

ENVIRONMENTAL DISCLOSURE PRACTICES AMONG TANZANIA'S LISTED MANUFACTURERS: DETERMINANTS AND INSIGHTS

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Abstract

This study looks into the factors that influence corporate environmental disclosure on the Tanzanian listed manufacturing firms. The study employs legitimacy theory as a theoretical foundation. For this study, the explanatory variables were profitability, firm size, financial leverage, and board size. From 2013 to 2020, data were extracted from the annual reports of five listed manufacturing firms for eight years totalling 40 data points. A regression analysis model was used to analyse data from all of the listed manufacturing firms. According to legitimacy theory, profitability and board size are significant parameters that positively influence environmental disclosure. Other factors, such as financial leverage and firm size, appear to positively influence environmental disclosure, though the impact is insignificant. The study recommends that listed manufacturing firms should improve their levels of environmental disclosure, participate in environmental activities, and ensure that more environmental information is disclosed for all users to assess. The study recommends for public traded manufacturing firms to improve their levels of environmental disclosure, participate in environmental activities, and ensure that more environmental information is disclosed for all users to access.

Keywords: Corporate Environmental Disclosure, Listed Manufacturing firms, legitimacy theory, Tanzania

1. Introduction

Corporate Environmental Disclosure is a type of accountability to stakeholders that allows them to assess the firm's environmental policy orientation. Environmental awareness has grown significantly in recent decades, and businesses are now required by their stakeholders to provide environmental information disclosure. In 2015, the United Nations adopted the Sustainable Development Goals (SDGs) to address environmental concerns (Karthikeyani & Angalakshmi, 2013; Lim & Wyborn, 2018). Environmental disclosures in annual reports have recently increased in both developed and developing countries. In the past, firm's performance was largely measured quantitatively, with the management of most multinational corporations viewing performance as a function of return on capital employed, return on equity, liquidity, and turnover, to name a few. Companies have recently shifted from quantitative to qualitative performance in response to shareholder wealth as competition has increased (Giroud & Ivarsson, 2020).

Most businesses have realized that it is critical for them to build positive relationships within the communities in which they operate in order to run their businesses smoothly. This is a result of good corporate social responsibility (CSR), which is a crucial issue for businesses. The CSR refers to a company's ability to be socially responsible for the growth and development of its operating environment. It refers to a company's voluntary services to a

society. It is important to note that CSR has been viewed from various perspectives, but focusing on three themes: economic, societal, and environmental sustainability. It should be noted that the existence of business activities should not be allowed to degrade the quality of the environment in which such businesses operate (Adeneye & Ahmed, 2015; Bidari & Djajadikerta, 2020; Angela, 2021).

Sri Lanka offers a distinct and dynamic setting for the study of Corporate Environmental Disclosures (CED). With a population of over 20.48 million people, the Sri Lankan economy has been steadily growing since the end of the armed conflict that devastated the country's economy. This country has seen an increase in foreign direct investment (FDI), which also however led to negative environmental consequences, such as pollution and ecological imbalances. While proactive government actions have been taken, primarily in the form of environmental regulations and policies, to monitor and control corporate environmental practices, there are still deficiencies in the reporting and disclosure of corporate environmental information (Nuskiya et al., 2021).

Tanzania Financial Reporting Standard (TFRS) No. 1 issued by the National Board of Accountants and Auditors (NBAA) guides the report of Those Charged with Governance (TCWG), formerly known as the Director's report. The standard establishes key principles and disclosure requirements for those Charged with Governance to describe the key factors underlying the entity's operations. The standard was first issued on January 1, 2010, and revised at the 182nd NBAA Governing Board meeting on June 22, 2020. This standard replaces TFRS 1 on Directors' Reports, which was published on January 1, 2010. This standard will apply to financial statements for accounting periods beginning on or after January 1, 2021. From 2021, all entities should include discussions about environmental challenges such as climate change, the loss of ecosystem, palm oil and deforestation, resource scarcity as planetary limits are approached. The revised standard is applicable to all entities except those that apply the Financial Reporting Standard for Micro Entities (FRSME) (Ladha, 2021)

Furthermore, there have been contemporary updates regarding sustainability reporting especially the establishment of International Sustainability Standards Board (ISSB) on 3 November 2021. The ISSB is expected to work closely with the International Accounting Standard Board (IASB), ensuring connectivity and compatibility between IFRS accounting standards and IFRS sustainability disclosure standards (IFRS, 2021).

