Determinants of Corporate Disclosure and Transparency Practices in Zimbabwean Companies

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Stakeholder theory

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Abstract

The study aimed to determine the association between the disclosure and transparency practices of Zimbabwean companies and 13 selected determinant factors, which are seven board characteristic variables and six company-specific attributes. The study was performed on annual reports of 35 ZSE listed companies for three years using a content analysis. A self-developed corporate governance disclosure and transparency index, based on the National Code on Corporate Governance Zimbabwe (NCCGZ), was used to evaluate the levels of disclosure and transparency. A panel regression analysis was used to test the association hypotheses. This study found that board ownership, company age and liquidity enhance the extent of disclosure and transparency. Within the context of stakeholder theory, the three identified determinants could be vehicles to enhance interrelationships between companies and their stakeholders. The originality is that this study is the first to address the gap to determine the association between a sustainability-oriented composite disclosure and transparency index and seven board characteristic variables and six company-specific attributes. The value thereof is it provides evidence to indicate which factors and to what extent they promote disclosure and transparency.

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1. Introduction

1.1. Background

As corporations are the central economic agents in the capitalist system of most countries, they need a number of resources in order to produce and deliver their products and services. Additional hereto is that a variety of stakeholders need adequate information to understand the operations of corporations in various ways (Jan *et al*., 2021). Against the overarching postulation of stakeholder theory that corporations share a central focus on the interrelationship amongst stakeholders (Freeman, 1984), this study was conducted because of an increased focus on corporate disclosure and transparency.

Corporate transparency, corporate disclosure and corporate governance have seen renewed interest by researchers, policy-makers and regulating bodies of both developed and developing countries (Albassam, 2014). For this study 'Transparency' is the ease with which an outsider is able to make a meaningful analysis of a company's actions, its economic fundamentals and non-financial aspects pertinent to that business, whereas corporate disclosure, therefore, becomes the principal means by which companies become transparent. Disclosure has long been recognised as the essence of corporate accountability. According to Uwuigbe and Fakile (2012), corporate governance is all about ensuring accountability and transparency by making information accessible in a constructive and effective way.

Corporate governance codes comprise recommendations that signify best conduct practice and serve as national guidelines for publicly-listed corporations by underscoring transparency as a key corporate governance matter (Mahadeo & Soobaroyen, 2016; Rose, 2016). Widespread studies have been conducted to evaluate corporate disclosure, transparency and governance practices in corporations. Some former studies used self-constructed disclosure measuring instruments (Adegboyegun *et al*., 2020; Lipunga, 2015; Owusu-Ansah, 1998), while other studies used a transparency index (Kılıç & Kuzey, 2018), a corporate governance code index (Albassam, 2014; Mahadeo & Soobaroyen, 2016; Price *et al*., 2011), or transparency and disclosure scores based on a Standard and Poor (S&P) Index (Sanan & Yadav, 2011).

In April 2015, the National Code on Corporate Governance Zimbabwe (NCCGZ) was introduced and applies to all types of business entities (IoDZ, 2015). It is a voluntary code where enforcement is based on an 'apply or explain' principle (NCCGZ, 2014). The code provides universal principles of sound corporate governance and suggestions to be followed by boards of directors and directors of corporations in pursuit of effective and sustainable corporate governance (IoDZ, 2015). The NCCGZ consists of 153 provisions that are aggregated into four broad corporate governance categories, including (i) ownership and control structure; (ii) information management and disclosure; (iii) governance of risk and structure; and (iv) board of directors and management structure.

Several studies have investigated the determinants of disclosure and transparency practices. Some of these studies have provided valuable insights into a general association found between company

characteristics and the extent of disclosure and transparency practices (Kılıç & Kuzey, 2018; Kumar *et al*., 2022; Samaha *et al.*, 2012; Uwuigbe & Fakile, 2012). From this well-researched field, six corporation-specific characteristics were identified as determinants, namely profitability, multi-nationality, company size, company age, liquidity and leverage. Other studies (Kılıç & Kuzey, 2018; Ludwig & Sassen, 2022; Mallin & Ow-Yong, 2012; Mangena & Tauringana, 2007; Mawanza & Mugumisi, 2014; Owusu-Ansah, 1998; Sarpong-Danquah *et al*., 2022) focused on the association between disclosure and transparency practices and some diverse dimensions, including both governance mechanisms and company-specific characteristics. From the above-mentioned studies, seven governance variables (board size, proportion of independent non-executive directors, audit committee size, audit firm size, government ownership, institutional ownership and board ownership) were identified as determinants to further investigate their relationship with disclosure and transparency practices in Zimbabwe.

1.2. Problem Statement

It remains unclear why previous studies on corporate disclosure and transparency amongst companies in emerging markets, particularly in Zimbabwe, did not apply a sustainability-oriented composite disclosure and transparency index in which provisions derived from the local corporate governance framework were incorporated to evaluate the extent and determinants of corporate disclosure and transparency, which should continually evolve to align more closely with global benchmarks. However, the empirical validity of such assertions, in particular the 'robustness' of the disclosure and transparency regulatory regime in Zimbabwe, has not been tested adequately in the time that the NCCGZ was introduced. It is evident from a review of literature that various studies have been conducted on disclosure and transparency practices in both developing and developed countries. However, there is a paucity in literature with respect to Zimbabwe, as only few studies were found: Owusu-Ansah (1998); Mangena and Tauringana (2007) and Mawanza and Mugumisi (2014) conducted in conjunction with other countries.

1.3. Research objectives

Inadequate attention is given to corporate disclosure and transparency practices, including its association with governance and company-specific determinants when the NCCGZ was not well established. Consequently, the *purpose* of the study was to determine the association between the disclosure and transparency practices of Zimbabwean companies and 13 selected determinants thereof.

To reach the purpose, the *first objective* was to use the NCCGZ as a foundation to develop a disclosure and transparency index (DTI); *secondly*, to assess the extent of disclosure and transparency practices of Zimbabwean companies by employing a sample of 35 ZSE listed companies using their 2014 to 2016 annual reports; and *thirdly*, to apply a panel regression model to quantitatively test the stated hypotheses

with regard to the association between the determinants (governance and company-specific characteristics) and disclosure and transparency practices.

