Examining the Relationship between Board of Directors' Gender and Sustainability Disclosure

By

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[redacted]

Mini-Dissertation

Submitted In Partial Fulfilment of the Requirements for the Degree Of

Master

In

Business Administration

In the

FACULTY OF MANAGEMENT AND LAW

Turfloop Graduate School of Leadership (TGSL)

UNIVERSITY OF LIMPOPO

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Declaration

I, Mantsha Emeldah Modiba, declare that this mini- dissertation hereby submitted to the University of Limpopo for the degree of Masters of Business Administration (MBA) has not been submitted by me for a degree at this or any other university and that it is my own work. The sources that I have used or quoted from have been indicated and acknowledged by means of complete reference.

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Acknowledgements

I thank all those who provided assistance and encouragement throughout the study. My deepest appreciation goes to my colleagues, family and friends for the support they gave me throughout this project.

Special appreciation to my supervisor Professor C. Ngwakwe who has provided me with valuable insight and constant guidance. His understanding and positive attitude and for being an amazing supervisor and mentor. Thank you for your patience, support, constructive criticism and guidance.

I would also like to send my sincere gratitude to TGSL staff and MBA 2015 class for the amazing and continuous support they have given me.

Most of all, special thanks to God for His grace for His companionship and truthful guidance throughout this project.

Abstract

This research examined whether an improved participation of women in the board of Socially Responsible Investing (SRI) firms has any relationship with sustainability disclosure. Accordingly, the objective of this research was to examine the relationship between the number of women on the board and environmental, social and gender-employment disclosure in South African firms. The research applied a purposive sampling design to study the nine best socially responsible investing firms on the Johannesburg Stock Exchange and secondary data were collected from the sustainability reports of the firms. Using a quantitative approach, the panel-data regression analysis was used to analyse the relationship between women on the board of directors, environmental, social and gender employment disclosure. Energy consumption disclosure, social investment and the number of women employment in the firms were the proxy for environmental disclosure, social investment and gender employment disclosures respectively. Findings show a positive relationship between the number of women on the board of directors and firm disclosure on energy consumption, disclosure on women employment and social investment disclosure. However, the number of women employed in the corporate is still very low in comparison with the male counterparts. The research recommends that, given the unique social and environmental sensitivity of women, the corporate should recruit more women onto the boards to enhance accelerated corporate sustainability performance and disclosures.

Key words: sustainability disclosure, women in the board, sustainability performance, energy disclosure, sustainable development

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CHAPTER 1
INTRODUCTION

1.1 Background

Gender representation on commercial executive boards refers to both males and females occupying equal ratios of board of director positions (Patel, 2015). Globally, males have been found to occupy more board seats than their female equals (Rhode, 2014) and this disproportionality is being addressed in many ways by both private and public organisations (World Economic Forum, 2013)

The desire both in private and public organisations to minimise the disproportionality on corporate boards is imbedded in the principle of equality of treatment (Sousa-Poza, 2014). According to Healey (2014), equality of treatment is very crucial for all people who must be treated equally, irrespective of their gender status.

Government is considering tough laws for noncompliance to gender transformation in both public and private sectors (Hills, 2015) and the new legislation requires both private and public organisations to have a quota of 50% of all senior and top management positions for women (Kmec et al.., 2014). The introduction of the Women Empowerment and Gender Equality Act (2013) will allow the state to penalise and/or detain executive heads breaching the act.

Women Empowerment and Gender Equality is aimed at promoting and improving gender equality (Krook and Norris, 2014) including equal remuneration for women and men in employment and in the workplace (Rubery and Grimshaw, 2015). The Act eliminates the discrimination of gender in relation to employment matters and to foster workplace consultation between employers and employees. It also improves employee consultation on issues concerning gender equality in employment and in the workplace.

1.2 Problem Statement

The Women Empowerment and Gender Equality Bill aims at maintaining the balance between women and men in the decision making positions and to ensure that they are fairly and equally represented and compensated across all boundaries in both government and private sectors (Women Empowerment and Gender Equality Bill, 2013). Statistics have proven that males occupy more high seats and are more in directorship posts of boards than women. According to the gender gap report for 2013, South African women earned up to 33% less than their male colleagues for the same work and the current international gap average is 13% (Bekhouch et al.., 2013).

It is also argued that women in decision making positions directly or indirectly influence the organisations to encompass social and environmental concerns in their business operations and also to interact with various stakeholders (Guay, Doh and Sinclair, 2004). Some studies also confirm that women are more inclined to Corporate Social Responsibility (CSR) than their male colleagues (Landry, Bernard and Bosco, 2014). Companies achieve a balance of economic, environmental and social requirements through CRS (Galbreath, 2011.)

Previous research found a positive relationship between the presence of women on boards and corporate environmental disclosure (Liao, Luo & Tang, 2014).To the best of the author's knowledge, no published literature has been found within the South African context dealing with board gender and environmental disclosure. Therefore, this research will examine the association between the presence of women on the board and corporate social and environmental disclosure in the JSE SRI firms.

1.3 Motivation or rationale of the study

Section 9 of the Constitution of the Republic of South Africa, 1996 is concerned with the empowerment of women and gender equality; to institute a legal framework for the empowerment of women; to align all aspects of laws and the application of laws concerning women empowerment and the appointment and representation of women on boards in directors' positions and structures; and to provide for matters connected therewith.

Women are found to be more socially responsible as compared to their male counterparts and this results in more effective board decision making especially on issues related to sustainability (Post et al.., 2014) .Gender stereotype studies link women with characteristics such as humanity, thoughtfulness and concern for others and being interested in important issues of the community (Garcia et al.., 2015) . The presence of women on the boards of director is considered to have a positive benefit in relation to their social orientation and community representation (Dezső et al.., 2015).

1.4 Significance of the study

The study will investigate reasons why companies and governments have a limited number of women in directorship positions and to evaluate the companies' compliance with the Women Empowerment and Gender Equity Act.

The study will make recommendations that will assist the companies to comply with the GEWE Act to avoid the penalties imposed on them and the detaining of the company heads by government for non-compliance, given the historical background of women.

The study will also make recommendations to private companies on Corporate Social and Environmental Responsibilities to the communities within their vicinity.

The study will also be used as a point of reference by companies and students to benchmark on GEWE and CSR.

1.5 Aim of the study

The aim of the study is to examine the relationship between boards of directors' gender and sustainability disclosure.

1.6 Objectives of the study

The objectives of this study will be as follows:

1. To examine the relationship between boards of directors' gender and social disclosure
2. To evaluate the relationship between boards of directors' gender and environmental disclosure (represented by energy disclosure)
3. To evaluate the relationship between boards' gender and gender equity employment

1.7 Research questions

The questions are as research follows:

1. What is the relationship between boards of directors' gender and social disclosure?
2. What is the relationship between boards of directors' gender and environmental disclosure (represented by energy disclosure)?
3. What is the relationship between boards' gender and gender equity employment in the work place?

1.8 Organisation of this Mini-Dissertation

This mini-dissertation is structured into five chapters.

Chapter 1 has provided the general introduction to the research, the objectives and questions.

Chapter 2 presents a review of related literature on the implication of women in the board on social disclosure, environmental disclosure and gender equity in employment.

Chapter 3 presents the research methodology which includes the population and sample and data analysis technique.

Chapter 4 presents the data analysis, findings and discussion of findings and chapter 5 presents the conclusion and recommendations.

1.9 Summary of Chapter 1

This chapter has presented a general introduction of the study by providing a background to the issue of women in the board of directors and the implication on sustainability disclosure. Hence this section presented among others, the problem statement which explains the importance of the study, the aim of study, the research objectives and the research questions.

Chapter 2

Literature Review

2.1 Introduction

In this chapter, the researcher examines the relationship between board gender and sustainability disclosure, social disclosure and environmental disclosure and board gender. Gender equity employment at the work place will been discussed and defined from various literature.

2.2 Board Gender & Sustainability disclosure

According to Montiel (2008), there is no clear definition of sustainability. Sustainability is defined as meeting the current obligations without compromising the ability of coming generations to meet their own needs (Reid, 2013). According to World Commission on Economic Development, sustainability is comprised of three related principles, economic growth, environmental quality and social responsiveness (Garriga and Melé, 2013; Opp and Saunders, 2013; Pearce et al.., 2013).

Corporate social responsibility can be defined the responsibility of the company towards various stakeholders in order to improve their standard of living in a manner that is good for business that will improve the economic sustainability of the community involved (Camilleri, 2016). Corporate Social Responsibility can be both financial and strategic advantages for companies (Luo et al.., 2015) and can help improve trust and goodwill of stakeholders (Taghian et al.., 2015) by participating in social activities and reporting on CSR which can offer them an economic advantage over others (Juščius and Snieška, 2015). Research suggests that sustainability disclosure ratifies companies' images and enhances their position (Igwe and Nwadialor, 2015) as relationships with stakeholders are based on a positive exchange of benefits (Korschun, 2015).

Some hypotheses indicate a direct and positive relationship between the presence of women on the board and Corporate Social Responsibility (Chang et al.., 2015) and also that gender composition had an impact on CSR performance. Hafsi and Turgut (2012) established that the board gender composition had a substantial impact on a company's social performance and that the presence of female directors is essentially important in businesses (Teigen, 2015).

According to Henderson (2005), private organisations improve the country's economic development which result from competitive, market-based activities such as improved value of goods and services (Kafouros, 2015). The more the companies provide the customers with products and services they have preference for, the more the value creation in terms of performance differentials at the customer-centric performance level (Flint and Maignan, 2015) and this minimises the cost of input or realises the scale of the scope. According to Holliday, Schmidheiny & Watts (2002), company employees benefit through remuneration, society benefits through better and improved standards of living and customers benefit through improved products and services.