Despite global growth in corporate environmental disclosure (CED), there is a considerable heterogeneity in the extent to which firms disclose their environmental impacts. With the rise in global warming concerns, influenced by global economic development, the world has witnessed negative environmental impacts such as carbon emissions, and natural disasters among others (Gerged, Beddewela & Cowton, 2021; Nuskiya et al., 2021). Firm operations, including those of the manufacturing industry, harm the environment by threatening people's lives and biodiversity through deforestation, climate change, and pollution (Ponsion, Mzenzi & Chalu, 2021). In recent times, the relationship between firms and their environment has sparked heated debates, as previously ignored environmental issues have now taken a centre stage, because a firm's legitimacy in the business world is now measured by how well it safeguards and protects the environment in which it operates. In this situation, where the

damage has been done but disclosure is still low among various firms, a study on environmental disclosure and what influences it is justified.

2. Literature Review

2.1 Theoretical Literature review

Legitimacy theory (LT)

Legitimacy is a measure of society's attitude toward a corporation and its activities. Legitimacy is also thought to refer to the values that a society holds and the behaviours that a society considers acceptable. A company is legitimate when the society judges it to be "just and worthy of support." It should be noted that firms exist and operate within a society, and the society expects firms to incorporate societal needs into their day-to-day activities. This is primarily because firms obtain the resources they require for survival from these societies (Dowling & Pfeffer, 1975; Pfeffer & Salancik, 1978; Suchman, 1995). Legitimacy theory arose from the concept of social contract, which is defined as a gap between societal expectations and expectations of the organizations. This requires organizations to consider the expectations of all members of the society as a whole, rather than just the rights of investors. Firms, to a greater extent, publish voluntary disclosures to ensure compliance with laws and regulations; thus, sustainability reporting serves as a tool for legitimizing business activities of the firms in question and indicates that a reporting firm is operating within the acceptable norms and values (Cheung, Jiang & Ping, 2010; Orazalin & Mahmood, 2019).

According to legitimacy theory, if a society perceives that the firm has broken the contract, the firm's sustainability is jeopardized. When the firm's operations fail to meet the values and expectations of the society, or when the firm fails to operate legally, the society revokes the firm's contract. This scenario is appropriate for the topic of climate change, which is gaining increasing attention all over the world. According to this viewpoint, legitimacy theory emphasizes that environmental disclosure is a means of the firms to demonstrate that they meet society's expectations and thus legitimize their operations in the market in which they operate (Hahn et al., 2015)

2.2 Empirical Literature review

Firms Profitability

Return on assets (ROA) is used to assess the profitability of listed manufacturing firms and is calculated as the ratio of net income to the total assets (Boshnak, 2021). There is a link between firms' profitability and CED. This is because when a company achieves a high profit margin, the management is motivated to disclose more information in order to showcase their good reputation to the public, stakeholders, shareholders, and any other interested party who is connected in some way to that company. Voluntary disclosure is possible if the firm in question has made significant economic gains, as disclosing environmental information involves costs that require a firm to make a profit in excess of what is required to meet shareholders' obligations (Ullmann, 1985; Pavelin & Brammer, 2006). Profitable businesses provide more extensive and transparent sustainability information for

external assurance. Furthermore, profitable companies have greater incentives to disclose more information to stakeholders in order to promote a positive image as a signalling device (Alsaed, 2006).

