Do Women and Ethnic Minority Directors Influence Firm Value? Evidence from Post-Apartheid South Africa

Ernest Gyapong*

Griffith Business School
Griffith University
170 Kessels Road
Nathan, QLD 4111, Australia
ernest.gyapong@griffithuni.edu.au

Reza M. Monem

Griffith Business School
Griffith University
170 Kessels Road
Nathan, QLD 4111, Australia
r.monem@griffith.edu.au

Fang Hu

Griffith Business School
Griffith University
170 Kessels Road
Nathan, QLD 4111, Australia
f.hu@griffith.edu.au

Forthcoming in ***Journal of Business Finance & Accounting***

*Corresponding author

Acknowledgement: A previous version of this paper was presented at the *Journal of Business Finance & Accounting Conference 2015* held at Bocconi University, Italy. The authors would like to thank an anonymous referee, the conference discussant, the editor Peter Pope, and the conference participants for their constructive comments and suggestions.

Abstract: Previous studies on the value relevance of board gender and ethnic diversity produced mixed results. This paper re-examines this relationship using hand-collected data of 245 South African listed firms over the period 2008-2013. We document a positive and significant effect of both board gender and ethnic diversity on firm value. We also find that the increase in firm value is greater when boards have three or more women directors. In contrast, ethnic minority directors contribute less to firm value when there are three or more on the board. Furthermore, we document that ethnicity has a concave relationship with firm value, but gender does not. We demonstrate that in better-governed firms, ethnic diversity is more value relevant than gender diversity. Our results also suggest that financial crisis is associated with the propensity to restructure boards along gender and ethnicity. This paper sheds new light on the effect of board diversity in South African firms as the government increasingly pursues policies aimed at eradicating the effects of apartheid. Our results are robust after controlling for self-selection and various forms of endogeneity.

Keywords: board diversity, gender, ethnicity, corporate governance, apartheid, South Africa.

1. INTRODUCTION

An emerging corporate governance (CG) issue facing organisations is the inclusion of women and ethnic minorities on corporate boards. Several countries, including Belgium, Brazil, Iceland, Italy, Malaysia, the Netherlands, Norway, and Spain, have already introduced or have pending bills requiring a mandatory gender quota on corporate boards (The Economist, 2014). Other countries, such as Australia, Sweden, and the UK, are threatening to follow suit if firms refuse to appoint voluntarily more women directors (Liu et al., 2014). Generally, the need for board diversity is supported by two primary arguments: social equity and shareholder value (Carter et al., 2003). Commenting on the need for board diversity, a former chief executive of Bank of America, Karen J. Curtin, retorted "there is real debate between those who think we should be more diverse because it is the right thing to do and those who think we should be more diverse because it actually enhances shareholder value. Unless we get the second point across and people believe it, we are only going to have tokenism" (as quoted in Brancato and Patterson, 1999:7). Corporate boards have a major objective to increase shareholder value and may voluntarily embrace the idea of board diversity if a business case is made for it.

Although several theories suggest a link between board diversity and firm value, no single theory directly predicts the nature of the relationship (Carter et al., 2010). Consistent with this, previous studies document mixed results for the association between women directors and firm value. Cotter et al. (2001) argue that women have the skills and qualifications required for board appointments but are simply discriminated against based on stereotypical perspectives unrelated to their qualifications and experience (the "glass ceiling" hypothesis). Hillman et al. (2002) suggest that women have different backgrounds and characteristics that make them unique from traditional directors. Women ask tough questions and bring collaborative leadership (Kramer et al., 2007) and different perspectives into the boardroom

(Baranchuk and Dybvik, 2009). Furthermore, board diversity results in boards having unique human capital (Terjesen et al., 2009) and in improved board independence (Liu et al., 2014). In support of this argument, empirical evidence demonstrates that gender and ethnicity are associated with a higher firm value (Carter et al., 2003; Ntim, 2013; Liu et al., 2014). If women are as qualified as men and are associated with an increase in firm value, then board gender homogeneity may be due to the "glass ceiling." In contrast, other studies suggest that women are not offered board seats because they lack the qualifications and skills required for directorships (the "competency gap" hypothesis). Proponents of the competency gap hypothesis suggest that directors must possess the unique human capital to be considered for directorships (Kesner, 1998); otherwise, they should be denied these organisational rewards (Oakley, 2000). Others argue that women tend to invest less in education (Tharenou et al., 1994) and are less likely to have business expertise (Terjesen et al., 2009). Consistent with these views, previous studies (e.g., Smith et al., 2006; Adams and Ferreira, 2009) document a negative relationship between women directors and firm value.

This study focuses on South Africa (SA), a developing country with a history of legal racial segregation, namely, "apartheid," that permeated the entire fabric of life, including education, healthcare, and CG. Within apartheid, humanity was defined on the basis of race - all aspects of the human endeavour, including living conditions, healthcare, jobs, and even burial, were based on racial classification (Hammond et al., 2009). Apartheid restricted access to quality education to a small racial minority, and two decades after the end of apartheid, a high number of the majority ethnic population still remains functionally illiterate (Statistics South Africa, 2011) and underrepresented on corporate boards (Ntim, 2013). Therefore, although the recent calls for board diversity have primarily focused on gender, "no study of South Africa would be possible without an examination of the regime's racial classifications" (Hammond et al., 2009:3).

As an African country, SA has cultural practices, traditional customs, and beliefs that reinforce the inferior status of women in society while highlighting the superiority of men (Wadesango et al., 2011). Transactional sex, early pregnancy, and child marriages are some of the causes of low access for and retention of girls in schools in developing countries (Plan International, 2012). South African "women suffer additional disabilities, both in law and custom" (Nolde, 1991:3). These issues increase the likelihood of a "competency gap" rather than a "glass ceiling" for women and ethnic non-white directors in SA. A competency gap may also render their equitable representation inconsistent with the business case for inclusion. Nevertheless, previous studies attribute the lack of board gender and ethnic diversity to the "glass ceiling" hypothesis (Baxter and Wright, 2000; Cotter et al., 2002). We test which of these two competing hypotheses is dominant in explaining gender and ethnic diversity in SA boards.

