

MAF003 An analysis of corporate image as a factor that supports corporate green investment practices in Johannesburg Stock Exchange (JSE) listed companies

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Abstract

Green investment practices assist preservation of the company's image through shielding it from undesirable media reports plus consumer boycotts. Green investment practices also improve the company's image thereby enhancing the firm to acquire better business contracts in addition to developing broadened market bases. This paper examined the association involving corporate image and green investment practices in 100 South African CDP companies on the JSE using data gathered from the firm's 2012 sustainability reports and/or annual integrated reports. Chi-square tests indicated that corporate image influence green investment practices in JSE listed firms. In addition, a positive linear connection between corporate image and green investment practices in JSE listed firms was demonstrated. Therefore, investing in green activities is important to improve corporate green image. The study also generated associated green image drivers of JSE listed firms. In addition, corporate perceptions in relation to green image for JSE listed companies were also briefly discussed.

Keywords: Corporate image; Green investment practices; JSE listed firms; Carbon Disclosure Project (CDP); South Africa.

INTRODUCTION

Environmental damage as a result of firm activity has increased in recent years, but the public and/or society has also noticed such growing environmental issues (Robinson, Kleffner & Bertels 2011). Therefore, increased attention by corporate stakeholders, has also put pressure on companies to introduce expanded green investment activities thereby acknowledging their environmental responsibility. Thus nowadays, companies have begun to integrate green investment initiatives as a procedure which preserves their corporate image by engaging green stakeholder interests (Cormier & Magnan 2003). Hence, if firms are able to offer commodities which address stakeholder green-oriented requirements, then the same stakeholders become more favourable to the company's green commodities (Aerts, Cormier & Magnan 2006). Therefore, in the advent of this green economy based era, corporations are required to explore prospects such as green reputation generation which supports superior green product performance to strengthen the firm's brand (Patten & Trompeter 2003). As such, companies which pioneer in green investment programs have been identified to experience first-mover benefits in addition to improved corporate green image (Kruger & Saayman 2013). Hence, green image has empowered the company to create new markets and acquire competitive benefits while natural environment attributes have been preserved (Van

den Berg, Labuschagne & Van den Berg 2013). Thus, facing the patterns of tough green-oriented conventions plus heightened stakeholder environmental awareness, corporations should not shirk their responsibilities, as such green-oriented patterns can be transformed into company green competences which spur increased green innovation plus improved firm green reputation (Patten 2002; Smith & Perks 2010). This paper examined whether corporate image influence corporate green investment practices in Johannesburg Stock Exchange (JSE) listed companies.

Hence, the main study question which motivates this research is: Does corporate image influence corporate green investment practices in Johannesburg Stock Exchange (JSE) listed companies? The objective of the research is, therefore, to explore if corporate image influence corporate green investment practices in Johannesburg Stock Exchange (JSE) listed firms. This study is important given increased green consciousness by corporate stakeholders who have become more responsive to firms which satisfy and meet their green requirements. Moreover, as fears concerning climate change increase, corporate activities persist to put a strain on global resources, therefore, green conscious stakeholders give more attention to corporations whom they can relate and share their green demands concerning environmental damage. Thus, green reputation has been perceived as a major issue to long-term business success. For example, corporate green image has been identified to determine share market value of the company (Cormier & Magnan, 2007) and influence public preparedness to forgive company misdemeanors (Cormier & Magnan 2003).

1. CONCEPTUAL MODEL

The section briefly analyse two main concepts of this study under the following headings: corporate green investment practices and then, corporate image.

1.1 Corporate green investment practices

The significance of the relationship involving financial issues plus natural environment has steadily heightened through examining both the economic and environmental perspectives. Kahlenborn (1999: 66) defines green investment as "...any form of financial investment whereby the investor pays attention to ecological goals as well as the traditional aims of investment. On the other hand, green investment can be understood as an investment that successfully counteracts negative influences on the environment, or serves to produce goods or services that have positive effects on the environment." Moreover, green investment can be defined as "...a form of investment where in addition to the traditional targets of an investor-liquidity, safety and performance-ecological criteria are also considered when making an investment decision." (Christian Armbruster in Ecologic 1998:99). Therefore, green investment practices includes, reduced-emission energy supply activities (green energy, green research and development); energy efficiency (hybrid vehicles, insulation and cooling models, energy saving mechanisms, waste management; smart grid technologies) and various forms carbon sequestration initiatives (agriculture, carbon capture and storage (CCS) models, reforestation) (Eyraud, Clements & Wane 2013). Kahlenborn (1999: 69) identify forms of green investment as "green savings accounts, green saving certificates, environmental direct

investment, and environmental investment funds.” Global literature has also outlined various green investment practices within corporate contexts.

For example, Zutshi & Sohal (2004) assessed 286 companies in Australia and New Zealand and demonstrates that these organisations adopted environmental management systems (that is ISO 14001 certified) to monitor the firms environmental effects. Fonseca & Jabbour (2012) examined Brazilian companies categorised in 6 business incubators within the city of Sao Paulo and illustrates that these businesses are greening their incubators by employing mechanisms such as energy management, green buildings, green screening processes and environmental training. Nandy & Lodh (2012) studied 1026 United States based companies and inform that banks take into account the eco-awareness or environmental consciousness of these firms (pollution prevention, clean energy, recycling, corporate governance, management systems and environmental products) in implementing its lending decisions which minimise default risk. Lin, Tan & Geng (2013) surveyed four major international motorcycle companies in Vietnam and demonstrates that these firms incorporated green product innovation (preventing waste increase in product disposal, efficient use of resources and minimising undesirable environmental risks and impacts in firm operations).