According to some research, there is a significant positive relationship between a firm's profitability and environmental disclosure (Clarkson et al., 2011; Burgwal & Vieira, 2014)" type": "article-journal", "volume": "30", "uris": ["http://www.mendeley.com/documents/?uuid=6a2730a9-9a16-45a0-868e-51e311ece5ed"]}], "mendeley": {"formattedCitation": "(Clarkson, Peter M, Li, Yue, Richardson, Gordon D, Vasvari, 2011; Burgwal, D. V D. and Vieira, 2014. However, other research has found no link between the firm's profitability and environmental disclosure. It is argued that firms with low levels of profit tend to justify unimpressive corporate performance by reporting their environmental activities because these activities have a cost implication and thus reporting them serves as a justification for their lower level of reported profits (Pavelin & Brammer, 2006; Welbeck et al., 2018). Consistent with legitimacy theory expectations, companies with higher profits are expected to report more environmental disclosures, such as greenhouse gas information, because the public expects them to take more responsibility to reduce environmental pollution (Chu, et al., 2013). This means that more profitable corporations are expected to disclose more environmental information than is the case with their less profitable counterparts.

Firm size

Numerous studies use the logarithms value of total assets to calculate firm size (Chernykh & Theodossiou, 2011; Amidu, 2014). Many researchers who studied firms' characteristics and environmental disclosure used total assets as a proxy to measure the firm size. Large public traded companies are more vulnerable to public scrutiny because their impact on stakeholders is more visible than is the impact of smaller firms (Gantowati & Augustine, 2017; Angela, 2021). According to literature, firm size is directly related to environmental disclosure because the cost of producing and reporting environmental information is high, and which could not be affordable to smaller firms due to limited resources. This implies that the size of a firm has a potential influence over the amount of disclosure information (Bidari & Djajadikerta, 2020; Monteiro & Aibar-Guzmán, 2010).

Corporate social reporting (CSR) is a strategy used by businesses to gain legitimacy and stay in business. According to legitimacy theory, visible companies that face greater pressure must engage in socially responsible activities and report more environmental information to the public (Arvidsson, 2010; Chu et al., 2013). This implies that large corporations are more visible and face greater pressure to disclose environmental information to the public.

According to a study conducted in Libya, larger firms disclosed more CSR information than smaller ones (Bayoud, Kavanagh & Slaughter, 2012). Another study conducted in Lebanon revealed a strong relationship between firm's size and the amount of CSR disclosures (Menassa, 2010). In Turkey, firm size was found to be positively related to Turkish firms' response and disclosure behaviour when it came to possible determinants of greenhouse gas disclosure (Akbas & Canikli, 2016)

Financial leverage

Financial leverage refers to a company's reliance on creditors to fund its operations. Firms with high financial leverage use debt financing to a greater extent, while firms with low financial leverage use equity financing more than external loans (Gantowati & Agustine, 2017). Thus, a more leveraged firm faces greater financial risk than a less leveraged firm. It is also important to note that financially stable businesses can meet their obligations to their shareholders more easily and allocate other financial resources available for environmental protection activities. As a result, less leveraged firms are expected to disclose Corporate Environmental Disclosures more than highly leveraged firms (Angela, 2021). Similarly, the management of a highly leveraged firm may decide to legitimize its activities to stakeholders by disclosing more Corporate Environmental information to the public (Boshnak, 2021).

According to a European Leveraged Finance Association survey, 72 per cent of the 100 leveraged loan and high-yield bond buyers polls consider CED as part of their investment decisions (Ho, 2020). Further research revealed that banks offer favourable financial terms to firms that disclose high carbon risk information to investors (Herbohn et al., 2019). Loan borrowers prefer firms that have higher levels of sustainable disclosure and are unwilling to accept low-quality information. As a result, highly leveraged firms are more likely to be scrutinized by debt holders and pressured to disclose more CED information to demonstrate their market legitimacy (Hummel & Christian, 2016). According to the legitimacy theory, highly leveraged firms are expected to report more environmental disclosure information than less leveraged firms.

