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The Relationship Between Corporate Environmental Disclosure Volume and the Equity Capital Growth of Manufacturing Companies Listed in the FTSE/JSE RI Index

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Abstract: Corporate environmental disclosure (CED) has a lot of implications for companies. This is because investors value companies that take Corporate Environmental Disclosure (CED) seriously. Furthermore, companies that invest in corporate environmental disclosure enjoy long lasting relationship with their stakeholders. Therefore, this article is based on research conducted on selected Johannesburg Listed manufacturing Companies. The aim of the study was to examine the effect of the quantity of corporate environmental disclosure on South African Johannesburg Stock Exchange FTSE/JSE RI Index-listed manufacturing companies' equity capital growth. The study used the quantitative research method. The multiple linear regression analysis, which utilised the panel data, was applied to analyse the integrated annual reports of 10 Johannesburg Stock Exchange listed manufacturing organisations for the period 2014 to 2023. The researcher discovered a positive impact of CED on equity capital growth, which suggests that corporate environmental investment benefits the economy and facilitates the relief of environmental harms, thereby develop the SA economy and enhance the competitiveness of local companies. These results will encourage listed companies to

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enhance and improve their environmental information disclosure policies, which would help them to improve their return on equity for shareholders. The researcher recommends that future researchers should use all Johannesburg Stock Exchange socially responsible investment Index listed organisations to assess the influence of corporate environmental disclosure on organisations' financial performance. Moreover, the researchers recommend that societies in which companies operate ought to get involved in such companies to advance the socio-economic chances that they propose. This would assist in strengthening community security as they would receive support from the corporate environmental challenges faced by the surrounding societies.

Keywords: Corporate environmental disclosure; Return on equity; Equity capital growth; sustainability reports and stakeholders; integrated annual report

JEL Classification: M14

1. Introduction

According to Losse, Cui, Ding, Yang and Yu (2024), a business rarely increases its shareholders' worth when it oversees the significance of all their stakeholders. They must not only focus on investors, but also on customers and host communities. As customers become aware of the appropriate implications of a company's behaviour, they develop trust in the certainty that it can maintain its exceptional standards to improve its reputation for producing quality products (Muneer, Singh, Choudhary, Alshammari & Butt, 2025). The latter help companies to increase its financial performance, which results in higher returns for shareholders. However, once investors are faced with a variety of financial investments, and act with intellect and emotions, but their treasure remains the primary influence on their choices (Losse et al., 2024).

It is expedient for companies to maintain a good commercial standing to sustain the confidence of customers in their products, which would improve financial performance, resulting in shareholders receiving higher returns. Such a firm's return on equity would increase, and more shareholders would invest in the company (equity capital growth).

Companies have various stakeholders with diverse interests and needs. Therefore, it is to be expected that companies fulfil the desires of their stakeholders. Despite their different views and expectations regarding environmental matters, companies must operate their businesses in a sustainable manner (Zang, Zhang & Li, 2023). As such, directors of businesses ought to consider not only investors' benefits, but also those of all stakeholders as well, even when making investment choices (Zang et al., 2023).

Therefore, this article is based on the study that investigated whether adequate investment in community social activities influences organisations' financial performance, which is return on assets and its profitability. The study sought to close the knowledge gap around the relevance and importance attached to financial performance and the profitability of those organisations that invest in communities' social activities. The study was conducted on selected companies listed on the Johannesburg Security Exchange Index (JSE SRI Index, 2023).

1.1. Problem Statement

According to Muneer et al. (2025), directors of companies are obligated to use funds presented to them to create large profits for their investors, while guaranteeing obedience with environmentally associated principles. Nevertheless, the question is, can directors succeed in fulfilling their duties and still realise significant proceeds for their investors and progress compliance with environmental performance? Furthermore, it is not certain whether directors achieve investors' hopes of significant proceeds with stakeholders' hopes of enhanced compliance with environmental performance (Widuhung & Machmud, 2024).

Validation about whether directors achieve their duties can be done through information released in companies integrated annual reports regarding their environmental (water, waste, energy and carbon emissions indexes) involvement and how these corporate environmental disclosures quantity influence equity capital growth. Given the above uncertainty, it is expedient to inspect how the quantity of corporate environmental disclosures influences the South African FTSE/JSE RI Index listed manufacturing companies' equity capital growth.