By reaching the objectives, the study contributes to the stakeholder theory by offering a view of the extent that the selected determinants are drivers of corporate transparency and disclosure in Zimbabwean companies at a time that the NCCGZ was not well established. Consequently, with the selected sampling period in mind, the study shows managers which of the determinants are unsurprisingly better drivers to fulfil various stakeholders' need for transparent disclosure.

The next section explains the theoretical framework and presents a literature review that led to the development of several hypotheses that focus on the relationship between disclosure and transparency practices and selected determinants. This is followed by the research design, the results and a discussion section. The study is concluded in the final section.

2. Literature Review

2.1 Theoretical framework

Corporate governance is a concept that adopted a new articulation to manage corporations. Its primary focus is on the interrelationship between the individuals and groups within the corporation, for example board members, including executive and non-executive directors, different levels of employees, for example the different levels of management, supervisors and operators, other groups, such as shareholders, suppliers, local community, etc. (Du Plessis & Rühmkorf, 2015).

A number of assumptions underlie stakeholder theory. Firstly, companies should be operated not only for the financial benefit of their owners, but also to the interest of the relevant broader society (Chen & Roberts, 2010). That implies, secondly, executive directors are equally accountable to all stakeholders, such as the company's owners, creditors, employees, the government, local communities, customers, and suppliers. Thirdly, stakeholder theory is strongly connected to notions of morality in business and corporate social responsibility (Landrum & Daily, 2012).

Although stakeholder theory is widely embedded in governance codes (Mahadeo & Soobaroyen, 2016), it has been criticised from two perspectives (Sternberg, 1997): (i) the assumptions of stakeholder theory conflict with the central objective of companies — to maximise the wealth of shareholders; and (ii) stakeholder theory conflicts with the agent-principal relationship, which suggests that managers are primarily accountable to shareholders. As such, stakeholder theory is arguably incompatible with the basic principles of corporate governance. Nevertheless, stakeholder theory remains key in corporate governance theory (Chen & Roberts, 2010). Therefore, companies are under growing pressure to better understand the needs of stakeholders and to pursue a balanced approach to build sustainability (Jan *et al*., 2021).

Since a variety of stakeholders are affected by the operations of companies in various ways, compliance and transparency promote the alignment on stakeholder interest increase (Ludwig & Sassen, 2022). The information disclosed by companies assists stakeholders in assessing various aspects about these companies, such as effectiveness, efficiency of management, corporate citizenship, adherence to regulation, performance, position and future prospects.

The corporate governance code enacted in Zimbabwe harbours an explicitly stakeholder focus (NCCGZ, 2014). Chapter 8 of the NCCGZ (2014) includes provisions related to stakeholder relationships, referring to companies as multi-interest enterprises (Paragraph 392). Paragraph 394 states that stakeholders are the *raison d'etre* for corporate governance and the prime constituency of companies. It further explains that the relationship between companies and their stakeholders is regulated by law and by best practice codes.

2.2. Literature to develop hypotheses

This study constructed a comprehensive sustainability disclosure-oriented scorecard, which is based on the NCCGZ that was released in 2015. Based on this scorecard, the study developed a disclosure and transparency index (referred to as NCCGZDTI), which was used to assess both mandatory and voluntary Zimbabwean company disclosures. It was important to refer to previously related literature on corporate disclosure and transparency indices in order to identify gaps in their development and implementation. Widespread studies have been conducted in advanced and emerging countries to evaluate corporate disclosure, transparency and governance practices in companies.

Studies that guided the development of the NCCGZDTI were, for example, Mahadeo and Soobaroyen (2016), who designed an inclusive assessment of the implementation of governance codes by applying a scoring system that merges a trichotomous weighting and rating of the implementation of each component. An association analysis of the corporate governance scores and company-based measures (level and changes) showed that the relationship between these diverse variables varies considerably over the implementation window. In a study by Price *et al.* (2011), a governance score was constructed on the basis of the degree of conformity to the recommended provisions that appear in the code of 'best' corporate practices filed with Mexico's regulators each year. The researchers applied this score as a proxy of the intensity of governance. They found a positive relationship between the compliance with the code and dividend payments. They also found that the better-governed companies are forced to adopt costly measures to reduce agency costs.

In another study, Sanan and Yadav (2011) developed a corporate governance transparency and disclosure index score for 30 Indian BSE listed companies based on the qualities derived from the S&P transparency and disclosure survey. The key findings of their research were that the CGS for the study period (2001-2002 to 2008-2009) indicated that financial disclosures of the selected companies revealed a constant increase. In a study by Owusu-Ansah (1998), an index approach was employed to evaluate

the level of obligatory annual report disclosure practices of the companies in the sample. One of the key findings of the study by Owusu-Ansah (1998) was that the amount of required information released by ZSE listed companies in their audited annual reports and accounts was insufficient to satisfy the information requirements of users of companies' annual reports in Zimbabwe. Kılıç and Kuzey (2018) used a content analysis method to examine the total, quantitative and qualitative forward-looking disclosures of companies by applying a forward-looking disclosure index (FLDI). The study by Kılıç and Kuzey (2018) discovered that the level of total forward-looking disclosures varied significantly amongst sample companies, from 0.10 to 0.90 with a mean of 0.49.

Different studies have captured diverse dimensions of the extent and determinants of corporate disclosure and transparency practices. This study investigated the influence of seven board characteristic variables: Board characteristic variables (H_1-H_7) and six corporation-specific (H_8-H_{13}) attributes on the extent of disclosure and transparency in the annual reports of corporations listed in Zimbabwe, which were measured by the newly developed NCCGZDTI. The remaining part of this section focuses on the development of the hypotheses.

2.2.1 Board size

Many corporate governance codes normally recommend that the board of a company ought to be of a proper size (Kumar *et al.*, 2022; Ronoowah & Seetanah, 2023). It was found that boards that are appropriately sized are more effective and are related to a higher disclosure quality (Lagasio & Cucari, 2019; Ludwig & Sassen, 2022; Sarpong-Danquah *et al.*, 2022). However, Wang and Hussainey (2013) maintain that (i) the diligence of smaller boards could be viewed as 'diminished' compared to larger boards where additional viewpoints could possibly be proposed, (ii) a greater mix of different credentials exist in larger boards, and could ensure congruency, and (iii) larger boards may possibly be comprised of numerous individuals from diverse upbringings who could produce a variety of competences.

