

# A PRE- AND POST-ELECTION COMPARISON OF THE COMMITMENT OF SOUTH AFRICA'S LISTED COMPANIES TO SUSTAINABLE DEVELOPMENT

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## **Abstract**

In South Africa the first democratic election brought about the possibility for the South African business community to compete internationally, unhindered by the limitations and sanctions designed to counter the system of apartheid. To be admitted to the global market, companies must comply with international environmental standards.

In order to ascertain the level of commitment of the South African business community to the concept of sustainable development, surveys were undertaken during August 1993 to January 1994 as well as April to May 1995 among South African companies listed on the Johannesburg Stock Exchange.

Based on the results we conclude that there is an increased commitment by South Africa's listed companies to the concept of sustainable development subsequent to the 27 April 1994 election.

## **Key words**

*Sustainable development  
Environmental management*

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## 1. BACKGROUND

Economics is concerned with the utilisation of scarce resources to satisfy the growing needs of the ever increasing human race (Samuelson & Nordhaus 1989; Stiglitz 1993; Dillingham, Skaggs & Carlson 1992). Should these resources be depleted, economic degeneration will ensue. In order to sustain the process of satisfying human needs, to reduce poverty and to raise living standards, economic growth is a fundamental prerequisite (Pearce & Warford 1993).

Economic activities cannot be divorced from the natural environment in which they are pursued (Pearce, Markandya & Barbier 1991:4). According to Gray, Bebbington & Walters 1993:3 environmental issues are business issues. Marsh (1864:43) already recognised this in the nineteenth century when he stated that industrialised society was making "... tremendous changes ... on the face of the earth." Prior to 1980, economic growth through development and environmental conservation were generally thought to be incompatible objectives: a country could either achieve economic growth or conserve the environment, but could not achieve both goals (CSIR Environmental Services 1992:3).

In 1980 the International Union for the Conservation of Nature embraced the concept of sustainable development, which sought to achieve an integrated approach to both development and the environment. It stated (in Pearce & Warford 1993:41) that development and conservation were both "... equally necessary for our survival and for the discharge of our responsibilities as trustees of natural resources for the generations to come". The question therefore is not *whether* to grow, but *how* to grow (Pearce & Warford 1993:3).

Such recognition of the fact that conserving the environment and economic development are two sides of the same coin has grown internationally (Hallows 1993:1) and today many companies see a commitment to sustainable development as an issue of paramount importance in their business (CICA 1994:9).

In South Africa the first democratic election brought about the possibility for the South African business community to compete internationally, unhindered by the limitations and sanctions designed to dismantle the apartheid system. In order to be admitted to the global market, companies must now comply with international environmental standards.

The premise of this paper is that the international trade opportunities that have come about since the election of 27 April 1994 have led to an increased commitment to sustainable development amongst the listed companies of South Africa.

This paper gives a brief overview of current thought on the concept of sustainable development and compares the levels of commitment to sustainable development by South Africa's listed companies observed before and after the election of 27 April 1994.

## 2. SUSTAINABLE DEVELOPMENT

### 2.1 Sustainable development - a definition

In 1987, the Brundtland Commission published *Our Common Future*, which led to the emergence of the concept of sustainable development at the forefront of political debate (Pearce & Warford 1993:41). The Brundtland Report defines sustainable development as "development which meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED 1987:43). Because this is a very general definition, it appears to be widely accepted (Gray & Bebbington 1994).

Gray & Bebbington (1994) identify two closely related components of a sustainable economic system, namely:

- *Eco-efficiency*, which refers to mankind's use of the physical environment;
- *Eco-justice*, which refers to the effect that mankind's use of the physical environment has on society. Eco-justice can be divided into *inter-generational* and *intra-generational* equity.

*Inter-generational* equity is defined by Pearce and Warford (1993:49) as "development that secures increases in the welfare of the current generation, provided the welfare in the future does not decrease". This definition tallies with the concept of constant wealth in terms of which a generation is required to leave the following generations a stock of "quality of life assets" no smaller than those it inherited.

The environment consists of two types of "quality of life assets". *Natural capital* refers to the planet's resources and one can distinguish between critical natural capital (essential to the maintenance of life, such as the ozone layer) and renewable, replaceable or substitutable natural capital (e.g. forests that can be replanted or man-made substitutes such as solar panels which can be used instead of fossil fuels). *Man-made capital* refers to the stock of all man-made things such as buildings, roads, consumer goods and knowledge (Gray & Bebbington 1994). Inter-generational equity is achieved by means of a system which protects all critical capital, renews some elements of natural capital and substitutes

depletions in natural capital by man-made capital (Gray & Bebbington 1994).