1.2. Aim of the Research

According to Tolsgaard, Nayahangan, Cook, Madsen, Brydges, van Schalkwyk, de Carvalho Filho, You and Cleland (2025), the aim of a study helps the researchers to detail what the research study must achieve. Therefore, the research aim can be stated as follows:

This study examines how corporate environmental disclosure influences organisations' financial performance, which is equity capital growth. The

researcher chose to use equity capital growth as an element of financial performance since it measures how much an investment's value or ownership stake increases over time.

1.3. Research Hypotheses

The study will test the following research hypotheses:

H₀: Corporate environmental disclosure quantity does not influence the growth in equity capital of Manufacturing Companies Listed in the FTSE/JSE RI Index.

H_a: Corporate environmental disclosure quantity does influence the growth in equity capital of Manufacturing Companies Listed in the FTSE/JSE RI Index.

1.4. Research Objectives

Tolsgaard et al. (2025) state that research objectives help the researchers with what must be reviewed and revised. Therefore, the objectives of the study were formulated as follows:

To investigate the extent to which corporate environmental disclosure quantity influences the equity capital growth of Manufacturing Companies Listed in the FTSE/JSE RI Index.

2. Literature Review

2.1. Conceptual Review

According to Amelia et al. (2024), the disclosure of ecological data by many companies can help prevent most environmental challenges and companies with equity capital growth for shareholders and increase profitability. As a result, most listed companies are working to prevent pollution. In so doing, they discover innovative prospects that promote new environmental solutions that enhance profitability and increase return on equity (Tolsgaard et al., 2024).

2.1.1. Evolution of Corporate Regulations in South Africa and Contribution to ECI Practices

The SA corporate law, the Companies Amendment Act 16 of 2024 applies to organisations seeking to issue shares or other securities listed in a regulated market (JSE) (Adam, 2024). The law has evolved over the years. Among other provisions, the corporate law of SA distinguishes between the executive, non-executive and independent directors, albeit with a rather confusing description of their duties and tasks. The board of directors' exercises management and control of the company registered under the SA corporate law. The executive members of the Board of Directors (hereafter 'BoD') are deemed to be those shouldering daily governance issues of the corporate entity (Adam, 2024). The BoD reports to the shareholders and other stakeholders to fulfil their corporate governance responsibilities. Corporate governance in SA considers both King IV and the Companies Amendment Act 16 of 2024 requirements. Corporate governance can be looked at as a system by which limited liability companies are directed and controlled. According to Adam (2024), corporate governance arrangements require looking at the various stakeholders in the company, such as shareholders, directors, debtors, creditors and customers. Matters of ESG are included in the reports of the board.

The provisions of the Companies Act are consistent with King IV, and consistent with Seligson and Blumberg's (2024) conclusion. Seligson and Blumberg (2024) contend that the corporate law of any country provides a company Act that controls businesses. A company is a business whose main aim or intention is to make a profit by producing goods or providing services to the public. This admittance also shelters guidelines by which organisations and trusts are controlled in South Africa, together with enterprises and sole proprietorships (Seligson & Blumberg, 2024).

2.1.2. National Environmental Management Act

The National Environmental Management Act was established for decision-making related to the environment to foster and implement processes for coordinating environmental functions (Umar, 2026). Only the National Environmental Management Act, which addresses environmental conservation by offering guidance on sustainable environmental decision-making while effectively addressing global warming, has an important influence on the study (Umar, 2026). The objectives of the Act are to promote sustainable development and to prohibit pollution. For companies, this would be done through environmental sustainability investments.

2.2. Empirical Review

With economic growth, due to inferior production circumstances and extreme power utilisation, the decline in ecological contamination in China has triggered the devotion of scholars and legislators (Aly, Hasan, Obioru & Nakpodia, 2024). Correspondingly, numerous eco-friendly regulatory instruments have been introduced to address the phenomena in question. For example, Bilal, Gerged, Arslan, Abbas, Chen and Manzoor (2024) examined the efficacy of China's eco-friendly data disclosure at the commercial level and how it influenced the return on equity. The study revealed a constructive and substantial relationship between ecological data disclosure and return on equity. Moreover, the authors showed that the disclosure of ecological data by many companies can help prevent most environmental challenges, support equity capital growth for shareholders and increase profitability. As a result, most listed firms are working to avoid pollution, thereby exploring new opportunities to develop environmental solutions that enhance profitability and increase return on equity. A study by Bilal et al. (2024) encouraged listed companies to improve their environmental information disclosure policies, thereby helping in improving their return on equity for shareholders.