2.2.2 Proportion of independent non-executive directors

It would be anticipated from a corporate governance perception that independent non-executive directors would improve monitoring of the board and reduce unprincipled conduct (Wang & Hussainey, 2013). This claim is confirmed by the study of Giannarakis *et al*. (2020) and Lagasio and Cucari (2019). In addition, a higher ratio of independent directors could exercise more power on management to release extra optional information in annual reports (Mallin & Ow-Yong, 2012). Moreover, non-executive directors bring broader business expertise to companies, including improved ideas and contemporary best practice learnt when they performed duties for other companies (Wang & Hussainey, 2013).

2.2.3 Audit committee size

The audit committee is an additional key variable used for scrutinising unscrupulous behaviour of management (Madi *et al*., 2014; Yafele, 2012). Investors are, therefore, informed of in-house events via

added disclosures, which would instill a sense of reassurance because stakeholders may deem an audit committee as a body that examines the accountability of management (Madi *et al*., 2014; Yafele, 2012). Ruhana and Hidayah (2020) found that the audit committee has a significant influence on disclosure quality. Furthermore, the existence of a larger audit committee may improve the protection of shareholder interests (Allegrini & Greco, 2013). Boards with larger audit committees would possibly publicise an improved level of information that would affect the decision making of stakeholders in a positive way.

2.2.4 Audit firm size

Barako *et al.* (2006) note that even though management is totally accountable for the content of corporate disclosure, agency and stakeholder theories suggest that audit companies could influence the extent of corporate reporting. As large audit firms (Big 4) have superior auditing performance standards when compared to smaller audit firms, Kumar *et al*. (2022) failed to find a positive association between audit firm size and corporate governance disclosure. However, Vitolla *et al*. (2020) found a positive and significant relationship. It could, therefore, be argued that large audit firms are most probably more independent (Albassam, 2014). Heuristic literature on the association between the excellence of external auditing and optional corporate disclosure indicates either a positive or non-significant association (Albassam, 2014; Barako *et al.*, 2006; Kumar *et al*., 2022; Ntim *et al.*, 2012; Naimah & Mukti, 2019).

2.2.5 Government ownership

Referring to stakeholder theory, state ownership is an important component influencing corporate governance disclosure, especially in developing countries where clustered ownership structures are prevalent (Cornett *et al*., 2010). Kumar *et al*. (2022) found that government ownership has a positive effect on corporate governance reporting. However, a claim exists that government ownership ordinarily makes it highly likely for the Government to intervene in business operations that could lead to a deficiency in corporate governance practices. The Government could exercise its influence to select directors and CEOs without considering the abilities and expertise of appointees (Cornett *et al.*, 2010). Granted the positive association discovered in former studies (Kumar *et al*., 2022; Nguyen *et al*. 2021; Ntim *et al.*, 2012), a hypothesis was formulated accordingly.

2.2.6 Institutional ownership

Institutional investors are able to monitor companies and assist in the improvement of corporate governance disclosure (Mallin & Ow-Yong, 2012). However, Ronoowah and Seetanah (2023) and Rujiin and Sukirman (2020) rejected the hypothesis of a positive relationship between institutional ownership and corporate governance. Institutional investors are motivated to safeguard their investments, particularly if withdrawing is pricey (Chung & Zhang, 2011). This implies that the existence of institutional ownership could lower agency costs (Albassam, 2014). As found by Aggarwal *et al.* (2011), institutional shareholders could aid in the reduction of information asymmetry and enhance corporation value. Chung and Zhang (2011) support this notion by claiming that the ratio of

institutions owning a company's stocks improves with the quality of governance. However, these institutional investors may be ineffectual in influencing sound corporate governance practices, due to their characteristically short-term investments (Albassam, 2014).

Empirical studies highlight the existence of a positive relationship between institutional ownership and optional corporate disclosure (Aggarwal *et al.*, 2011; Barako *et al.*, 2006; Chung & Zhang, 2011; Ntim *et al.*, 2012). The association between institutional ownership and optional corporate governance is yet to be investigated in the Zimbabwean business environment.

2.2.7 Board ownership

The significance of board (director share) ownership arises from the influential function that the board of directors performs concerning corporate governance reporting processes (Eng & Mak, 2003). Insider trading limitations also encourage managers to produce additional disclosures to prevent any alleged lower valuation well before the expiry of share option positions (Yafele, 2012). Nevertheless, Lagasio and Cucari (2019) collected meta-analysis data and hypothesised a positive relationship between board ownership and disclosure quality, However, they failed to accept their hypothesis. This suggests that directors desire to improve corporate transparency and disclosure to improve business company value (Albassam, 2014; Mallin & Ow-Yong, 2012).

In ZSE listed companies, the relationship between director stock ownership and corporate disclosure and transparency is yet to be examined. However, a closer related research study conducted by Owusu-Ansah (1998) examined a connection between the quantity of a company's stocks owned by insiders and the level of its mandatory disclosure.

2.2.8 Profitability (return on assets (ROA)/return on capital employed (ROCE)/ return on equity (ROE))

Profitability has for a long time been known in former disclosure and transparency studies to be linked to the release of obligatory disclosure items by companies in their annual reports (Owusu-Ansah, 1998). In this regard, Sarpong-Danquah *et al*. (2022) found a positive relationship between firm performance and corporate governance.

Yafele (2012) offers evidence that is applicable to both private and public listed companies to disclose information disclosure in order to publicise their operations. In addition, profitable companies often reveal more information that would differentiate themselves from unprofitable companies (Sharma *et al*., 2020; Vitolla et al., 2020).

2.2.9 Multinationality

According to Owusu-Ansah (1998), there is an assumption that the obligatory disclosure strategies and practices of companies are shaped by multinational membership. Yafele (2012) maintains that when companies function in foreign countries, they are guided by the regulations of external countries. It may

be proposed that companies that operate in other geographical divisions release more disclosures in their annual report because of these additional regulations.