Board members can affect firm value by performing various advisory and monitoring functions (Felaye et al., 2011). In addition, the appointment of women and ethnic minority directors is associated with other legitimacy benefits (Pfeffer and Salancik, 1978; Liu et al., 2014). These legitimacy benefits manifest in the form of intangible operational resources (Tilling and Tilt, 2010) such as customer and supplier appreciation, increased capital inflows, government blessing, and community acceptance (Mahadeo et al., 2011), all of which may increase firm value. As firms appoint more women and ethnic minority directors, firms see an increased need for their advice and monitoring functions because their effect on firm value outweighs the legitimacy benefits. The presence of women and minorities on boards despite the competency gap will cause their advice and monitoring functions to have a negative impact on firm value. For example, previous studies such as Ferrel and Hersch (2005) and Sealy et al. (2008) suggest that a dearth of qualified women directors leads to them holding multiple directorships. This makes them too busy to monitor and increases potential agency

problems, which may reduce firm value (Jiraporn et al., 2009; Cashman et al., 2012; Falato et al., 2014; Field et al., 2014). Similarly, if there is a competency gap, they may lack the appropriate human capital to offer value-enhancing advice (Tejersen et al., 2009). Furthermore, "despite the importance of gender diversity in the policy debate, relatively little research links diversity and governance" (Adams and Ferreira, 2009:2). Previous US studies suggest that women directors have a value-decreasing effect in firms with low levels of managerial entrenchment (Adams and Ferreira, 2009; Gul et al., 2011). Our study tests a non-linear relationship between board diversity and firm value. It also considers corporate governance and agency problems in testing this relationship in a unique setting.

Developing countries have two major features that reduce shareholder rights and expose them to difficult agency problems. First, they have structural variations, such as a dominance of family/government/block holders that increase the propensity for tunnelling (Bertrand et al., 2002; Ntim et al., 2012; Samaha et al., 2012). Second, they have a weaker external corporate regulatory environment, which weakens investor protection (Balasubramanian et al., 2010; LaPorta et al., 2000; Ntim et al., 2012). Although there are studies addressing the effect of gender and ethnic minority directors on firm value in developing countries, the effect of CG on this relationship remains unexplored. If the presence of women directors is value decreasing in firms with strong shareholder rights, as reported by previous US studies, it will be important to study the influence of CG, especially in developing countries where investors rely heavily on strong CG to remedy weak investor protection and a weak external regulatory environment.

Using a hand-collected dataset relating to 245 unique firms in SA over the period 2008-2013, we examine the value relevance of the equitable representation of women and ethnic non-white directors. First, we test the critical mass theory's postulation that "one is a token, two is a presence, three is a voice" for both gender and ethnicity. We find that, although

boards with one female director see a positive and statistically significant increase in firm value, the increase in firm value declines marginally with two female directors. Notwithstanding this, the greatest impact on firm value occurs when boards have three or more female directors. This evidence supports a business case for the equitable representation of women directors.

The findings for ethnic non-white directors differ markedly. We find that the increase in firm value is greater when boards have one or two ethnic non-white directors but declines when the number is three or more. We next investigate whether the positive relationship is affected by the strength of CG. We measure CG using 66 CG provisions from the 2009 King report of CG (King III) over the study period. We find that the positive association between women directors and firm value is weaker in better-governed firms; however, the relationship remains positive and statistically significant. Our evidence is in contrast with that of Adams and Ferreira (2009), who report a negative influence of women directors on firm value in firms with high shareholder rights and attribute this effect to over monitoring. Our results suggest that the weak investor protection and the weak external regulatory environment in developing countries make the extra monitoring from women directors value relevant even in better-governed firms. However, our evidence also suggests that ethnic non-white directors are more value relevant in better-governed firms. We offer alternative explanations for this result. Furthermore, the fixed-effects regression demonstrates that the glass-ceiling hypothesis is more relevant than the competency gap hypothesis for women directors. On the contrary, the competency gap hypothesis is dominant for ethnic non-white directors. The sub-sample analysis suggests that this competency gap is a result of lack of monitoring in poorly governed firms with a high number of ethnic non-white directors.

Further analysis shows that, for both gender and ethnicity, non-executive directors contribute positively to firm value but executive directors do not. We find that although both

"busy" and "non-busy" women and ethnic non-white directors are value relevant, "busy" ethnic non-white directors are more value relevant than "non-busy" ethnic non-white directors whilst "non-busy" female directors appear more value relevant than their "busy" counterparts. Additionally, in crisis periods firms are more likely (less likely) to increase (decrease) women and ethnic non-whites on boards. Our results are robust after controlling for different forms of endogeneity.

Our study contributes to the corporate governance literature in several ways. First, we consider a non-linear relationship between women/ethnic non-white directors and firm value. Legitimacy theory suggests that the appointment of women and ethnic non-white directors is associated with legitimacy benefits (Pfeffer and Salancik, 1989; Carter et al., 2003; Liu et al., 2014), which may increase firm value. Other theories offer competing explanations about how their advice and monitoring functions may affect firm value. For example, social psychological theory suggests two conflicting ways in which the monitoring and advisory functions of women and ethnic non-white directors may affect firm value. On the positive side, they may increase firm value by enabling boards to make better decisions. This benefit occurs because women and ethnic non-whites may bring to the board different attributes, experiences, and ideas that may lead to a better appreciation of business complexities (Jehn and Bezrukova, 2004; Baranchuk and Dybig, 2009). On the negative side, they may decrease the firm value by increasing boardroom conflict and inhibiting the board's decision-making ability (Jackson et al., 2003). It is therefore not surprising that studies examining linear relationships between both gender and ethnic diversity and firm value have produced only mixed results (Carter et al., 2003; Smith et. al., 2006; Adams and Ferreira, 2009; Ntim, 2013; Liu et al., 2014). Despite this mixed evidence, to the best of our knowledge, no study has examined the presence of a possible non-linear relationship between gender/ethnicity and firm value. Our study fills this void in the literature. This study will increase our

understanding about how the gender- and ethnicity-related attributes of the board affect firm value.

Second, this is the first study to apply the critical mass theory (Kanter, 1977) to ethnicity and is one of the few studies to consider both ethnic and gender diversity. However, consistent with the findings of Hillman et al. (2002), we find that gender and ethnicity are different and may affect value differently. Third, we extend prior studies on CG by investigating how CG influences the value relevance of gender and ethnicity. Adams and Ferreira (2009) provide evidence on the moderating effect of an entrenchment index on the gender-firm value relationship in the US context. Our study is different from theirs in two ways. First, we examine the moderating effect of a composite CG index on this relationship, and we do so in a country with weaker investor protection and a weaker external regulatory environment. Second, we consider this relationship for both gender and ethnicity.

The structure of our paper is as follows. Section 2 discusses the institutional setting in SA. We discuss the theoretical and empirical literature on board diversity and firm value and develop hypotheses in section 3. The data and research design are discussed in section 4. We discuss our results in section 5 and conduct several other analysis in section 6. Section 7 reports the robustness tests and section 8 concludes this paper.