*Intra-generational equity* is described by Pearce *et al.* (1991) as providing for the needs of the least advantaged individuals in society. He cites that the poor are often more affected by abused environments than the rich. A constant or rising stock of natural resources is most likely to serve the goal of intra-generational equity when the productivity of the local eco-system is essential to the livelihood of the poor. In order to achieve intra-generational equity, a different perspective is required. Siebert and Anthal, in Mathews (1993:154) suggest that "social groups must be prepared to calculate into their real income the value of an improved environment, and must be willing to sacrifice income increases in the traditional sense of the term in favour of improvements in environmental quality."

The complexity of the concept of sustainable development can probably be illustrated by the following questions (Gray *et al.* 1993:282-285): Who or what do we wish to sustain? If humans, which humans? Does sustainability mean the sustenance of Western civilization at an economically more developed stage than at present? If so, for how long, and at what level of resolution? There are no unambiguous answers to these questions. For the purposes of this paper, however, the authors subscribe to the view of sustainable development, which is associated with both eco-efficiency and eco-justice.

## **2.2 Measuring sustainable development**

Since the publication of the Brundtland Commission Report, *Our Common Future* (1987), much work has been done on sustainable development at the local, regional and global level and on its practical implementation at the sectoral and project level.

The pursuit of sustainable development requires indicators of success (Pearce and Warford 1993:83), preferably based on a conceptual foundation. Various indicators that may serve as a yardstick against which success can be measured have been developed by various bodies. These indicators include those developed by *inter alia*:

- the International Chamber of Commerce (ICC) in *The Business Charter for Sustainable Development* (Gray *et al.* 1993:68-69);
- the Coalition for Environmentally Responsible Economies in *The Valdez Principles* (Gray *et al.* 1993:65-67);

- the Chemical Industries Association Responsible Care Programme (Gray *et al.* 1993:70-72);
- the Brundtland Commission in their report *Our Common Future* (1987);
- publications of the Business Council for Sustainable Development;
- Agenda 21 and other documents produced in Rio de Janeiro at the Earth Summit;
- the European Union in their *Fifth Action Plan - Towards Sustainability*.

In a study by Shotter (1994) which focuses on measuring sustainable development in a South African context, a number of key success indicators are identified. These indicators were identified after due consideration of the above international guidelines. For the purposes of this study, the indicators identified by Shotter are used as a basis for gauging the level of commitment to sustainable development by South Africa's listed companies.

To reach a statistically sound conclusion, indicators were selected that would be applicable to companies from every sector represented on the Johannesburg Stock Exchange, taking into consideration the diversity of the responding companies. Six indicators that complied with this requirement were selected. These factors are not necessarily a complete test for the level of commitment of a company to sustainable development, but merely serve as indicators.

### **2.3 A comparison of sustainable development before and after 27 April 1994**

In order to ascertain the level of commitment of the South African business community to the concept of sustainable development, surveys were undertaken during August 1993 to January 1994 as well as April to May 1995, among South African companies listed on the Johannesburg Stock Exchange. The responses to the selected indicators were found to be representative of the population as a whole.

The percentage of the total response in both surveys that replied positively to the selected key indicators of sustainability is shown in table 1.

**TABLE 1**

**POSITIVE RESPONSE TO SELECTED KEY INDICATORS**

	<b>Pre-election</b>	<b>Post-election</b>
Does the company currently have a written policy regarding the environment?	36%	37%
Has the company appointed a senior official(s) who is(are) specifically concerned with the responsibility of the company in respect of the environment?	48%	48%
Are environmental objectives taken into consideration when the performance of managers is evaluated?	42%	38%
Does the company conduct or support any research in order to limit the negative effect of its activities and products on the environment?	43%	49%
Does the company follow a policy in terms of which suppliers and contractors are required to comply with certain minimum standards in respect of the environment?	14%	53%
Is an environmental audit performed?	33%	56%