However, in the process of value creation by companies, natural resource depletion, environmental degradation and the disruption of community and worker welfare and health can be potential negative externalities (Williams, 2016). Carroll (1979) further argues that companies have responsibilities to the communities they operate in, including building social capital via volunteering and contributing money to various cultural enterprises. What such viewpoints suggest is that companies have responsibilities to *society*, not just to shareholders.

Conforming to the CSR perspective, Donaldson and Dunfee (1994) highlight the fact that companies have an equal responsibility towards all stakeholders, inside and outside the corporate walls and must ensure that they maintain social upliftment as part of their sustainability reporting (Lupini, 2015). The assumption in this article is that under the sustainability paradigm, companies imposed on society; thus, in the conceptualisation of corporate sustainability, economic development is naturally linked to basic aspects of economic activity such as social responsive and environmental quality (Turker , 2015)

Kwang et al.. 2015 argue that women are more resourceful, decisive, highly competent and more likely to take calculated risks in accounting and finance and these are good qualities necessary for good governance. Women are more considerate, respectful, good listeners, attend to the needs of others, help the group to recognise reasonable concessions to solve delicate problems in board meetings and this is due to the unique character they possess as compared to their male counterparts (Hilb, 2012). Women must be prepared for leadership positions by human resource directors, which in turn will give them a competitive advantage for board of directors' positions (Nadarajah, 2012**)**

Findings from boards in Finland support the arguments that women directors react differently to ethical and board matters as compared to their male equivalents and that they also improve mentoring and coaching of their fellow colleagues (Agency and Resource dependency theory). According to Virtanen 2012, women directors take roles that are more active and use their powers on the board better than their male equivalents. Studies reveal that the overall performance of companies with more women on the board differ across industries and increases where women are actively involved with the clients and the workforce (Ben-Amar et al.., 2015).

Studies in the USA show that huge companies with high potential have a smaller percentage of women on the boards of directors (Dezső, 2016). There is a close correlation between the number of women on a board and the interests of various stakeholders such as judicial matters that are mostly relevant to diversity (Chia, 2015). An increase in the number of women on the board assists the company to build and strengthen it (Lukerath-Rovers, 2011). Accordingly, and in light of growing public, client and shareholder forces, corporate governance structures, such as board attributes, are mainly focused on the shareholder interests (Cremers and Sepe, 2016), which might be effective in promising managerial stewardship for the benefit of a wide range of stakeholders(Davies et al.., 2015).

There is a pragmatic and substantial connection between the presence of female directors and a company's financial performance as measured by return on asset (ROA) and this is based on women's different management styles (Abdullah, Ismail and Nachum, 2013). It has been found in the Netherlands that companies with women directors perform better on ROE (return on earning) than the companies without women on their boards (Azmi et al.., 2013.). Campbell and Vera (2009) found that there is a momentary impact on stock markets and a durable impact on the company's reputation with women on the board of directors' positions and this can largely be as a result of board gender diversity.

In Norway studies found a positive and significant relationship on Return on Equity (ROE) in innovation companies with three or more women on the board (Torchia, Calabro and Huse, 2011) i.e. with 30 percent of women on the board (Joecks, Pull and Vetter, 2012). In the USA there is a positive and quite evident relationship between a company's financial performance and the number of women on the board as measured in terms of return on assets (ROA) and return on investments(ROI) (Erhardt, Werbel and Shrader, 2003). Azmi and Barret , 2014 established a better and an improved performance in terms of Tobin's Q and ROA in one of the developing countries, Bangladesh, with a higher proportion of women on the boards.

A study by Mercer Investment Consultant (MIC) indicates that 46% of official investors consider environmental, social and corporate governance when making investment decisions (Bear et al…, 2010). Becht et al…, 2003 reports that institutional shareholders will pay an extra 12-14% for a well-managed company (Fombrum, 2006). Dowling (2006) argues that prosperous companies have a higher chance of maintaining superior performance over time if they also retain a relatively good name. Fombrum & Shanley (2009) discovered that ample factors that add to a positive reputation include accounting measures, viability and risk market, media visibility, institutional stockholding, shareholders incentives, firm size and concern over social matters. Recent researche also highlights customer satisfaction as reputation enhancing factors (Bontis et al.., 2007), stakeholders' (community, investors) satisfaction (McCokindale, 2008) and corporate campaigns (Ellen et al.., 2006)

However, there was no significant relationship between a company's performance and the board of directors in Malaysia (Azmi, 2013; Ramli and Esa, 2012; Shukeri, Ong and Shaari, 2012; Mohamad, Abdullah, Mokhtar and Kamil, 2010; Maran, 2009; Maran and Indraah, 2009). This could be due to differences in national and corporate cultures (Maran and Indraah, 2009). A study in another developing country, Pakistan, also did not find a substantial association between company performance and board gender diversity measured as economic value added (Khan and Zaman, 2010).

In Spanish SMEs, Minguez-Vera and Lopez-Martinez (2010) also found no significant relationship between gender diversity and company performance measured as ROA. Haslam, Ryan, Kulich, Trojanowski and Atkins (2010) and also found no significant relationship between directors' gender on the boards with the companies' accounting performance measured as ROA and ROE in UK companies and the average effect of gender diversity on company's performance was found to be negative in the USA (Adams and Ferreira, 2009). According to Maran and Indraah (2009), these findings can be because of the difference in national and cultural backgrounds.

Companies that are CSR committed have a better chance of reducing the company's risks performances that may be exacerbated by labour disagreements, product safety scandals and consumer fraud (Waddock and Graves, 1997). Chen (2015) states that companies that are perceived to have high CSR standards are subjected to lower company specific risks due to lower cash flow inconsistencies. Investors are progressively considering the social behaviours in their investment decisions because CSR engagement and reporting have a direct impact on the companies' risk and profitability (Simpson and Kohers, 2002; Aguilera et al.., 2006; Matten, 2006). Studies conducted in USA point out that companies can lower their cost of capital by investing in employee relations, environmental policies and CSR products strategies (Ghoul et al.., 2011) and boards and managers are increasingly requested by investors to engage in CSR and to report these engagements(Scholtens, 2008; Kolk and Pinkse, 2010)

2.3 Association between board gender and Social Disclosure

According to Nguyen (2015), companies are gradually obliged to respond to social matters. Social issues are matters that affect the society (Mokhtar, 2015). General examples include AIDS, poverty and obesity. However, social issues can also be very company specific, such as working surroundings, product safety and equal rights (Epstein, 2014). Carroll (1979) further argues that companies have responsibilities to the communities they operate in and not just to shareholders, including building social capital via volunteering and contributing money to numerous cultural enterprises (Fatma, 2014). Capturing this perspective, Donaldson and Dunfee (1994) stipulate that companies are obligated to demonstrate responsible behaviour to all stakeholders, whether within or outside corporate walls and to make social responsiveness an essential dimension of sustainability(Chawla, 2014; Beare, 2014).

Sustainability is one of the most essential management pattern strategic decision makers needed to respond to the pursuit of competitive success these days (Bansal, 2014; Sarvaiya, 2014; Salvioni, 2015). Prominent sustainability scholar Bansal (2001:48) advises that companies which do not respond to sustainability will basically not succeed. The ability of companies to incorporate sustainability into their corporate missions and into relationships with stakeholders will define which companies will prosper in the twenty-first century and which will fail (Powell, 2014; Thompson, 2015).

Kipkirong (2014) argues that boards of directors are the critical decision makers within corporations because they exert significant power and responsibility in managing companies and they have a direct influence on strategies that affect subsequent performance (Fama & Jensen, 1983a,1983b; Mattingly, 2015; Lynall,Golden & Hillman, 2003). It is therefore important for the company to determine the right board composition because a board composition that includes gender diversity has been one of the most relevant governance issues facing modern governance (Hassan, 2015). Gender diversity improves organisational values and performance by teaching board members new acumens, new information and new perspectives (Wirtenberg, 2014).

In order for the company to endure sustainability challenge, new insights and fresh perspectives at the board level are likely to be essential because the nature of sustainability involves understanding, assurance towards economic shareholders and a wide range of actors including employees, communities, suppliers and governments (Bansal, 2005; Konrad et al.., 2006; Rupp, 2015). The ability to address such varied and contradictory shareholders' pressures and demands is complex at best (Danielsen, 2015). However, De Leon (2014) suggests that women are predominantly skilled at problem-solving and this provides them with strong skills to deal effectively with conflicts and uncertainty. Phavi and Urashima 2006, further suggest that women represent the needs of all stakeholders better than compared to their male counterparts given their orientation towards supporting and maintaining relationships and these assist in policy development and decision making in areas of sustainability.

However, Ricart, Rodríguez & Sánchez (2005), examining the link between gender diversity on corporate boards and sustainability, have yet to thoroughly qualify and investigate this link (Rao, 2015) and the researchers also reviewed the association between a company's economic performance and women on the board (Bonn, 2004; Carter et al.., 2003; Catalyst, 2004; Rose, 2007).

This type of research is limited, given the current climate where economic results are no longer the sole criterion for how companies are valued in the market; environmental and social outcomes are also important aspects of sustainability (Montie, 2014; Mercer Investment Consulting, 2006). The Australian research gap on women and sustainability disclosure showed no relationship between women on boards and the three dimensions of sustainability (Fernandez, 2014), whereas on the other side, women on boards are argued to increase effective monitoring of company agents, indicating more effective enforcement of the ethical attitude of the company more than their male counterparts (Kakabadse, 2015). Women are proven to expand shareholders' relationships which all impact on sustainability. Some researchers specified that women appointees increase assurance of investors who are expecting increased accountability, transparency and moral duty from the directors of the company (Arfken, Bellar & Helms, 2004; Brown, Brown & Anastasopoulos, 2002; Flynn & Adams, 2004).