Board Size

Board size is defined as the total number of board members at the end of the fiscal year (Sankara, et al., 2017; Assenga et al., 2018). Empirical evidence regarding the impact of board size on CED reveals that small size of the board can minimize its capacity for monitoring managements' behaviour, resulting into a reduced level of CED (Beiner et al., 2004). Other researchers affirm that a large board is more likely to support corporate engagement in CED practices (Tauringana & Chithambo, 2015; Ezhilarasi & Kabra, 2017; Mudiyansele, 2018). On the contrary, larger board size enables the directors to discuss and exchange ideas. This will result in better decision making and improve firm's image as a legitimate entity through better CSR strategies, which are then published in the company's annual reports (Esa & Ghazali, 2012). As a result, these CSR strategies enable a company to justify its existence. Studies conducted in Australia and Turkey revealed a positive and significant association between board size and corporate environmental disclosure (Rao et al., 2012; Akbas, 2016). A Nigerian study found that a larger board size in a firm has a negative impact on the level of environmental performance of a manufacturing firm (Uwuigbo et al., 2011).

Thus, this study is guided by the following hypothesis

H1. Firm profitability positively and significantly influences corporate environmental disclosure

H2. Firm size positively and significantly influences corporate environmental disclosure

H3. Financial leverage positively and significantly corporate influences environmental disclosure

H4. Board Size positively and significantly influences corporate environmental disclosure

3. Methodology

The study used a quantitative method and a descriptive research design. All the listed manufacturing firms at the Dar es Salaam Stock of Exchange (DSE) were included as the population of this particular study. Secondary information on the listed manufacturing firms was obtained through annual reports from 2013 to 2020. The non-probability sampling method which is purposive was fully applied. The latter is a sampling technique where the researcher obtains information from readily or conveniently available data from a specific target group and for this particular study it was the listed manufacturing firms (Kothari, 2017). The sampling criteria were all manufacturing firms listed at the DSE that produced sustainability and annual reports. The majority of earlier literature employed secondary published data from corporate reports and various corporate databases to explore the relationship between corporate governance practices and environmental performances (Karthikeyani & Angalakshmi, 2013; Gantyowati & Agustine, 2017; Gerged et al., 2021; Kumari et al., 2022). The study lasted eight years, from 2013 to 2020, and the time frame was chosen to accommodate the availability of data required to support this particular study. Similar studies sourced data for similar periods. Only five (5) of the seven (7) listed manufacturing firms namely, Tanzania Breweries limited (TBL), Tanzania Cigarette Company Ltd (TCC), Tanga Cement Company Ltd, Tanzania Portland Cement Company Ltd and East Africa Breweries Ltd met the aforementioned eligibility criteria. Data from these firms were sourced from annual reports for eight years from 2013 to 2020. Thus, the study had 40 observations or data points. Table 1 shows the listed manufacturing firms used in the current study.

Table 1: Listed Manufacturing firms at the DSE in Tanzania

S/NO	Name of Manufacturing firm	Abbreviation
1	Tanzania Breweries Plc	TBL Plc
2	Tanzania Cigarette Company Ltd	TCC Plc
3	Tanga Cement Company Ltd	Simba Cement
4	Tanzania Portland Cement Company Ltd	TPC Plc
5	East Africa Breweries Ltd	EABL Plc

Model Specification and Data analysis

Pre-regression analysis (multicollinearity and Durbin-Watson test) was performed. Multicollinearity test was performed to determine the existence of inter-correlation between independent variables (Epaphra, 2020). The DurbinWatson test was used to determine whether or not there was autocorrelation between variables (Kamboj & Gupta, 2020). The cause-and-effect relationship of profitability, firm size, financial leverage and board size on

the level of Corporate Environmental Disclosure of Tanzanian selected listed manufacturing firms was determined using correlation and regression analysis. The following equation serves as the basis for this research.

$$CEDit = \beta_0 + \beta_1ROA + \beta_2FSit + \beta_3FLRit + \beta_4BSi + \varepsilon it \dots\dots\dots Eqn 1$$

Where: CED stands for Corporate Environmental Disclosure ratio

ROA = Return on asset (Profitability measure)

FS = Firm's size of listed manufacturing firm

FL = Financial leverage of listed manufacturing firm BS = Board size of listed manufacturing firm

β_0 = Constant term

$\beta_1, \beta_2, \beta_3, \beta_4$ = Coefficients

ε = the error term

Measurement of Variables

The study was confined to four explanatory variables namely profitability, size, financial leverage and board size. These variables were linked to the dependent variable namely the Corporate Environmental Disclosure (CED). In the case of response variable for the selection of environmental information indicator list, the researcher departed from the GRI G3 checklist (Welbeck et al., 2018). The study employed the following checklist as indicated in Table 2.