Similarly, Amelia, Khakim and Astuti (2025), Phrophayak, Techarungruengsakul, Khotdee, Thuangchon, Ngamsert, Prasanchum, Sivanpheng and Kangrang (2024), Ramadana and Ilham (2025) and Zang et al. (2023) found that environmental disclosure mechanisms from a corporate perspective affect a company's return on equity. Amelia et al. (2025) revealed that almost 40% of the tested companies disclosed no significant ecological information disclosure to the community, as may well be observed from the content assessment of the released data from these companies. Moreover, Amelia et al. (2025) discovered that companies operating wherever the marketplace had been located and moderately advanced are more likely to release emission-related data and improve companies' financial performance. The more data on ecological investment and contamination regulation the more cost is released.

This is supported by Ramadana and Ilham (2025), who discovered a constructive and substantial connection between ecological data disclosure and return on equity, and that municipalities whose city managers had lengthier occupations and were Ph.D. graduates were expected to issue extra ecological data disclosures. Moreover, the more the cyberspace operators and income per capita, and the smaller a town's joblessness percentage, the better the degree of ecological disclosure (Ramadana &

Ilham, 2025). Conversely, Phrophayak et al. (2024) found a negative and insignificant connection between environmental information disclosure and return on equity.

Bilal et al. (2024) employed the Difference-in-Differences (DID) model, along with the analogous inclination hypothesis test, placebo testing, and the PSM-DID methods to identify the influence of Chinese eco-friendly data disclosure (EID) on return on equity at the commercial level. The emphasis of the study was on the NKME designed for independent oversight and ID distributed in 2019 as a self-styled accepted test. Amelia et al. (2025) used a trial of the uppermost 500 Indian companies for the period 2008 to 2018, and rigorous arithmetic approaches to assess the bidirectional interconnection and concentration of the environmental information disclosure and return on equity association using the Granger interconnection assessment and numerous reversions for panel information. Phrophayak et al. (2024) used a sample of 35 listed non-profit companies from India and Japan for the period 2015 to 2020. A binary coding system was used to estimate environmental information disclosure scores grounded on the Global Reporting Initiative (GRI) agenda. Growth in equity capital was selected to assess the financial performance, and panel regression models built on the Cobb-Douglas construction purpose were used to explore the data.

The researchers varied on the direction (positive or negative) of the influence of environmental information disclosure on equity capital growth; however, they concur that corporate environmental disclosure influences equity capital growth. Evidently, variances in population scope, statistical tests and study exploration methods might have contributed to differences in the directional relationship of CED on ECG. Although previous studies have yielded differing perspectives regarding the impact of CED on ECG, there might be a necessity for considerable CED policy/framework creativities that encourage equity capital growth.

The literature review thus far reveals that there is prior interrelated research on the singularity under investigation. Nevertheless, prior research has not fixated precisely on the joint effect of corporate environmental disclosure quantity on equity capital growth. Consequently, this study seeks to bridge this gap in knowledge by contributing to the existing body of knowledge through an investigation that explicates the relationship between CED quantity and shareholder value.

3. Material and Methods

3.1. Research Paradigm and Design

The study used the positivist paradigm and descriptive correlational design to test the hypothesis of the study regarding quantitative variables. The quantitative method was appropriate because the coefficients of the variables were estimated numerically. Amelia et al. (2024) used quantitative research within a positivist paradigm to investigate the effect of disclosure of environmental aspects (Environmental Disclosure) on company value.

3.2. Research Population and Sampling Procedure

A total of 52 manufacturing corporations listed in the FTSE/JSE RI Index constituted the population of this study (JSE, 2023). The sample comprised 10 manufacturing companies listed on the FSTSE/JSE through the RI index (JSE, 2023). Manufacturing companies were chosen because they were more involved in corporate environmental matters (air pollution, water pollution, increased energy usage, carbon emissions, etc.).

The justification for choosing the FTSE/JSE RI Index was that the integrated annual reports are audited by certified chartered accountants and approved, documented, and published on the JSE website and the IRESS Database.

3.3. Data Collection

This study collected quantitative data from the selected manufacturing companies' corporate integrated annual reports. The quantity of corporate environmental disclosure and equity capital growth data was sourced from the JSE SRI Website and the IRESS database for a period of ten (10) years (2014–2023). This was organised as a balanced panel dataset comprising 100 observations derived from 10 companies over a 10-year period ($10 \times 10 = 100$). The quantity of corporate environmental disclosure was gathered using the JSE sustainability disclosure metrics.

