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AUD012 **Does Board Diversity Impact Firm Performance?**

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ABSTRACT:

This paper investigates whether a relationship exists between the extent of racial diversity of a firm's board of directors and the firm's performance, in a South African context. A significant objective for firms in the post-Apartheid period has been to obtain diverse racial representation amongst board members. The majority of theoretical and empirical evidence suggests that there are significant benefits to be realised through board diversity. While there are many aspects of good corporate governance, this study examines the impact of board composition specifically, (defined as the percentage representation of Non-White directors on the board) on measures of firm performance; namely return on assets (ROA), return on equity (ROE), and Tobin's Q, using firms listed on the Johannesburg Stock Exchange (JSE). This study used data from 29 companies in 2006 and 2015, and found inconclusive evidence on the relationship between board diversity and firm performance, both at these points in time and over this period of time. The findings may be as a result of the relatively small sample size, the presence of dual-listed companies in the sample and the nature of the performance measures used.

Key words: board diversity; firm performance; corporate governance

INTRODUCTION

The role that Corporate Governance plays within organisations has become increasingly relevant in recent years. Good corporate governance has been found to enhance firm performance and increase shareholder value (Yortt, 2009). A board of directors plays a vital role in steering a company, being responsible for vital tasks including advisory and monitoring roles (Ntim, 2013b; Yortt, 2009). If the board performs its duties effectively, the value of the company should increase (Swartz & Firer, 2005). Consequently, the suitability of the composition of the board has become an increasingly popular topic of discussion.

A major determinant of a board's functional and operational effectiveness and efficiency is the extent to which ethnic and gender diversity exists on the board (Ntim, 2013b; Rhode & Packel, 2010). It has been identified that with increased diversity, companies are more likely to gain access to unique networks, information and human capital. It is also proposed that with increased diversity, governance is improved which results in improved financial performance (Carter, D'Souza, Simkins, & Simpson, 2010). For diversity to occur willingly, companies have to believe that there is a legitimate case for improved financial performance, due to the fact that companies are always looking for ways to be more competitive. Therefore, this study aims to assess whether a business case exists for board diversity (i.e. improved financial performance), or whether it should primarily remain a public policy issue.

This study will be South African focussed due to the fact that South Africa is an emerging economy with a unique history. As a consequence of Apartheid, which saw the systematic oppression of the majority of the population, the economic landscape is vastly different to that of any other country. Thus, the findings of international studies may not be directly applicable to the South African context.

As a result of South Africa's tumultuous history, significant reform policies have been implemented to try and address the severe lack of diversification within the economy. This includes the Employment Equity Act (EEA), the Broad-Based Black Economic Empowerment (BBBEE) Act as well as the King Report on Corporate Governance (The King Report). All these came into effect post-1994 which saw the end of the Apartheid era. Now, 23 years later, it is still unclear whether these reform policies have been successful in their endeavours. Therefore, this report also aims to identify to what extent the goals of these policies have been achieved, relating specifically to board diversity and whether this has influenced firm performance.

A literature review follows, outlining more context over the South African landscape and corporate governance in South Africa. It also includes a review of theoretical and empirical findings relating to board diversity. An explanation of the methodology used for testing the relationship between board diversity and firm performance follows, as well as a discussion of the findings. Recommendations are provided, and limitations to this study and areas for future research are identified. Finally, concluding remarks are provided in the last section.

LITERATURE REVIEW

The board of directors is the group of people in the company who have to provide effective leadership. The King Report states that the board is responsible for corporate governance. They are in effective control of the company and therefore have many responsibilities, including determining the company's strategic directions. Due to this, the board is seen as a very crucial group within an organisation (Ntim, 2013b). The board is also responsible for monitoring executive management, and this role is seen as a vital control within corporate governance (Campbell & Minguez-Vera, 2008; Rossouw, Van der Watt & Rossouw, 2002). Thus, the crucial question of how a board can be most effective is one that has been deliberated often.

The purpose of this literature review is to discuss the benefits that arise from diverse company boards. The review commences with a discussion of the economic landscape in South Africa today. Thereafter a brief discussion on corporate governance practices appears, followed by the advantages and disadvantages of diversity identified from theoretical and empirical evidence. An explanation of critical mass theory as it relates to board racial diversity is also included. Finally, empirical evidence relating to board diversity and firm performance is discussed.

The Economic Landscape of South Africa

Pre-1994, the economic landscape of South Africa was a predominantly White male environment (Ntim, 2013b). A culture of corporate governance, based on the fundamental principles of transparency and disclosure was not a priority in South African firms up until the end of the Apartheid era (Padayachee, 2014). Post-Apartheid, the government realised that reforms were necessary to address the severe lack of good corporate governance as well as inequality that was so ingrained during the Apartheid era.

With the introduction of the Cadbury Report in 1992 and the end of Apartheid just two years later, a definitive shift was seen not only in South Africa but worldwide, to a greater focus on corporate governance. This was in part as a result of the significant number of corporate failures in developed economies, such as Enron and Worldcom in the United States (Padayachee, 2014). The Cadbury report identified the importance of the board being able to discharge its responsibilities effectively, but it also necessitated a framework of accountability for these directors. The commonly identified definition of corporate governance also comes from the Cadbury Report, which defines it as "the system by which companies are directed and controlled." The report also went on to identify the principles of the Code of Best Practice, one of which was accountability of the directors to the shareholders of the company (Cadbury, 1992).