A research study by Brown & Brown (2001) suggest that 94 percent of boards where women are represented warrant that conflict of interest procedures are inevitable as compared to with 68 percent of all male boards. Many shareholders perceive more women on board to be doing a better job by guaranteeing that their investments are not embezzled by management. Governance control over possible embezzlement of shareholder's funds and ethical conduct should result in higher economic growth (Brown & Brown, 2001; Flynn & Adams, 2004). A positive relationship has been established between women on the board and the company's economic growth as recent studies recommend that the company ought to keep its activities and decisions attuned to the community's aspiration (Bhimani & Soonawalla, 2005; Jamali, Safi, Eddine & Rabbath, 2008; Tirole, 2001).

According to Hillman & Keim (2001), addressing various stakeholders' interests involves coherent perspective and the ability to maintain a positive relationship with those stakeholders. Women are more positioned towards supporting and maintaining the relationship than their male equivalents and they focus more on the needs of others rather than their own needs (Hater & Bass, 1988; Hisrich & Brush, 1984; Rosener, 1995). By maintaining the relationship with various stakeholders, women position the companies to understand the social demands of their constituents' base better and to avoid costly missteps with strategic decisions regarding sustainability. Such interpersonal abilities are crucial to sustainable strategy development (Konrad et al.., 2006; Miles, Munilla & Darroch, 2006). The greater the number of females on a board, the more the magnitude of corporate social disclosure (Inyang, 2015).

According to Brown and Dacin (1997), the manner in which the company addresses social responsibility can have a positive influence on product positioning. The ability of the company to demonstrate social responsibility can positively influence the consumers' perception about the quality of the product and is of great importance to understand consumers' needs in order for the company to maintain sustainability.
According to Mackenzie (2007), socially responsible companies are likely to experience greater brand loyalty, customer satisfaction and employee devotion (Matute-Vallejo et al.., 2011). Heffernan (2002) suggests that a higher ratio of women purchasing more goods and services, are likely to bring information of consumers' demands since customers are the major stakeholders of every company (Daily, Certo, & Dalton, 1999) and have leverage over the social aspect of sustainability (Clarkson, 1995).

As Turatti (2012) presume that corporate social responsibility and environmental policies engender various sets of encounters from the "agency conflict" to interest management and shareholders as profit maximisation. It is argued that the more diverse the board, the more independent it is. It is crucially important to distinguish between directors who protect the interest of shareholders over management and those who are likely to have their interest overshadow the community's (Jain & Thomson, 2008). Corporate social responsibility is important not only to the shareholders and consumers' risk assessment but also for regulators' good will and for public assurance. Researchers indicate a positive link between a company's performance and corporate social responsibility (Gray, Kouhy and Lavers, 1995b; Simpson and Kohers, 2002; Scholtens, 2008; Godfrey, Merrill and Hansen, 2009)

Moreover, disclosure on Corporate Social Responsibility reduces distortion between management, shareholders and other stakeholders. Jamali, Safieddine and Rabbath (2008) indicate the importance of companies to have an effective board of directors that will promote CSR reporting. Assumed the possible impact of CSR reporting on a companies' sustainability, there is an unanticipated shortage of research into the effect of corporate governance on CSR exposé. Existing research emphasises that the more the board committee supports CSR projects, the greater the magnitude of sustainability disclosure (Amran et al.., 2014). Engaging and reporting on CSR matters must not be seen as a provisional trend for boosting the managers' self-opinion (Hakala, 2015), but to recognise social interests and preserve positive associations with key stakeholders for the purpose of uplifting social issues. According to Williams (2016) companies with more effective board structures are more likely to provide information on matters relating to CSR.

Naturally, women are likely to reach a glass ceiling on sustainability issues due to the fact that they are less represented and are regarded as tokens by their male counterparts (Ballard, 2015). The research gap on the presence of women on board based in Australia showed that no experiential research concomitantly discovered the relationship between women on boards and sustainability aspects (Del Mar Alonso-Almeida et al.., 2015). Other studies showed no positive relationship between increased numbers of women on boards and corporate social disclosure (Low et al.., 2015) and the research does not show a positive relationship between the increasing numbers of women on boards and the increasing attention on environmental and ethical matters. The number of women on corporate boards strongly correlated with the increased attention to ethical and environmental problems.

2.4 Association between board gender and Environmental Disclosure

According to Doering et al… (2002), economic activity often influences the natural environment, including decreases in biodiversity, ozone weakening, weakened air quality and waste resulting from products and deforestation. Joss, 2015 defines environmental sustainability as the amount of viable resource harvest, pollution formation and non-renewable resource exhaustion that must be sustained indeterminately and if they cannot be continued indefinitely then they are not sustainable.

Product stewardship is concerned with the environmental impact of products relating to their packaging design, production, delivery, usage and development. Process stewardship is concerned with reducing adverse environmental impacts in the processes ranging from production, distribution, to end-of-life product management.

According to Wong et al... (2016), all companies have an environmental impact from a product life cycle perspective, production, methods applied and services that include numerous phases which incur energy consumption, wastes and pollutant emissions. Moreover, researchers identified three main environmental quality concerns: Firstly, companies can control pollution through responsible waste disposal and recycling (Sharma and Amish, 2015). Secondly, companies can reduce greenhouse gas emissions through improved innovative processes and new technologies during production (Nahmias and Olsen, 2015).

Companies can use more recyclable and less harmful material for production or manufacturing practice (Bhasin, 2015) which are more eco-friendly because the more the environment is tampered with, the more contaminated it will be and this means that it will be difficult to maintain and access clear water and air (Spellman, 2015). Tejersen *et al...* (2009) discusses principal assets and an improved institutional role, an improved business balance and the existence of stakeholders that can assist in improving the success of corporate governance through board gender composition.

According to Low et al.., (2015), Kılıç et al... (2015), Lakhal et al... (2015) and Boulouta (2013), there is a positive correlation between the existence and increase in the number of women on boards and the increase of attention to ethical and environmental issues and improved decision-making processes. Mallin et al... (2013), Fernandez-Feijoo et al... (2012), Liao et al... (2014) established a positive relationship between the presence of women on the board and an increased corporate environmental disclosure (Liao, Luo & Tang, 2014). To the best of the authors' knowledge, no published literature has been found within the South African context dealing with on board gender and environmental disclosure.

According to Kruger (2010), a larger percentage of women on the board of directors is inclined to create a selfless attitude that improves social behaviour, such as donations, involvement with environmental concerns and labour matters (Johnson, 2014). Companies which are sensitive to gender issues, with three or more women as board members, have a corporate social investment of more than 28% as compared to companies with only male board members (Boulouta, 2013). Gender composition of board of public listed companies can encourage compliance to ethical and environmental issues for a better and improved corporate social performance (Adams, 2015). The presence and number of female directors in a company can be a signal for stakeholders that the company shows concern for women and minority groups in the community and for social responsibility (Bear *et al.*., 2010). Boulouta (2012) proposed that this condition might happen because female directors are more interested in CSR programmes that focused on improving the bad image of the company, because of the environmental impact of the company's business (the controversy which arose in the community relating to environmental contamination caused by the company's business, the severance of the community's access to natural resources and water and the safety of product), rather than on establishing the company's positive image through social activities .

According to the National Business Initiative (NBI), major companies in South Africa graded among world leaders in greenhouse gas reporting and measurement. According to the National Business Initiative, 74 out of 100 top companies revealed their greenhouse gas emissions in the 2010 carbon disclosure project (CDP) and South Africa ranked fourth amongst 20 countries in which 4500 of the world's largest corporations were studied. The South African Carbon Disclosure Leadership Index, 2010 established that out of the 74 companies under study, FirstRand and Gold Fields Mining Company came out on top with 93%. Anglo Platinum and Medi Clinic Corporation both at 89% and Nedbank at 88% closely followed. The other four best performers ranked in climate change mitigation and adaption in the annual CDLI report included Barloworld, Gold Fields, Nedbank and Woolworths Holdings. Of these four companies, Woolworths connected solar water heating systems and they are using their recycled cooking oil in a 5% bio-diesel mix for the company fleet.

The report highlighted that most companies should advance in greenhouse gas emission adaptations and the real estate sector was singled out for its low response rate in carbon footprint reporting because only one South African listed real estate company participated in the 2010 CDP (Carbon Disclosure Projects). The Element Investment manager said, “We suggest the real estate sector allocates board responsibility for climate change to a specific director or committee to ensure that executive management is taking action to identify and manage risks and opportunities.”

On 11 November 2010, the Minister of Environmental and Water Affairs, Edna Molewa, cited that South Africa is the greatest environmental polluter in the Southern African region as compared to China and Brazil and she also encouraged South Africa to address this debacle. However, other companies such as Shoprite, Illovo sugar, African bank etc. declined to participate in the carbon disclosure project. Environmental costs are mostly associated with a product, process, system or facility for important and sound management decisions such as decreasing environmental expenses, increasing revenues, improving environmental performance specifically by paying attention to current, future and potential environmental costs (Ngwakwe, 2009).

In light of the environmental guidelines, all relevant information is essential for proper allocation of environmental costs and for informed decision-making (Marelli, 2015). Developing environmental regulatory arrangements such as corporate sustainability (OECD, 2000), extended producer responsibility (OECD, 1996) , the international standard organisations (ISOs), sustainability certification (ISO 14000s), the Kyoto protocol and the greenhouse gas (GHG) trading schemes include green responsibility to the cost and management accounting system to furnish relevant cost information to assist corporate environmental management decisions (Appleby, 2013). Moorthy and Yacob (2013) state that most of the environmental costs are as a result of business decisions, ranging from operational and housekeeping changes. The environmental cost can be reduced or minimised through proactive management methods or style like investing in “greener” technologies, redesigning of procedures and costs (López-Gamero and Molina-Azorín, 2015) and with better and improved environmental costs’ management, companies’ environmental performance can be improved and be of significant importance to human safety and also the companies’ profitability (Epstein and Buhovac, 2014).