2. INSTITUTIONAL BACKGROUND

SA is one of the most ethnically diverse countries in the world (Andreason, 2011). In 2011, SA had a population of 51,770,560 of which 79% were black Africans, 8.9% were coloured, 2.5% were the people of Indian/Asian origin, and whites constituted 9.5% (Statistics South Africa, 2011).[1] Despite this population distribution, the corporate boards in SA are dominated by the white male minority (Ntim, 2013; Ntim and Soobaroyen, 2013). In contrast to most

[1] This was the most recent census in SA.

developed countries where ethnic minorities and women are underrepresented on corporate boards (see Carter et al., 2003; 2010), the racial majority that constitutes approximately 90% of the population (i.e., non-white South Africans) is heavily underrepresented on corporate boards in SA (see appendix 1a for more information). This is due to SA's history of apartheid, a system of legal racial segregation (Ntim et al., 2012). In the pre-1993 era, apartheid introduced racial segregation into the fabric of life, including healthcare, education, and housing (see Hammond et al., 2009; Ntim 2013). For example, the Bantu Education Act of 1953, which was later renamed the Black Education Act of 1953, enforced a racially segregated educational infrastructure (Staeheli and Hammett, 2013). In justifying the Bantu Education Act, Dr. Hendrik Verwoed, then the SA minister for native affairs, remarked, "There is no place for [the Bantu[2]] in the European community above the level of certain forms of labour ... What is the use of teaching the Bantu child mathematics when it cannot use it in practice? That is quite absurd. Education must train people in accordance with their opportunities in life, according to the sphere in which they live" (as quoted in Lapping, 1987). Today, most non-white South Africans are functionally illiterate, are the poorest, have the highest unemployment rate, and have the lowest labour force absorption rates compared with white South Africans (see appendix 1a, 1b, and 1c).

Beyond apartheid, as an African country, SA has cultural practices, traditional customs, and beliefs that reinforce the inferior status of women in society while highlighting the superiority of men (Wadesango et al., 2011). In addition to the discrimination suffered by most women around the world, women in SA suffer from other cultural practices that lead to inferior job opportunities and a lack of access to education (Nolde, 1991). Therefore, after the collapse of apartheid in 1993, the African National Congress (ANC) government introduced several policy reforms aimed at empowering blacks and women in a bid to mitigate the

[2] Bantu refers to the non-European racial groups in South Africa (Hall, 1969).

effects of apartheid. Among these are the Employment Equity Act (EEA) of 1998, the Broad Based Black Economic Empowerment (BBBEE) Act of 2003, and the various King reports on CG. The BBBEE Act of 2003 is primarily aimed at increasing black participation in the SA economy (Alessandri et al., 2011; Ntim and Soobaroyen, 2013).

The BBBEE has seven main segments; management control is one of them. This segment, among others, encourages firms to appoint "black" South Africans to corporate boards in SA. Firms receive points on a scorecard for their compliance with the various segments. Compliance with the BBBEE Act is voluntary, and no formal penalties apply to non-compliant firms. However, firms with lower scores may be barred from government contracts and may struggle to obtain or renew necessary licences from the state. Moreover, because procurements from BBBEE-compliant firms attract extra points, non-compliant firms risk being left out of the supply chain.

The EEA, however, is aimed at mitigating all forms of discrimination in employment. This includes increasing the representation of black people at all levels of the organisation up to a level where it is commensurate with the country's economically active population (EAP). The EEA documents affirmative action rules in favour of black people, women, and people with disabilities. These rules "include preferential treatment and numerical goals but exclude quotas" (Employment Equity Act Section 14:3). To demonstrate compliance, firms are required to submit their employment equity plan to the director general (EEA, Section 21). Moreover, unlike the BBBEE Act, further amendments to the EEA impose severe fines for non-compliance. All these requirements are aimed at increasing diversity in corporate SA.

However, the feasibility and value relevance of these policies are empirical questions given the extant circumstances in SA. For example, appendix 1a shows that language may also contribute to segregation between the black and white populations in SA. Whereas

nearly 100% of the white population has either Afrikaans or English as the first language, this is the case for only approximately 4.4% of black Africans. At the board level, such language barriers can reduce trust (Tenzer et al., 2014), become a barrier to effectiveness (Jonsen et al., 2011), and can reduce firm value. Furthermore, the 2011 population census[3] revealed that the black African and coloured population had the highest level of functional illiteracy in SA. As shown in appendix 1a, the gross higher education participation rate stands at 14% each among blacks and coloured South Africans and 47% among white South Africans. In fact, the 2011 census showed that women in SA are more likely than men to have no formal education. Appendix 1a further shows that of the persons aged 14 years and above without a formal education, women constitute 53.2%, while men constitute approximately 45.7%. These statistics raise further doubts regarding the value relevance of appointing black and women directors to South African boards.

The King reports on corporate governance are also among the policy documents introduced to increase board diversity in SA. The first report was produced in 1994 (King I), the second in 2002 (King II), and the third in 2009 (King III). Although these reports generally adopted the Anglo-Saxon style of CG (LaPorta et al., 2000: Ntim, 2012), they also included some specific affirmative action rules and stakeholder provisions.[4] However, unlike developments in some western countries,[5] the King reports do not set a specific quota for female or racial representation on boards. For example, the King II report requires firms to value diversity and appreciate the contributions of women and black people in the corporate endeavour. The code further requires firms to disclose specific policies and practices in place to promote equal opportunities for women and black people. Similarly, section 2:18:4 of the

[3] This is the most recent census in SA.
[4] See appendix 2 for a list of the provisions in the 2009 King Report of Corporate Governance.
[5] In 2003, Norway passed a law requiring 40% female representation on corporate boards by 2008. Spain required that the same quota be met by 2015, and countries such as France, Germany, and the UK are considering following suit.

King III report requires boards to consider whether their level of diversity makes them effective.

3. THEORY, LITERATURE REVIEW AND HYPOTHESES

(i) Gender, Ethnic Diversity, and Firm Value: *Theoretical Framework*

The link between gender diversity and firm value can be traced in the psychology literature. In psychology, cognitive development theory states that children recognize their gender at early ages, and this motivates them to strive for gender congruent attributes and behaviour (Lewis and Brooks-Gunn, 1979). Gender differences are naturally and unavoidably more obvious to children to the extent that gender-based self-concept and value system is developed spontaneously without recourse to external pressure to behave in a sex-stereotyped manner (Cazden, 1968). Similarly, gender schema theory proposes that "sex typing is mediated by the child's own cognitive processing" (Bem, 1983: 603). Bem (1983) argues that children naturally learn to encode and process information with recourse to an evolving gender schema.