Table 2: Indicator list for dependent variable

Original GRI G3 checklist indicator words	The study indicator list (Dependent variables)
Material; energy; water; biodiversity; emissions; effluent; waste product, services; compliance; transport; supplier environmental assessment; environmental grievances mechanisms	Biodiversity, emissions; waste; environment; climate; warming; carbon; pollution, water (9 items)

Source: Adopted from (Miklosik, Starchon and Hitka, 2021)

Table 3: Variables and measurement

Variables	Symbols	Definition	Formula	Authors	Expected sign as per LT
Response Variable					
CED Ratio	CED	The completeness overview appraisal of the environmental issues disclosed by the Tanzanian listed	Actual items disclosed/9	(Welbeck et al., 2018)	

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		manufacturing firms at the year t over the period 2013-2020			
Explanatory variables					
Profitability	ROA	The ratio of net income to Total assets of Tanzanian listed manufacturing at year t over the period 2013–2020	NP/TA *100	((Boshnak, 2021).)	+
Firm size	FS	Size of the firm in terms of assets it owns. Size of the firm is natural logarithm of total assets at year t over the period 2013–2020.	log (Total assets)	(Chernykh & Theodossiou, 2011; A m i d u , 2014)	+
Financial leverage	FL	Tanzanian Listed manufacturing firm's reliance on creditors to fund its operations The ratio of Total liabilities to total assets i at year t over the period 2013–2020	TL/TA *100		+
Board size	BS	The total number of board members at the end of the fiscal year from 2013 to 2020	Total number of directors	(S a n k a r a , et al., 2017; Assenga et al., 2018)	+

4. Results and Discussion

4.1 Descriptive statistics

The descriptive statistics (Table 4) reveals that the level of corporate environmental disclosure for the selected Tanzanian listed manufacturing firms remains low at an average of 18.6 per cent during 2013-2020. These results show that the reporting status of the listed manufacturing firms in Tanzania is relatively low. A similar study conducted on listed companies in Sri Lankan revealed that the level of corporate environmental disclosure from

2015 to 2019 was relatively low at an average of 14.2 per cent (Nuskiya et al., 2021). Nonetheless, when the CED figures in Table 4 are compared to those from developed countries, Tanzanian listed manufacturing firms exhibited relatively low CED. In the United Kingdom (UK), for example, CED recorded an average of 64 per cent of the adopted items (Barbu et al., 2014). In another study conducted in the United States of America, CED scored an average of 81.8 per cent of the surveyed items (Matisoff et al., 2013). This implies that CED is still at a low level in Tanzania.

Table 4: Descriptive Statistics

Variables	Observations	Min	Max	Mean	SD
CED	40	11.1	33.3	18.577	6.3444
Profitability	40	.53	31.38	16.2842	8.17737
Firms Size	40	4.77	5.98	5.4473	.36781
Financial leverage	40	14	30	21.19	4.886
Board Size	40	9	24	16.65	3.813

Source: Estimation from SPSS output

Table 5 shows the correlation matrices for the explanatory variables used in the study. The Pearson correlation results show that CED is positively correlated to profitability ($r=.0786$). According to the legitimacy theory, more profitable firms are expected to report more environmental disclosures, such as greenhouse gas information, because the public expects these companies to take more responsibility in reducing environmental pollution (Chu, et al., 2013). There is also a positive relationship between CED and board size and financial leverage supporting the contention of legitimacy theory that larger board size has the ability of holding the management accountable on Corporate environmental issues than smaller boards; and more leveraged firms are expected to report more environmental issues than less leveraged firms. Last but not least, the firm size had a slight positive correlation to CED with Pearson value of ($r=.136$)

Table 5: Correlation Matrix

Correlations					
Variables	CED	Profitability	Firm size	Financial leverage	Board size
CED	1				
Profitability	.786**	1			
Firm size	.136	.188	1		
Financial leverage	.775**	.702**	.168	1	

Board Size	.720**	.557**	-.015	.722**	1
*. Correlation is significant at the 0.05 level (2-tailed).					