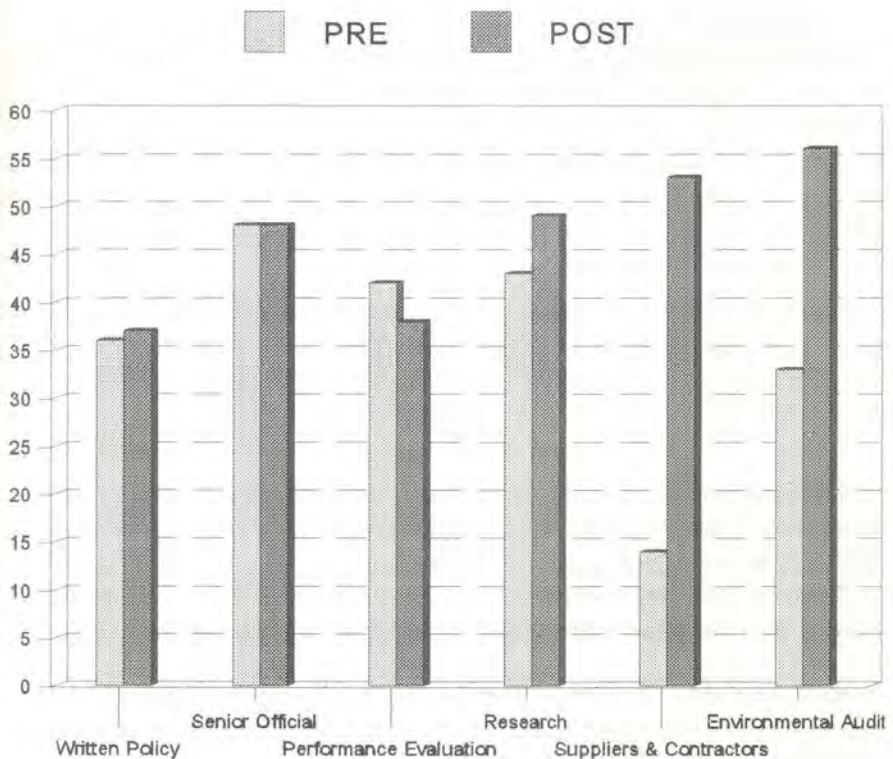
Based on the above response, in general, there does not appear to be a marked difference in the commitment of South Africa's listed companies in the period after the general election of 1994. The companies do, however, appear to be more committed after the election with regard to research in order to limit the negative effects of their activities and products on the environment. There has also been a remarkable improvement in policy regarding the environmental conduct of suppliers and contractors.

Environmental audits relate to the collection of information and its dissemination as part of an awareness raising programme within organisations (Gray 1990:91). The increase of companies having environmental audits done from 33% before the election to 56% after the election, shows an increased awareness of environmental issues.

The above response to the selected key indicators is set out in chart 1.

## CHART 1

## RESPONSE TO SELECTED KEY INDICATORS



The respondents were further categorised according to the proportion of positive indicators they complied with. The results are set out in table 2.

In order to state unequivocally whether there has been an improvement in the commitment of South Africa's listed companies to the concept of sustainable development, a Wilcoxon rank sum test for the difference of the median proportion of positive indicators between the pre- and post-election groups was carried out.

The null hypothesis states that there is no difference between pre- and post-election medians. The alternative hypothesis states that the pre-election median is smaller than the post-election median, indicating an increased commitment of South Africa's listed companies to the concept of sustainable development.

**TABLE 2**

**PROPORTION OF POSITIVE INDICATORS COMPLIED WITH**

<b>Proportion of positive indicators complied with</b>	<b>Pre-election: # Respondents</b>	<b>Post-election: # Respondents</b>
0/6	56	32
1/6	6	12
2/6	9	6
3/6	6	7
4/6	10	10
5/6	19	16
6/6	1	11

A Wilcoxon rank sum statistic of 2.619 was found with a one-sided exceedance probability of 0,0044 ( $\text{Prob} > |z| = 0,0088$ ; appendix 2) which is smaller than 0,01 (1% level of significance). This indicates that the null hypothesis is rejected in favour of the alternative hypothesis. The pre-election median is significantly smaller than the post-election median on a 1% level of significance.

Based on the above results we conclude that there is an increased commitment among South Africa's listed companies to the concept of sustainable development subsequent to the 27 April 1994 election.

## **2.4 Conclusion**

The increased commitment of South Africa's listed companies to the concept of sustainable development is a positive factor in the bid to succeed in the global market. This is a step in the right direction as far as international acceptance and complying with international and foreign environmental standards are concerned, and may benefit present and future generations of South Africans.