From this report stemmed the 1994 King Report in South Africa, which used the same definition of corporate governance as the Cadbury Report (Rossouw et al, 2002). The King Report aligns itself with the shift towards an AngloAmerican corporate governance model, which requires the maximisation of shareholder value to be a major focus of any public company (Ntim, 2013b; Yortt, 2009). In an attempt to address the inequalities of the past, the report specifically identified the need for boards to value diversity and take active steps to ensure transformation occurs (Padayachee, 2014). The 2002 updated King Report furthered the cause for diversity by specifically requiring companies to consider the diversity of board composition. The Report was also amended to incorporate a more stakeholder

inclusive model in an attempt to more formally address the negative consequences of Apartheid (Ntim, 2013a). While it is not obligatory for all companies to comply with the King Report, all JSE listed companies have to disclose the extent of their compliance with the requirements of the Report (Yortt, 2009).

In 1996, 77% of the population were classified as Black African, 11% as White, 9% as Coloured, and 3% as Indian/Asian (Statssa, 1996). The Employment Equity Act (EEA) was passed in 1998, which aimed to end discrimination in the workplace on grounds such as race, gender, sex, and ethnic and social origin through Affirmative Action (AA) programmes (Tladi, 2001). The main aim behind AA was to correct the misrepresentation of the overall demographic of South Africa seen in the workplace. This was to be achieved in several ways: AA allows for the preferential treatment of certain groups, namely people belonging to previously oppressed race groups, and women; a requirement for companies to develop the skills of the disadvantaged groups, and finally, to promote employment opportunities which are equal for all (Burger & Jafta, 2010; Tladi, 2001).

In 2004, parliament passed the Broad-Based Black Economic Empowerment (BBBEE) Act. One of the main objectives of the Act is to substantially change the racial composition of ownership and management structures of current and new enterprises (Government, 2004; Mersham & Skinner, 2016). The Act also included a requirement for the Minister of the Department of Trade and Industry (DTI) to issue Codes of Good Practice, which provide guidelines for the implementation of BBBEE strategies. In addition, the DTI is responsible for measuring compliance with these BEE requirements, using a balanced scorecard. A 30% weighting of this scorecard was allocated to direct empowerment, 10% of which was to be allocated to Black persons in a management role (Black person here is defined as Black African, Coloured and Indian), and the remaining to Black ownership interests. Definitive targets were also created for companies, such as encouraging companies to have boards that are 40% to 50% Non-White. While compliance was voluntary, these scorecard ratings would be taken into account when the company attempted to interact with government organisations (Burger & Jafta, 2010; Ntim, 2013b).

A question is whether any benefit has been realised through all these reform policies that South Africa has in place? While this topic is too broad to delve into for purposes of this report, it is worth mentioning a few key findings of some research done to date relating to BBBEE. There are many arguments both for and against all the reform policies in place today.

Minimal research has been conducted to assess whether BBBEE has been successful in its motives. Patel & Graham (2012) identified a study done by Sartorius & Botha in 2008 that concluded that BBBEE has resulted in a fairly limited change in Black directorship and ownership in companies listed on the JSE. However, they noted that companies recognised BBBEE as imperative to business and there was a risk that through not implementing it they may lose market share. By appointing a Non-White director, the company signals their commitment to BBBEE and their ability to now obtain government contracts which could improve firm value (Gyapong, Monem, & Hu, 2016). In a study conducted by Kruger (2014), where 500 management level employees were surveyed, he found that managers claimed BEE resulted in companies not being able to effectively compete in both national and global

markets. He also identified that BEE is perceived to have benefited a few Black wealthy individuals and not the broad Black economic population as was intended.

However, in a study conducted by Patel & Graham (2012), they aimed to identify who has actually been benefitting from BBBEE deals. They found an increasing trend of deals where the full risks and rewards went to broad-based partners, as well as deals that significantly involved employees. They agreed that while previously certain Black individuals were the key beneficiaries of BEE deals, more recently the main beneficiaries are employees, followed by women and a range of community, education and development trusts.

Advantages of Good Corporate Governance

A fair amount of research has gone into determining the benefits of good corporate governance. Yortt (2009) recognises that companies with good corporate governance have increased productivity and reduced risk. Sound corporate governance also increases investor confidence over future cash flows and is as a result, priced into stock values (Ntim, 2013a).

Ntim (2013a) performed a study that investigates the relationship between an integrated corporate governance index and financial performance for 169 listed South African companies for the period 2002 to 2007. They found a statistically significant and positive relationship between a broad set of good corporate governance practices and financial performance.

In the South African context, it is necessary to diversify boards due to the inequalities created by Apartheid, but whether board diversity is actually beneficial to the company is still uncertain. Studies, both locally and internationally, have found both advantages and disadvantages to diversity in board composition, which are discussed below.

Advantages and Disadvantages of Diversity

Currently, mixed views exist regarding whether or not diversity in board composition has a positive impact on firm value. The theoretical evidence, as well as empirical evidence regarding these views, is presented below.