Yafele (2012) reasons that the citizens of a host country would also like to invest in multinational membership companies. As a result of the distribution of investors, monitoring costs may rise. Additional stakeholder groupings, such as government officials, individuals from the public arena, consumers, employees, and suppliers, are more inclined to request added disclosures from both private and public multinational membership companies. Lopes and Rodrigues (2007) claim that globalised companies would make an effort to explain their positive impacts to stakeholders and consequently, release further disclosures. Owusu-Ansah (1998) explains that foreign direct investments managed by multinational membership companies accompany technology transfers that include accounting and information disclosure practices in their home country and in their subsidiary companies that support developing economies.

2.2.10 Company size

Legitimacy theory proposes that larger companies release additional disclosures in response to social expectations, as these companies normally have more stakeholders than smaller companies (Turturea, 2015). Large companies usually boast multi-product branches and operate across global regions with numerous divisions (Kılıç & Kuzey, 2018). Moreover, larger companies are inclined to release more information than smaller ones (Giannarakis *et al*., 2020; Vitolla *et al*., 2020). In this regard, Sarpong-Danquah *et al*. (2022) found that there is a positive association between company size and corporate governance.

2.2.11 Company age

The level of disclosure may be influenced by a company's age (Owusu-Ansah, 1998). The age of companies may be a valid determinant, because established companies may have accumulated distinct expertise in business reporting. Conversely, newly listed companies may opt to release additional information to improve their corporate governance (Osama, 2013). However, Nguyen *et al.* (2021) found that company age does not influence disclosure quality. Nevertheless, Rujiin and Sukirman (2020) found in their study that there is a positive significant relationship between company age and disclosure quality.

2.2.12 Liquidity

A connection between liquidity and disclosure levels has been investigated in numerous studies (Mangena & Tauringana, 2007). According to Yafele (2012), the aim of management is to apprise creditors on how their resources were utilised and to keep short-term creditors abreast with how their dues are honoured in an agreed upon time frame. In this regard, Ruhana and Hidayah (2020) studied 54 companies and found that there is a positive significant relationship between companies' liquidity and disclosure quality. This is confirmed by Nguyen *et al.* (2021) who also found that liquidity significantly

influence disclosure quality. The association between institutional ownership and optional corporate governance is yet to be investigated in the Zimbabwean business environment.

2.2.13 Leverage

Financial leverage is measured by gearing that signifies the extent to which the operations of companies are funded by equity owners in contrast to the funds provided by creditors (Kılıç & Kuzey, 2018). Companies with high levels of debt suffer higher agency costs (Lopes & Rodrigues, 2007; Mangena & Tauringana, 2007). It could be proposed that an effective method to decrease agency costs is to improve the extent of corporate disclosure (Kılıç & Kuzey, 2018; Yafele, 2012). Lopes and Rodrigues (2007) state that when wealth moves from bondholders to equity stockholders, the leverage intensities rise. When bondholders price shield themselves, stockholders and managers are motivated to improve the degree of monitoring in companies that includes the disclosure of detailed information in their annual reports (Kılıç & Kuzey, 2018; Yafele, 2012). Lopes and Rodrigues (2007) reason that this claim is built on signalling components, and depends on the fact that companies with high gearing levels fall under bank-oriented financial systems. This claim illustrates, therefore, the inadequacy of only leverage as a sound alternative for the financial structure of companies concerning their motivation to disclose the extent of internal or external debt (Lopes & Rodrigues, 2007).

3. Research methodology

Albassam's (2014) guidelines were followed to obtain a comprehensive sample. The sample period spanned, therefore, from before 2015 — the year in which the NCCGZ was released. The final sample excluded suspended and merged companies (n = 3); companies with no available annual report data (n = 21); and recently listed companies (2015 to 2016) (n = 4). The final sample consisted of 35 companies, approximately 56% of the total population of companies listed on the ZSE and representative across a wide array of industries. The extent and quality of disclosures included in the annual reports of sampled companies were assessed and evaluated by making use of both a qualitative and quantitative content analysis.

To reach the first objective, the researchers made use of a double-step content analysis (qualitative and quantitative) to analyse and evaluate the level of corporate disclosure and transparency in the annual reports of companies listed on the ZSE during the 2014 to 2016 financial years by employing the NCCGZDTI. The NCCGZDTI contains 153 corporate governance requirements, including four broad categories (sub-indices): (i) ownership and control structure (28 provisions); (ii) information management and disclosure (77 provisions); (iii) governance of risk and structure (21 provisions); and (iv) board of directors and management structure (27 provisions). The NCCGZDTI was broken down into operational questions with reference to previous studies that also focused on the same themes (Kılıç & Kuzey, 2018; Lipunga, 2015).

Reliability and validity were deemed important as two specific measurement aspects of the instrument (Allegrini & Greco, 2013). Test-retest and internal consistency techniques were used to enhance the reliability of the constructed disclosure and transparency index. In order to create trustworthiness when the test-retest technique was utilised, three stages were pursued. Firstly, the content of the annual reports of every company during the specified period were extensively perused. This aided in the identification of noteworthy details in the annual reports (Omar & Simon, 2011). Secondly, the data of all the selected companies within the three-year sample period were coded. This approach enabled the reading of the annual reports repeatedly and correctly. Thirdly, after the annual reports of each sampled company were scored, the annual reports were read again to ensure that all suitable corporate governance details were considered (Omar & Simon, 2011). The scoring of the considered corporate disclosure and transparency requirements during the initial series of coding was done accurately by reading through the annual reports repeatedly. During the second series of coding the annual reports were read again. Generally, the findings of the second series of coding corresponded with the findings of the initial series, which proved the reliability of the coding process.

In this research study, the validity of the corporate disclosure and transparency index was enhanced by utilising three approaches. Firstly, the corporate disclosure and transparency index was developed by the researchers themselves, rather than making use of the ratings of analysts. This ensured that the index reflected the corporate disclosure and transparency practices of ZSE listed companies, and improved the content validity of the developed index. Secondly, the disclosure and transparency index was constructed to improve construct validity by focusing on disclosure and transparency requirements, which corresponds with the findings of a number of researchers who reported on business governance (Albassam, 2014; Barako *et al.*, 2006).

