxoSmithKline | 63 | Whitbread |
| 27 | Helical Bar | 64 | WPP |
| 28 | Homeserve | 65 | Aquarius Platinum |
| 29 | Imagination Technologies Group | 66 | Cadbury |
| 30 | IMI | 67 | Carphone Warehouse Group |
| 31 | Imperial Tobacco Group | 68 | COLT Telecom Group SA |
| 32 | International Power | 69 | Genus |
| 33 | Invensys | 70 | Inmarsat |
| 34 | Johnson Matthey PLC | 71 | Morgan Sindall |
| 35 | Liberty International | 72 | Northumbrian Water Group |
| 36 | Lloyds Banking Group | 73 | Robert Wiseman Dairies |
| 37 | Lonmin | | |

# Appendix B: Decision Rule and Classification Scheme for Content analysis

| No. | Description of Information for content analysis |
|-----|------------------------------------------------|
| **1.** | **Company name.** |
| **2.** | **Year of report.** |
| **3.** | **Quality of community disclosure** |
| **a)** | **Specific** mention of any item of community activity as described below:<br>**Community projects:**<br>• Donations of cash, products or employee services to support established community activities, events and organisations<br>• Donation of premises or office equipment for community programmes<br>• Developing and patronising local suppliers of goods and services<br>• Provision of local employment and infrastructures<br>• Provision of summer or part-time employment for students<br>• Provision of livelihood and income generation schemes for local residence e.g. micro-credit.<br>**Health and related activities:**<br>• Sponsoring public health projects<br>• Aiding medical research<br>• Provision of health facilities<br>• Environmental sanitation.<br>**Education and the arts:**<br>• Sponsoring educational conferences, seminars or art exhibits<br>• Offering University scholarship for local residents<br>• Provision of education facilities and skills training<br>• Apprenticeship program to provide on the job training for local residents<br>• Provision of opportunity for students placements.<br>**Other community activities:**<br>• Other special community related activities, e.g. opening the company's facilities to the public<br>• Supporting and sponsoring sporting activities<br>• Supporting national pride/government sponsored campaigns. |
| **b)** | **Factual** information on community involvement disclosed;<br>i) Financial information given<br>ii) Physical information in form of pictures |
| **c)** | **Important**<br>i) Located under chairman's statements<br>ii) Located in a separate section of annual reports |
| **d)** | **Relevant**<br>- Located in the review of the year section<br>- Located in directors report |
| **4.** | **Corporate governance information:** |
| **a)** | NEDs (measured by proportion of total independent non-executive directors to total directors on the board |
| **b)** | Board activities (measured by board meetings and size) |
| **c)** | Audit committee activities (measured by audit committee meetings and size) |
| **d)** | Other standing committees (CSR, Risk, and Disclosure committees were dichotomous variables where 1 = Presence and 0 = otherwise) |

Adapted from: (Deegan and Gordon, 1996; Gray, et al., 1995; Hackston and Milne, 1996; Ingram and Frazier, 1980)

## Appendix C: Breusch and Pagan LM Test for Random Effects

```
Breusch and Pagan Lagrangian multiplier test for random effects

        TQS[Id,t] = Xb + u[Id] + e[Id,t]

        Estimated results:
                               Var       sd = sqrt(Var)
                   TQS       5.436043        2.331532
                     e       2.360807        1.536492
                     u       1.281769        1.132153

    Test:   Var(u) = 0
                         chi2(1) =     338.08
                     Prob > chi2 =     0.0000
```
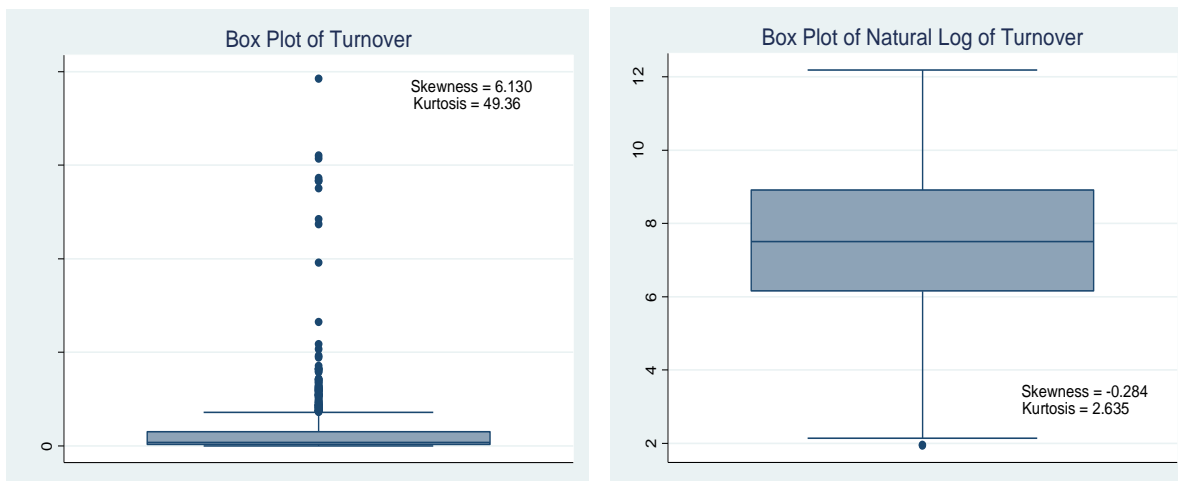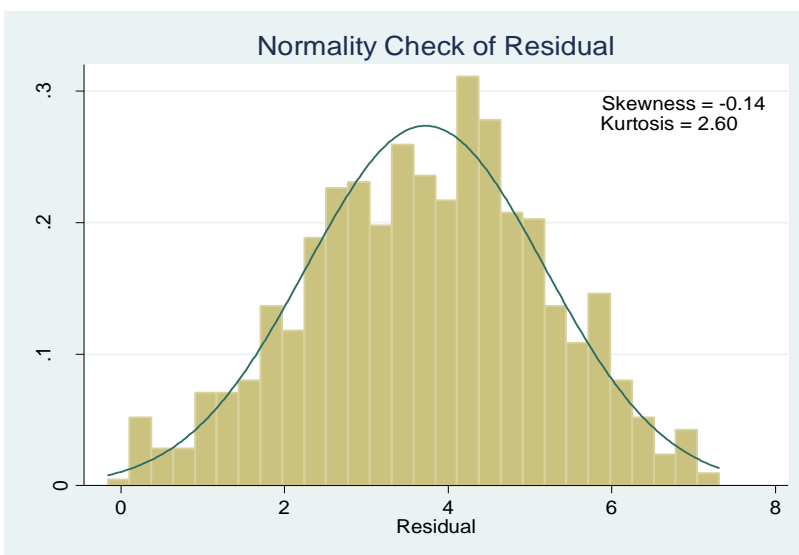
## Appendix D: Box Plot of Variables Before and After Transformation



## Appendix E: Histogram of Residuals



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