Nameroff, Garant & Albert (2004) implemented a study on 3235 institutions in the United States and confirms that these entities integrate green chemistry patents as measures which indicates green innovation and green research and development (R&D). Pons, Bikfalvi, Llach, & Palcic (2013) analysed 116 Spanish manufacturing firms and 64 Slovenian manufacturing firms in Europe and outlines that these firms integrated energy and resource efficient technologies. Wang, Toppinen & Juslin (2014) assessed 18 companies in the United Kingdom construction industry and maintain that they integrate green buildings. Hsu, Kuo, Chen & Hud (2013) examined a Taiwanese light-emitting diodes (LEDs) electronic company and spotlights that the firm adopts carbon management practices (that is policy, governance, targets, verification, risk assessment, information, reporting and supplier collaboration) in its green supply chain. Karagülle (2012) studied the Turkish logistics business companies and indicates that these firms integrate green transportation and green logistics initiatives.

1.2 Corporate Image

Corporate image has been defined as views that the company stakeholders possess towards the firm, along with perceptions they believe other partners hold as they view the company (Melo & Garrido-Morgado 2011). Thus, psychologists have described corporate image as a symbolic connection that link the company to all its relevant stakeholders (Herremans, Akathaporn & McInnes 1993). On the other hand, sociologists explain corporate image as perceived and disclosed (Cretu & Brodie 2007). Corporate image can also defined as the net outcome of comprehensions, principles, ideas, sentiments, thoughts and judgements about the company (Cho, Guidry, Hageman & Patten 2012). It refers to the aggregate product of different issues that reflect and support interchange of ideas about the identity of the firm (Moon 2007). Accordingly, corporate image can also be called “corporate reputation” (Kang & Yang 2010). Therefore, corporate image is a collection of features and characteristics that define a firm, which are derived from the company’s historical operations. It is a mental

picture which suddenly appears when the company's name has been mentioned (Cho et al. 2012). As such, corporate image is a synthesized psychological outward appearance or conviction which persistently transforms in relation with amongst others, the company's setting, performance, announcements and media coverage (Kang & Yang 2010; Cormier & Magnan, 2007; Aerts et al. 2006).

2. RELATED LITERATURE

Past studies consistent with the relationship between corporate image and corporate green investment activities has also been discovered. For instance, Li, Richardson & Thornton (1997) investigated 14 772 pollutant spills recorded from 1988 to 1992 of Ontario's 10 industries (pulp & paper, transportation, food, chemical, hydro utilities, metallurgical, forestry, mining, petroleum plus other manufacturing) on their environmental liability reporting activities. They suggest that environmental reporting was highly likely when external stakeholders believe that the firm understands the environmental liability and when the firm is identified as a high polluter. Bewley & Li (2000) studied 188 manufacturing companies in Canada using their 1993 yearly records about voluntary environmental reporting practice. The study demonstrates that companies with greater media exposure about their environmental practices, greater pollution disposition and extended political exposure tend to report their environmental information. Cormier & Magnan (2003) evaluated 50 French companies unique environmental regulatory contexts and outlines that extent of corporate environmental disclosure had a connection with environmental media visibility (outside stakeholder pressures that monitor firm operations) and other issues such as size of the firm, type of industry, proprietary and information costs.

Aerts, Cormier & Magnan (2008) studied firm environmental reporting of 892 firms (43-Belgian, 419-US, 206-Canadian, 84-German, 43-Dutch and 97-French) from various industries (Telecom, Utilities, Information Technology, Chemicals, Industrial, Energy, Consumer goods, Materials). They posit that environmental disclosure was heavily influenced by stakeholders which include financial analyst forecast projections and affiliation with environmentally interested organisations. Buysse & Verbeke (2003) analysed corporate pro-active environmental policy of 197 firms based in Belgium and demonstrate that different stakeholder threats with regard to poor environmental practices exert pressure on companies to develop better environmental management policies. Cormier & Magnan (2007) analysed how environmental disclosure adds to firm financial performance of 235 firms (50- French, 118-Canadian, 67-German) from diversified industries (energy, manufacturing, mining, chemicals, food, consumer goods, water, oil and gas, forestry and paper) by utilising their environmental disclosure annualised observations. The research points out that environmental disclosure of the firms relationship with factors such as media visibility (outside stakeholder pressures that monitor firm operations) and firm stock market value (which must be considered) were significant to influence the firm's financial performance when environmental reporting.

Aerts et al.(2006) evaluated firm imitation practices about firm environmental participation and disclosure at intra-industry level for large companies in Germany, Canada and France from 1992 to 1997 by considering their annualised environmental disclosure observations. The study found out that a firm imitation behaviour of other company's environmental practices and disclosure within a specific industrial sector considerably decrease when those firms are experiencing high media visibility or exposure. Einhorn (2005) examined the relationship between mandatory and voluntary reporting and illustrates that the type of information that is gained through an understanding or acceptance by the audience (stakeholders) have the power to influence the company's environmental reporting approach. Friedman & Miles (2001) investigated firm environmental and social disclosure by surveying 14 experts from UK's socially responsible investment (SRI) sector and posit that these firms have engaged in environmental and social practices since corporate reputational risks have developed to be the top company priority. Niskala & Pretes (1995) examined environmental disclosure and participation in 75 Finnish companies from 1987 to 1992 and the outcomes argue that stakeholder factors (governmental laws, environmentally oriented institutions, public views) have improved corporate environmentalism towards greater environmental reporting.