Quantitative information gathered in the study encompassed variables aligned with the research objective, namely, quantity of water disclosure (in cubic kilometres); quantity of waste disclosure (in tonnage); quantity of energy disclosure (in kilowatt hour); and quantity of carbon emissions disclosure (in tonnes). Moreover, the

variables incorporate equity capital growth (in Rand amount) and market capitalisation (in Rand amount) as a control variable.

3.4. The Analytical Framework

Multiple linear regression analyses (Panel Auto-Regressive Distributive Lag) based on the empirical literature were applied to determine the correlation between the quantity of corporate environmental disclosure and the company's equity capital growth. The study had one independent variable, corporate environmental disclosure quantity, proxied by waste, water, energy, and carbon emissions. It also had one dependent variable as the company's equity capital growth.

The panel data analysis was chosen because, in this study, the data structure is quite complicated and is characterised by multiple observations and a period extending up to ten years. The multiple linear regression analysis was chosen for the researchers to know the effects of the correlation between corporate environmental disclosure and organisations' equity capital growth.

3.5. Data Management and Analysis

Both individual variables and models were subjected to several econometric tests. The variables were tested for stationarity to establish the integration order and to guide the appropriate examination for cointegration analysis. From there, a selection of suitable lag length structures was used to determine the best lag length in the dataset. This was followed by cointegration analysis using the panel auto-regressive distributive lag (PARDL) method to obtain long- and short-run estimates. A PARDL model was used to examine the impact of debt on growth (Epo, Tapche Ndam & Abiala, 2024). As this research study investigated the influence of the quantity of CED (spending) on equity capital growth (revenue), the PARDL model was suitable. Lastly, analytic and constancy examinations were performed to guarantee the legitimacy and robustness of the model.

This study collected information from 20 FTSE/JSE-listed manufacturing companies during the specified period spanning 2014 to 2023. In the preliminary PARDL analysis, data from 20 manufacturing companies were tested, resulting in erroneous outcomes. In econometrics terms, this implies that the dataset was dominating cross-

sectionally (Large N and small t). This means that the study encompassed a greater number of companies (20) compared to the period (10 years).

According to Rajabov (2025), the PARDL requires a time-series dataset ($N \leq t$) to yield positive outcomes. So, during the preliminary testing of data through the PARDL system, it was recommended that the sample of the study be 10 companies out of 20 manufacturing companies to accommodate the PARDL system (10 companies and 10 years – time-series based ($N=t$)). The study initially intended to use 20 companies but based on the preliminary PARDL analysis outcomes, only 10 were accommodated over 10 years, resulting in 100 observations (10 x 10). Therefore, the study sampled 10 manufacturing companies to accommodate the PARDL software.

The model designed to achieve the objective is presented as follows,

$$ECG_{(Equity\ capital\ growth)it} = a + \beta_1 CEDQ_{(Water)it} + \beta_2 CEDQ_{(Waste)it} + \beta_3 CEDQ_{(Energy)it} + \beta_4 CEDQ_{(C\ Emissions)it} + \beta_5 MC_{it} + \varepsilon_{it}$$

Where:

Where ECG is Equity Capital Growth, CEDQ is the Corporate environmental disclosure quantity, and MC is Market Capitalisation. Furthermore, a is the constant, β_1 to β_5 are the coefficients of each descriptive variable, and ε_{it} is the error term.

3.6. Theoretical Review

3.6.1. Stakeholders Theory

One of the primary goals of the stakeholder theory is to inspire firms to focus on maintainable development and report on their sustainability involvement (Stoelhorst & Vishwanathan, 2024). According to Abubakr, Sahal, Mohammed, Yousif, Mohammed and Roustom (2024), businesses are encouraged to report evidence regarding their Environmental, Social and Governance performance. This is a technique to internalise and advance companies' pledges to supportable growth in a way that can be demonstrated to both internal and external stakeholders (Abubakr et al., 2024).

Awareness of a maintainable business has remained around for several years and is frequently denoted as maintainable commercial development or corporate social

responsibility (Widuhung & Machmud, 2024). A company may be considered sustainable if it meets extant desires without constraining its aptitude to encounter future necessities and strategies (Widuhung & Machmud, 2024). According to Esposito, Marrone, Pontrelli and Rella (2025), a corporation would hence be liked by society and stakeholders to be economically profitable, legitimate, publicly acknowledged, ethical and produce environmental-friendly products.