The Advantages of Board Diversity

A common trend amongst many of the proponent arguments is that diversity enhances the decision-making ability of the board (Hunt, Layton, & Prince, 2014; Ntim, 2013b; Rhode & Packel, 2010). Based on several psychological studies, it was identified that homogenous boards could give rise to groupthink – “a phenomenon where members’ efforts to achieve consensus override their ability to realistically appraise alternative courses of action,” (Rhode & Packel, 2010, p. 393). Homogenous boards are also seen to have similar views as they come from similar life experiences and as a result, their responses to changes in the business are less effective (Gupta, Lam, Sami, & Zhou, 2014; Rhode & Packel, 2010). Heterogeneous boards avoid this problem by being able to offer more diversity in ideas, opinions, perspectives, business experiences and knowledge which is useful for improved decision-making (Ntim, 2013b) and avoiding the negative consequences of groupthink.

One psychological study done by Phillips Liljenquist & Neale (2009) assessed whether groups performed better at decision making when a new similar person or non-similar person was added to a homogenous group. They found that the group with a non-similar newcomer performed better than the group with the similar newcomer, despite having less confidence in their performance than the homogenous group. However, they assert that this is not even necessarily because the non-similar newcomer brought new ideas to the table. Merely the presence of someone who was not similar to the rest of the group motivated "behaviour that can convert affected pains into cognitive gains," (Phillips et al., 2009).

Another assessed benefit is boards being less likely to make extreme decisions and will instead engage in higher quality analysis of the situation. This also improves the organisational processes and company performance. It is also asserted that diverse boards are more likely to prevent corruption because they are not afraid of questioning management (Rhode & Packel, 2010).

Rhode & Packel also identified that through a diverse board, the monitoring function is enhanced (2010). This stems from the agency theory, which states that it is the responsibility of the board to see to interests of the shareholders above their own personal interests, through monitoring of the managers in the company (Muchemwa, 2014). The agency theory dictates that a more diverse board will be more independent, and as a result, be better equipped to carry out their duties thereby reducing the agency costs (Muchemwa, 2014; Ntim, 2013b).

As per the stakeholder theory, having a diverse board improves the relationship with stakeholders. By matching the board diversity to the diversity of their stakeholders, it aligns their organisation with their increasingly heterogeneous customer base and increases their chances of being able to reach more consumers and penetrate more markets. By taking a customer perspective, they would also be able to adapt to market developments more effectively (Hunt et al., 2014; Ntim, 2013b).

Based on research performed by McKinsey and Company, other benefits identified but not mentioned above include the following: Diversity in leadership increases the scope for the business to secure talent and allows them to gain a competitive recruitment advantage. They also found that workplace diversity increases job satisfaction for those who are female and part of minority groups (Hunt et al., 2014; Yortt, 2009).

There are clearly many positive aspects of diversity that have been identified. However, there are negatives as well which are discussed below.

The Disadvantages of Board Diversity

Under the organisational theory, it is believed that greater diversity within boards may result in the board struggling to "take decisive action and initiate strategic changes," through an increase in conflict, especially in times of stress or poor company performance (Ntim, 2013b). This increase in conflict may result in the business making the incorrect choice or missing valuable opportunities due to late responses. Ntim (2013b) also raised the issue of board members' individual interests and commitments. In a more diverse board, it is likely

for these external influences to also be more diverse, which increases the possibility of conflicts occurring which will negatively impact boardroom performance.

Another major problem with board diversity is if the director is only appointed as a sign of tokenism – where a director is appointed merely to create the appearance of diversity. If this is the case, the benefits of diversity mentioned above are at risk, as the contribution of the member may be marginalised (Ntim, 2013b). This can be linked to the findings of a study done by Westphal and Milton (2000), who found that it is still debatable whether diverse directors are actually able to influence group decision-making. They noted that the demographic differences which existed actually lowered the social cohesion between board members which reduced the chances of the minority viewpoints being incorporated into decision making.

Despite the disadvantages mentioned, the positives appear to outweigh the negatives. The question remains whether the benefits mentioned above will translate into a real improvement in the firm's financial performance. Empirical evidence of research done to date regarding this is discussed below.

Empirical Evidence: Relationship Between Board Diversity and Firm Value

Despite the substantial discussion on this topic, not many empirical studies have assessed whether a relationship between racial diversity and firm performance actually exists. Of the studies conducted, mixed results have been found. This may be due to the fact that diversification has both positives and negatives. It could also be because of shortcomings in some of the tests performed, such as limited sample sizes or weak measures of firm performance. It must also be noted that the effect of a diverse board will be different for different industries, as well as for different markets (i.e. developed or not). In addition, in this instance, South Africa is a unique case because of the exceptional circumstances created by Apartheid, and that the regulatory environment is different to most other countries (Yortt, 2009).

One of the first studies to examine the empirical relationship between board diversity and firm performance was done in 2003 by Carter, Simkins, and Simpson. This study was conducted in the United States (US) over the Fortune 1000 firms and defined diversity as the percentage of females, African Americans, Hispanics and Asians on the board. This test found statistically significant positive relationships between the proportion of both women or minorities on the board and firm value, where Tobin's Q[15] was used as the measure of performance.

Another study done in the US by Carter, D'Souza, Simkins, & Simpson (2010) found a positive and significant relationship between the number of ethnic minorities on the board and return on assets (ROA). However, when Tobin's Q was used as the measure of firm financial performance, no relationship was found. However, this study did note that no negative link was found, which means that they found no reason to refute the case for board diversity.

[15] Tobin's Q is the ratio of the market value of a firm to the replacement cost of the firm's assets. See the Methodology section for more detail.