Patten & Trompeter (2003) scrutinised the connection involving environmental reporting plus earnings management in 40 United States chemical companies which have experienced undesirable discretionary accruals in year 1984 and the findings illustrates that environmental reporting and engagement has been utilised by the firm as efficient instruments that manages political pressures and crises. Patten (2002) studied the association involving environmental performance and reporting for 131 US firms using their 1988 toxic release data published to the public in 1990 and the outcomes highlights that firms with negative environmental performances (that is high toxic releases) extensively implemented environmental reporting so that they are able to save corporate image owing to high social/political exposures than companies with positive environmental performances (low toxic releases). Hughes, Anderson & Golden (2001) evaluated environmental reporting and initiatives of 51 United States manufacturing companies over the period 1992 to 1993. The findings suggest that poor environmental performance by companies result in such firms implementing high environmental initiatives and reporting. Hence such mechanisms were viewed as part of remediation procedures as public interest about environmental issues was observed to be high.

Deegan & Rankin (1999) investigated environmental expectations of the firms stakeholders (investors, academic and review institutions) from yearly environmental reports of 462 Australian largest firms and the outcomes highlights that these stakeholders perceived environmental issues as important subject issue, supported mandatory reporting of environmental issues, and they approved extended government involvement in corporate environmental practices and disclosure. Darrell & Schwartz (1997) examined change of environmental reporting against public policy requirements of 53 US companies from different industrial sectors (15-oil, 11-consumer goods, 16-forestry, 11-chemical) following the Exxon Valdez oil spill in Alaska (1989) by considering years 1988 to 1990. The findings

demonstrates that environmental participation and disclosures significantly increased (through being both “time” and “event” specific) as a result of high public policy interests. Aerts & Cormier (2009) studied 158 companies from United States (119) and Canada (39) on media legitimacy and reporting of environmental issues by companies. The outcomes suggest that firm environmental legitimacy was positively correlated to yearly environmental reporting (economic-based parts) plus reactive environmental media publicity. Moreover, undesirable firm media legitimacy stimulated environmental media reporting.

van Staden & Hooks (2007) investigated firm environmental disclosure and their responsiveness to environmental issues for 54 New Zealand companies. The study puts forward that environmental participation and reporting by these companies represents proactive mechanisms to acquire corporate legitimacy as most companies desired to maintain their positive environmental reputation. Toms (2002) assessed factors that spur firm environmental image in UK firms over the period 1996 (considered 89 firms) to 1997 (considered 126 firms). The results indicate that environmental implementation, management and reporting adds to development of corporate environmental image. de Villiers and van Staden (2011) examined drivers of corporate voluntary environmental reporting of 120 firms selected from the Toxics Release Inventory (TRI) information on the Corporate Environmental Profiles Database. 60 companies were determined to have a bad green image (crisis) and another 60 had a good green image (non-crisis). Using Univariate analysis, the outcomes spotlights that corporations tend to report extended environmental information when they have a bad green image or they are experiencing an environmental crisis. Golob & Bartlett (2007) examined corporate social responsibility (CSR) disclosure and adoption in Slovenia and Australia and the results spotlights that CSR disclosure (environmental, social & governance) and practice has been employed as a mechanism that to sustain corporate image by expanded firm transparency plus it foster greater involvement of corporate stakeholders.

Robinson et al.(2011) explored sustainability leadership of 318 US and Canadian firms included in the DJSI World Index and demonstrates that companies which affiliates themselves and become members in the Dow Jones Sustainability Index (DJSI) are perceived as having attained a sustainability image. Cho & Patten (2007) investigated 100 US firms (which were part of KLD Research and Analytics Incorporation 2002 ratings, must have produced the 2001 fiscal year 10-K report) regarding the implementation of environmental disclosure as an instrument of corporate legitimacy. The outcomes suggest that firms constituted with poor environmental activities encounter extended exposure to political and public demands, hence integration of environmental practices and reporting assist towards reducing such exposures. Brown, Guidry & Patten (2010) analysed 59 US firm independent sustainability reports from 2001 to 2007 on sustainability disclosure and firm image views by applying the *Fortune Most Admired* ratings. The results indicates a positive correlation involving sustainability reporting quality and indicators of firm reputation.

Contrary to these views, some research points out that corporate image does not determine corporate green investment activities. For example, Crane & Matten (2007) examined

corporate ethics in this period of globalisation and posit that affiliation with Dow Jones Sustainability Index (DJSI) do not earn the firm a sustainability image since the entity's operation largely depend on organisational disclosed internal and external sustainability information. Crittenden, Crittenden, Ferrell, Ferrell & Pinney (2011) created a "market-oriented sustainability framework" and adds that when companies communicate the same green practices to their customer's then image can be hard to achieve since customers will have difficulty in distinguishing green activities specific to a selected company. McGinn (2009) examined 92 United States green-oriented organisations utilising these companies green reputation ratings (found in *Newsweek* magazine). The research outcomes demonstrate that environmental performance ratings were negatively associated with green reputation.

Azapagic (2004) studied the minerals and mining sector using global perspectives and observed that poor environmental performance in the past generates negative perceptions of the industry which can affect attainment of positive corporate reputation of modern environmental performances. Luchs, Naylor, Irwin & Raghunathan (2010) evaluated corporate sustainability liability by surveying 281 respondents in the US and the results suggest that consumers' may not prefer buying environmentally compatible commodities (eco-friendly tires) since they view them as having low performance attributes when compared to conventional standard tires. Thus eco-based companies were perceived by consumers as bad and underperforming firms. Wang & Chen (2012) examined Japan nuclear energy safety practices and outlines doubt on green corporate image development in nuclear energy investment.