"Gender schematic processing involves spontaneously sorting attributes and behaviours into masculine and feminine categories… regardless of their differences on a variety of dimensions unrelated to gender" (Bem, 1983: 604). Consequently, the effect of gender diversity on firm value may be captured by the natural cognitive behavioural differences that result in differences in the way men and women make decisions. This is because, cognitive differences affect a group's ability to gather information, process it and reach decisions (Byoun et al., 2013). For example, a feminine gender is associated with higher risk aversion in decision making and less over-confidence compared to the masculine gender (Sunden and Surrette, 1998). These attributes may be necessary for improved strategic decision making at the board level (Carter et al., 2010). Furthermore, women are by nature inquisitive which

makes them better monitors than men (Carter et al., 2003). Due to this monitoring attribute, women directors may impact firm value through improvement in earnings quality and corporate governance quality (Adams and Ferreira, 2009; Gul et al., 2011; Srinidhi et al., 2011).

The effect of board ethnic diversity on firm value in the SA setting is underpinned by the post-apartheid ANC government's agenda of economic empowerments of the majority black population and the popular African "Ubuntu" philosophy. Black South Africans were legally prevented from participating in corporate management during the apartheid (Allessandri et al., 2011). When the ANC, a black-majority government, came into power in the post-apartheid period, they instituted the BBBEE. The BBBEE became a major instrument to champion the ANC government's objective of re-integrating the black majority into corporate SA. Thus, in the post-apartheid period, although economic power remains in the hands of the minority white South Africans, political power rests in the hands of the majority blacks putting them in a position to exert much pressure for reforms. In addition, like any other CSR program, BBBEE seeks to accomplish social benefits (McWilliams and Siegel, 2001; Allessandri et al., 2011; Ntim and Soobaroyen, 2013) and compliance with it is voluntary. Notwithstanding this, the SA government has indicated its preparedness to consider firms' BBBEE score in the award of government contracts and to grant of concessions and licenses. In a qualitative study, Satorius and Botha (2008) report that 44% of SA companies recognize BBBEE as a business imperative and that firms that refuse to implement it risk losing market share. Thus, appointing a black director signals a firm's commitment to the BBBEE movement and positions the firm to win lucrative government contracts which may improve firm value (Peloza and Papania, 2008; Satorious and Botha, 2008; Alessandri et al., 2011). Appointing a black director also links the firm to black empowerment groups which are influential consortia of powerful business persons, politicians, activists, and unions

(Alessandri et al., 2011). This may help firms gain access to new markets in both public and private sectors.

The effect of ethnic black directors on firm value can also be explained by the popular African "Ubuntu" philosophy which the majority of South Africans share. Ubuntu means "an action is right insofar as it promotes cohesion and reciprocal value amongst people: An action is wrong insofar as it damages relationships and devalues any individual or group" (2014:8). The King III report requires boards to provide leadership based on moral duties that find expression in the Ubuntu philosophy. In fact, several projects have failed for failing to gather "Ubuntu" (Rwelamila et al., 1999). The Ubuntu concept is directly at variance with apartheid. Ubuntu evokes collectivism, communal togetherness, and interconnectedness whilst apartheid is for separation on the basis of race (Villa-Vicencio, 2009; Fox, 2011). "If the systems of apartheid sought to dehumanize non-whites by equating racial blackness as an animalism or barbarity, Ubuntu serves to coax individuals back into the folds of humanity" (Fox, 2011:9). Thus, the ANC government's attempts at socio-economic integration have a vital social role in SA because it is perceived as righting the wrongs of the past and in line with Ubuntu (Taylor, 2014; Fox, 2011). Such appointments may also help improve corporate image and reputation (Branco and Rodrigues, 2008). Good corporate image and reputation positively mediate the link between CSR and financial performance (Saeidi et al., 2015). Others also (e.g., Liao and Yu, 2012; Wang et al., 2015) show the long term positive effect of legitimacy on firm value. SA firms can thus legitimize their operations and improve firm value by appointing ethnic black directors.

In sum, appointing black directors to the corporate boards in SA is in line with the Ubuntu philosophy and the ANC government's socio-political agenda of economic empowerment of the vast black population. Such appointments, therefore, create broader social legitimacy of the firm and creates opportunities to participate in the government's economic programs.

(ii) Board Diversity and Firm Value: Empirical Literature

There has been a recent surge in studies examining the link between board diversity and firm value. However, most of these studies are premised on the US and European settings. In the US setting, Carter et al. (2003) find a positive relationship between the fraction of women and ethnic minorities on a board and Tobin's Q. In contrast, in a subsequent study, Carter et al. (2010) find that whether women and ethnic minorities are present at the main board or its subcommittees, their presence does not affect firm value. However, in an authoritative study in this strand of research, Adams and Ferreira (2009) report a negative relationship between gender diversity and firm value. Further analysis revealed that the relationship is driven by firms with higher scores on their shareholder rights index. There is also evidence that gender diversity improves share price informativeness (Gul et al., 2011). Using a shareholder rights index, Gul et al. (2011) note a stronger relationship for firms with low shareholder rights and conclude that gender diversity can partially substitute for weak CG. In another US study, Levi et al. (2014) find that women directors make fewer acquisitions and that when they do, they pay lower bid premia, leading to an increase in shareholder value.

Similar to the US setting, evidence in the European setting is mixed at best. In Denmark, while Rose (2007) fails to find a statistically significant relationship between board gender diversity and Tobin's Q, Smith et al. (2006) report a negative relationship between board gender diversity and a host of firm performance measures. Using Spanish data, Campbell and Minguez-Vera (2008) report a positive relationship between gender diversity and Tobin's Q. In developing countries, Mahadeo et al. (2012) find a positive relationship between board gender diversity and firm value for 42 listed firms in Mauritius. Similarly, in China, Liu et al. (2014) report a positive relationship between the number of women directors and firm performance. Liu et al. note that the relationship is stronger for boards with three or more

women directors. They also find a stronger relationship for female executive directors than for non-executive female directors.

In the SA setting, Ntim (2013) finds the percentage of women and ethnic minorities on the board to have a positive relationship with Tobin's Q. He notes that the relationship is stronger for ethnic minorities on the board than for women directors. Using a composite diversity index that includes both gender and ethnicity, he fails to find a non-linear relationship between board diversity and Tobin's Q. However, as discussed in section 2, the ANC government has pursued several policy reforms, such as the EEA, the BBBEE Act, and the various King reports on CG. These reforms placed greater emphasis on increasing women and ethnic minority representation with a view to achieving equity. Given the cultural practices and the history of apartheid that hindered the education of women and ethnic minorities in SA, it is appropriate to investigate how increasing the number of ethnic and women directors affects firm value. Furthermore, Carter et al. (2010) and Hillman et al. (2002) note the differences between female and racial minority directors. Therefore, if their linear relationship with firm value is different (Carter et al., 2010), then *ceteris paribus*, their non-linear relationship with firm value may also be different. Therefore, a composite diversity index consisting of both gender and ethnicity as used by Ntim (2013) may not capture these differences.