Gupta et al. (2014) conducted a study that attempted to assess the impact of board diversity (gender and ethnic) on firm financial and non-financial performance. They collected data over a 10-year period for 1153 firms in the US. They found that while the increasing board diversity did not necessarily result in an increased financial performance for the firm, it did enhance the firm's non-financial performance. These included improvements in social, environmental and governance dimensions. This was considered to be due to more diverse boards being more sensitive to the needs of other stakeholders. This results in long-term benefits for the firm as well as the broader society.

Marimuthu & Kolandaisamy (2009) examined the effect of board diversity on ROA and ROE for Malaysian listed companies over the period 2000 to 2006. They found that consistent results did not exist over the 7-year period. They found a significant positive correlation between diversity and ROA throughout the period and a significant positive relationship with ROE for the latter half of the period. In contrast to this, a study done in Indonesia by Darmadi (2011) identified that nationality diversity had no effect on firm performance, as measured by ROA. Both of these economies are emerging economies and therefore its findings may be more comparable to South Africa than that of developed economies.

Drawing closer to home, Ntim (2013b) assessed 291 companies listed on the JSE over a five-year period. He found a positive and statistically significant relationship between board diversity and the stock market valuation of the firm. This is consistent with the findings of Swartz & Firer (2005), who also found a positive significant relationship between the percentage of ethnic members on the boards of 117 JSE listed companies, and firm intellectual capital performance. Based on these two studies, not only does the market value diversity, but there is firm value to be added through diversity as well. These findings are consistent with the assertions made in law through the EEA as well as BEE that a diverse board will benefit the firm.

Another South African study by Yortt (2009) on the top 40 listed companies identified that at the time of her study, only 32.5% of the directors in the top 40 companies were Black, and only two met the BEE criteria of having at least 50% Black executive directors. She found that a positive correlation exists between ethnic diversity and company performance (measured in terms of both ROE and ROA).

Critical Mass Theory

Gyapong et al. (2016) was the first study to investigate whether or not the critical mass theory is relevant to racial diversity on boards. Kanter developed the critical mass theory in 1977, which declared that 'one is a token, two is a presence, three is a voice'. In other words, diversity is only really of benefit when the number of underrepresented groups reaches at least three members. Many studies have applied this theory to women representation on boards and have found that an increased number of women does positively influence a firm's performance (Joecks, Pull & Vetter, 2013; Konrad, Kramer & Erkat, 2008; Torchia, Calabrò & Huse, 2011).

When Gyapong et al. (2016) tested this theory on 245 South African listed firms over the period 2008-2013, they found that positive contribution to firm performance existed when

one Non-White director was appointed, a greater positive contribution was earned when two Non-White directors were appointed, but when this number increased to three or above, the positive contribution began to decline. They asserted that this decline in firm value could be attributed to the shortfall in qualified Non-White directors in South Africa. As a result of the Affirmative Action policies, the same few individuals may end up holding several directorships and as a result not be able to perform all their monitoring roles effectively (Gyapong et al., 2016).

Conclusion

Based on the literature reviewed, it is evident that the proposed benefits of board diversification outweigh the possible downfalls. This is seemingly confirmed by the existence of the 1998 EEA and 2003 BEE Act as well as the introduction of the King Report, which requires regular review of the ethnic and gender composition of the board in order to reflect the diversity of the South African population as well as improve the effective operations of the firm. While only a limited amount of empirical evidence exists regarding whether any financial value is obtained through board diversification, there is some evidence to prove the contrary. Therefore, this study aims to add to the empirical evidence regarding the relationship between board diversity and firm performance in South Africa, using updated data and a less static approach than previous studies have done.

METHODOLOGY

In order to determine the role of racial diversity within boards of South African companies, this study will aim to answer three questions.

1. What is the representation of each racial group within the boards of directors of South African companies?
2. Is there a correlation between the percentage of each different racial group and firm performance?
3. Has there been an improvement in racial diversity on company boards from 2006 to 2015 and has this translated into improved financial performance?

Research Design

The aim of this research is to determine whether any relationship exists between board diversity and firm performance, as stated above. Many of the studies done previously have used a static approach, that is, board diversity was assessed only at one point in time. Our study aims to counter this by gathering data for the 2006 and 2015 fiscal years. A 10-year gap was initially planned, however, due to a significantly greater number of companies having 2006 annual reports available but not 2005, the time frame was adjusted accordingly. Including 2006 is also appropriate as it is prior to the 2008 financial crisis, which allows the effects of the crisis on companies to be excluded.

Only 29 companies are included in our sample. Due to this relatively small sample size, it is certain that the data is non-normal. As a result, regression models cannot be used to

analyse the data. Therefore, in order to determine whether any correlation exists between board diversity and firm performance, a Spearman's Rho correlation test was used. Additional testing on the four respective sectors; namely Consumer Goods, Resources, Financials, and Industrial, was also performed.

Selection of Data

For the purposes of this study, two sets of data are required: Namely, the diversity that exists on boards as well as a measure of firm performance. The data was chosen based on two criteria:

1. publically available information, and
2. the measures of diversity and performance had to be comparable across industries.

For this reason, the top 40 companies listed on the Johannesburg Stock Exchange (JSE) were selected as a starting point for the companies to be included in our sample. These were reduced to 29 due to the unavailability of particular data. For example, some companies in the top 40 in 2015 were not yet listed in 2006, and were therefore excluded from the sample. Other companies did not include pictures of their directors in their annual reports. As a result the director's race could not be ascertained with sufficient certainty. (See Appendix 1 for a comprehensive list of companies that make up the sample).