3. METHODOLOGY

This study utilised secondary data obtained from the firm's 2012 sustainability reports and/or annual integrated reports. The study employed a multiple case study approach which investigated the complete 100 South African Carbon Disclosure Project (CDP) firms that are on the JSE. These are companies which take part in the CDP, integrate green investment initiatives, adhere to JSE environmental sustainability requirements plus they measure, evaluate and control carbon emissions in their operations (CDP, 2014). Hence, the CDP companies possess the green attributes that the research is focussing on. Therefore, content analysis method was deployed to extract information which illustrates that corporate image is a factor which supports green investment practices in JSE listed firms. Therefore, the researcher produced a collection of phrases that demonstrate corporate image as a factor which supports firm green investment activity. The utilisation of categorical themes in corporate sustainability studies has been identified (Gray, Kouhy & Lavers 1995; Hackston & Milne 1996). In this regard, the researcher comprehensively scrutinised both paragraphs plus sentences which had a connection with the variable under study- corporate image and then extracted such details. In this case, firms which highlights that corporate image motivates their green investment initiative, the number of such announcements were gathered in the "yes" row, while non-announcements were gathered in the "no" row. On that account, data in textual formats was converted into numerical digits. The numerical data was, hence analysed by deploying Chi-square tests.

4. DATA ANALYSIS

The calculations of the IBM SPSS Version 22 produced the Chi-square tests outcomes as illustrated in Table 4.1 and Table 4.2 below:

Table 4.1: Showing the relationship between corporate image and green investment practices in JSE listed firms: Chi-Square tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	28.880 ^a	1	.000		
Continuity Correction ^b	27.380	1	.000		
Likelihood Ratio	29.619	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	28.736	1	.000		
N of Valid Cases	200				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 50.00.

b. Computed only for a 2x2 table

Rejection and Acceptance of Hypotheses:

Given the level of significance, $\alpha = 0.05$ (5% significance level)

The *degrees of freedom* formula is: $df = (r-1)(c-1)$, where r = the number of rows in the cross-tabulation table and c = the number of columns in the cross-tabulation table.

In this example, $df = (r-1)(c-1) = (2-1)(2-1) = 1$.

Then the X^2 -critical value will be determined using $df = 1$ and $\alpha = 5\%$ or 0.05. The region for acceptance for H_0 is $X^2\text{-Stat} \leq X^2\text{-critical value}$.

X^2 -critical value with $df = 1$ and $\alpha = 5\%$ or 0.05 is 3.843. The X^2 -statistic value was determined as 28.880 as indicated in Table 4.1 above. The X^2 -statistic value is the Pearson Chi-Square value. Therefore, the decision was that we reject H_0 and accept H_1 since $X^2\text{-Stat}$ (28.880) is greater than X^2 -critical value (3.843). Thus, corporate image influence green investment practices in JSE listed firms.

Table 4.2: Results on the correlation between corporate image and green investment practices in JSE listed firms.

Symmetric Measures

	Value	Approx. Sig.
Nominal by Nominal Phi	.380	.000
Cramer's V	.380	.000
N of Valid Cases	200	

In this study, the Phi and Cramer's V were two tests employed to examine the strength of association involving corporate image and green investment practices in JSE listed firms. As demonstrated from Table 4.2 above; the strength of association was discovered to be 0.380. This result illustrated a positive linear association between corporate image and green investment practices in JSE listed firms.

5. DISCUSSION OF THE FINDINGS

The outcome from Chi-square tests demonstrates that corporate image influence green investment practices in JSE listed firms. In order to conform these findings, the study also utilised Phi and Cramer's V tests to tests the strength association between corporate image and green investment practices in JSE listed firms. The result was ascertained as 0.380 thereby proving a positive linear association involving corporate image and green investment practices in JSE listed firms. Therefore, many reasons can be put forward to explain these findings. For instance, SAPA (2009) suggest that undesirable negative reports from internal and external partners of South African companies are likely to increase on firms that are not incorporating green initiatives. In the same vein, Smith & Perks (2010) express that green consumerism demands in South African business contexts have advocated for widened incorporation of firm environmental preservation approaches. For example, Kruger & Saayman (2013) documents that South African wine industries are instituting green activities to attract visitors and increase demand of their products from consumers. In this regard, there is no doubt that South African JSE companies are integrating green investment practices in order to preserve or create their green reputation. In this case, growing green demands from the firm's stakeholders imply that JSE companies which do not institute green initiatives are likely to face increased negative publicity and undesirable media reports which will definitely create negative impacts on their corporate market shares.

Therefore, the strength of the association indicated by a positive association involving corporate image and green investment practices in JSE listed firms could suggest that growing green stakeholder demands are increasingly having an impact on firm environmental performance demonstrated through widened green practice integration. On that note, Trialogue (2007) investigated 20 experts from various parts of the South African economy and the responses demonstrates that desire to generate green reputation and green law adherence were prime stimulators behind firm sustainability practice incorporation. CDP (2012) also adds that green programs incorporated by South African firms which are supported by comprehensive disclosure remove public doubt and negativity. For example, Herringer et al. (2009) posit that sustainability issues started as early as 1990s through the South Africa's Trade Union initiatives which also discouraged apartheid and undesirable business operations. In the same vein, Mitchell et al.(2005) informs that stakeholder requirements concerning sustainability issues is relatively high within South African contexts which has inevitably put pressure on firms to improve their sustainability involvement since it was identified to be low.