As described, information by an organisation is vital to every stakeholder of the organisation. It is every stakeholder's right to expect a more comprehensive corporate environmental disclosure of an organisation (Esposito et al., 2025). In the past, organisations have encountered increasing stress not only to perform well financially but are also expected to demonstrate environmental and social consciousness. Stakeholders and other investors expect a more comprehensive reporting about how organisations satisfy their financial, environmental, social and governance duties.

4. Presentation of Results

4.1. Empirical Results

One issue encountered in the study is that some variables were threads, which were converted into numeric values (Epo et al., 2024). Like several other panel studies, absent values or information facts were a problem requiring careful treatment.

The empirical analysis began with descriptive statistics, followed by Cross-sectional dependence (CSD) assessments, unit root assessment, and an assessment of cointegration among the variables.

4.2. Unit Root Tests

Table 1. First-generation unit root test results

Variable	Test method	Test equation II – Individual intercept II&T – Individual intercept & Trend N – None	Probability value		Decision
			LEVEL	1 ST DIFF	
	<i>LLC</i>	<i>II</i>	0.9653	0.0090	

EQUITY CAPITAL GROWTH		II&T	0.0964	0.0000	I(1)
		N	0.0854	0.0000	
	IPS	II	0.0834	0.0000	
		II&T	0.9850	0.0000	
		II&T	0.0564	0.0021	
Water disclosure	LLC	II	0.9531	0.0084	I(1)
		II&T	0.1064	0.0000	
		N	0.3469	0.0000	
	IPS	II	0.9853	0.0019	
		II&T	0.9631	0.0000	
		II&T	0.7632	0.0000	
Waste disclosure	LLC	II	0.9520	0.0000	I(1)
		II&T	0.2965	0.0000	
		N	0.7943	0.0000	
	IPS	II	0.3596	0.0008	
		II&T	0.8409	0.0000	
		II&T	0.3028	0.0050	
Energy disclosure	LLC	II	0.0656	0.0970	I(1)
		II&T	0.8599	0.0000	
		N	0.7305	0.0065	
	IPS	II	0.9554	0.0000	
		II&T	0.9960	0.0000	
		II&T	0.0510	0.0000	
Carbon emission disclosure	LLC	II	0.1850	0.0000	I(1)
		II&T	0.0653	0.0000	
		None	0.1649	0.0000	
	IPS	II	0.6043	0.0000	
		II&T	0.0649	0.0041	
		II&T	0.9543	0.0000	
Market capitalisation	LLC	II	0.3051	0.0017	I(1)
		II&T	0.1865	0.0060	
		N	0.1965	0.0000	
	IPS	II	0.9856	0.0000	
		II&T	0.9853	0.0000	

Source: Authors' computation

This section provides formal unit assessments from the initial-generation unit root assessments of Lavin, Lin and Chu (LLC), as well as the Im, Pesaran and Shin tests. First-generation unit root tests were employed because they are CSD assessments. The findings showed no CSD across all four models. Table 1 describes the initial-generation unit root assessment findings for all the variables of the four estimated models.

The findings in Table 1 indicate that after first differencing, the probability values for all variables were less than the critical value of 0.05. Thus, it is concluded that they become stationary after first differencing. This implies that the model integrates at order I(1), which warrants the adoption of panel PARDL as the estimating technique for the model.

Apart from the unit root tests, the model was subjected to a battery of empirical tests presented below.

4.3. Equity Capital Growth Model Empirical Test Results

This subsection presents the results of the research objective (Equity capital growth model), which investigated the effects of CED quantity on the equity capital growth of Manufacturing Companies Listed in the FTSE/JSE RI Index.

4.3.1. Descriptive Statistics

Table 2. Descriptive statistics test results

	bs	CG	F	D	V	ASD	V	D	F	ED	C	N
ean	M	0	9.606	1	3	4.677	6	5.092	2	6.864	1	4
edian	M	0	6.243	1	3	9.956	1	9.200	7	2.900	2	1
aximum	M	0	0.104	8	1	8.000	7	4.100	1	5.531	1	3
inimum	M	0	6.240	1	4	5.600	1	.518	2	.100	9	6
td. Dev.	S	0	7.094	1	1	0.338	1	1.746	4	2.688	3	9

Note: All variables are log (logarithm)

Source: Authors' computation

The results of the descriptive statistics analysis in Table 2 present the equity capital growth model variables for the number of observations, mean, median, standard deviation, smallest and biggest values.