Diversity Data

Diversity measures were obtained using company's directors' listings included in the annual reports. As this is a South African focused study, we adopt the four racial categories used by South Africa's national statistics agency, Statistics SA. This is namely, Black African, White, Coloured, and Indian/Asian. Directors were classified into these four categories for each company in the sample for both the 2015 and 2006 fiscal years.

Performance Measures

As mentioned above, two criteria were adopted when considering which measure of firm performance to use. Swartz & Firer (2005) identified that using an uncomplicated measure of performance can be justified for various reasons. This included the cost/benefit trade-off as well as the risk that with increased complexity, the risk of ambiguity increases. As a result, three separate measures of firm performance were chosen for this study; namely Return on Assets (ROA), Return on Equity (ROE) and Tobin's Q.

A drawback of using ROA and ROE is that they are internal measures of performance, however, they are useful for comparing the profitability of companies in the same industry. Tobin's Q compensates for this drawback in that it is a market-related measure of performance. These measures were also chosen to be consistent and comparable with prior studies (Yortt, 2009).

All three measures were obtained from the Bloomberg database, which is a reputable source, for each of the companies at the respective dates. More detailed explanations of each measure are discussed below, based on Bloomberg definitions.

$$Tobin's\ Q = \frac{Market\ Cap + Total\ Liabilities + Preferred\ Equity + Minority\ Interest}{Total\ Asset\ Value}$$

This formula is based on the assumption made by James Tobin that the market value of a company should be at least equal to its replacement cost. If the market value is above that of the replacement cost of the assets, the company is making a higher than normal return on its investment. A major advantage of Tobin's Q lies in trend analysis.

If Tobin's Q is falling, either investor sentiment has decreased or the company is not managing its assets effectively (CIMA, 2003). If investors value diversity on boards, this should be reflected by an increased market cap.

$$ROA = \frac{Net\ Income}{Total\ Assets}$$

ROA is an indication of how profitable a company is relative to its total assets. It is a reflection of how efficiently management is using their assets to generate earnings. As management is responsible for making these decisions, increased board diversity may result in better decision making and an improved ROA.

$$ROE = \frac{Net\ Income}{Shareholder's\ Equity}$$

ROE is a measure of the amount of net income returned as a percentage of shareholder's equity. This is an indication of how much profit a company generates using the money shareholders have invested.

Statistical Testing

As stated above, due to the non-normal distribution of the data obtained (a result of the small sample size), a Spearman's Rho correlation test was performed. For the purposes of this test, the measures of firm value are the dependent variables and board diversity is the independent variable. The test was conducted numerous times, to isolate any correlation between each specific racial group and each of the three measures of firm performance, for both 2006 and 2015. An aggregate test of Non-White directors (Black African, Coloured and Indian/Asian) against firm performance was also conducted.

For purposes of determining whether there has been an improvement in racial diversity on company boards from 2006 to 2015, and what effect this has had on company performance, a longitudinal data analysis with time-varying covariate was performed[16]. A longitudinal data analysis is used to determine the correlation between observations of the same variables over extended periods of time. A time-varying covariate has to be used due to the fact that the independent variable, in addition to the dependent variable, changes over the period. This test was performed three times, to assess the impact of the change in Non-White representation on boards against the three separate measures of firm performance.

[16] Abdul-Karim Iddrisu, a current PHD student in the statistics department at UCT, assisted with this.

RESULTS

Table 1 Descriptive Statistics

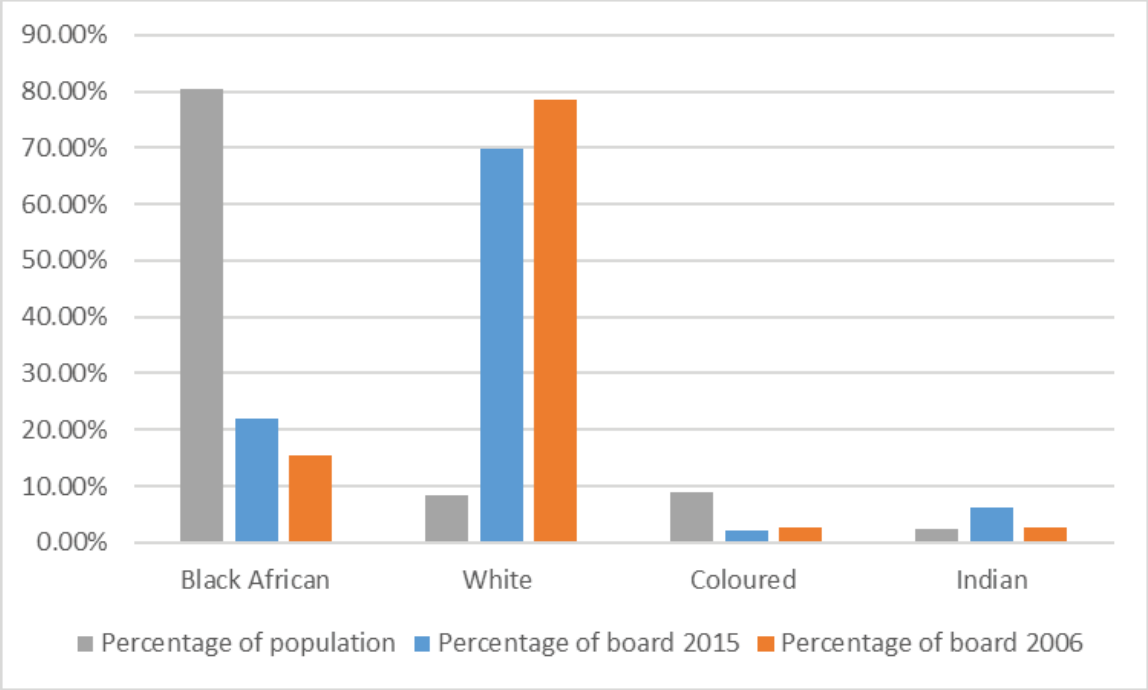
Table 1	**Breakdown of racial diversity within board of directors**					
Total number of Directors	**Total**	**Black**	**White**	**Coloured**	**Indian/Asian**	
2006	425	66 (16%)	336 (79%)	11 (2%)	12 (3%)	
2015	428	94 (22%)	299 (70%)	9 (2%)	26 (6%)	
Descriptive statistics of board diversity expressed as a percentage of board size						
	2006	**2015**			**2006**	**2015**
BLACK				**COLOURED**		
Mean	16.00%	22.00%		Mean	2.36%	1.93%
Median	11.76%	21.43%		Median	0.00%	0.00%
SDV	11.51%	13.15%		SDV	3.25%	2.66%
Min	0.00%	0.00%		Min	0.00%	0.00%
Max	46.15%	53.85%		Max	13.33%	8.33%
Sample (N)	29	29		Sample (N)	29	29
INDIAN/ASIAN				**TOTAL NON-WHITE**		
Mean	2.91%	6.23%		Mean	20.10%	30.16%
Median	0.00%	6.25%		Median	16.67%	33.33%
SDV	3.61%	4.97%		SDV	13.67%	15.22%
Min	0.00%	0.00%		Min	0.00%	0.00%
Max	15.38%	20.00%		Max	61.54%	62.50%