Good costing and pricing of products or services are key aspects towards allocation of environmental budget and reporting on environmental performance (Epstein and Buhovac, 2014). Henri et al... (2015) indicate that a revised environmental cost allocation discloses more accurate overhead costs and also production costs and that management is motivated to make informed environmental management decisions if a product related to environmental costs is reflected in the production cost of the polluting product (Colwell and Joshi, 2013)

In South Africa, WWF-Nedbank Green Trust water catchment project focused on 230km of the Pongola River and surrounding land, with more than two million water users including forestry, farming (predominantly livestock, sugar cane and fruit), agri-industry, towns and rural communities. The Pongola River and its headwaters provide more than 50% of South Africa's fresh water and many people around the area rely on the river for daily water use. The bush and river are used as a lavatory creating a situation where water is more likely to test with unacceptably high levels of faecal matter and E.coli, putting the end users at risk for waterborne diseases such as cholera and dysentery. This project serves to address water security, health and sanitation by introducing basic water filters and appropriate water treatment methods at the villages and households (Nedbank, 2015).

The WWF Nedbank Green Trust is funding a two-year programme to lay the foundation for South Africa's transition to a lower-carbon, climate-resilient economy to attain the essential green goals (green affinities). There are developing policy instruments that can be practically implemented by residents and industries in South Africa to scale down the country's carbon emissions and this is made possible by the allocation of a carbon budget, where every sector of the economy is officially restricted to a quantified amount of carbon that it can produce (Nedbank, 2015).

These green goals are attainable through incorporation and rationalisation of different green economy development plans and programmes within government departments such as the Energy, Trade and Industry, Agriculture, Water and Health Departments. The programme is collaborating with the government on this and together with the Department of Environmental Affairs; the programme aims to build the necessary capacity to take the National Climate Change Response Policy forward. It is argued that if South Africa does not meet its Copenhagen obligations to reduce its carbon emissions, taxes must be imposed on South African merchandises. According to the UN Climate Change Conference held 2009, South Africa made a commitment to reduce its carbon emission by 34% by 2020 and by 42% by 2025. “The City of Cape Town adopted an Integrated Metropolitan Environmental Plan (IMEP) in 2001 which includes improved air, water, sea, land quality and an environmentally conscious citizenry in partnership with City authorities in maintaining a clean environment”. EThekwini and The City of Johannesburg Metropolitan Municipality are two other major municipalities that are proactively addressing climate change with extensive integrated development plans. Rural municipal authorities must increasingly be called upon to actively address the climate changes because of the increased pressures of migration and food insecurity (Nedbank, 2015).

2.5 Board Gender and Gender Equity Employment in the Work Place

According to the Workplace Gender Equality Act 2012, equality in the workplace is a process by which the pay gap between women and men is achieved with equal resources and prospects regardless of their gender status (Women Empowerment and Gender Equality Act, 2013). Many countries worldwide have made extensive progress towards gender equality in the workplace in recent years, particularly in areas like education and South Africa is ranked number 17 in the global gender-gap (World Economic Forum, 2013).

The effects of subversion or fraud of shareholders’ funds can be unfavourable to their returns and good governance like gender diversity can lessen this (Mahadeo, Soobaroyen & Hanuman, 2012). Women on boards are capable of engaging with multiple investors and respond to their needs, resulting in positive responses to social responsiveness (Jia and Zhang, 2012). Current research on gender and governance and accountability have found some relationship between women on the board and the company’s performance (Marquis and Lee, 2013 and Teelken and Deem, 2013). Board diversity improves a company’s image and offers equal opportunity, improves decision-making and to increase representation in good view and increases adherence to ethical practices (Skaggs et al.., 2012)

According to the study conducted in Spain, there is an existing correlation between the increase in the number of women on the board and a proportion of women directors (Minguez-Vera and Lopez-Martinez, 2010). The result proposes that more women on boards are essential for protecting shareholders' interest and for social justice (Terjesan et al.., 2009). Women are believed to bring a different management style to board responsibilities and a better environmental adaptation especially in a highly competitive market environment. Quintana-García and Benavides-Velasco (2015) conducted studies in Malaysia and cited that companies with more female board members are well-organised and highly operative, more than those with fewer women.

According to *The Jakarta Globe* (2011), companies' management boards were formerly dominated by male employees but recent studies indicate that companies allow female employees to occupy those positions with the aim of presenting women with equal chances as their male counterparts in order to develop best work performances and to empower themselves and other women. Hillman *et al.*. (2003) found that female co-leaders provide a greater chance of support and is more concerned with the community than their male counterparts are. According to Wang & Coffey (1992) and William (2003) more women on a board make the company more accountable towards CSR and better methods of formulating its CSR policies. Boards comprising of gender diversity is of a vital concern to a company's management (Singh *et al.*., 2008) due to market drivers that require investors to be concerned about social responsibility as part of sustainability (Grosser & Moon, 2005).

ISO 26000 defines gender equality as conserving equal treatment between men and women. Gender biasness reduced the competencies of individuals, families, social groups and the community. There is a pragmatic correlation between gender equality and social and economy development and "Gender equality constitutes one of the Millennium Development Goals (MDGs)". According to the Journal of Economics and Sustainable Development, board diversity plays a strategic role in the formulation of

CSR and company policies which focus on all stakeholders, but is also able to maintain equality in the relationship between all stakeholders (Tricker, 2015). A good and competent board composition requires different board member age, board size, board gender and board tenure. These are crucial issues that are required for the success of board management (Quintana-García and Benavides-Velasco, 2015).

Female leadership is essential in a company because of the perseverance, precision, equality, cooperativeness and kindness that are primarily female characteristics. The opinion of Betti Alisjahbana and Kassandra Putranto in *The Jakarta Globe* (2011) stated that irreplaceable female contributions in business did not only come from females who were in leadership positions or public figures, but also from behind the scenes females who could motivate and inspire other women in innovation and performance. Hillman *et al..*. (2000) indicate that the presence of women on a board can have a positive impact on CSR and increase donations (Wang & Coffey, 1992); improve work atmosphere (Bernardi *et al.*., 2002), are environmentally vigilant (Fernandez *et al..,* 2012) and also improves social activities of the company (William, 2003).

According to Boivie (2015), the more diversified the board structure, the more effective in terms of problem solving and the better the chances of networking. This makes it easier for the directors in managing their business environment and in improving and encouraging CSR performance. Bear *et al..*. (2010) argue that the larger the diversity of directors' resources, the larger the influence for understanding and solving problems which can inspire directors to enthusiastically and successfully overcome the conditions of their business environment, which in turn will promote a positive environment for CSR. The presence of, and increase in the number of women on board is directly linked with the company's concerns over women minorities and social responsibilities (Kakabadse, 2015).

According to Rai (2015), the disproportionality is more noticeable when a certain percentage or number of gender capacity is not reached. Lukerath-Rover (2011) indicates that fewer woman on the board is viewed as representative, not an equal and might find it difficult to convince their male counterparts in board meetings.

According to Konrad, Kramer and Erkut (2008), a board with more women is more effective, loyal and cooperative and women feel more comfortable to discuss their ideas and to socialise together as this improves and facilitates information sharing (Elstad and Ladegard, 2010). Countries' effectiveness depend on how skilful and developed women are (Nag and Das, 2015).

Many other countries like the Nordics, United States, Canada, New Zealand and Australia invested in empowering women on issues around health and education and therefore realise the returns on these investments in economic and political participation (World Economic Forum, 2013). Other countries still lag behind on empowering women, especially in areas of management and remunerations (World Economic Forum, 2013).

A reduction in gender disproportions is an essential determinant of the European economic growth in the past era and closing this gap would have enormous economic implications for developed economies; for example: boosting the US GDP by 9% and Euro zone GDP by 13%. Research in Japan shows that closing the gap between male and female employment would boost the GDP by 16% in the United Nations Economic and Social Commission for Asia whereas the Pacific Countries found that limiting work opportunities for women is costing the state between US$ 42 and US$ 46 billion annually. The World Bank demonstrates that the Middle East experiencing similar restrictions have also suffered massive costs of substantial investment emanating from, not only the gender gap in education, but also the gender gap in the economic opportunity in the whole world. The more diverse the board, the more the innovative, creative and competitive the company will be. Many companies successfully benefit from incorporating women as half of their ability pool through their internal leadership structures. These women have a tendency for making more comprehensive, informed decisions and participating in less risky activities and it was found that gender equal teams may be more successful (The Global Gender Gap Report, 2013).

Recently, the company formed the integral part of the society and that the company must act responsibly towards its stakeholders and not only as a source of revenue generation for its investors' economic benefit. As a responsible corporate citizen the company has to take cognisance and report on the impact of its activities, desirable or undesirable on the economy, society and the environment, while taking into account its needs thereon and the related threats because value and performance are no longer understood as being financial only (The World Economic Forum, 2013).

Indonesian public companies are mostly coordinated as family businesses (Ree and Rodionova, 2015) and the existence of more women as board members in a family driven business tends to control the shareholders rather than for the reason of their expertise or understanding (Bianco et al.., 2015) Gender disproportionality and non-compliance to ethical matters such as sustainability disclosure, corporate social responsibility strategies and policy formulations impact negatively on corporate performance (Sjafjell, 2015)

Many countries are legislatively obliged to promote gender equality in the boardroom (Childs, 2015). Norway was one of the first countries to execute the gender equality law in 2003 demanding registered companies to fill board positions with not less than 40 percent of women by 2008 (Chizema et al.., 2015; Singh, Point and Moulin, 2015). According to Adams and Ferreira (2009:292) Spain followed Norway by minimising the gender disparity gap by proposing a 40% ratio of women representation on boards by 2015 (De Jonge, 2015) and so are European countries, like the Netherlands and France, which introduced a proportion of women on boards (De Jonge, 2015)

The performance of companies which socially and morally support or promote women empowerment is beyond dispute (Chatterjee, 2016). While some studies hint at a positive link between female representation in the boardroom and company performance, others find no or even a negative relation. However, in the *skewed* group, these fresh views may neither be sufficiently stated by the tokenism nor recognised by the majority and in tilted (Ferrara, 2015) In balanced groups, equal representation in the boardroom will more likely be of more prolific deliberations and definitely affect group performance (Sabadoz, 2015). Adikaram and Wijayawardena (2015) analysed group interaction processes and constructed four different categories of groups according to their structure: identical groups, skewed groups, tilted groups and balanced groups. Kanter 1997 discovered that the uniform group consists of a homogeneous gender and members share the same visible characteristics (Healey and O'Brien, 2014).