In order to estimate the dependent variable derived from the level of disclosure and transparency, the chosen index for each company was the total of all the disclosed key performance indicators (KPIs) collected from the research study's selection of annual reports, as done in former studies (Mahadeo & Soobaroyen, 2016; Owusu-Ansah, 1998; Yafele, 2012). This procedure ensured that the extent of disclosure was computed according to the characteristics that are applicable to each company under consideration. The NCCGZDTI was employed to survey the extent of corporate disclosure and transparency, and was used as the central variable to assess the factors that enable disclosure and transparency by ZSE listed companies. This study adopted both actual and relative indexing procedures to conduct a statistical analysis in order to enhance the reliability and dependability of findings (Mahadeo & Soobaroyen, 2016). From the self-constructed index used in this study, the relative score is the proportion of the actual disclosure score deserved by a selected company in relation to the maximum achievable score. The calculated relative score for x selected company was denoted as follows:

relative score = actual score ÷ maximum possible score

$$= NCCGZDTISCORE_{rel} = \sum_{i=1}^{ax} d_{ix} \div \sum_{i=1}^{mx} d_{ix}$$

Where: d_{ix} = the disclosure value of *i* item of the information required of x sample company, meaning '4' if the item *di* is disclosed to a significant extent; '3' if the item d_i is disclosed to a large extent; '2' if the item *di* is disclosed to some extent; '1' if the item d_i is disclosed to a lesser extent; and '0' if the item d_i is not disclosed.

ax = the number of disclosure and transparency KPI items applicable to the x sampled company disclosed by that company.

mx = the number of disclosure and transparency KPI items relevant to and supposed to be released by the x selected corporation, where in mx=612 (meaning 153 KPIs times the maximum score of 4).

In this research study, the determinants of disclosure and transparency practices were employed as independent variables, as indicated in the 13 hypotheses in the next section. These independent variables were investigated to assess whether they could explain the level of corporate disclosure and transparency of companies represented by the dependent variable, their NCCGZDTI score.

Panel data could be described as a dataset in which the behaviour of entities is studied across time (Du Prel *et al*., 2010; Nayak & Hazra, 2011). These entities may be states, companies, individuals, or countries. The researchers applied the panel regression model to analyse an association between the NCCGZDTI score and the independent variables for the time period 2014 to 2016, specified as follows:

$$NCCGZDTIit = \alpha_0 + \beta_1 BDSIZEit + \beta_2 PNEDit + \beta_3 AUDCSIZEit + \beta_4 AUDFSIZEit + \beta 5GOVSHAREit$$
$$+ \beta 6INSSHAREit + \beta 7DIRSHAREit + \beta 8ROA / ROCE / ROEit + \beta 9MNCAffilit + \beta 10LogCompSzit + \beta 11CompAgeit$$
$$+ \beta 12LQDTYit + \beta 13LEVRGit + \varepsilon_i$$

Where: $NCCGZDTI_{it}$ = the dependent variable, which is the relative disclosure and transparency score in terms of a percentage for 35 companies ($_i$) over a three-year ($_t$) period; $\beta_1 BDSIZE_{it}$ = the total number of board directors; $\beta_2 BNED_{it}$ = the number of non-executive directors as a proportion of the total number of board directors; $\beta_3 AUDSIZE_{it}$ = the number of directors in the audit committee as a proportion of the total number of directors; $\beta_4 AUDFSIZE_{it}$ = a dummy variable- Big-4 = 1, otherwise = 0; $\beta_5 GOVSHARE_{it}$ = the voting shares held by Government divided by the total issued shares; $\beta_6 INSSHARE_{it}$ = the voting shares held by institutional investors divided by the total issued shares; $\beta_7 DIRSHARE_{it}$ = the voting shares held by board members divided by the total number of shares issued; $\beta_8 ROA/ ROCE/ ROE_{it}$ = net profit divided by total assets/earnings before

interest and tax divided by capital employed/ net income returned divided by shareholders' equity; $\beta_9 MNCAffil_{it}$ = the voting shares held by foreign investors divided by the total number of shares issued; $\beta_{10} CompSz_{it}$ = the natural log of total assets in billions of USD; $\beta_{11} CompAge_{it}$ = years since establishment; $\beta_{12} LQDTY_{it}$ = current assets divided by current liabilities; $\beta_{13} LEVRG_{it}$ = long-term debt divided by total assets.

3.1 Hypotheses

From the literature review, the following alternative hypotheses were formulated for the study (H_1-H_7, the seven board characteristics and H_8-H_{13}, the six company specific attributes):

- H_1: A positive and significant link exists between board size and the degree of disclosure and transparency practices in annual reports of ZSE listed companies.
- H_2: A statistically significant positive association exists between the proportion of non-executive board directors and the extent of disclosure and transparency practices in annual reports of ZSE listed companies.
- H_3: The size of an audit committee is a statistically significant positive factor of the level of disclosure and transparency practices in the annual reports of listed companies in Zimbabwe.
- H_4: A statistically significant and positive association exists between the size of audit companies and the extent of corporate disclosure and transparency practices in conformity to the NCCGZ.
- H_5: A statistically significant and positive association exists between government share ownership and the extent of disclosure and transparency practices in annual reports of ZSE listed companies in conformity with the NCCGZ.
- H_6: A statistically significant and positive association exists between institutional ownership and the extent of disclosure and transparency practices in annual reports of ZSE listed companies in compliance with NCCGZ.
- H_7: A statistically significant and positive association exists between board ownership and the degree of disclosure and transparency practices in annual reports as indicated in the NCCGZ.
- H_8: A company's profitability level (represented by ROA (H_8^1), ROCE (H_8^2), and ROE (H_8^3)) positively and significantly influences the extent of corporate disclosure and transparency practices in annual reports of Zimbabwean listed companies.
- H_9: A statistically significant positive association exists between multinational affiliation and the extent of disclosure and transparency practices in the annual reports of ZSE listed companies.