Sample (N)	29	29		Sample (N)	29	29

Table 1 above shows detailed descriptive statistics relating to board diversity within South African organisations. The cumulative number of directors who served on boards of directors included in the sample remained relatively the same during 2006 and 2015, with the average number of directors per board being just under 15. There has been a definite shift in boards tending more towards this average number. In 2006, the smallest board had only 8 members, while the largest had 27. However in 2015, the smallest board had 11 members and the largest only 22. On average, 2015 boards comprise 22% Black African members, 2% Coloured members, 6% Indian/Asian members and the remaining 70% White members. In addition, the standard deviation for almost all groups has also increased. This implies that the spread of diversity across these companies is still rather wide.

The biggest change from 2006 to 2015 was an increase of 28 Black African directors (comprising 16% in 2006 and 22% in 2015). However, in Figure 1 below, it can be seen that Black Africans and Coloureds are still underrepresented when compared to the demographics of South Africa, and Indians and Whites are overrepresented.

Figure 1 Board Composition by Race for 2006 and 2015, as well as Population Split



Despite board diversity reform policies, boards remain dominated by White members at approximately 70% in 2015 with only a 9% decrease since 2006. This proportion is much higher than the findings of Ntim (2013b) who found that Non-Whites made up approximately 26% of the average South African board between 2002 and 2006. Yortt's (2009) findings were also in line with Ntim (2013b).

Only two companies had no Non-White directors by 2015 (six in 2006), namely Richemont and BHP Billiton. However, both of these companies are dual listed, with Richemont's headquarters being located in Switzerland and BHP's in Australia. This is most likely the reason these boards remained completely represented by Whites in 2015.

Of the 29 companies included in the sample, 21 companies managed to increase the percentage of Non-White representation on the board from 2006 to 2015. The biggest improvement of Non-White representation on the board of directors was seen in Barclays Africa and Tiger Brands with a 33.33% and 30.48% increase in Non-White director representation since 2006 (See Appendix 1). Barclays Africa however, had no Non-White directors in 2006 whereas Tiger Brands was made up of 26.67% Non-Whites in 2006. Barclay's improvement is also somewhat misleading due to the fact that they also reduced their total board size from 17 members in 2006 to 12 members in 2015.

Five of the companies in the sample still had no *Black African* directors on its board, down from eight in 2006.

By 2015, six of the companies in the sample had more than 50% Non-White directors on the board (21%), up from only two companies in 2006 (7%). The latter finding is consistent with Yortt's (2009) findings of only two companies (5%) having more than 50% Black executive directors in 2008.

Correlation between board diversity and firm performance

Table 2: Statistical Results testing for a correlation between board diversity and firm performance

	ROA		ROE		Tobin's Q	
	2006	**2015**	**2006**	**2015**	**2006**	**2015**
% Black Correlation	-0.055341	-0.14373	-0.14878 - 0.152196		-0.174347 - 0.263682	
p-value	0.776	0.457	0.441	0.431	0.366	0.167
% Coloured Correlation	0.038936 - 0.090527		0.01701	-0.051782	0.021671	0.032769
p-value	0.841	0.640	0.930	0.790	0.911	0.866
% Indian Correlation	0.095457 - 0.043553		0.025637	0.002521	-0.195776 - 0.086112	
p-value	0.622	0.823	0.895	0.990	0.309	0.657
% Non-White Correlation	-0.012125 - 0.153509		-0.110797 - 0.138963		-0.186267 - 0.250966	

p-value	0.950	0.427	0.567	0.472	0.333	0.189

Contrary to expectations, a negative relationship was found between the accumulated Non-White percentage and ROE, ROA and Tobin's Q at each of the two time periods. This is contradictory to the empirical findings of several studies such as Ntim (2013b), Swartz & Firer (2005), and Yortt (2009). This could be a result of using simple measures of firm performance or the significantly smaller sample size. This negative relationship could also be as a result of investors not factoring in the requirement of board diversity when valuing companies. South Africa is only weak-form efficient which means that publically available information is often not priced into the market value (Ntim, Opong, Danbolt, & Dewotor, 2011).