In the skewed group, the controlling group tends to govern the few and also control the culture of the company and the less represented are treated as tokens and representatives of their group (Krislov, 2012). According to Casey et al... (2011), companies ought to reach a specific set target of women representation in the board room for compliance with the gender mainstreaming policies, so as to eliminate the problem of tokenism at the workplace as this may affect group performance (Rhode and Packel, 2014). Joecks et al... (2013), suggest that a *skewed* group considers having not less than 20 percent of feminine boardroom representation.

According to Koland (2015), the tilted groups are groups with less risky distribution and are different from skewed groups because the minorities can collaborate and influence group dynamics. They do not stand for all of their kind, instead they represent a subgroup whose members are to be distinguished from each other in their expertise and capabilities (Kanter, 1977a:209). Kanter suggests that a tilted group with respect for female representation consists of 20-40 percent women.

Lastly, in the balanced group, the majority and the less represented are treated the same with women representation of more than 40% but less than 60 % (Dougherty et al.., 2015) and gender based variances become less and less vital (Young, 2015) and the different abilities and skills that men and women possess boost the company's performance (Kakabadse et al.., 2015). A *Skewed group* is considered the most challenging because either the less represented are in the centre or they are not considered and they may be segregated (Lu and Anderson, 2015). As a result, three perceptual phenomena may arise: attention through being under watch, contrast through divergence and acclimatisation (Kanter, 1977a; Dahlerup, 1988:279). Visibility means that the less represented feel they are always being watched. The fewer the number of women on the board, the more they feel pressurised and their performance deteriorates as compared to that of their male counterparts (Elsesser, 2015).

Women feel excluded from casual networks and feel socially isolated and vulnerable because men continue with their networks that separate them from the women (Bushell, 2015) and this social and network segregation drives a wedge between women and men in the boardroom (Harris and Giuffre, 2015). *Assimilation* implies categorising where few women are not noticed by their male counterparts and are therefore regarded as tokens (Adikaram and Wijayawardena, 2015). Women adjust differently to this tokenism; either they pretend the disparities do not exist or by hiding their characteristics behind stereotype roles (Cain, 2015).

Kulik and Metz (2015) identified three as the magic number for female representation and further indicate that the number brings the difference in boardroom decision making. Relying on Kanter, 1997, these studies claim that three women or more can considerably transformation boardroom dynamics. Women help improve a company's performance by bringing in new ideas to a male dominated boardroom (Reguera-Alvarado et al.., 2015)

No equal or fair representation between males and females, with males constituting a higher percentage on the board of directors' position in a skewed group (Teigen, 2015). With the tilted or balanced groups there are equal and fair representation of both genders and this equality improves the company's performance (Lyly, 2015). Compared to the uniform or tilted, the skewed group's performance will be weaker than the uniform group (Bae et al., 2015) and the tilted group will outshine the uniform

A study by Power (2015) investigated the concerns and obstacles women face in the workplace e.g. glass ceiling, empowerment deprivation, prejudgment, segregation and resistance. The study conducted are aimed at finding solutions that can assist women minimise and break gender favouritisms, creating organisational buy-in, providing women with more employment opportunities and more network platforms. The study statistically surveys the number of women in leadership positions globally, particularly in Bahrain, and it revealed that the number of women in higher positions has been increasing and compared to men, women still have little opportunities in top management (Ahmed et al., 2015)

Germany is an exception because it focused on voluntary commitments. The German Corporate Governance Code (2010) requests companies to obey or endorse the goals regarding its board composition taking into account board diversity (Lo, 2015). According to Böcklerimpuls (2011) and Holst and Schimeta (2011), there is still low representation of females in the boardroom sitting below 10% on supervisory boards in the 30 biggest companies listed on the Frankfurt Stock Exchange (DAX 30).

However, practical evidence indicates no association between board gender diversity and company performance (Chang et al., 2015) whereas some studies indicate a positive relation between women on boards and company performance to be positive (Vafaei et al.., 2015; Low et al., 2015; Hassan et al., 2015). Campbell and Minguez-Vera (2008), Carter et al. (2003) and others provide evidence of a negative relation (Pletzer et al., 2015; García-Meca et al., 2015; Bianco et al., (2015).

2.6 Summary of Literature Review

Some Studies revealed a positive association between the increasing number of women on the corporate board and improvement of corporate social disclosure whereas others found no significant relationship. However, to the best of the authors' knowledge, no published literature within the South African context, dealing with board gender and environmental disclosure, exists. Therefore, this research will examine the association between the presence of women on the boards of directors and sustainability disclosure in South Africa.

Chapter 3

Research Methodology

3.1 Introduction

In this chapter, the researcher presented the origin of the preferred methodology. Details of the selection yardsticks and the method of analysis used to check each of the stated allegation are presented. Methods of gathering data and measuring tools were also explored.

3.2 Research method

Research methodology is the process of collecting data and information for business decision making purposes (Bryman and Bell, 2015). Methodology may include publication research, interviews, surveys and other research techniques and would include both contemporary and ancient information (Yanow and Schwartz-Shea, 2015). Research can be based on either quantitative or qualitative data or on a combination of both (Leedy and Omrod, 2014). The choice may depend on the researcher's inclinations and capabilities and the relevance of specific approaches to the research topic. The researcher needs to be able to justify why he/she has chosen to use such data. The Quantitative method is mainly used when the researcher wishes to discover how common particular forms of behaviour, such as illegal drug use, are for a particular age group whereas a qualitative method is predominantly used for finding out people's behaviour.

In searching for answers to the problem statement presented in chapter 1, the researcher studied the relationship between a board of directors' gender and sustainability disclosure, in the light of the current literature on board of directors' gender and corporate social responsibility.

3.3 Choice and rationale of research design

According to Kothari (2009), research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure.

The research was based on quantitative research because numerical data was collected to explain a specific phenomenon. A Quantitative research method was employed because it determines the extent of the relationship between two or more variables using statistical data. Relationships between and among a number of facts are followed and translated to distinguish developments and patterns in data, but it does not address the analysis to establish the origin and results.

3.4 Study area and population

The study area is the Johannesburg Stock Exchange companies. A population was the group of people that the researcher made assumptions about in the research study. The population of the study focused on 82 companies listed on the Johannesburg Stock Exchange (JSE) Social Responsible Index (SRI). The justification for choosing this population was that this was the index of companies created by the Johannesburg Stock Exchange for their dedication to social and environmental performance and reporting in their various operations. Depending on their performance, this population changes from year to year, however, the current population of companies in this JSE SRI as at November 2014 were 82 companies

3.5 Sampling method and sample size

Sampling is the process whereby a researcher chooses his/her sample from the population (Lunsford & Lunsford, 1995). The research sample is a group of individuals or companies that the researcher uses wanting to make assumptions about the population. A sample is therefore defined as a subset of a population which the researcher hopes to study (Lunsford & Lunsford, 1995). According to Birchall (2014), there are two major groups of sampling methods: probability or random sampling and non-probability or non-random sampling.

Whilst probability sampling gives equal chances to every member of the population, non-probability sampling is based on purpose, reason, convenience or choice; "In purposive sampling, we sampled with a purpose in mind, we had to have one or more specific predefined groups we were seeking" (Trochim, 2006:1). In this study therefore, a purposive sampling approach was used because the researcher focused on the nine best socially responsible performing companies as determined by the Johannesburg Stock Exchange. However although the research sample was nine of the best performing companies (according to the JSE), the actual sample was again purposively determined based on the number of companies that had complete data for the five years of study 2010 – 2014. For instance four out of the nine best companies had complete data on social investment for the five years, hence four companies' data were used, and since the data analysis made use of panel data, this gave 20 observations (which is 5 years' time series by 4 cross sectional data = 20 observations). In the same vein, the number of companies of the nine best companies with complete data on energy consumption disclosure and number of women employed were five, and these gave 25 observations in the panel regression data (which is a 5 by 5 panel) (see section on data analysis). Given the sensitivity of environmental and social issues, the name of the actual companies whose data were used in the final sample were represented with companies A, B, C, D and E.

3.6 Data collection

Secondary data were collected from the sustainability reports of the companies under study. The data collected are: number of women and men in the board of each company from 2010 to 2014 (four years), furthermore, social and environmental disclosure data were collected. Social and environmental disclosure data were collected through the use of content analysis. The years 2010 – 2014 were chosen because the King III requirement for sustainability disclosure in the integrated reports became effective in 2010, hence the JSE listed firms were required by the JSE to commence compliance in 2010.

3.7 Data analysis

Data analysis is quantitative as the objective is to measure relationships between two variables: the association between board gender and sustainability disclosure. The panel data simple regression analysis is used to analyse the correlations as stated in the objectives:

- To examine if board gender is associated with social disclosure,
- To evaluate if board gender is associated with environmental disclosure
- To examine the association between board gender and gender equity in the work place

Panel data regression is one method of observations that surveys a specified sample of characters over a given time period and also provides numerous interpretations on statistical collection on every aspect of individuals in the sample (Hsiao, 2014). Panel data allow the researcher to analyse important economic problems that cannot be addressed using cross sectional or a time series data set (Cameron and Trivedi, 2013).