- H_{10}: A statistically significant positive influence exists between company size and the degree of disclosure and transparency practices in the annual reports of ZSE listed companies.
- H_{11}: Established companies incorporate more disclosure and transparency in their annual reports than younger corporations.
- H_{12}: Liquidity level significantly and positively affects the degree of disclosure and transparency practices in the annual reports of ZSE listed corporations.
- H_{13}: A statistically significant positive association between leverage/gearing and the degree of corporate disclosure and transparency practices in annual reports of ZSE listed companies.

3.2. Ethics

This study collected publicly available data, namely companies' published annual reports. The ethical process was followed as per the North-West University's Faculty of Economic and Management Sciences requirements. This study was classified as low risk and an ethical clearance approval number was issued: EMSREK16/09/30 01/01.

4. Results and discussion

The second objective was to assess the extent of disclosure and transparency practices evident in Zimbabwean companies by sampling the annual reports of 35 ZSE listed companies during the period 2014 to 2016. In Table 1, a summary of the relative disclosure and transparency scores are provided. The scores obtained over the three-year period are relatively low with a mean of only 41.90%. A slight increase is evident in the score from 40.74% in 2014 to 42.89% in 2016. These low scores are, however, in line with the findings of other studies. Albassam (2014) and Lipunga (2015) both reported complying scores of 44% and 43%, respectively, when they applied their constructed IR-index in Malawi and Saudi Arabia, respectively. Ntim *et al.* (2012) reported a somewhat higher score of 61% with regard to the disclosure and transparency scores of South African companies, as communicated in the King III report.

In Table 1 Panel A represents the dependent variable. Panels B to N summarise the data of independent variables that were needed in conjunction with Panel A to reach the third objective: To apply a panel regression model in testing the hypotheses quantitatively about the association between the identified determinants and the disclosure and transparency practices. For each independent variable, each year's mean and standard deviation and the total for the three-year period are exhibited in Table 1.

Panels *B*, *C*, *D*, *E*, *F*, *G*, and *H* show the analysis of board characteristic variables and audit firm size E, as the only external governance mechanism variable. The results of the audit firm size, which is indicated as a dummy variable (Big-4 = 1, otherwise = 0), indicated that 94% of the companies use the services of the Big-4 audit firms.

Panels *F*, *G*, and *H* reveal a second group of variables that considered a corporate proprietorship structure. These three panels government, institutional, and director shareholding as a proportion of the

overall quantity of shares. Panels *I*, *J*, *K*, *L*, *M*, and *N* show a set of company-specific characteristic variables.

Table 1: Descriptive statistics of the variables of the corporate disclosure and transparency model

Panel	Variable	2014		2015		2016		ALL	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
A	Total disclosure and transparency	40.74	7.44	41.94	8.58	42.89	9.03	41.90	8.34
B	Board size	8.83	2.18	8.94	1.92	9.06	1.94	8.94	8.94
C	Independent directors	73.71	10.50	73.91	11.24	75.09	11.94	74.24	11.15
D	Audit committee size	3.43	0.98	3.60	1.19	3.31	0.83	3.45	1.01
E	Audit firm size (%)	94	24	94	24	94	24	94	24
F	Government ownership %	10.49	16.19	9.87	16.16	10.58	17.17	10.32	16.36
G	Institutional ownership %	32.73	20.67	33.77	23.49	30.94	24.01	32.48	22.58
H	Board ownership %	7.81	13.58	9.74	17.21	7.93	15.45	8.49	15.36
I	ROA	5.02	11.70	3.52	7.49	4.88	6.59	4.47	8.82
	ROCE	6.95	22.77	6.21	12.90	10.25	11.27	7.80	16.39
	ROE	2.17	28.45	-3.29	32.03	10.66	19.37	3.18	27.50
J	Multinationality	21.30	23.60	20.76	24.32	21.00	25.65	21.02	24.30
K	Company size	18.43	1.35	18.45	1.38	18.49	1.39	18.45	1.36
L	Company age	60.71	31.58	61.71	31.58	62.71	31.58	61.71	31.58
M	Liquidity	1.90	1.57	2.14	2.38	1.94	1.93	2.00	1.97
N	Leverage	28.52	33.47	35.14	37.43	23.98	29.33	29.21	33.56

Source: Own research

Panel data permitted the researchers to control the variables that could not be observed or measured, such as cultural components or variations in business practices across companies, or variables that fluctuate across time but not amongst entities (i.e., national policies, federal regulations, and international agreements) (Du Prel *et al*., 2010; Nayak & Hazra, 2011). Panel data take, therefore, individual heterogeneity into consideration. The core presumptions of this approach that had to be ascertained before running the statistical tests were categorised as follows: multicollinearity, normality, linearity, and homoscedasticity (Du Prel *et al*., 2010; Nayak & Hazra, 2011).

The normality of constant variables was checked to investigate whether the variables formed a normal distribution (Du Prel *et al*., 2010; Nayak & Hazra, 2011), by utilising probability-probability (P-P), quintile-quintile (Q-Q), and histograms. The developed NCCGZDTI appeared to be normally distributed. Government and board ownership recorded a non-normal distribution, whereas institutional ownership showed a fairly normal distribution. Additionally, the results implied that four (board size;

proportion of non-executive directors; audit committee size; and institutional share ownership) out of the seven corporate governance mechanism variables used in this research represented a normal distribution comparatively. All of the profitability measures (ROA; ROCE; and ROE) were fairly normally distributed. Furthermore, some of the company-specific characteristic variables, such as a multinational affiliation, liquidity, and leverage did not form a normal distribution.