Bonellie (2013) also illustrates that green investment practices in South Africa are important to improve customer loyalty, attract and retain employees plus reduce negative firm publicity. As such, in this era of globalisation which has also seen heightening emergence of green issues, it appears that attainment of a green image by the company will guarantee its survival while companies which do not integrate green initiatives will experience loss of market share as a result of negative media attention and publicity. This view therefore could also explain why corporate image influence green investment practices in JSE listed firms. Thus, within South African context, lost organisational green reputation imply loss of firm competitiveness and market base (Van den Berg et al. 2013) reduced customer loyalty (Tshesane & Seroka,2012) and reduced business legitimacy (CDP,2014). Past global research which are in agreement with this study outcomes that corporate image influence green investment practices have also been determined. For instance, results by Li et al.(1997); Bewley & Li (2000); Cormier & Magnan (2003); Aerts et al.,(2008); Buysse & Verbeke (2003); Cormier & Magnan (2007); Aerts et al.(2006); Einhorn (2005); Friedman & Miles (2001); Niskala & Pretes (1995); Patten & Trompeter (2003); Patten (2002); Hughes et al.(2001); Darrell & Schwartz (1997); de Villiers & van Staden (2011) and Brown et al.(2010). Nonetheless, Crane & Matten (2007); Crittenden et al. (2011); McGinn (2009); Azapagic (2004); Luchs et al.(2010) plus Wang & Chen (2012) highlighted that corporate image does not influence corporate green investment practices thereby generating contradicting findings with this study.

6. DRIVERS OF CORPORATE IMAGE AS A FACTOR THAT PROMOTE CORPORATE GREEN INVESTMENT INITIATIVES IN JSE LISTED COMPANIES.

The following Table 6.1 indicates common stimulators of firm reputation as a variable which supports corporate green investment initiatives in JSE listed companies.

Table 6.1: Drivers of corporate image as a factor which spur corporate green investment practices in JSE listed firms.

Summarised drivers of corporate image
<ul style="list-style-type: none"> • Green technology integration promotes mutual partnership with key stakeholders. • The firm is determined to attain a positive environmental legacy. • The entity wants to be identified and recognised as green champions. • The firms funding assets have impact in areas where environmental groups operate thereby attaining legitimacy. • Voluntarily disclose carbon footprint with Carbon Disclosure Project (CDP) South Africa which has improved trust, credibility and firm belief systems. • Maintain close association with key stakeholders on carbon emission reduction matters. • Reputational risks are avoided by sound greening activities. • Builds sustainability image of the firm's vision.

- Participating in the carbon emission reduction annually is part of the firm's green vision.
- Public disclosure of carbon footprint enhance harmonisation of relationships with stakeholders.
- Signatory of the Energy Efficiency Accord with South African government which improve relationship with the government.
- Public disclosure of carbon through Carbon Disclosure Project (CDP) is now part of firm long-term policy and green image building.
- Actively involved with green projects and campaigns with major stakeholders which foster carbon reduction initiative and general society approval.
- Carbon footprint is verified by recognised worldwide sustainability supporting agencies such as the Global Carbon Exchange (GCE).
- Is a member of the Carbon Protocol South Africa.
- Assists clients to be more efficient by greening IT systems.
- External stakeholder views are incorporated in sustainability policy development.
- Regularly carry out energy saving initiatives in Shopping Malls on customer's behalf.
- Energy and carbon management are pillars of corporate policy.
- Takes part in CDP South Africa and Nedbank BettaBeta Green exchange trade fund.
- Is a member of the Green Building Council of South Africa ("GBCSA")
- Taking part in carbon disclosure indicates better green brand quality.
- Undertakes and hosted climate change projects such as COP17 public debate on climate change and the 2011 Global Investor Statement on Climate Change.
- Seek to maintain a viable green business model from a stakeholder's perspective.
- Produces green certified products approved by stakeholders.
- Integrates a strong and empowered green vision.
- Green demands of stakeholders have formalised & established channels within the firm.
- Offer Greening Your Business Course to companies.
- Have improved availability of green merchandise range.
- Use magazines, newsletters and e-media to communicate green matters.
- Assume industrial leadership on green investment issues.
- Taking part in Carbon Disclosure Project (CDP) improve firm attractiveness.
- View carbon emission reduction matters as part of firm culture.
- Taking part in Carbon related issues continually improve public relations.
- Consider carbon emission reduction aspects as ethical.
- Promotes transparency by disclosing carbon footprint.
- Have an ethical and credible climate change policy.
- Involvement with carbon disclosure is designed to meet expectations of stakeholders.
- Is forthright in communicating carbon and environmental matters.
- Company visibility is improved through assuming carbon reporting practices.
- Promotes public awareness concerning green matters.
- Believe high business standards are maintained by taking part in Carbon related matters and reporting.

An examination of the drivers of corporate image indicates that JSE listed firms are conducting their business by instituting green programs in order to maintain and sustain green corporate image. The findings in Table 6.1 therefore highlights that corporate green reputation is a tool which they use to develop relationships with their stakeholders in order to gain legitimation, preserve and build market shares.

7. COMPANY PERCEPTIONS CONCERNING CORPORATE IMAGE AS A FACTOR THAT SPUR GREEN INVESTMENT ACTIVITIES IN JSE LISTED COMPANIES.

This section discusses firm perceptions with respect to corporate image. These views were retrieved from selected JSE listed firms by employing simple random sampling approaches. The assumption was that all the entire 100 South African CDP firms on the JSE integrate green-oriented activities, therefore, any company selected met the selection criteria. The study only considered and evaluated 10 company perceptions.

Company 1: *“We pledge to be a socially responsible and humane corporate citizen that ploughs back in our communities, and that will continue to make progress to minimise the negative impact we have on the environment we operate in.”*

By this statement, JSE listed firms would like to be perceived as companies that “care” and are able to harmonise their business objectives with natural environmental interest in order to be socially acceptable. This statement also imply that businesses do not want to be viewed as working in isolation and/or pursuing their business goals without supporting corporate environmental accountability issues.