As indicated in the table, the study had a well-balanced panel where the observations are 80, and all the variables were continuous. Equity capital growth had an average of 19.61, the smallest of 16.24, and the biggest of 80.10. The water disclosure had an average of 37.50, the least value being 4.30 and the highest of 18.30. The mean

waste disclosure was 64.68, the least of 15.60 and an utmost value of 78.00. Energy disclosure had an average value of 25.09, with the lowest of 2.52 and the highest of 14.10; and Carbon emission disclosure had a mean value of 16.86, with the smallest of 9.10, and the biggest of 15.53. Finally, the market capitalisation (control variable) was 43.62, with the lowest of 6.80, and the highest of 38.45.

4.3.2. Correlation Analysis

Table 3. Equity capital growth model Matrix of correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)
(1) Equity capital growth	1.000					
(2) Water disclosure	-0.206	1.000				
(3) Waste disclosure	-0.166	-0.347	1.000			
(4) Energy disclosure	-0.052	0.045	0.017	1.000		
(5) Carbon emission disclosure	-0.068	0.376	-0.556	0.033	1.000	
(6) Market capitalisation	0.205	-0.007	-0.028	-0.164	-0.006	1.000

Source: Authors' computation

The correlation test results in Table 3 suggest that equity capital growth and corporate environmental disclosures (water, waste, energy and carbon emissions) ($r = -0.21$; -0.17 ; -0.05 ; -0.07) were negatively correlated. At the same time, equity capital growth and market capitalisation were positively correlated ($r = 0.21$). This revelation implies that equity capital growth was most likely to decrease as corporate environmental disclosure level increased.

4.3.3. Multicollinearity Test

Table 4. Variance inflation factor results

Variables	VIF	1/VIF
Equity capital growth	2.750	0.920
Water disclosure	2.630	0.892
Waste disclosure	2.610	0.870
Energy disclosure	2.420	0.820
Carbon emission disclosure	1.950	0.790
Market capitalisation	2.120	0.670
Mean VIF	2.413	

Source: Authors' computation

Table 4 presents the VIF analysis. Given that the mean VIF is 2.413, which is less than 10, multicollinearity is not from the data.

4.3.4. Cross-Sectional Dependence Test Results

Table 5. Equity capital growth model cross-sectional dependence test results

Test description	Test	Statistic	P-value	Conclusion
CSD- SUR:	Breusch-Pagan LM	13.17171	0.4145	Null Accepted
	Pesaran scaled LM	2.070295	0.0384	Null Rejected
	Pesaran CD	-0.126651	0.8992	Null Accepted

Source: Authors' computation

Table 5 provides findings of the CSD assessment for the equity capital growth model. The calculated probability values for the Breusch-Pagan LM, Pesaran LM, and Pesaran CD analyses were 0.4145, 0.0384 and 0.8992, respectively. The decision in this case was to reject the null hypothesis, given that two of the three test statistics were insignificant; and to dismiss the null hypothesis of the absence of CSD, given that two test statistics out of three were statistically significant. The conclusion is that there was no existence of CSD in the estimated model.

4.3.5. Cointegration Estimation Results

Table 6. Equity capital growth mode Kao panel cointegration test results

Variable	t-statistics	Probability
ADF	-0.591303	0.0022
Residual variance	3.749411	-
HAC variance	7.330211	-

Source: Authors' computation

Table 6 presents the Kao (1999) panel cointegration test outcomes for the equity capital growth model. The computed probability value is 0.0022. As such, it is concluded that there was long-run co-movement among the variables.

4.4. Panel PARDL Results

The study tested the stability of the estimated models. All were stable and reliable for economic inference. The findings of the PARDL test for equity capital growth are presented in Table 7 below:

Table 7. Equity capital growth model panel PARDL test results

Variables	LONG RUN		SHORT RUN	
	Coefficients	Probability	Coefficients	Probability value
WASTE DISCLOSURE	0.240512	0.0501	0.861111	0.4491
WATER DISCLOSURE	0.414711	0.0452	0.478710	0.7917
ENERGY DISCLOSURE	0.185851	0.1262	0.039609	0.3556
CARBORN DISCLOSURE	-0.119512	0.0440	-0.468510	0.9019
MARKET CAPITILASION	-0.134113	0.0987	-3.919512	0.9879
	<i>Coefficient</i>	<i>Probability</i>		
<i>Cointeq01</i>	-0.109884	0.0221		
<i>Constant</i>	-1.919512	0.2755		

Source: Authors' computation

PARDL test outcomes in Table 7 showed that if the p-value is <0.05 , it means the connection among the variables is significant. Moreover, if the p-value is >0.05 , it means the relationship among the variables is insignificant.