Table 2: The ordinary least square presumption tests

	VIF	Skewness	Kurtosis	Cook's distance		
	Stat.	Stat.	Stat.	Model	Min.	Max.
NCCGZDTI	1.142	0.518	-0.213	NCCGZDTI	0.000	0.082
Board size	1.829	0.168	-0.329			
Independent directors	1.309	-0.710	0.016			
Audit committee size	1.780	1.404	3.463			
Audit firm size	1.271	-3.871	13.239			
Government ownership	1.435	1.792	2.164			
Institutional ownership	1.615	1.087	1.028			
Board ownership	1.415	2.004	2.769			
ROA ROCE ROE	7.288 7.503 3.244	-0.274 -0.567 -1.191	0.000 0.284 1.961			
Multinationality	1.927	1.335	0.907			
Company size	2.131	0.546	-0.452			
Company age	1.717	1.134	2.707			
Liquidity	1.585	2.734	8.532			
Leverage	1.660	0.793	-1.067			

Source: Own research

The skewness and kurtosis tests confirmed the results of somewhat normally distributed features in many of the variables. The rule of thumb concerning a skewness test is that the value of symmetric distribution should be at zero (Brooks, 2008). Table 2 reveals that the NCCGZDTI was skewed at 0.518 (somewhat skewed towards the right), denoting an estimate symmetrical curve (a normal distributed curve). Considering kurtosis, the proposition of non-normality could be declined if its value is 3 (Brooks, 2008). Table 2 reveals that the kurtosis value of the NCCGZDTI was -0.21, which suggests that the dispersion of data was fairly normal. ROCE, ROE, and ROA were skewed at -0.57, -1.19, and -0.27, respectively. According to the statistical analysis shown in Table 2, a somewhat negative skewness is indicated. The kurtosis values of 0.284, 1.96 and 0.000 implied a nearly normal distribution. Contrariwise, the liquidity ratio was skewed at 2.73 that implied a very positive skewness, as shown in Table 2. This ratio suggests that the proposition of non-normality could not be declined, while a kurtosis

value of 8.53 signified a non-normal distribution of the liquidity ratio values. The statistical analysis in Table 2 shows that the audit firm size was skewed at -3.87, and signified a high negative skewness. The kurtosis value of 13.24 denoted a nearly perfect distribution. Concerning the rest of the variables, Table 2 reveals that the values of many of the continual variables were skewed (-0.71 to 1.79), except for director ownership that revealed a value of 2.00. In the kurtosis test statistics, the variables ranged from -1.07 to 3.46 that signified a skewness in particular selections of the data.

It is challenging for any study's data to be dispersed in a perfectly normal way (Brooks, 2008). A degree of non-normality in certain selections of the data is, therefore, always anticipated. In line with present literature, non-normality in selected variables was reduced by the transformation and winsorisation of the data (Du Prel *et al*., 2010; Nayak & Hazra, 2011).

Multi-collinearity may be evident — a situation in which inter-correlations amongst independent variables are significant. In line with previous studies, the Pearson association multipliers (parametric) and Spearman association multipliers (non-parametric) tests were run (Ntim *et al*., 2012; Ntim & Soobaroyen, 2013). These tests show the correlation coefficients in order to check the tendency and enormity of the linear association between variables to assist in the discovery of the possible existence of multi-collinearity amongst variables. The extent and trend of both the Pearson association multipliers and Spearman association multipliers seemed to be reasonably analogous. The claim was, therefore, supported that no considerable complication of non-normality amongst the variables in the models existed (Ntim & Soobaroyen, 2013). Additionally, the associations among the variables were somewhat low that suggested that no severe multi-collinearity complication existed. However, Du Prel *et al.* (2010) and Nayak and Hazra (2011) claim that multi-collinearity may continue to cause a risk even after every test was administered to ensure normal and transformed data.

The bivariate relationships showed a high correlation between ROE, ROCE and ROA, which could have resulted in obtaining unexpected negative correlations when all these variables were used in one model. To ensure that this high multi-collinearity did not influence the regression model of this study, the researchers ran a regression analysis by making use of the same data, but excluding ROA and ROCE. The researcher only kept ROE, because it showed the highest correlation with NCCGZ. The researcher found that the two models (1) with all three measures (ROA, ROCE and ROE), and (2) with only ROE, were very similar. Furthermore, the r-squared value of the first model with all three of the measures (ROA, ROCE and ROE) was slightly higher than in the model with ROE only. The researchers decided, therefore, to include all three of the measures in the regression model.

Consistent with the findings of previous studies, additional techniques were employed to examine the existence of multi-collinearity amongst the variables, namely the variance inflation factor (VIF) and Cook's distance tests (Dam & Scholtens, 2012). Very high inter-correlations may be a complication if VIF values exceed 10 and tolerance levels are close to 0. However, Table 2 reveals that the VIF values

of variables utilised in this research models, of which 7.503 was the highest, implied that no serious problem of multi-collinearity existed. Cook's distance is a commonly used estimate of the effect of a data point when a least squares regression analysis is performed. It is effective in the identification of outliers in the X values, indicating that when Cook's distance is higher than 1, it should be considered as influential. Table 2 shows that the data complied with this threshold.

The fixed effects (FE) model and random effects (RE) model were run concurrently. The fixed effects model treats the constant as a group-specific or section-specific, whereas the random effects model treats the constant for each section as flexible (Asteriou & Hall, 2016). Consequently, the random effects model is more appropriate when the cross-section in the sample has been randomly selected from a population, while a fixed effects model is more appropriate when the sample effectively constitutes an entire population. To choose between fixed or random effects, a Hausman test was administered. The Hausman diagnostic test results for this study's panel regression model revealed that the Prob $\geq Chi^2$ for the Hausman test was equal to 0.0006, which is less than 0.05. Th test result was significant, and the researchers made use of a fixed effects model to run panel regressions.

Table 3 shows that only three of the hypotheses were accepted: Board ownership (H_7); company age **(H_{11})**; and liquidity **(H_{12})** were significant at a 1% level for (H_7), and at a 5% level for both **(H_{11})** and **(H_{12})**.

The hypothesis (H_7) states that a positive association exists between board ownership and sound corporate disclosure and transparency practices. The decision to accept this hypothesis was backed by related literature that argues that board ownership has an impact on the improvement of corporate disclosure and transparency practices in order to improve the competitive standing of companies (Samaha *et al*., 2012). Company age was discovered to be positively and significantly linked to disclosure and transparency practices at a 95% level of confidence. This result is also consistent with the content of hypothesis **(H_{11})**. The association between liquidity and the quality and extent of KPI disclosures in annual reports of ZSE companies was positive and significant. This finding was in line with the hypothesis **(H_{12})** developed in this research study. Considering these findings, established companies and those that boast high levels of liquidity generate more comprehensive disclosure and transparency KPI. Sound liquidity implies that companies have finances available to fund investment opportunities swiftly. Liquidity also offers stability to additional stakeholders, such as suppliers.