(iii) Hypotheses Development

Token status theory, critical mass theory, and the value relevance of board diversity

The token status (Kanter, 1977) and critical mass theories (Kirstie, 2011) argue that numbers are important if organisations are to reap the full benefits of board diversity. Token status theory suggests that when women and racial minorities represent only a small fraction of a board, they may be seen as "tokens" or "solos". The dominant group may mostly see them as

bringing some "auxiliary traits" to the board and judge them based on these informal assumptions but not on their ability to do the job (Hughes, 1944). Segal (1962) suggests that in such instances, the dominant male/ethnic majority may place the women or ethnic minorities in a stereotypical position and expect them to perform tasks considered distasteful by the dominant group. Moreover, "tokens" may undergo personal stress in their quest to maintain a satisfactory relationship with colleagues (Kanter, 1977). Spangler et al. (1978) report that performance pressure and social isolation diminish the achievement of minority women law students. Similarly, Budig (2002) notes that the male advantage in promotions is at the barest minimum when males are "tokens". Therefore, to reap the full benefit of adding women and ethnic minorities to corporate boards, numbers appear to be important (Glazer, 1976). Kramer et al. (2007) argue that the impact of women and racial minorities is more profound when there are three or more. Kristie (2011) extended Kanter's token status theory by stating that "one is a token, two is a presence, three is a voice". The above discussion leads to the following hypotheses:

H1: Ceteris paribus, subsequent increases in the number of women directors from one, to two, to more than two are associated with subsequent increases in firm value.

H2: Ceteris paribus, subsequent increases in the number of ethnic minority directors from one, to two, to more than two are associated with subsequent increases in firm value.

Corporate governance and the value relevance of women and ethnic minority directors

The relative efficacy of smaller groups compared with larger ones is well documented in the organisational psychology literature. Gibson (1999) argues that in the presence of low task uncertainty, team members work collectively and interdependently, which promotes efficiency. The presence of women/ethnic minorities on boards may lead to the formation of sub-groups on corporate boards (Butler, 2012). Compared to the full board, these sub-groups

may be better coordinated, and thus they can more effectively monitor management. Previous studies (e.g., Adams and Ferreira, 2009; Gul et al., 2011; Upadhyay and Zeng, 2014) suggest that diverse boards demand higher audit efforts and managerial accountability and that they reduce corporate opacity. Furthermore, board diversity may improve board independence and board monitoring (Triana et al., 2014). The extra monitoring, in turn, may reduce the extent of agency problems (Jurkus et al., 2011; Ntim et al., 2012; Xiao and Zhao, 2014). However, CG quality may moderate the relationship between board diversity and firm value (Adams and Ferreira, 2009; Gul et al., 2011; Liu et al., 2014).

Adams and Ferreira (2009) argue that gender diversity may only increase firm value when the extra monitoring is warranted. This is so because diverse boards may act as an alternative monitoring device in weakly governed firms (Gul et al., 2011). In better-governed firms, the extra monitoring offered by board diversity may increase monitoring intensity. Intense board monitoring discourages the CEO from communicating with the board (Adams and Ferreira, 2009). It may also reduce the firm value by weakening the CEO's perception of the board and stifling the initiative required to undertake risky but value-enhancing projects (Felaye et al., 2011). Moreover, management may starve the board of important strategic information if boards monitor intensely (Adams, 2009). This may reduce the firm value by negatively impacting the quality of advice offered by women and ethnic minority directors because they are mostly outsiders (Upadhyay, 2014). Therefore, the effect of board diversity on firm value may be less in better-governed firms relative to weakly-governed firms. This leads to the following hypotheses:

H3: Ceteris paribus, the strength of the relationship between women directors and firm value is weaker in better-governed firms.

H4: Ceteris paribus, the strength of the relationship between ethnic minority directors and firm value is weaker in better-governed firms.

The non-linear relationship between board diversity and firm value

Resource dependency theory suggests that organisations can reap legitimacy benefits through their linkages with the external environment (Pfeffer and Salancik, 1978). To gain legitimacy, organisations must demonstrate their congruence with societal goals (Mahadeo et al., 2011). In return, society rewards legitimised firms with intangible operational resources (Tilling and Tilt, 2010) such as customer and supplier appreciation, increased capital inflows, government blessing, and community acceptance (Mahadeo et al., 2011). Firms may gain legitimacy by appointing women and ethnic minority directors to the board (Carter et al., 2003).

In addition to legitimisation, board members impact firm value by performing various advising and monitoring functions (Felaye et al., 2011). However, there are two competing views as to how the advising and monitoring functions associated with women and ethnic minority directors may affect firm value. This effect depends on whether board homogeneity is caused by the "glass ceiling" or a "competency gap." The "glass ceiling" hypothesis has been offered as an explanation for board homogeneity (Baxter and Wright, 2000). The Federal Glass Ceiling Commission (1995: iii) in the US defines the glass ceiling as "artificial barriers to the advancement of women and minorities". It is an invisible but "unbreakable" barrier that makes it more difficult for women and ethnic minorities to reach higher ranks of the corporate ladder despite their qualifications and achievements (Baxter and Wright, 2000; Cotter et al., 2002). The glass ceiling reflects labour market discrimination and job inequality that is not explained by job-relevant characteristics such as competencies, qualifications, or achievements (Cotter et al., 2002).

In developed countries such as Australia, the UK, and the US, female graduates far outnumber their male counterparts (OECD, 2011). In Australia, students with an immigrant background tend to outperform their counterparts with a non-immigrant background (OECD, 2011). There is also evidence that, relative to male directors, women and ethnic minority directors are more likely to possess advanced degrees and have an internationally diverse background (Burgess and Tharenou, 2002; Hillman et al., 2002; Singh et al., 2008). The glass ceiling brings in its trail discrimination and subjective bias in promotion and selection against women and ethnic minorities, which lead to the under-utilisation of human capital (The US Federal Glass Ceiling Commission, 1995; Hillman et al., 2002). It creates a pool of qualified but untapped women and ethnic minorities (The US Federal Glass Ceiling Commission, 1995; Baxter and Wright, 2000; Cotter et al., 2002). Under a glass ceiling, women and ethnic minority directors have the skills, attributes, and qualifications for directorships; therefore, in higher numbers, the effect of their advising and monitoring functions on firm value will be positive.