## **APPENDIX 1**

### **RESEARCH METHODOLOGY**

In order to compare the level of commitment of South Africa's listed companies to the concept of sustainable development for the period before and after the election of 27 April 1994, surveys were undertaken by means of questionnaires during August 1993 to January 1994 as well as during April to May 1995. The surveys were carried out on an anonymous basis and were addressed to the senior official(s) concerned with the environment. Questionnaires were circulated twice during both these periods.

Companies listed on the Johannesburg Stock Exchange were selected as the target group as information for correspondence purposes is readily available. The populations, in respect of both surveys, were selected in consultation with the Bureau for Financial Analysis at the University of Pretoria and with reference to the Johannesburg Stock Exchange Handbook.

The population of the two surveys is summarised and compared in table 3. In spite of the fact that the definition of the population for the two surveys differs in certain respects, for the purposes of the above comparison, the listed companies to which the questions are applicable have been included in both populations and the results can therefore be considered to be comparable.

The pre-election population consisted of **419** companies listed on the Johannesburg Stock Exchange. Responses were received from **107** companies, resulting in a response rate of **25,54%**.

The post-election population consisted of **542** companies listed on the Johannesburg Stock Exchange. Responses were received from **94** companies, resulting in a response rate of **17,34%**.

**TABLE 3****THE POPULATION OF THE SURVEYS**

	Pre-election	Post-election
Total population according to the JSE Handbook		
■ February 1993	679	
■ August 1994		616
Companies from whom the Bureau of Financial Analysis did not receive financial statements during 1994/5 - excluded from the population	-	(3)
Pyramid companies	(60)	-
Companies that indicated that it is their policy not to participate in surveys	(9)	(15)
Foreign companies	(18)	(23)
Companies delisted or suspended between		
■ February 1993 and August 1993	(26)	
■ August 1994 and April 1995		(35)
Companies of which no shares traded during the period between February and June 1993	(8)	-
New listings between August 1994 and April 1995	-	2
Financial holding companies, property holding and cash shells	(139)	-
<b>Total</b>	<b>419</b>	<b>542</b>

The extent of representation of the whole population can be judged by the distribution among the different sectors represented on the Stock Exchange and is summarized in tables 4 and 5.

The gold-, mining- and metals & minerals sectors were combined into one sector for the purposes of analysing the results. The percentage representation of the three sectors in the population are, in both surveys, adequately reflected in the percentage representation in the response received and the results can therefore be accepted as representative of the population as a whole.

**TABLE 4:****PRE-ELECTION SURVEY - REPRESENTATION OF THE SECTORS OF THE JOHANNESBURG STOCK EXCHANGE**

Sector	Mining, Gold, Metals & Minerals	Financial	Industrial	Total
Number of companies' in the population	77	90	252	419
% of the total population	18,38%	21,48%	60,14%	100%
Number of companies' response per sector	17	18	70	105*
% of the total response	16,19%	17,14%	66,67%	100%
% Response per sector	22,08%	20%	27,8%	25,1%

\* Two of the respondents did not specify their sector.

**TABLE 5:****POST-ELECTION SURVEY - REPRESENTATION OF THE SECTORS OF THE JOHANNESBURG STOCK EXCHANGE**

Sector	Mining, Gold, Metals & Minerals	Financial	Industrial	Total
Number of companies in the population	82	125	335	542
% of the total population	15,13%	23,06%	61,81%	100%
Number of companies' response per sector	17	14	63	94
% of the total response	18,09%	14,89%	67,02%	100%
% Response per sector	20,73%	11,2%	18,81%	17,34%

**APPENDIX 2**

**RESULTS OF THE STATISTICAL TESTING**

Prof MM Shoter - Research Project - T94165  
 Environmental data 1993-5 Kruskal-Wallis Test

08:32 Tuesday, July 25, 1995 3

N PARTWAY PROCEDURE  
 Wilcoxon Scores (Rank Sums) for Variable KRITERIA  
 Classified by Variable VERKIES

VERKIES	N	Sum of Scores	Expected Under HO	Std Dev Under HO	Mean Score
Na	94	10521.5000	9494.0	392.136051	111.930851
Voor	107	9779.5000	10807.0	392.136051	91.397196

Average Scores were used for Ties

Wilcoxon 2-sample Test (Normal Approximation)  
 (with Continuity Correction of .5)

S = 10521.5      Z = 2.61899

Prob > [Z] = 0.0088

T-Test approx. Significance = 0.0095

Kruskal-Wallis Test (Chi-Square Approximation)

CHISQ = 6.8658

DF = 1

Prob > CHISQ = 0.0088

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