



# Board gender diversity and environmental management: A South African perspective

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## Introduction

**“There can be no renewal of our relationship with nature without a renewal of humanity itself” (Pope Francis, 2016)**

- **Environmental threats** in SA: water-stress; over-fishing; air pollution; waste management; industrial farming<sup>1</sup>
- **Paris agreement** signed in April 2016
  - **Fundamental change** is required
  - Focus on **managing the environment** in a sustainable manner
- A firm’s **environmental programs** should be **managed** in a comprehensive, systematic, planned and documented manner<sup>2</sup>



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## Role players in promoting sustainable business policies and practices

- **Banks and institutional investors**
  - **Evaluate** firms' environmental policies and practices; acknowledge risks<sup>3</sup>
  - **Withhold or withdraw capital** if environmental criteria are not met
  - **Engaging** in private



## Role players in promoting sustainable business policies and practices (cont.)

- **Government**
  - Promulgate and enforce pro-environmental **legislation**
- **Directors**
  - Environmental management does not only depend on **ecological factors**, but also on the **behaviour of environmental stewards**<sup>4</sup>
  - **Directors** set the **tone** to limit their firms' environmental impact
  - **Personal liability** has become more important in recent years
  - Important **monitoring mechanism**<sup>5 & 6</sup>
  - Diverse directors bring **different perspectives** to boardrooms<sup>7</sup>



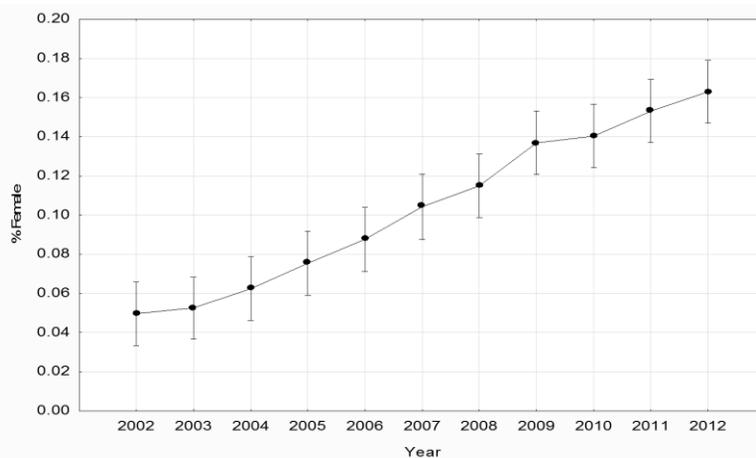
## Board gender diversity

- **Diversity**: Human groupings based on, *inter alia*, race, **gender**, age, education, professional background and personality characteristics<sup>8</sup>
- Females represent **51.3%** of local population; **43%** of the economically active population<sup>9</sup>
  - **Discriminatory policies** before 1994
  - Are females still **under-represented** as senior managers and directors?



## Board gender diversity in the local context

Figure 1: Percentage of female directors (2002-2012)<sup>13</sup>



**Significant increase** in female board representation (14.58% in 2009 to 18.66% in 2015)

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## Board gender diversity (cont.)

- **Diversity** is the art of thinking **independently together** (Malcolm Forbes)
- Our ability to reach **unity in diversity** will be the beauty and the test of our civilisation (Mahatma Gandhi)
- **Advantages**
  - Innovation; different approaches in identifying environmental risks and exploiting green opportunities; complex moral reasoning; access to personal network<sup>7, 10 & 11</sup>
- **Disadvantages**
  - Conflict; slower decision-making<sup>12</sup>
- **Concerns**
  - Tokenism; over-boardedness<sup>13</sup>



## Underlining theories

- **Ecofeminism**: Combines **ecological and feminist** concerns
  - Ecofeminists claim that patriarchal institutions are responsible for the **domination** (and possible exploitation) of both **women and nature**<sup>14</sup>
  - By **promoting institutional change** at the highest echelons, **benefits** to companies, society and nature can be unlocked
- The evolution of institutions coincides with the evolution of the **“individual mind”**<sup>15</sup>
  - To what extent have institutional and individual “minds” in South Africa **evolved** in terms of **conserving the natural environment** and **diversifying** corporate structures in recent years?



## Board gender diversity and environmental management

- Growing body of **international literature** on the relationship between **board gender diversity** and **environmental management**<sup>16, 17 & 18</sup>
  - Mixed results
- **Limited research** has been undertaken on this topic in South Africa
- **Problem statement:** to investigate the relationship between female board representation and various elements of environmental management for a sample of JSE-listed companies



## Research design and methodology

- **Research period:** 2009 – 2015
- **Population:** all companies listed on the JSE over the research period
- **Sample:** restricted to companies which had data on the % female directors on Bloomberg (the **independent** variable)
  - Included companies that **delisted** to avoid survivorship bias
  - **745** annual observations
  - Companies operated across **all economic sectors**



## Research hypotheses

- There is **no relationship** between the % female directors and ...
  - H<sub>0,1</sub>: a company's awareness of **climate change risks**.
  - H<sub>0,2</sub>: a company having environmental **policies and targets** in place.
  - H<sub>0,3</sub>: a company's **environmental impact**.
  - H<sub>0,4</sub>: the quality of a company's **environmental reporting**.
  - H<sub>0,5</sub>: a company's **positive** environmental **reputation**.