Company 2: *“Environmental management is characterised by a focus on a sustainable future and on ensuring that mining bestows a positive legacy.”*

The statement by company 2 outlines that JSE firms support environmental practices by embedding such initiatives in corporate policy such that environmental engagement will simply be part of the firms’ culture and way of operating business both in the present and in the future.

Company 3: *“Ongoing engagement with the media has been an important aspect of managing the company’s corporate reputation as well as raising awareness of key sustainability issues.”*

The company selects media as an instrument that they can use to communicate their sustainability practices so that the firm image is preserved. As such, openly supporting media attention to corporate practices could be an indication that the company has fulfilled sustainability demands and hence, even media involvement with their business sustainability practices will not damage their corporate reputation.

Company 4: *“Newsweek Green Rankings- We ranked 21st in the financial sector and 64th overall out of the largest 500 publicly traded companies globally.”*

The company perceive green reputation as very important since firms undergo green ratings to determine the extent of greening policies they have adopted. The statement highlights that

corporate green reputation determines corporate green investment activity. Hence, high green ratings are perceived to be instrumental in attainment of firm green reputation.

Company 5: *“Lending responsibly protects our reputation and assists our customers to meet their social and environmental obligations.”*

The JSE listed firms consider environmental and issues in lending and investing decisions. Such practices are considered ethical and credible as they preserve corporate image. The companies therefore accept that environmental image damages can negatively affect business operations.

Company 6: *“Our commitment is to be Earth Kind™ and inspire a better life. Typek™ carrying the Earth Kind™ seal is a key brand for “Company 16” that consumers have come to trust. The Typek Green promotion was a vehicle to translate the message of responsible corporate citizenship.”*

The statement illustrates that a good image is generated by developing green brands. Thus the firm perceives that consumers prefer and identify more with green products than non-green products. Therefore, green products are viewed as the ones which make the company socially acceptable.

Company 7: *“Changing stakeholder requirements in terms of transparency have made it essential for companies to disclose their strategies regarding environmental management.”*

The company expresses that reporting corporate environmental activities through increased transparency practices is adequate to meet and gain support of stakeholders. The statement seems to portray that stakeholders questioned corporate transparency on environmental issues and hence they can acquire their good reputation by improved environmental reporting thereby gaining stakeholder trust.

Company 8: *“While “Company 8” enjoys a well-established reputation for caring for the environment, we remain acutely aware that, to be truly effective, sustainability must not only deliver environmental benefits – it must also impact positively on people, communities, the economy, and the future of the country as a whole.”*

Company 8 demonstrates that positive corporate image is acquired through increased environmental participation. Thus, the firm believes that built positive corporate environmental image last long and it then extends by providing benefits to people and their societies.

Company 9: *“For the Company to achieve its vision and strategy, it has to retain its societal licence to operate. The nature and impacts from our mining activities carry with them obligations of respect for human rights, sound environmental management and ethical behaviour.”*

The company asserts that appropriate environmental practices are one of the mechanisms which supports firm legitimation as the company require to be accepted by the communities in host locations where they conduct their business activities. Therefore, environmental participation of the firm imply that the company will experience reduced social scrutiny and conflicts with local people.

Company 10: *“Company 10 is a leader in the local industry in reducing the impact of print-production processes on natural resources and implementing practices to eliminate emissions.”*

The company is proud to be a green leader. As such, green leadership will automatically increase company corporate green image rankings. Therefore high green reputation ratings maintains customer base, widens market bases and creates positive perceptions of the firm’s brand.

OVERALL DISCUSSION

This study found out that corporate image influence green investment practices in JSE listed firms. Furthermore, the strength of association between corporate image and green investment practices in JSE listed firms was ascertained as to be 0.380. Therefore, the study demonstrated a positive linear association involving corporate image and green investment practices in JSE listed firms. A Roman historian, Publilius Syrus (100 B.C) expressed that “A good reputation is more valuable than money.” Therefore this study also managed to prove this statement as obtaining a good green image heightens the company’s status in the industry. As such, integrating green investment activities can be a vehicle that improves a company’s industrial status, in addition to supporting company practices which preserve the natural environment. The drivers of corporate image managed to outline that green image is an intangible corporate green asset which can also be employed as a source of firm competitiveness which ensure the company’s capability to remain viable in the long-term. In this case, better corporate reputational benefits enhance the firm to acquire profitable market prospects plus increase company market value. The drivers also indicated that green image is a function of responsibility, credibility, reliability and trustworthiness issues. As such, corporate green image represents a major contributor of the company’s operational performance. This perception is supported by JSE corporate views regarding corporate image. Moreover, improved corporate green image as demonstrated by the drivers of corporate image (see section 6) and corporate views (see section 7) minimise company risks, improve firm strategic flexibility, promotes superior firm morale and leads to price concessions. Section 6 and 7 also highlighted that corporate green reputation is not constructed in isolation as it is also affected by firm association with its major and minor stakeholders. Therefore, the company’s green reputation relates to firm view of its associated stakeholders, namely, suppliers, employees, shareholders, consumers, media, government, local community and environmental interest groups.

CONCLUSION

The desire to prevent increasing stakeholder hostility has empowered companies to engage green investment initiatives. Thus, companies participate in green activities to sustain and regain public support. In this case, some researches have demonstrated that corporate green image issues are actually an informal regulatory mechanism which complements governmental legislative tools. Therefore this paper, sought out to explore the relationship between corporate image and green investment practices in JSE listed companies. This study determined that corporate image influence green investment practices in JSE listed firms. In addition, the strength of the relationship involving corporate image and green investment practices in JSE listed firms was discovered to be 0.380. Thus, a positive linear connection between corporate image and green investment practices in JSE listed firms was demonstrated. The study also managed to present the drivers of corporate image in JSE listed firms. From a corporate perspective, this research demonstrated how JSE listed firms employ corporate green image towards improving overall firm performance. Further studies are important to investigate how firm stakeholders view green investment practices with regard to image by employing experimental research designs which will further contribute more evidence in accordance with this dimension.