As shown in Table 3, leverage is significantly linked to the degree of disclosure and transparency KPI with a 10% level of significance. However, the hypothesis (H_{13}) states that leverage is positively related to the level of disclosure and transparency and, therefore, this study rejected the hypothesis. However, a negative relationship is not consistent with some related studies (Naimah & Mukti, 2019), which suggests that companies with extreme operating leverage should focus on their oversight.

Table 3: Panel regression results of the corporate disclosure and transparency model (n = 105)

	Fixed effects		
Variables (H)	**Coef**	**Std. err**	**P>|t|**
Board size (***H_1***)	0.045	0.346	0.897
Independent directors (***H_2***)	-0.065	0.062	0.301
Audit committee size ((***H_3***)	-0.872	0.741	0.244
Audit firm size (***H_4***)	-0.517	2.383	0.829
Government ownership (***H_5***)	0.102	0.165	0.540
Institutional ownership (***H_6***)	0.023	0.034	0.493
Board ownership (***H_7***)	0.195***	0.057	0.001
ROA ***(H_8^1***)	-0.084	0.14	0.553
ROCE (***H_8^2***)	0	0.088	0.998
ROE (***H_8^3***)	-0.008	0.039	0.847
Multinationality (***H_9***)	-0.065	0.063	0.302
Company size (***H_{10}***)	2.045	3.094	0.511
Company age **(*H_{11}*)**	0.840**	0.321	0.011
Liquidity **(*H_{12}*)**	1.118**	0.42	0.010
Leverage (***H_{13}***)	-0.044*	0.025	0.076
Constant	-42.36	55.32	0.447

Source: Own research / Notes: ***, ** and * denote a significance at 1%, 5%, and 10% levels, respectively.

Moreover, Ntim and Soobaroyen (2013) are of the opinion that companies with a desire to release corporate governance information to make their activities acceptable to lenders and stockholders would focus more on their leverage. Several research studies discovered no considerable association between leverage and non-mandatory corporate governance disclosure (Ntim *et al.,* 2012; Samaha *et al.,* 2012; Allegrini & Greco, 2013). Kılıç and Kuzey (2018) also found that leverage had no significant impact on forward-looking disclosure or qualitative forward-looking disclosure in their study. Moreover, the panel regression model did not reveal support for hypotheses ***H_1***, ***H_2***, ***H_3***, ***H_4***, ***H_5***, ***H_6***, ***H_8***, ***H_9***, and ***H_{10}***; their variables were not significant to corporate disclosure and transparency practices.

5. Managerial Implications

As explained, the corporate governance code enacted in Zimbabwe has an explicitly stakeholder focus (NCCGZ, 2014). It is, therefore, expected of Zimbabwean companies not only to pursue the interests of shareholders, but also to advance the interests of other stakeholders, such as employees, local communities, and governments. Furthermore, the African value of 'Ubuntu' encourages a benevolence towards society, and it could be expected within reason that companies are more likely to be socially

responsible. The study found that Zimbabwean companies were not very much compliant (41.9%) to the total corporate disclosure and transparency. Therefore, corporate managers need to know that there is very much room to improve. Within the context of stakeholder theory, the three identified determinants — (i) board ownership, (ii) company age, and (iii) liquidity — could be viewed as vehicles to enhance interrelationship amongst companies and their stakeholders, as these determinants improve the extent of disclosure and transparency in Zimbabwean companies.

The above-mentioned determinants are unsurprisingly better drivers to fulfil various stakeholders' need for transparent disclosure. Therefore, corporate managers should lean on those determinants to promote transparent disclosure by: (i) applying their influence in boards, (ii) building on years' matured experience and (iii) using cash-flows. The benefit of improved disclosure is to (Cocoran, 2021): (i) avoid stakeholders' misconceptions and mistrust and (ii) improve compliance and transparency with accredited bodies and government agencies.

In addition, our results do not support the notion that an increase in board size, proportion of non-executive directors, audit committee size, audit firm size, government ownership, institutional ownership, profitability, foreign ownership, company size and leverage improves corporate disclosure and transparency practices. Ronoowah and Seetanah (2023) explain that understanding the determinants are important for regularity authorities and policymakers to raise corporate disclosure and transparency standards. Furthermore, private investors and fund managers may also rely on the determinants in targeted companies to make sound credit and investment decisions.

6. Conclusions, Limitations and Future Research

In light of the introduction of the NCCGZ in 2015, we investigated determinants of corporate disclosure and transparency practices in the annual reports of our sample companies according to recommendations provided on good governance practice in the NCCGZ. As conformity with the NCCGZ guidelines is not obligatory, the index for disclosure and transparency developed in this study may assist future research in predicting the direction of sustainable business practices of companies.

The regression of diverse independent factors in the NCCGZDTI revealed some interesting findings. This study found that board ownership promotes the level of disclosure, transparency, and compliance with the NCCGZ. We concluded that increased board shareholding in companies enhances corporate and transparency practices. The study also found that company age has a constructive influence on the degree of disclosure, transparency and compliance with the NCCGZ. This finding supports other studies that the age of a company may be pertinent, as established companies may have amassed a unique familiarity with corporate disclosure over time. The study also found that liquidity enhances the level of disclosure, transparency, and compliance with the NCCGZ. Within the context of stakeholder theory, the three identified determinants could be regarded as vehicles to enhance interrelationship amongst companies and their stakeholders.

The originality of this study is that it is the first to address the gap to determine the association between a sustainability-oriented composite disclosure and transparency index and seven board characteristic variables and six company-specific attributes. The value thereof is it provides evidence to indicate which factors and to which extent promote a disclosure and transparency. Consistent with related studies, this study had the following limitations: Firstly, while listed companies are vital to the economy, non-listed companies exist that have a considerable impact on the Zimbabwean economy and are, therefore, worthwhile of being researched. Secondly, this study analysed annual reports in a fixed financial time frame (2014 to 2016) when the NCCGZ was not well established. However, the investigation related to the above period offers an opportunity for future research, namely, to compare this study's findings with a similar study using recent data to determine whether there are changes that the 13 determinants driving corporate disclosure and transparency in Zimbabwe.

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