## Dependent variables

- Awareness of **climate change risks**
  - Carbon Disclosure Project (CDP) physical risk exposure
  - CDP regulatory risk exposure
- Environmental **policies and targets**
  - Environmental quality management policy
  - Energy efficiency policy
  - Emissions reduction targets



## Dependent variables (cont.)

- **Environmental impact (log)**
  - Water intensity per sales
  - Energy intensity per sales
  - Total greenhouse gas emissions
  - Waste generated per sales
  - Waste recycled per sales
- **Environmental reporting**
  - Bloomberg's Environmental (E) disclosure score
- **Positive environmental reputation**
  - Sunday Times Top Brands Green Award
  - Mail & Guardian Greening the Future Award
  - Imvelo Awards for Responsible Tourism
  - Eco-Logic Awards
  - CDP A-list



## Research design and methodology (cont.)

- **Control variables**
  - Size of the board
  - Company size (log total assets; log revenue; log market capitalisation)
  - Financial slack (log current assets / current liabilities)
  - Accounting performance (earnings per share)
  - Industry classification (Global Industry Classification System)
- **Cross-checks** were done to ensure data accuracy



## Research design and methodology (cont.)

- **Descriptive statistics** to establish trends (means;  $\sigma$ )
  - Fisher's least significant difference post hoc test
- **Inferential statistics** to test research hypotheses
  - Generalised estimating equations and two-way fixed effects panel **regressions**
  - Adjustments were made for **heteroscedasticity** where applicable
  - Possible effects of **multicollinearity** were moderated by the sample size and the regression models' overall fit
  - **Acceptable tolerance values** were determined for the predictors



## Empirical results

- Significant **increase** in female board representation: 14.58% in 2009 → 18.66% in 2015 (LSD test  $F=10.355$ ,  $p<0.000$ )
- More companies **acknowledged** physical and regulatory risks associated with climate change exposure
- Substantial **increase** in companies having an environmental quality management policy, an energy efficiency policy and emissions reduction targets; still quite low in absolute terms



## Empirical results (cont.)

- Sample companies used **less** energy, generated less waste and recycled more waste, but used **more** water and emitted more greenhouse gases over the same period

Year	Avg water intensity per sales	Avg GHG/CO <sub>2</sub> emissions per sales	Avg energy intensity per sales	Avg waste generated per sales	Avg waste recycled per sales
% change	128%	52%	-22%	-40%	26%

- Bloomberg's **E-disclosure score** increased from 16.91 (out of a 100) in 2009 to 24.15 in 2015; in **contrast** to CDP studies showing improvements<sup>19</sup>
- On average 13 companies received one or more green **awards** per annum



## Empirical results (cont.)

- Only **two** statistically significant relationships:

Null hypotheses: There is no relationship between the percentage of female directors and...		Outcome	Significant relationship(s)
H <sub>0,1</sub>	a company's awareness of climate change risks.	Could not reject	
H <sub>0,2</sub>	<b>a company having environmental policies and targets in place.</b>	<b>Could reject</b>	Environmental quality management policy F: 4.6513; p: 0.0315; Wald: 2.9425; Pr(> W ): 0.0863
H <sub>0,3</sub>	<b>a company's environmental impact.</b>	<b>Could reject</b>	Waste generated per sales (t = 2.594; p = 0.013) Waste recycled per sales (t = 2.412; p = 0.026)
H <sub>0,4</sub>	the quality of a company's environmental reporting.	Could not reject	
H <sub>0,5</sub>	a company's positive environmental reputation	Could not reject	



## Summary and conclusions

- Women bring **new perspectives** to the boardroom, specifically as it pertains to **environmental management**
- In this sample, boards with **more female directors** had more environmental **policies and targets** in place and reduced and recycled more **waste** compared to male dominated boards
- Pro-environmental actions **not adequately reported** on; do not reap the **reputational benefits**
- **“Kill two birds with one stone”**: Become more attractive to investors who value sound environmental management and gender equality



## Implications

- **Regulator**
  - Strict(er) **enforcement** of environmental laws
  - **Legislation** is not the solution to increase board gender diversity
    - A “red tape tsunami”<sup>20</sup>
- **Companies**
  - Change **mind-sets**
  - Raise the profile of the **nomination committee**
  - Improve the **quality** of environmental reporting
  - Broaden the pool of eligible directors through **training and continuous development; mentoring and coaching**



## Implications (cont.)

- **Women with directorship ambitions**
  - Acquire the **required qualifications**
  - **Build networks**
  - Utilise **development opportunities**
  - **Family-related challenges**
- **Educators and researchers**
- **Institutional investors**
  - Recognise the **importance** of board gender diversity and sound environmental management
  - Build capacity and step up **voting** and **engagement**



## Final remarks

- Some **positive** board diversity and environmental management **developments** in South Africa, yet **scope for improvement** given the associated benefits
- **Different stakeholders** have a **role to play** in encouraging further change to serve the **greater good of society**

“If we keep asking the **same people** the same questions and they keep coming up with the **same answers**, we are not going to make the transition to a de-carbonised economy very well”<sup>10</sup>

**Questions / suggestions?**

**Thank you!**



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