Panel data was considered most suitable because the statistical tool used is the regression statistics and the application of regression statistics requires (according to rule of thumb) a data set of at least 10 counts for each variable (see e.g. Kahai and Cooper 2003; Westland, 2010). However, given that the time series for the data collection in this research was only over five years, the panel data was thus justified in order to produce more than ten observations to enable the use of multiple regression. Hence with five years observation and four cross sectional units, a total count of 20 for each variable was produced, and five cross sectional units, a total count of twenty five for each variable was produce. The fixed effect version of panel data regression was used which assumes that data set was fixed at within immediate future and hence the formula: $y_{it} = \alpha + \beta' X_{it} + u_{it}$,.

3.8 Ethical considerations

Most ethical issues occur at the data collecting stage; however in this research, data was from a secondary source which was from the sustainability reports of companies under study and these reports were publicly available data and so there were no ethical issues of primary data collection. However, the sources of data was duly credited to the firms and data usage complied with the usage terms in the companies' web sites from which such free data collected was not be used for commercial purposes. So the data and other company information retrieved from the sustainability reports were only used for the purpose of this mini-dissertation and any journal publications emanating from this research.

3.9 Limitations

As with any other research, the coverage of this study – the SRI listed firms and the sample, the best social and environmental performers and reporters would not mean that the researcher may generalise the findings to the entire JSE population, rather, findings are limited to the SRI listed firms.

3.10 Summary of Chapter 3

Chapter 3 has highlighted the research methodology employed in the process of this research and the justification. This chapter thus explained the research approach, which is quantitative, and this is justified as the research seeks to establish possible relationship between variables. Other highlights in chapter 3 include the research area, the population, the sample size determination, the analytical method (the panel data regression) and the ethical consideration. The next section, chapter 4 will provide a detailed analysis of data and discussion of findings.

Chapter 4

Data Analyses and Interpretation

4.1 Introduction

This chapter presents the research data, analyses and results based on the objectives of the study outlined in Chapter one. This chapter demonstrates the findings through sustainability disclosures from 2010 to 2014. Information on whether the board of directors' gender has an impact on the sustainability disclosure is demonstrated by graphs and panel data regression analysis. Data analysed addresses the three research objectives:

To examine the relationship between a board of directors' gender and social disclosure, to examine the relationship between a board of directors' genders and environmental disclosure and lastly, to examine a board's gender and Gender Equity Employment at the work place.

4.2 Data Presentation

The following tables present data from 2010, 2011, 2012, 2013 and 2014. Year 2009 was not included because it was when the King III code was introduced which had an element of assurance in sustainability reporting. Gender equality and women empowerment was also researched. Tables 4.1 to 4.4 represent raw data obtained from the annual reports of the companies under study and the information from table

4.5 to table 4.11 is extracted from the raw data obtained from integrated annual reports.

Table 4.1 Board of directors' gender

(Six companies had complete data for the five years 2010 – 2014)

No	Company	2010		2011		2012		2013		2014	
		M	F	M	F	M	F	M	F	M	F
1	Company A	7	2	3	2	3	2	8	2	9	6
2	Company B	9	3	9	4	11	2	9	3	9	3
3	Company C	10	1	9	1	9	1	11	2	6	2
4	Company D	9	1	7	2	5	4	10	4	10	4
5	Company E	6	3	6	3	6	3	8	2	7	3
6	Company F	11	2	10	2	11	3	9	3	9	3

Table 4.2 Social Investment Disclosure

(Four companies' data were purposively chosen as these had complete data for the five years 2010 – 2014)

No	Company	Corporate Social Investment				
		2010	**2011**	**2012**	**2013**	**2014**
1	Company A	R111M	R129 M	R145.7 M	R127.5 M	R135.8 M
2	Company B	R14.1 M	R14.4 M	R14.7 M	R197 M	R268 M
3	Company C	R112 M	R129 M	R146M	R127 M	R136 M
4	Company D	R132 M	R76.8 M	R84.5 M	R104 M	R115 M

Table 4.3 Environmental Disclosure (Represented by Energy Consumption)

(Five companies' data were purposively chosen as these had complete data for the five years 2010 – 2014)

No	Company	Energy consumption				
		2010	**2011**	**2012**	**2013**	**2014**
1	Company A	99.97GJ	102.36GJ	112.9GJ	105.69GJ	107.68GJ
3	Company B	100GJ	102GJ	113GJ	106GJ	108GJ
5	Company C	6215GJ	6533GJ	6433GJ	6740GJ	4696.7GJ
7	Company D	1 871 756 GJ	18 072 441GJ	1921347 GJ	2779 570 GJ	2953038 GJ
8	Company E	820 075 GJ	719 727 GJ	945 489GJ	1 038 5405 GJ	1 118 169 GJ

Table 4.4: Number of Women Employed

(Five companies' data were purposively chosen as these had complete data for the five years 2010 – 2014)

No	Company Name	Number of Women				
		2010	**2011**	**2012**	**2013**	**2014**
1	Company A	13%	14%	15%	16%	17%
2	Company B	7%		8.15%	8%	8.20%
3	Company C	57%	57%	57%	57%	57%
4	Company D	13%	13.5%	14%	14%	13%
5	Company E	40%	40%	38%	37%	38%

4.3 Data Analysis

The tables above present data collected from the companies' annual reports from 2010 to 2014. Data from 2009 were not included because it was when King III was introduced which came into effect in March 2010. Table 4.1 indicates the number of women in the board of director positions per company under research as covered by the Women Empowerment and Gender Equality act of 2013. Clause 7 of the GEWE indicates that selected public and private bodies must improve and implement measures to achieve the advanced realisation of about 50 percent representation and influential involvement of women in decision making structures.

King III became obligatory as a result of the awaited new Companies Act and changing developments in intercontinental governance. As with King I and King II, the King Committee strived to be at the front of governance internationally and this has again been achieved by focusing on the importance of annual reporting and on how a company is affecting the economic life of the community in which it operated during the year under review. In addition, emphasis has been placed on the requirement to report on how the company intends to enhance those positive aspects and eliminate or improve any possible negative impacts on the economic life of the community in which it will operate in the year ahead (Makhutla, 2014).

Table 4.2, 4.3 and 4.4 show the social investment disclosure, environmental disclosure (energy) and gender equity employment (number of women employed) respectively. There has been an increasing concern on corporate social responsibility across all disciplines. According to Rao &Tilt (2015), CSR is a company's biggest responsibility towards the society within which it operates and also, companies must not be assessed based on their economic success only (Carol, 1997; Savitz, 2012) as they are no longer anticipated to be major contributors to the international economy but rather merge and skilfully balance multiple stakeholders (Jamali et al., 2008).

4.4 Panel data regression

In evaluating the link between women on the board and social disclosure, three social performance variables were chosen: Social investment disclosure, environmental disclosure (represented by energy) and number of women employed. This section therefore provides analysis of the three research questions as follows:

1. What is the relationship between boards of directors' gender and social disclosure?
2. What is the relationship between boards of directors' gender and environmental disclosure (represented by energy disclosure)?
3. What is the relationship between boards' gender and gender equity employment in the work place?

Therefore the panel data simple regression model is:

$$OY = \beta o + \beta_1\chi_1 + + \varepsilon$$

Where: Y = dependent variables: social investment disclosure; energy disclosure and gender equity employment (number of women employed).
$\chi_1 =$ Number of women in the board
βo = constant
$\beta_1 =$ regression coefficient,
$\varepsilon =$ error term

It is therefore hoped that by answering the above research questions, the following research objectives would have been achieved:

1. To examine the relationship between boards of directors' gender and social disclosure
2. To evaluate the relationship between boards of directors' gender and environmental disclosure (represented by energy disclosure)
3. To evaluate the relationship between boards' gender and gender equity employment

Table 4.5: Relationship between number of women on the board and social investment disclosure

Model 1: Fixed-effects, using 20 observations
Included 4 cross-sectional units
Time-series length = 5
Dependent variable: SocInvest

	Coefficient	*Std. Error*	*t-ratio*	*p-value*	
const	8.3625	0.828396	10.0948	<0.00001	***
women	0.75	0.271314	2.7643	0.01446	**

Mean dependent var	10.50000	S.D. dependent var	5.916080
Sum squared resid	26.50000	S.E. of regression	1.329160
R-squared	0.960150	Adjusted R-squared	0.949524
F(4, 15)	90.35377	P-value(F)	2.61e-10
Log-likelihood	-31.19290	Akaike criterion	72.38579
Schwarz criterion	77.36445	Hannan-Quinn	73.35768
Rho	0.447939	Durbin-Watson	0.745283

Tested at 5% significance level, the panel data regression analysis show a P value of 0.01 which is less than the 5%, this means that, whilst keeping other factors constant, women on the board is associated with social investment disclosure in the companies studied.