Another competing source of board homogeneity is the "competency gap." This view posits that board homogeneity is caused by a dearth of women and ethnic minorities with the requisite level of qualifications, skills, attributes, and experience required for directorships (Ragins et al., 1998; Catalyst, 2000; Terjesen et al., 2009). In this view, some women and ethnic minority directors either do not have the attributes, skills, or qualifications to carry out their advising and monitoring roles in a way that will increase firm value or they possess characteristics and attributes that cause their monitoring and advising functions to impact firm value negatively. Moreover, to be considered for directorships, individuals must possess unique human capital (Kesner, 1998). Although education is a skill and resource required to maximise the board's portfolio of skills (Hillman et al., 2002), women are traditionally associated with lower levels of investment in education and work experience (Tharenou et al.,

1994). Moreover, women and ethnic minority directors are less likely to have expert experience in business (Hillman et al., 2002; Terjesen, 2009). Therefore, increasing the number of women and ethnic minority directors may result in firms having inefficient boards (Hilman et al., 2002; Terjesen, 2002; Bohren and Staubo, 2014) and may lead to a decline in firm value (Ahern and Dittmar, 2014).

However, when the small number of qualified women is somehow appointed to corporate boards, they are more likely to hold multiple directorships (Sealy et al., 2008). This shows excess demand over supply and indicates a lack of qualified female candidates (Farrel and Hersch, 2005). Holding multiple directorships can lead to "director busyness" (Jiraporn et al., 2009; Field et al., 2014), reduced executive monitoring, and increased agency problems, which can reduce firm value (Felaye et al., 2011). Social psychology theory suggests that women and ethnic minority directors may increase board level conflicts and inhibit the board's decision-making ability (Wespal and Milton, 2000; Carter et al., 2010).

Based on the above discussion, we surmise that when a firm appoints one ethnic minority or female director, he or she may be considered a "solo" or a "token" and will have a limited impact on board decisions because his or her views can easily be marginalised by the dominant majority group (Erkut et al., 2008; Ntim, 2013; Liu et al., 2014). Nevertheless, this appointment may still be associated with legitimacy benefits that may impact firm value positively (Pfeffer and Salancik, 1978; Liu et al., 2014). Consequently, the marginal contribution to the firm value associated with the appointment of one female or ethnic minority director will be positive. Consistent with this view, Bohren and Strom (2014) find that firms create more value when gender diversity is low. This is also the reason why some firms resort to tokenism. However, board seats are limited, and any additional seat offered to a woman or ethnic minority director may be at the expense of a qualified male or ethnic majority director. With a "glass ceiling", women and ethnic minority directors are as

qualified or even more qualified than traditional directors. Therefore, any subsequent board seat offered to a woman or an ethnic minority director may have a positive incremental firm value and may increase total firm value at an increasing rate. With a competency gap, women and ethnic minority directors are less competent relative to traditional directors. Therefore, any subsequent appointment offered to them may have a negative marginal contribution to firm value. Therefore, as their number increases at the expense of qualified traditional directors, the firm value will increase at a decreasing rate, will reach a peak, and will ultimately fall. Thus, to investigate which of these two competing views is dominant in explaining the relation between board diversity and firm value, we test the following hypotheses:

H5a: If the glass ceiling hypothesis explains the lack of board gender and ethnic diversity, a concave relationship between women/ethnic minority directors and firm value is not expected.

H5b: If the competency gap hypothesis explains the lack of board gender and ethnic diversity, a concave relationship between women/ethnic minority directors and firm value is expected.

4. RESEARCH DESIGN

(i) Data

The sample consists of all listed firms on the Johannesburg Stock Exchange (JSE) for the period 2008-2013. This sample period is chosen to cover the King III report of CG in SA. Consistent with prior SA literature (Musa and Mangena, 2008; Ntim et al., 2012), we exclude from our sample financial and utility firms as well as firms with three or more missing annual

reports. The final sample consists of an unbalanced panel[6] of 245 unique firms over a 6 year period. Compared with previous SA studies (Ntim et al., 2012; Ntim and Saboorayen, 2013), our sampling technique produced the largest number of observations, which is vital for improving the power of the tests. Data for the study were hand-collected from company annual reports, which were obtained from the African Financials Database, company websites, and direct emails to companies.

(ii) Variables and Measures

Dependent variable: firm value

Our measure of firm value is Tobin's Q. We use Tobin's Q for three reasons. First, the study seeks to examine the effect of board diversity on long-term firm value. ROA and ROE are unsuitable because they are short-term measures of firm performance while Tobin's Q measures long-term firm value (Bhagat and Black, 2002; Thomas and Eden, 2004). Second, relative to Tobin's Q, other accounting measures of firm performance (ROA and ROE) may be easily subjected to several short-term earnings manipulation activities. Third, Tobin's Q is a standard firm value measure in "governance-to-value studies" (Black et al., 2014). We measure Tobin's Q as the ratio of total assets minus the book value of equity plus the market value of equity to total assets.

Independent variables: gender and racial diversity measures

The variables of interest in this study are ethnic and gender diversity. Prior studies (e.g., Adams and Ferreira, 2009; Simpson et al., 2010; Ntim, 2013) captured diversity using two

[6] Previous SA studies (Ntim et al. 2012; 2013) used balanced panels. We use an unbalanced panel for three reasons. First, in the real world, most panels are unbalanced (Greene, 2008). Therefore, choosing a balanced panel may introduce sample selection bias into the dataset, which may make the results less representative of the population. Second, although the choice of an unbalanced panel may be subject to attrition bias (Baltagi, 2012), we have no reason to believe the data are non-randomly sampled because we included all listed firms at the sample date. Third, by allowing for entry and exit, we capture much of the firm-level heterogeneity in disclosure, which is vital for this study.

main measures: (1) a dichotomous variable and (2) as the percentage of women/ethnic minority directors on the board. In this study, we follow Liu et al. (2014) and adopt both measures. First, we construct three dummy variables for gender diversity. The dummy variables take the value of "1" for the presence of one woman director on the board and "0" otherwise; "1" for the presence of two women directors on the board and "0" otherwise; and "1" for the presence of three or more women directors on the board and "0" otherwise. Second, following the steps used for women directors, we create three new dummies for ethnic minority directors.[7] We also measure both gender and ethnic minority as a percentage of total board size.

In line with previous studies in this area (Adams and Ferreira, 2009; Gul et al., 2011; Ntim, 2013; Liu et al., 2014;), we control for several CG attributes as well as other firm characteristics, namely, the natural log of total assets (SIZE), a dummy variable (BIG4) set equal to "1" if a firm is audited by a big four audit firm and "0" otherwise, separation of the board chair role from the CEO (DBL), leverage (LEVERAGE), board size (BSIZE), firm growth (GROWTH), CEO age (AGE), and board independence (BIND) measured as the percentage of non-executive directors on the board. All variable definitions appear in Table 1.