A positive relationship was however found for Coloured and Indian representation when using both ROA and ROE in 2006, as well as using Tobin's Q relative to Coloured representation in 2006. However, almost all of these became negative when using the 2015 diversity and performance measures.

Despite the associations found, as Table 2 shows, none of these findings are statistically significant at a 90% confidence level as evidenced by the large p-values. This means that we cannot draw any conclusions as to the nature of the relationship between board diversity and firm performance.

Table 3 Correlation between % Non-White and Measures of Performance, split by Sector

% Non-White	**ROA**		**ROE**		**Tobin's Q**	
	2006	**2015**	**2006**	**2015**	**2006**	**2015**
Consumer Goods (12)	0.412581	-0.19912	0.226904	-0.32388	-0.156504	-0.25785
p-value	0.183	0.535	0.478	0.304	0.627	0.418
Financials (11)	-0.40036	-0.37352	-0.41481	-0.06932	-0.322051	-0.34508
p-value	0.222	0.258	0.205	0.839	0.334	0.299
Industrials (3)	0.496013	0.715622	0.919151	0.508945	0.9164824	-0.94992
Resources (3)	0.657691	-0.92027	0.428115	-0.81049	0.9079389	-0.32326

When split into their respective sectors, 12 companies fell into the Consumer Goods Sector, 11 in the Financial sector, and 3 in each of the Industrials and Resources sectors

respectively (see Appendix 1). Given the small number of companies in the Industrials and Resources sectors, no further discussion is warranted on these results.

When companies were split into their various sectors and the relationship between the percentage of Non-White board members and the various measures of performance was investigated, an increased number of positive associations were identified. Within the consumer goods sector, which made up 41% of the sample size (12 companies), a positive association was found between board diversity and firm performance for both ROA and ROE in 2006, however, these both became negative by 2015.

A negative relationship between the firm diversity and firm performance was found within the Financials sector, at all points in time. However as Table 3 shows, none of these findings are statistically significant at a 90% confidence level, as evidenced by the large p-values. This means that we also cannot draw any conclusions as to the nature of the relationship between board diversity and firm performance, per sector.

Testing the change in board diversity and firm performance from 2006 to 2015

Table 4 Longitudinal Data Analysis Results

	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
ROA						
year	-0.0056168	0.0026011	-2.16	0.031	-0.010715	-0.0005187
Non-White	-0.0435356	0.0701489	-0.62	0.535	-0.181025	0.0939538
ROE						
year	-0.0123122	0.0046994	-2.62	0.009	-0.0215228	-0.0031017
Non-White	-0.1151957	0.1184299	-0.97	0.331	-0.347314	0.1169226
Tobin's Q						
Year	0.0096742	0.0271999	0.36	0.722	-0.0436366	0.062985
Non-White	-1.205777	0.9138088	-1.32	0.187	-2.996809	0.5852555

As shown in Table 4 above, for both ROA and ROE, time is significant as evidenced by the small ‘year’ p-values. This means that there has been a significant change in the performance measures over the period. The fact that they are both negative indicates that there has been a decrease in the performance measures over time. This was indeed observable from the data: the average ROA for the sample of companies was 12.22% in 2006 but had dropped to 6.72% in 2015. Similarly, the average ROE also significantly

dropped from 28.23% in 2006 to 16% in 2015. Only Tobin's Q remained relatively consistent at an average of 2 and 1.96 respectively. While the time varying coefficient was positive for Tobin's Q, it was not statistically significant.

For all three measures, there is a negative correlation between the Non-White representation and firm performance. This can be interpreted as for each 1-unit increase in Non-White representation on a board of directors, over time this has resulted in a 0.0435 decrease in ROA, a 0.115 decrease in ROE, and a 1.21 decrease in Tobin's Q. However, none of these correlations are statistically significant at a 10% confidence level, and therefore conclusions cannot be drawn as to the nature of the relationship between the change in board diversity and the change in firm performance.

This is inconsistent with the findings of Ntim (2013b) who found a positive correlation between board diversity and firm performance over a consecutive five-year period. The reason for the difference could be as a result of the fact that Ntim's study was over a five-year consecutive period, and therefore more data points were used for each year's change in performance and diversity, whereas this study assessed a singular change over a (longer) nine-year period.

CONCLUSION

The board of directors is a crucial part of any organisation as they are responsible for performing critical advisory and monitoring roles. As a result of the Apartheid era, South African has seen significant reform policies affecting the economy, a major focus of which was attempting to diversify the leadership positions within organisations.

Based on the literature reviewed, a strong argument exists, both theoretically and empirically in a South African context, for board diversification to occur. Studies performed by Ntim (2013b) and Swartz & Firer (2005) both found positive correlations between board diversity and firm performance.