Graph 4.1: Relationship between women on a board and social investment disclosure

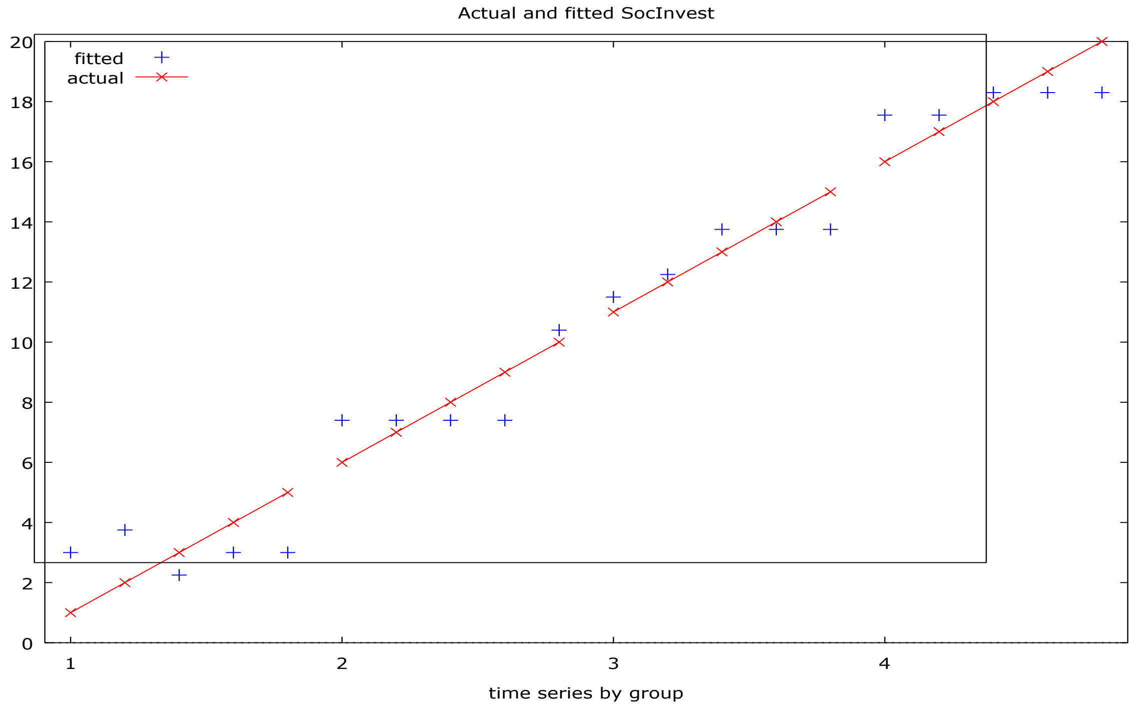


Table 4.6 : Women on the board and Energy Disclosure

Model 1: Fixed-effects, using 25 observations
Included 5 cross-sectional units
Time-series length = 5
Dependent variable: Energy

	Coefficient	*Std. Error*	*t-ratio*	*p-value*	
const	6.86667	0.716426	9.5846	<0.00001	***
Women	0.833333	0.260534	3.1986	0.00473	***

Mean dependent var	9.000000	S.D. dependent var	6.123724
Sum squared resid	32.50000	S.E. of regression	1.307871
R-squared	0.963889	Adjusted R-squared	0.954386
F(5, 19)	101.4308	P-value(F)	5.00e-13
Log-likelihood	-38.75302	Akaike criterion	89.50603
Schwarz criterion	96.81929	Hannan-Quinn	91.53442
rho	0.417949	Durbin-Watson	0.773504

Tested at 5% significance level, the panel data regression analysis show that P<0.01, this indicates that keeping other factors constant, women on the board is associated with energy disclosure

Graph 4.2: Relationship between women on the board and energy disclosure

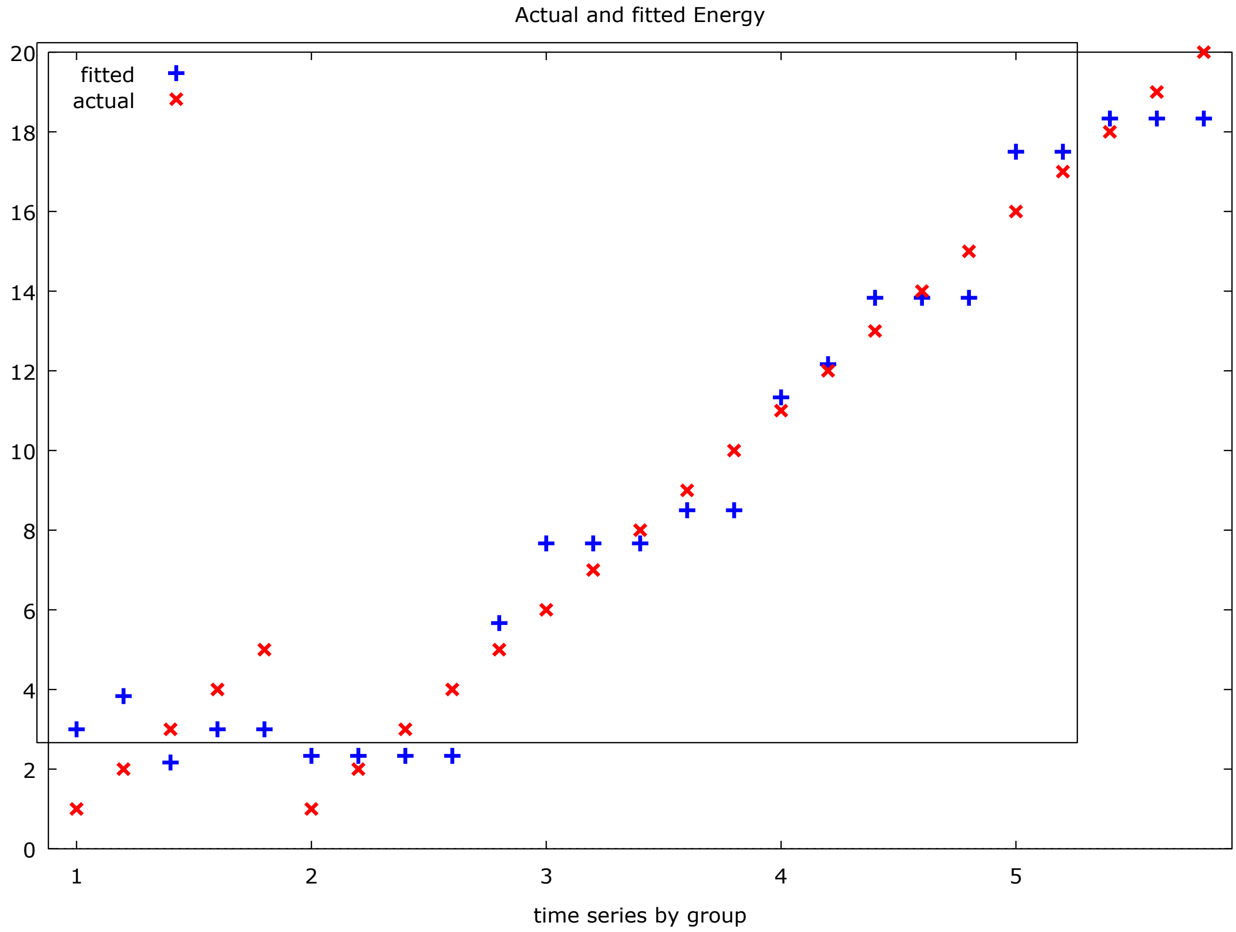


Table 4.7: Relationship Between Women on the Board and Number of Women Employed:

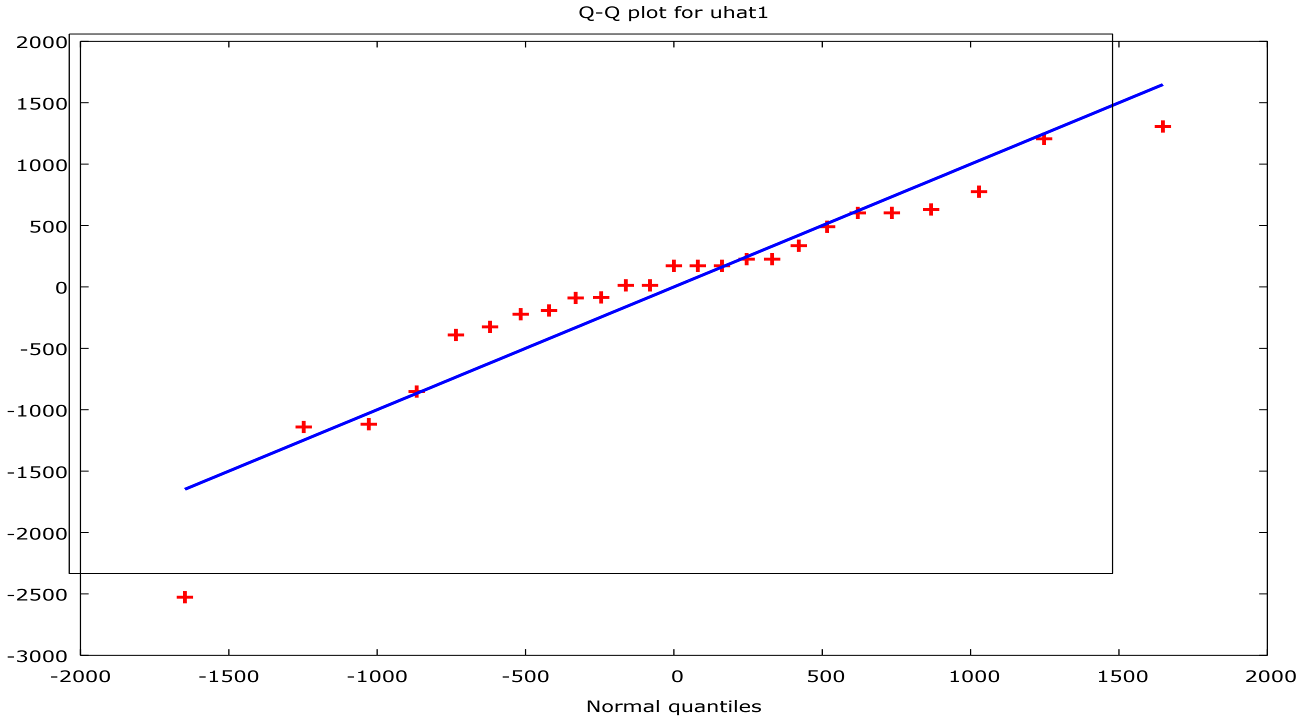
Model 1: Fixed-effects, using 25 observations
Included 5 cross-sectional units
Time-series length = 5
Dependent variable: No of Women Employed

	Coefficient	*Std. Error*	*t-ratio*	*p-value*	
const	11476.2	478.925	23.9624	<0.00001	***
WomenonBoard	430.528	168.053	2.5619	0.01907	**

Mean dependent var	12612.80	S.D. dependent var	11658.69
Sum squared resid	15453934	S.E. of regression	901.8675
R-squared	0.995263	Adjusted R-squared	0.994016
F(5, 19)	798.3496	P-value(F)	2.18e-21
Log-likelihood	-202.1547	Akaike criterion	416.3094
Schwarz criterion	423.6226	Hannan-Quinn	418.3378
rho	-0.102621	Durbin-Watson	1.482101

Tested at 5% significance level, the panel data regression analysis show that P=0.019, this indicates that P<0.02; therefore keeping other factors constant, women on the board is associated with disclosure of women employed in the companies studied.