REFERENCES

- Aerts, W. & Cormier, D., 2009, 'Media legitimacy and corporate environmental communication', *Accounting, Organizations and Society* 34(1), 1-27.
- Aerts, W., Cormier, D. & Magnan, M., 2006, 'Intra-industry imitation in corporate environmental reporting: An international perspective', *Journal of Accounting and public Policy* 25(3), 299-331.
- Aerts, W., Cormier, D. & Magnan, M., 2008, 'Corporate environmental disclosure, financial markets and the media: An international perspective', *Ecological Economics* 64(3), 643-659.
- Azapagic, A., 2004, 'Developing a framework for sustainable development indicators for the mining and minerals industry', *Journal of Cleaner Production* 12, 639-662.
- Bewley, K. & Li, Y., 2000, 'Disclosure of environmental information by Canadian manufacturing companies: A voluntary disclosure perspective', *Advances in Environmental Accounting and Management* 1, 201-226.
- Bonellie, D., 2013, 'Carbon offsetting vs carbon reduction', viewed 23 November 2013, from <http://carbonfootprintcourses.co.za/purchasing-carbon-offsets-vs-reducing-emissions-internally/>
- Brown, D.L., Guidry, R.P. & Patten, D.M., 2010, 'Sustainability reporting and perceptions of corporate reputation: An analysis using Fortune most admired scores' *Advances in Environmental Accounting and Management* 4, 83-104.
- Buysse, K. & Verbeke, A., 2003, 'Proactive environmental strategies: a stakeholder management perspective', *Strategic Management Journal* 24(5), 453-70.
- CDP, 2012, *CDP South Africa 100 Climate Change Report 2012*, CDP South Africa, South Africa.

- CDP, 2014, *CDP South Africa 100 Climate Change Report 2013*, CDP South Africa, South Africa.
- Cho, C.H. & Patten, D.M., 2007, 'The role of environmental disclosures as tools of legitimacy: a research note', *Accounting, Organizations and Society* 32 (7–8), 639–647.
- Cho, C.H., Guidry, R.P., Hageman, A.M. & Patten, D.M., 2012, 'Do actions speak louder than words? An empirical investigation of corporate environmental reputation' *Accounting, Organizations and Society* 37, 14–25.
- Cormier, D. & Magnan, M.L., 2003, 'Environmental reporting management: a continental European perspective', *Journal of Accounting and Public Policy* 22, 43–62.
- Cormier, D. & Magnan, M., 2007, 'The revisited contribution of environmental reporting to investors' valuation of a firm's earnings: An international perspective', *Ecological economics* 62(3), 613–626.
- Crane, A. & Matten, C., 2007, *Business ethics: Managing corporate citizenship and sustainability in the age of globalization*, Oxford University Press, Oxford.
- Cretu, A.E. & Brodie, R.J., 2007, 'The influence of brand image and company reputation where manufacturers market to small firms: a customer value perspective', *Industrial Marketing Management* 36(2), 230–40.
- Crittenden, V.L., Crittenden, W.F., Ferrell, L.K., Ferrell, O.C. & Pinney, C.C., 2011, 'Market-oriented sustainability: a conceptual framework and propositions' *Journal of the Academy of Marketing Science* 39, 71–85.
- Darrell, W. & Schwartz, B.N., 1997, 'Environmental disclosures and public policy pressure', *Journal of accounting and Public Policy* 16(2), 125–154.
- De Villiers, C.J. & Van Staden, C., 2011, 'Where firms choose to disclose voluntary environmental information', *Journal of Accounting and Public Policy* 30(6), 504–525.
- Deegan, C. & Rankin, M., 1999, 'The environmental reporting expectations gap: Australian evidence', *British Accounting Review* 31, 313–346.
- Ecologic., 1998, 'Green Investment: Market Transparency and Consumer Information' *Workshop Summary-Proceedings of the International Workshop*, Berlin, October 07, 1998.
- Einhorn, E., 2005, 'The nature of the interaction between mandatory and voluntary disclosures', *Journal of Accounting Research* 43, 593 – 621.
- Eyraud, L., Clements, B. & Wane, A., 2013, 'Green investment: Trends and determinants', *Energy Policy* 60,852–865.
- Fonseca, S.A. & Jabbour, C.J.C.,2012, 'Assessment of business incubators' green performance: A framework and its application to Brazilian cases' *Technovation* 32,122–132.
- Friedman, A.L. & Miles, S., 2001, 'Socially responsible investment and corporate social and environmental reporting in the UK: an exploratory study', *British Accounting Review* 33 (4), 523–548.
- Golob, U. & Bartlett, J.L., 2007, 'Communicating about corporate social responsibility: A comparative study of CSR reporting in Australia and Slovenia', *Public Relations Review* 33(1), 1–9.