Column (1) presents the estimations of long run PARDL outcomes. Waste disclosure was positively and insignificantly correlated to equity capital growth in the long run; and a 1 percent change in waste disclosure led to approximately a 24.05% increase in equity capital growth. Water disclosure was positively and significantly connected to equity capital growth in the long run; and a percentage change in water disclosure led to about 41.47% improvement in equity capital growth. Energy disclosure was positively and insignificantly related to equity capital growth in the long run; and a percent change in energy disclosure led to about an 18.59% increase in equity capital growth. Carbon disclosure was negatively and insignificantly related to equity capital growth in the long run; a percent change in carbon disclosure led to about a 4.40% decrease in equity capital growth. Market capitalisation as a control variable was negatively and insignificantly related to equity capital growth in the long run; a percent change in market capitalisation led to about a 13.41% decline in equity capital growth.

Column (2) presents the estimations of short run PARDL results. In the short run, waste disclosure was positively and insignificantly related to equity capital growth; a percentage change in waste disclosure was associated with 86.11% growth in equity capital. In the short run, water disclosure was constructively related to equity capital growth and estimates were statistically insignificant. A percent change in

water disclosure led to a 47.87% growth in equity capital growth. In the short run, energy disclosure was positively and insignificantly related to equity capital growth; a percentage change in energy disclosure led to a 3.96% increase in equity capital growth. In the short run, carbon disclosure was inversely and insignificantly related to equity capital growth; a percentage change in carbon disclosure relates to a 46.85% decrease in equity capital growth. In the short run, market capitalisation was negatively but insignificantly connected to equity capital growth; a proportion change in carbon disclosure related to a 39.1% decrease in equity capital growth.

The model converged to equilibrium at a speed of approximately 10.99%. This implies that if there were disequilibria or instability in the estimated model, they would be corrected at a rate of 10.99% from one to another.

4.5. Models' Stability Test Results

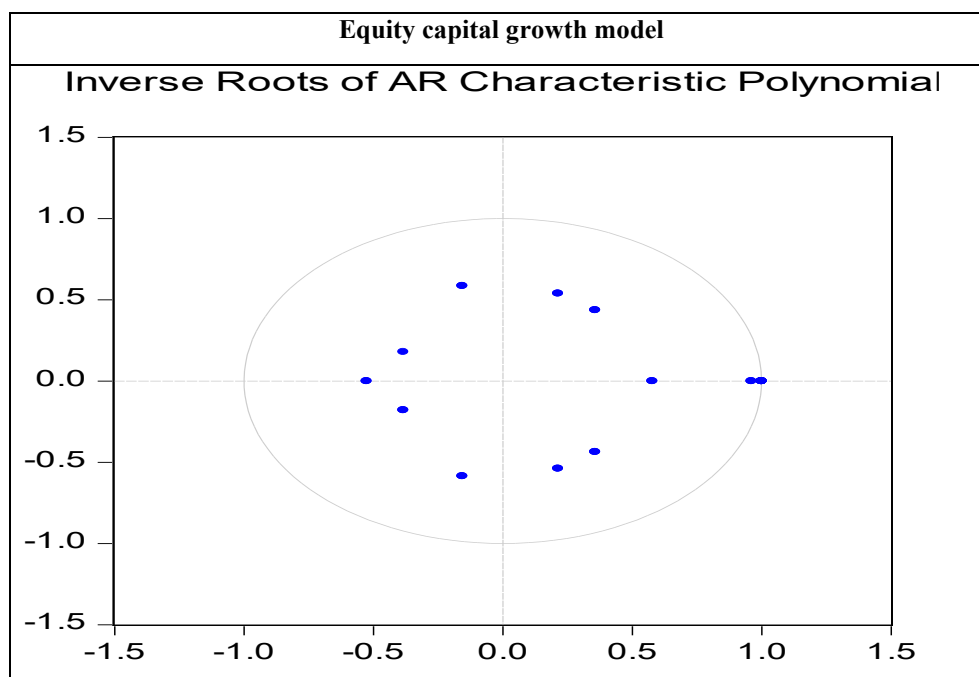


Figure 1. Inverse roots of AR characteristic polynomial for growth models

Source: Authors' computation

4.6. Discussion of the Equity Capital Growth Results

The results in Table 7 indicate that waste disclosure had an insignificant constructive impact on equity capital growth in both the long and short run estimates. In the long run, for example, water disclosure had a significant positive influence on equity capital growth as well as an insignificant positive impact on equity capital growth in the short run. Energy disclosure had an insignificant positive relationship with equity capital growth, both in the long and short run estimates. In both the long and short run, estimates showed that carbon disclosure had an insignificantly negative impact on equity capital growth. Market capitalisation had an insignificantly negative relationship with equity capital growth in both the long and short run estimates. Based on the outcomes, three out of five variables, namely, corporate environmental disclosure quantity were positive predictors of equity capital growth in both the long and short run estimates. Thus, based on dominance, it is determined that the CED quantity was positively correlated to equity capital growth.