This report has attempted to identify whether or not a relationship exists between racial board diversity and firm performance using a sample of 29 publically listed companies in the South African stock exchange. This report also assessed whether there has been an improvement in board diversity from 2006 to 2015 and whether this has translated into improved firm performance. This time period was useful as it was when the government was implementing a range of reform policies including the 1996 EEA, the 2003 BEE Act, as well as the 1994 and 2002 King Reports.

This study found inconclusive evidence as to whether a relationship exists between board diversity and firm performance in the South African context, both at specific points in time (2006 and 2015), and over this period of time. These findings could be due to the limitations that exist in this study, which are further elaborated on below.

However, the study did find that boards are becoming increasingly racially diverse, although the increase has not been substantial. The board racial mix still does not reflect the population demographics, and therefore government's reform policies have not been as effective as was hoped. Thus, a recommendation is that government re-evaluate the

strategies used to obtain the objectives of their reform policies. Furthermore, it is recommended that firms' commitment to transformation is prioritised beyond the diversification of the board of directors, for example through in-house training initiatives that assist in upskilling and developing current employees towards possible future board positions.

The preliminary evidence obtained from this study is useful to a range of interested parties beyond policy-makers and government. These include investors that are engaged in formulating responsible investing practises, as well as the board of directors themselves. Finally, other researches may be benefit from these initial findings in taking this research forward.

LIMITATIONS AND SCOPE FOR FURTHER RESEARCH

The purpose of this study is to obtain preliminary evidence on the whether a relationship exists between firm performance and board diversity, in a South African context. There were several limitations which existed in this study which contributed to the inconclusive results discussed above. The biggest limitation of this study was the very small sample size, which made it difficult to draw conclusions. It is unlikely that the JSE Top 40 would be representative of all listed companies (Yortt, 2009). In addition, some companies included in the sample are dual listed, with their places of effective management not located in South Africa. As a result, the diversity of the board may not be as highly prioritised in that country as it is in South Africa (Ntim, Opong, & Danbolt, 2012).

Furthermore, the nature of this study was that of a preliminary investigation into the relationship between board diversity and firm performance in South Africa, and did not control for other variables that influence firm performance. Sales growth (Beiner, Drobetz, Markus & Zimmermann, 2006; Ntim et al., 2012); research and development activity (Shrader, Blackburn, & Iles, 1997; Adams and Ferreira 2009; Baranchuk and Dybvig 2009; Ntim et al., 2012); degree of leverage (Jensen 1986; Guest 2009; Ntim et al. 2012); capital expenditure (Pfeffer, 1973; Guest, 2009; Kang, Cheng & Gray, 2007; Dale-Olsen, Schone & Verner, 2013; Triana, Miller & Trezebiatowski, 2013); and firm size (Beiner et al. 2006; Roberson and Park 2007) have been found to influence firm performance. It is recommended that this study be reperformed and these factors controlled for, in order to establish more conclusive results.

As mentioned above, ROA and ROE are short-term accounting measures of performance. As a result, they can be perceived as backward looking and may not accurately reflect the decision-making abilities of the current board of directors. ROA and ROE may therefore not be the best way to measure the impact of diversity (Rhode & Packel, 2010). A suggestion may be to reperform the study by including non-financial measures of firm performance that reflect the firm's sustainability and ability to create value (not solely financial value), much like the study performed by Gupta et al. (2014) in the US.

All three measures of performance are also very simplistic in nature, and thus may not be the most suitable measure of performance to be compared to board diversity. It is subject to, and can be influenced by several external factors, which have not been controlled for in this study. Future studies could expound on this study by controlling for external factors such as economic growth and inflation, which may result in a different outcome.

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Appendix 1: List of JSE Top 40 Companies included in this study

RANK	COMPANY	SECTOR	Change in Non-White % from 2006 to 2015
1	British American Tobacco Plc	Consumer Goods	7.69%
2	Sabmiller Plc	Consumer Goods	11.61%
3	Naspers Ltd	Consumer Goods	4.76%
4	Compagnie Fin Richemont	Consumer Goods	0.00%
5	Bhp Billiton Plc	Resources	0.00%
6	Steinhoff International Holdings	Consumer Goods	-2.98%
7	Sasol Limited	Industrials	0.51%
8	MTN Group Ltd	Consumer Goods	-3.21%
9	Firstrand Ltd	Consumer Goods	6.36%
10	Old Mutual Plc	Financials	19.05%
11	Standard Bank Group Ltd	Financials	14.44%
12	Aspen Pharmacare Holdings Ltd	Consumer Goods	5.59%
13	Sanlam Limited	Financials	12.94%
14	Barclays Africa Group Ltd	Financials	33.33%
15	Remgro Ltd	Industrials	22.38%
16	Bidvest Ltd	Industrials	9.26%
17	Woolworths Holdings Ltd	Consumer Goods	12.73%
18	Intu Properties Plc	Financials	3.79%
19	Anglo American Plc	Resources	16.67%
20	Nedbank Group Ltd	Financials	21.32%
21	Discovery Ltd	Financials	-1.67%
22	Shoprite Holdings Ltd	Consumer Goods	11.76%
23	RMB Holdings Ltd	Financials	13.75%
24	Growthpoint Prop Ltd	Financials	7.14%
25	Capitec Bank Holdings Ltd	Financials	-3.33%
26	Tiger Brands Ltd	Consumer Goods	30.48 %
27	PSG Group Ltd	Financials	-1.19%
28	Mr Price Group Ltd	Consumer Goods	6.67%
29	Anglo American Platinum Ltd	Resources	6.67%