To determine the existence of inter-correlation between the independent variables, a multicollinearity test was performed. According to Epaphra (2020), multicollinearity problem is present if VIF is greater than 10 and 1/VIF is less than 0.1. Table 5 shows that multicollinearity does not exist between all the independent variables indicating that all the independent variables used were valid.

The Durbin-Watson test was used to determine whether or not there was autocorrelation between variables. The Durbin-Watson test is one of the most effective tests for detecting autocorrelation (Kamboj & Gupta, 2020). Durbin-Watson normally provides values ranging from 0 to 4, with positive autocorrelation represented by values close to 0 and negative autocorrelation represented by values close to 4. If the values are between 1.5 and 2.5, there is no autocorrelation (Mazengo & Mwaifyusi, 2021). The results reveal further that there was no autocorrelation between variables as Durbin-Watson test has a value of 2.130.

With an F-statistic of 27.043 and a p-value of 0.000, the overall model used in this study is statistically significant. Similarly, the R-square was 75.6 per cent indicating that the variables used in the model explained more than 75 per cent of the listed manufacturing corporate environmental disclosure status, while other omitted variables accounted for the remaining variables not used in this study.

Thus, Corporate Environmental disclosure is predicted by the following model; $CED_{it} = -3.44 + .346ROA + .265FS + .321FL + .488BS + \varepsilon_{it}$

Table 6: Regression analysis table

Independent variable	Definition	Hypothesis	Exp. sign	Coef	Coef values	t-statistics	p-values	Hypothesis testing
Constant	Model constant			β_0	-3.44		.690	
Profitability		H1	+	β_1	.346	-.403	.001	Accept
Firm size		H2	+	β_2	.265	3.748	.861	Reject
Financial leverage		H3	+	β_3	.321	.176	.094	Reject
Board Size		H4	+	β_4	.488	1.723	.024	Accept
Additional statistics								
R	.869 ^a							

R2	.756							
Adjusted R ²	.728							
F-value	27.043							
Prob (F)	.000 ^b							
Durbin-Watson Value	2.130							
VIF	>1.1							

4.2 Profitability and Corporate Environmental Disclosure

Profitability is an important determinant of Corporate Environmental Disclosure because profitable firms tend to publish more environmental information in order to legitimize their operations. For a period of eight years, from 2013 to 2020, profitability had a positive and statistically significant influence on Corporate Environmental Disclosure of the selected Tanzanian listed manufacturing firms. According to legitimacy theory, a more profitable firm will be motivated to disclose more environmental information in order to demonstrate their good reputation to the public, stakeholders, shareholders, and any other interested party. This will strengthen the firm's standing in the business community. This implies that a manufacturing firm's level of profitability is related to its level of Corporate Social Environmental Disclosure, and the more profitable a firm is the more likely it will be willing to disclose more environmental information. These study findings are consistent with the findings of other studies (i.e., Clarkson et al., 2011; Burgwal & Vieira, 2014) (Clarkson, Peter M, Li, Yue, Richardson, Gordon D, Vasvari, 2011; Burgwal, D. V D. and Vieira, 2014. According to legitimacy theory, these findings support the expected sign.