Graph 4.3: Relationship between women on the board and number of women employed



The Second Objective sought to evaluate the link between women on the board and environmental disclosure; this was analysed using the energy disclosure data.

4.5 Discussion of findings

The study intended to examine the association between the board of directors' gender and sustainability disclosure. This section deliberates the outcomes as presented and draws the associations with the literature review done in Chapter 2. In line with the objectives, the first level of analysis looks into the association between board gender diversity and social disclosure. The study focused on 5 companies that are listed in the Socially Responsible Index (SRI) of the Johannesburg Stock Exchange (JSE).

Secondary data from the company's annual report are used in this study. The data collected from the annual reports are sustainability disclosures (environmental and social disclosures) and women empowerment from 2010 to 2014. A quantitative method of data analysis is employed. As explained in Chapter 3, quantitative data analysis is concerned with the measurement and statistics of attitudes, behaviours and perceptions based on observable behaviour of samples, implicit and explicit dimensions and structures of meaning making in the material and what is represented in it (Flick, 2014:370).

4.5.1 The relationship between the board of directors' gender and social disclosure

The first objective of this study sought to provide an answer to whether there is a relationship between the board of directors' gender and social disclosure. Integrated reports were obtained from companies" websites with the purpose of finding out if companies do invest in social issues. It was found that almost all companies have sustainability reports over the years under study. It may be said that there is an increase in disclosing issues of sustainability amongst certain companies.

The research found a positive correlation between the board of directors' gender and social disclosure on companies under study from 2010 to 2014. Of the nine companies under study, five companies have fully disclosed their corporate social investment in their annual report, supporting the first objective that there is an existing correlation between the board of directors' gender and social disclosure. The results are supported by various researchers from different countries. Compared to men, women are considered more socially orientated and this results in more effective board decision making especially on issues related to social responsibility (Hur et al., 2015; Rosenblum, 2014). Gender stereotype studies associate women with characteristics such as compassion, caring and concern for others and being interested in important issues of the community (Boulouta, 2013). The presence of women on the boards of directors is considered to have a positive benefit in relation to their social orientation and community representation

Women as board of directors' members are commonly expected to play an important role in supporting CSR strategies (Mishra and Kumar, 2014). According to the resource dependence theory, board members usually bring resources emanating from their individual background, gender diversity and cultural minorities (Ben-Amar et al., 2013). These individual background characteristics increase the board's devotion to CSR issues and eliminate or reduce racial and gender disproportionalities. It is also confirmed by the studies that female directors are likely to be more sensitive to CSR than their male counterparts (Landry et al., 2014). Women and minority group directors are expected to be more interested in the welfare of various stakeholders even though they are not well represented in organisations (Fowler, 2013; Mishra and Kumar, 2014).

The higher percentage of women on corporate boards tend to selflessness and having an improved attitude towards social behaviour (Robbin et al., 2013). Companies with at least three or more women as board members donate 28% more CSR funds than companies without female board members (Tricker, 2015).

4.5.2 Relationship between the board of directors' gender and environmental disclosure

With regards to the second objective which seeks to evaluate the relationship between the board of directors' gender and environmental disclosure, data were obtained from the annual reports of various companies under study from the year 2010 to 2014. Some companies disclosed their environmental impact whereas some did not. From the research conducted, there is a positive correlation between the board of directors' gender and environmental disclosure. Liao, Luo and Tang (2014) indicate a significant and positive relationship between gender diversity as measured in the percentage of female directors on the board and the inclination to release Green House Gas information as well as the extensiveness of environmental disclosure.

Moreover, a board comprising of more female directors or environmental committee tends to be ecologically transparent (Liao, Luo and Tang, 2014). There is a positive correlation between the existence and increase in the number of women on the board and the increased consideration on corporate ethical and environmental decision making. (Frias-Aceituno et al., 2013). Previous research have found that women on the board enhances corporate environmental disclosure (Liao, Luo & Tang, 2014).

Frias-Aceituno et al. (2013) argue that gender composition focuses more on ethical and environmental concerns because it has a positive impact on the improvement of corporate social performance. It is also argued that women in decision making positions influence the organisations to integrate social and environmental concerns in their business operations and interact with various stakeholders (Weiss, 2014).

Landry et al. (2014) confirm that female directors are more sensitive to Corporate Social Responsibility (CSR) as compared to their male counterparts.

4.5.3 Relationship between board of directors' gender and women employment

The third objective is to evaluate the relationship between board gender equity and employment in the work place. Data were collected from the annual reports from 5 companies on the JSE-SRI from 2010 to 2014. The results indicate a significant relationship between women on the board and an increase in the number of female employees and an increase in women empowerment. According to a study conducted in Spain, a significant and positive correlation between women directors and an increase in the proportion of women employees was found (Minguez-Vera and Lopez-Martinez, 2010). Other studies have equally found that female board members or executives are related to more women employees (Ragins, 1989; Hillman, 2007; Skaggs et al., 2013). This is made possible as women executives are more prone to mentoring fellow female employees (Skaggs et al., 2013) and that a women's director programme has introduced a programme to educate women directors and ensuring that they have the required skills experience for directorship responsibilities (Azmi & Barret, 2013) .

Companies have introduced initiatives such as recognised mentoring curriculums (Grayson et al., 2013), other occupations and alternative and supple work options (Azmi, & Barret, 2013) to enhance the development of women. More recently, women networking appear to help with regard to their professional progress (Dobbin and Kalev, 2013) and that they help facilitate with the other women in male dominated industries (García and Welter , 2013; Germain et al., 2012). Countries around the world passed a law for companies and public sectors to fill at least 50 percent of their board seats with women as part of the Women Empowerment and Gender Equality act (Beckwith, 2003; Dahlerup, 2006, 2012; Krook, 2008, 2009; Norris, 2004, 2006; Pande and Ford, 2011).

4.5.4 Summary of Chapter 4

This chapter provided the analysis of data, the findings and discussions. The three major research questions were analysed using data from the JSE SRI sample companies. The questions raised in the study were whether the number of women in the board of directors has a relationship with social disclosure, environmental disclosure and gender equity in the work place. Social disclosure was represented by social investment disclosure; environmental disclosure was represented by energy usage disclosure and gender employment equity was represented by the percentage of women employed in the companies. A panel-data regression analysis was used to analyse the three research questions. Tested at a significant level of 5%, all the regression results showed a positive relationship with an alpha of less than 0.02. This thus led the researcher to conclude that a sufficient number of women in the board of directors may influence corporate social and environmental disclosure and the number of women employed in the work place. Consequently, answers were provided to the three research questions and hence the three research objectives were achieved.

Chapter 5

Conclusion and Recommendations

5.1 Conclusion

This study examined the relationship between the board of directors' gender and sustainability disclosure of the top 9 companies in the JSE-SRI report. Secondary archival data from the companies were used. The quantitative method was used. In order to address the aim of this study as reflected in the title, three objectives were stated: to examine the relationship between a board of directors' gender and social disclosure; to evaluate the relationship between a board of directors' gender and environmental disclosure and to evaluate the relationship between a board's gender make up and gender equity employment at work place. Answers to the above objectives were sustained by the data obtained from the companies' annual integrated reports and from the review of related literature.

Findings from the analysis of data which gave an answer to the first objective showed a positive and significant correlation between women on the board and social disclosure. This finding is also supported by the literature evidence that the higher the number of women on board, the more the increased responsibility towards the community they serve. Moreover, findings from the data analyses provided answers to the second objective stating the positive association between the presence of women on a board and environmental disclosure. Women are found to be inclined to ethical and environmental decision making and also enhance corporate environmental disclosure. Most of the companies under study disclosed their environmental impact in their annual reports and therefore the objective is supported by both the literature and the findings.

With the third objective, an increase in the number of women on the board increases the proportion of females employed by the companies. This finding is supported by the literature which states that female board members are associated with the number of female employees and that female board members are more prone to mentoring their fellow female employees.

From the study conducted and the use of regression analyses, a positive relationship was established between board diversity and various sustainability measures in the top nine companies listed on the JSE-SRI. However, not all companies under study disclosed their sustainability issues on their annual reports but there is a significant improvement in terms of sustainability and corporate social disclosure by companies to the communities within which they operate.

The sustainability disclosure practice is supported by King III which consists of 3 key elements: leadership, sustainability and good governance citizenship. King III considers the fact that the board should direct the company to achieve sustainable economic, social and environmental performance. The King III report was released in 2009 and came into effect in 1 March 2010. King III was written in agreement with the principle based approach of governance. King III, Chapter 9: Integrated Reporting and Disclosure, indicates that a board must ensure that proper procedures and processes are in place and that companies are obliged to produce a report that gives a comprehensive image of a company's financial and non-financial profiles which must be consistent and universal.

5.2 Recommendation

By examining the relationship between women on boards and sustainability disclosure, this study provides an avenue for more case based studies in examination of these relationships. The paper recommends that women on the board should be encouraged since it enhances sustainability disclosure. This means that women on the board may significantly improve the campaign for corporate sustainability. It is also recommended that future research should expand the sample to include many other companies on the JSE to examine this relationship further. This research may also be used as a classroom case study on the relationship between a board's gender make-up and sustainability disclosure.

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