[INSERT TABLE 1]

Table 2, Panel A, reports the descriptive statistics of the board ethnic and gender diversity measures. In line with Dejong and Ling (2012), we winsorized each continuous variable at the top 0.5% and the bottom 0.5% of observations to reduce the outlier problem. Panel A shows that Tobin's Q has a mean of 1.43, a standard deviation of 0.66, and a median of 1.352. Also, the mean Tobin's Q for firms with women or black ethnic directors is higher than other firms. In Panel A, the mean of Race suggests that 15.04% of all directors are non-

[7] Although SA is a black-majority country, weak presence of black directors in SA boards make them ethnic minority at the board level.

white, meaning that the minority white population still holds approximately 85% of all directorships in the sample firms. However, 49% of the sample firms have at least one non-white director[8] on their board. We also find that among the firms that have non-white directors, 12%, 11%, and 26% have one, two, and three or more non-white directors, respectively.

In Panel A of Table 2, the mean of Gender shows that 16.75% of all directors in the sample firms are women. However, the mean of GDIV suggests that the number of firms with at least one woman director constitutes 54% of the sample. Of this number, 20% have just one woman director, while 18% have two women directors. We also find that 16% of all firms have at least three women directors. This is consistent with Erkut et al. (2008) and indicates that most firms are in the habit of appointing just one female director, in a way reminiscent of "tokenism". Overall, it appears that the various policy reforms, such as the BBBEE Act, the EEA, and the King reports, aimed at increasing the number of women and ethnic minorities on SA corporate boards have not been particularly successful.

In relation to the key control variables (see Table 2, Panel A), 53% of the sample firms are audited by BIG4 auditors; the average CEO age is around 32 years with the average board size of about eight and 42.56% of the board members are non-executive directors; in 75% of the firms, the CEO and the board chair roles are performed by separate individuals.

Panel B of Table 2 shows the industry distribution of our sample firms. Based on the JSE industry classification, the sample firms come mainly from five industries. These are Industrials (31.84%), Basic Material (28.16%), Consumer Services (14.29%), Consumer Goods (11.43%), and Technology (7.35%). However, women and black directors are mostly

[8] In this paper, we use the terms "blacks" and "non-whites" interchangeably to refer to the same groups of people. Statistics SA classify African blacks, coloured people, Asian and Indian people as "blacks". The BBBEE Act also follows this classification scheme. Along the same spirit, we classify all non-whites in SA as blacks.

present in Oil and Gas, Technology, Telecommunications, Industrials and Consumer Services.

[INSERT TABLE 2]

We present a Pearson's bi-variate correlation matrix of the independent variables in Table 3, which shows some high correlation coefficients (**in bold**), thus raising concerns about multicollinearity. The high correlations are due to the alternative measurements of ethnic and gender diversity adopted in this paper. Schroeder (1990) recommends two ways of addressing multicollinearity. First, regression techniques that use biased regressor coefficients can be used to achieve a substantial reduction in the stability and variance of these same coefficients. Second, the theoretical model can be altered either by combining the collinear independent variables or by including them only in different regression models. However, Gujarati (1988) argues that multicollinearity is not a question of a kind but of degree. Consistent with Schroeder (1990), he also suggests that a safe approach to addressing multicollinearity is to incorporate the suspected variables only in alternative models. Hence, we adopt this safe approach by regressing the collinear independent variables alternatively in different regression models. Therefore, the high correlations are not an issue.

[INSERT TABLE 3]

5. MAIN RESULTS

In this paper, we analyse panel data. A major advantage of panel data over cross-sectional and time series data is their ability to control for individual heterogeneity (Hsiao, 1986; Baltagi, 1998). However, these individual heterogeneities can only be properly controlled for if the appropriate panel data technique is used (Park, 2011). Following Kennedy (2008), we conduct a raft of diagnostic tests to guide us in our choice of a suitable panel estimation

technique. We first conduct the Breusch and Pagan (1980) LM test to test for the suitability of either a pooled OLS or a random-effects regression model. The test rejects the null hypothesis of zero variance across entities, making pooled OLS unsuitable. We then perform the Hausman (1978) test, which also rejects the null hypothesis that individual effects are uncorrelated with the regressors.

Based on the result of the Hausman (1978) test, we adopt a fixed-effects regression model as follows:

$$Q_{it} = \alpha_{it} + Diversity_{it} + \sum_{i=1}^{n} B_1 Controls_{it} + \delta_{it} + \varepsilon_{it} \qquad (1)$$

where Q_{it} = Tobin's Q for firm *i* at time *t*; Diversity = Race, Gender, GDIV, RDIV, or any of the dummies (D1_Gender, D2_Gender, D3_Gemder, D1_Race, D2_Race, and D3_Race); Controls = LEV, BIG4, DBL, BSIZE, GROWTH, AGE, SIZE and Industry-Firm fixed effects, Year Fixed effects; and δ = the fixed effects of a vector of the mean differences of all time-variant variables. All variables are as defined in Table 1. To reduce heteroskedasticity, we follow previous studies (Peterson, 2009; Thomson, 2011) and use cluster-robust standard errors across all estimations.

As discussed in section 2, the SA government has constantly pushed for more women and blacks on SA corporate boards with the aim of achieving social equity to counter a history of apartheid. By contrast, boards may not voluntarily embrace the idea unless there is a business case for it. We examine the value relevance of increasing the number of women and blacks on SA boards. Specifically, we follow Liu et al. (2014) and adopt the token status theory (Kanter, 1977) and the critical mass theory (Kramer et al., 2007; Erkut et al., 2008; Kristie, 2011), which state that "one is a token, two is a presence, three is a voice". We posit that if one woman/ethnic black director can influence firm value, then the effect should be more

pronounced with two women/black directors. Similarly, three or more women/black directors should have even greater impact on firm value *ceteris paribus.* We, therefore, run model (1) by replacing "*Diversity"* with our women director dummies (D1_Gender, D2_Gender, and D3_Gender).

The regression results, as reported in column 1 of Table 4 (Panel A), indicate that one woman director exerts a significant impact on firm value. Specifically, relative to boards with no women director, boards with one woman director (D1_Gender) are associated with 0.246% higher Tobin's Q. This higher firm value may be attributed to the legitimacy benefits enjoyed by firms when they announce the appointment of the first woman director (Pfeffer and Salancik, 1978; Carter et al., 2003) because a token woman may be marginalised by the dominant males (Kanter, 1977; Kirstie, 2011; Ntim, 2013). We also find that two women directors (D2_Gender) have a positive relationship with firm value. Nevertheless, the increase in firm value is marginally lower than that of one woman director. Boards that have two women directors are associated with 0.221% increase in Tobin's Q.