4.3 Firm size and Corporate Environmental Disclosure

Firm's size is technically measured by log (Total assets). There was a positive and insignificant relationship between the firm's size and the level of corporate environmental disclosure of the selected Tanzanian listed manufacturing firms for a period of 8 years of this study. Legitimacy theory suggests that bigger firms have enough resources to stay relevant in the market and also disclose financial and non-financial information including the environmental information. This is because the cost of producing and reporting environmental information is high, which cannot be affordable to smaller firms due to limited resources. The results reveal that firm size had a positive and statistically insignificant influence on CED of the selected Tanzanian listed manufacturing firms over eight-year period from 2013 to 2020. The findings imply that firm size does not guarantee the level of CED disclosed to the public, as small firms can also disclose more corporate environmental information. This study finding contradict the findings of previous studies (i.e., Bayoud, Kavanagh & Slaughter, 2012; Menassa, 2010; Akbas & Canikli, 2016). As a result, the legitimacy theory was proven false in this context.

4.4. Firm Leverage and Corporate Environmental Disclosure

Financial leverage refers to a company's reliance on creditors to fund its operations. According to legitimacy theory, a highly leveraged firm is expected to disclose more of the Corporate Environmental information than a less leveraged firm. Similarly, the management of a highly leveraged firm may decide to legitimize its activities to stakeholders by disclosing more CED information to the public (Boshnak, 2021). Financial leverage had a positive and statistically insignificant influence to corporate environmental disclosure of Tanzanian listed manufacturing firms. It is also worth noting that financially stable businesses can more easily meet their obligations to their shareholders and allocate other financial resources to environmental protection activities. As a result, less leveraged firms are expected to disclose more environmental information than their counterparts, as also observed by Angela (2021). The findings were inconsistent to the findings in a study by Boshnak (2021). As a result, the legitimacy theory was proven false in this context

4.5 Board size and Corporate Environmental Disclosure

Empirical evidence suggests that a small board's capacity for monitoring management's behaviour can result in a lower level of CED. A larger board size allows directors to discuss and exchange ideas, resulting in better corporate engagement in CED practices. Legitimacy theory suggests that larger board size stands a better chance of making decisions that aim in improving the firm's image as a legitimate entity through better CSR strategies published in the firm's annual reports (Esa & Ghazali, 2012). Board size had a positive and statistically significant influence on Corporate Environmental disclosure of Tanzanian listed manufacturing firms. This implies that larger board size will likely support corporate engagement in CED practises. The study findings are consistent with findings of other studies (i.e., Taurigana & Chithambo, 2015; Ezhilarasi & Kabra, 2017; Mudiyansele, 2018). According to legitimacy theory, these findings support the expected sign.

5.0 Conclusions and recommendations

Corporate Environmental Disclosures (CED) of the listed manufacturing firms in Tanzania are relatively small when compared to CED of the listed manufacturing firms in other developed countries such as the United Kingdom and the United States of America. As revealed in the descriptive statistics in Table 4, where Tanzania had a mean value of CED of approximately 18.6 per cent compared to 81.8 per cent in the US and 64 per cent in the UK (Barbu et al., 2014; Matisoff et al., 2013). This implies that the prevalence of CED in Tanzania is low. The legitimacy theory was applied in this study. Environmental disclosure, according to this theory, allows firms to demonstrate that they meet society's expectations and, as a result, legitimize their operations in the market in which they operate (Hahn et al., 2015). Thus, using the legitimacy theory, this study examined the impact of profitability, firm size, financial leverage, and board size on the level of CED in Tanzanian listed manufacturing firms from 2013 to 2020. Profitability and board size were found to be significant determinants that positively influence corporate environmental disclosure, and the expected signs matched the signs proposed by the

legitimacy theory. Other factors, such as financial leverage and firm size, appear to have a positive impact, though insignificant, on the environmental disclosure.

By utilizing Tanzanian data, the findings contribute to a better understanding of the relationship between corporate environmental disclosures and the explanatory variables used in the study and provide new empirical evidence in an emerging country. According to the study, listed manufacturing firms must improve their levels of environmental disclosure if they want to remain legitimate in the market. Other studies should include non-listed manufacturing firms in East African countries that consistently disclose environmental information in their annual reports, as well as broadening the scope in terms of years and explanatory variables used. If this is accomplished, the level of CED will be seen from a much broader perspective.

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