The results agree with that by Amelia et al. (2025), who discovered a constructive and substantial relationship among ecological data disclosure and return on equity. Similarly, Bilal et al. (2024), Zang et al. (2023) and Aly et al. (2024) found that environmental disclosure mechanisms from a corporate standpoint had a positive effect on a study company's return on equity (equity capital growth). Conversely, Phrophayak et al. (2024) found a negative insignificant connection among environmental information disclosure and return on equity (equity capital growth). Additionally, Arévalo, González, Guzmán and Trujillo (2025) found a higher cost of equity, indicating that highly polluting companies face a disadvantage for investment. Evidently, according to Hu, Chen and Liu (2026), corporate environmental disclosure has an adverse influence on the ECG of a company, since the increase in equity capital costs will decrease the financial performance of the company. The legitimacy theory states that companies can create, influence or manipulate numerous disclosure-related policies, and can be inspired to disclose social and environmental data to legitimise their status within society (Hu et al., 2026).

The implications of the findings on the South African economy and the shareholder value of the companies used are stated below.

The results showing a positive impact of CED on equity capital growth suggest that the CEI benefits the economy and facilitates relief of environmental harms, thereby developing the SA economy and enhancing the competitiveness of local companies.

Moreover, the disclosure of ecological data by many companies can help prevent most environmental challenges, assist companies with equity capital growth for shareholders and increase profitability. As a result, most listed companies are working to prevent pollution, and in so doing discover innovative prospects of promoting new environmental solutions that enhance profitability and increase return on equity. These results will encourage listed companies to enhance and improve their environmental information disclosure policies, which would help them improve their return on equity for shareholders.

4.7. Conclusion

The results of study showed a constructive effect of corporate environmental disclosure quantity on equity capital growth, as shown in the model, which was derived from the research objective. The model of the study revealed that waste disclosure was positively and insignificantly linked to equity capital. In contrast, water disclosure was positively and significantly associated with equity capital growth; energy disclosure was positively and insignificantly correlated with equity capital growth; and carbon disclosure was negatively and insignificantly interrelated with equity capital and market capitalisation as a control variable, which was negatively and insignificantly related to equity capital growth.

A distinguishing feature of the study was its prominence on corporate environmental disclosures, which evaluated various combinations of waste management, water usage, energy usage and carbon emissions reduction and equity capital growth in divergence from most studies that focused exclusively on one environmental disclosure proxy. The outcomes of this study foster upcoming research to further explore alternatives of the corporate environmental disclosures of companies. Nonetheless, there is a necessity for JSE-listed companies to report further on corporate environmental disclosure and equity capital growth.

4.8. Contributions of the Study

Previous studies indicated a gap in understanding whether managers of companies can generate higher returns for their shareholders while satisfying the needs of their local communities by providing adequate measures for the pollution caused by the production (Amelia et al., 2025; Widuhung & Machmud, 2024; Zang et al., 2023). Based on the reviewed literature, there is limited research in South Africa on the

impact of CED quantity on equity capital growth. This study has bridged the identified gap in the literature by analysing whether and how the quantity of corporate environmental disclosure affects equity capital growth.

4.9. Recommendations

The researcher recommends that shareholders should invest more in CED, such as water usage disclosure, waste management disclosure, energy usage disclosure, and carbon emission reduction disclosure, as this would help enhance shareholder value in companies. Shareholders ought to investigate sustainability reports for a thorough insight into the corporate environmental disclosures that can assist in growing their wealth. The recommendation to the societies in which companies operate is that they ought to get involved in such companies to advance the socio-economic chances that they (companies) propose. This would assist in strengthening community security as they would receive support from the corporate environmental challenges faced by the surrounding societies.

Based on the results of the study, it is proposed that companies should participate more in CED as they progressively influence equity capital growth. Additionally, listed companies are advised to enhance their environmental information disclosure policies as this would help them improve their return on equity for their shareholders.

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