- Gray, R., Kouhy, R. & Lavers, S., 1995, 'Corporate social and environmental reporting: a review of the literature and a longitudinal study of UK disclosure', *Accounting, Auditing & Accountability Journal* 8(2),47-77.
- Hackston, D. & Milne, M.J., 1996, 'Some determinants of social and environmental disclosures in New Zealand companies', *Accounting, Auditing and Accountability Journal* 9(1), 77-108.
- Herremans, I.M., Akathaporn, P. & McInnes, M., 1993, 'An investigation of corporate social responsibility reputation and economic performance', *Accounting, organizations and society* 18(7), 587-604.
- Herringer, A., Firer, C. & Viviers, S., 2009, 'Key challenges facing the socially responsible investment (SRI) sector in South Africa', *Investment Analysts Journal* 70, 11-26.
- Hsu, C., Kuo, T., Chen, S. & Hud, A.H., 2013, 'Using DEMATEL to develop a carbon management model of supplier selection in green supply chain management', *Journal of Cleaner Production* 56, 164-172.
- Hughes, S.B., Anderson, A. & Golden, S., 2001, 'Corporate environmental disclosures: are they useful in determining environmental performance?', *Journal of accounting and public policy* 20(3), 217-240.
- Kahlenborn, W., 1999, 'Transparency and the Green Investment Market', *Greener Management International* 27, 65-78.
- Kang, M. & Yang, S.U., 2010, 'Comparing effects of country reputation and the overall corporate reputations of a country on international consumers' product attitudes and purchase intentions', *Corporate Reputation Review* 13(1), 52–62.
- Karagülle, A.Ö., 2012, 'Green business for sustainable development and competitiveness: an overview of Turkish logistics industry', *Procedia - Social and Behavioral Sciences* 41, 456 – 460.
- Kruger, M. & Saayman, M., 2013, 'How green are visitors at a green wine destination in South Africa?', *Acta Academica* 45(3), 63-98.
- Li, Y., Richardson, G.D. & Thornton, D.B., 1997, 'Corporate disclosure of environmental liability information: theory and evidence', *Contemporary Accounting Research* 14 (3), 435–474.
- Lin, R., Tan, K. & Geng, Y., 2013, 'Market demand, green product innovation, and firm performance: evidence from Vietnam motorcycle industry', *Journal of Cleaner Production* 40, 101-107.
- Luchs, M., Naylor, R.W., Irwin, J.R. & Raghunathan, R., 2010, 'The sustainability liability: Potential negative effects of ethicality on product preference', *Journal of Marketing* 74, 18-31.
- McGinn, D., 2009, 'The greenest big companies in America', *Newsweek*, 28 September, p. 34–54.
- Melo, T. & Garrido-Morgado, A., 2011, 'Corporate reputation: A combination of social responsibility and industry', *Corporate Social Responsibility and Environmental Management* 19(1), 11–31.
- Mitchell, C.G., Hill, T.S. & Stobie, B.R., 2005, 'Corporate social and environmental reporting as an effective mechanism to support social accountability in South Africa', *Southern African Journal of Accountability and Auditing Research* 6, 67-74.

- Moon, J., 2007, 'Corporate image effects on consumers' evaluation of brand trust and brand affect', *Journal of Korean Academy of Marketing Science* 17(3), 21–37.
- Nameroff, T.N., Garant, R.J. & Albert, M.B., 2004, 'Adoption of green chemistry: an analysis based on US patents' *Research Policy* 33, 959–974.
- Nandy, M. & Lodh, S., 2012, 'Do banks value the eco-friendliness of firms in their corporate lending decision? Some empirical evidence', *International Review of Financial Analysis* 25, 83–93.
- Niskala, M. & Pretes, M., 1995, 'Environmental reporting in Finland: a note on the use of annual reports', *Accounting, Organizations and Society* 20(6), 457-466.
- Patten, D.M., 2002, 'The relation between environmental performance and environmental disclosure: a research note', *Accounting, Organizations and Society* 27(8), 763-773.
- Patten, D.M. & Trompeter, G., 2003, 'Corporate responses to political costs: an examination of the relation between environmental disclosure and earnings management', *Journal of Accounting and Public Policy* 22(1), 83-94.
- Pons, M., Bikfalvi, A., Llach, J. & Palcic, I., 2013, 'Exploring the impact of energy efficiency technologies on manufacturing firm performance', *Journal of Cleaner Production* 52, 134-144.
- Robinson, M.J., Kleffner, A. & Bertels, S., 2011, 'Signaling sustainability leadership: Empirical evidence of the value of DJSI', *Journal of Business Ethics* 101(3), 493–505.
- SAPA., *South African firms "not green enough"*, viewed 20 September 2013 from www.southafrica.info/news/business/207879.htm
- Smith, E.E. & Perks, S., 2010, 'A perceptual study of the impact of green practice implementation on the business functions', *Southern African Business Review* 14(3), 1-29.
- Toms, J.S., 2002, 'Firm resources, quality signals and the determinants of corporate environmental reputation: some UK evidence', *British Accounting Review* 34, 257-282.
- Dialogue, 2007, *The sustainable business handbook: smart strategies for responsible companies*, 4th edition, Cape Town: Dialogue.
- Tshesane, G. & Seroka, L., 2012, *How companies create sustainable savings through cost reduction?* viewed 20 June 2014, from <http://deloitteblog.co.za/tag/carbon-emissions/>
- Van den Berg, U., Labuschagne, J.P. & Van den Berg, H., 2013, 'The effects of greening the supplier and innovation on environmental performance and competitive advantage', *Journal of Transport and Supply Chain Management* 7(1), 121.
- van Staden, C.J. & Hooks, J., 2007, 'A comprehensive comparison of corporate environmental reporting and responsiveness', *The British Accounting Review* 39(3), 197-210.
- Wang, Q. & Chen, X., 2012, 'Regulatory failures for nuclear safety—the bad example of Japan—implication for the rest of world', *Renewable and Sustainable Energy Reviews* 16(5), 2610-2617.
- Wang, L., Toppinen, A. & Juslin, H., 2014, 'Use of wood in green building: a study of expert perspectives from the UK' *Journal of Cleaner Production* 65, 350-361.
- Zutshi, A. & Sohal, A.S., 2004, 'Environmental management system adoption by Australasian organisations: part 1: reasons, benefits and impediments', *Technovation* 24, 335–357.