A reasonable explanation for above results may be that although at two women directors may still be marginalised by the dominant males, the marginalisation process may result in increased boardroom conflicts which may inhibit boardroom decision making and cause a decline in firm value (Jackson et al., 2003). However, the benefits are higher for boards with three or more women directors. We find that the presence of three or more women on the board (D3_Gender) increases Tobin's Q by 0.349%. Overall, although findings do not support H1, they show that *ceteris paribus* higher presence of female directors leads to higher Tobin's Q. This evidence is congruent with Erkut et al. (2008) as well as Liu et al. (2014), who suggest that gender ceases to be a barrier and women directors are more effective when there are three or more on a board. More importantly, the findings appear to offer justification

for the various policy reforms, such as the EEA, the BBBEE Act, and the King reports, put in place by the SA government to increase the number of women on SA corporate boards.

To test the effect of the number of ethnic non-white directors on firm value, we re-estimate model (1) using our director ethnicity dummies (D1_Race, D2_Race, and D3_Race). As reported in column 2 of Table 4 (Panel A), we find that the presence of one ethnic non-white director (D1_Race) increases Tobin's Q by 0.319% relative to firms without any non-white directors. The result further indicates that the appointment of two ethnic minority directors (D2_Race) is associated with a 0.329% increase in Tobin's Q. However, we find that three or more ethnic minority directors (D3_Race) increase Tobin's Q by 0.234%. The results show that the appointment of one or two ethnic non-white directors increases firm value; however, the increase in firm value declines with the appointment of three or more non-white directors. These findings appear to be at variance with H2 as well as the critical mass theory. It may thus be conjectured that the critical mass theory is not applicable to ethnicity. Our evidence confirms previous suggestions (Hillman et al., 2002; Carter et al., 2010) that gender and ethnicity are different and may impact firm value differently. The decline in firm value may be attributed to the dearth of qualified ethnic non-white directors in SA[9] (relative to the population distribution) vis-à-vis the affirmative action rules requiring firms to appoint ethnic non-white directors. Therefore, as firms scramble for the few qualified ethnic non-white directors, the directors may receive multiple appointments and become too "busy" to monitor (Jiraporn et al., 2009; Field et al., 2014), leading to a decrease in firm value (Cashman et al., 2012). In contrast, Ferris et al. (2003) document a positive relationship between director busyness and firm value. However, Cashman et al. (2012) note that this finding stems from their sample composition and empirical design. Consistent with this, Field et al. (2014) report that the positive effect of busy boards on firm value is lowest among firms

[9] As at 2013, the minority whites who are less than 10% of the total population in SA constituted more than 50% of the membership of the Institute of Directors in South Africa (Source: Institute of Directors SA).

that require more board monitoring than advising. Alternatively, it could also be that the dearth of qualified ethnic non-white directors leads to firms appointing less-qualified directors in a bid to meet current affirmative action requirements. The dearth of qualified non-white directors is supported by appendix 1a, which shows a gross higher education participation rate of 14% and 57% for black and white South Africans, respectively.

We next investigate whether the strength of CG has any effect on the relation between women/ethnic non-white directors and firm value. To do this, we build a CG compliance index (GOVIN) based on 66 provisions in the King reports of CG for the sample period. A disclosure index $GOVIN_{jt}$ for firm *j* at time *t* is calculated as follows:

$$GOVIN_{jt} = \left[\left(\sum_{t=1}^{n_{jt}} x_{ijt} \right) \div n_{jt} \right] \times 100 \qquad (2)$$

where n_{jt} = the number of items expected for the *j* th firm at time *t*; $n_{jt} = 66$; and $x_{ijt} = 1$ if the i^{th} item is disclosed for firm *j* at time *t* and 0 otherwise. Thus, $0 \le GOVIN_{jt} \le 100$.

We then create a dummy variable (G_Dummy) set equal to "1" if a firm scores higher than the mean on our CG index (*GOVIN*) and "0" otherwise. We further measure women and ethnic non-white directors as a percentage of total board size (Gender and Race, respectively) and interact G_Dummy with both Gender and Race in different regression estimates.[10] The results of these estimates are reported in columns 3, 4, and 5 of Table 4 (Panel A). We find that in better-governed firms, a 10% increase in the percentage of women directors results in a 0.02% increase in firm value (see column 4). The increase in firm value due to the presence of women directors in better-governed firms appears to be lower than that in other firms. As shown in column 6, the increase in firm value due to the presence of women directors in the

[10] In different sets of regressions (results un-tabulated but available on request), we resort to sample-splitting (on the basis of the CG dummy) to check how the coefficients of the control variables influence the results of the interaction variables and find that the results are qualitatively similar.

overall sample is 0.04% compared to a 0.02% increase in better-governed firms. These results suggest that the effect of women directors on firm value is weaker but positive in better-governed firms. These findings are in line with H3 but in contrast with previous US studies (Adams and Ferrera, 2009; Gul et al., 2011). It appears that weaker investor protection and the weaker external regulatory environment in developing countries make the extra monitoring from women directors value relevant.

However, this is not the case with the percentage of ethnic non-white directors. In contrast to H4, we find that ethnic non-white directors have a higher impact on firm value in better-governed firms. Our results suggest that, in better-governed firms, a 10% increase in the percentage of ethnic non-white directors (Race * G_Dummy) increases firm value by 0.07% (see column 5 of Table 4, Panel A). In contrast, the increase in firm value for the percentage of ethnic non-white directors (Race) for the full sample (irrespective of the level of CG quality) is only 0.05% (see column 8). A reasonable explanation may be that the increase in firm value associated with ethnic non-white directors arises predominantly from legitimacy and advisory factors. This implies that SA firms appoint qualified ethnic non-white directors who are well connected but too busy to monitor. Felaye et al. (2011) note that director time is a fixed resource, and they suggest a trade-off between the time allocated for advising and monitoring. Field et al. (2014) find that busy directors allocate more time to advising than monitoring. Therefore, firms may benefit more from the appointments of busy ethnic non-white directors when there is an effective CG mechanism in place to address other agency problems that may negatively impact firm value. The role of CG mechanism is more critical in countries where the external corporate regulation environment is weak (Samaha et al., 2012). Our result suggests that while gender diversity may partially substitute for poor CG (Adams and Ferreira, 2009; Gul et al., 2011), ethnic diversity may not. Nevertheless, ethnic non-white directors are more value relevant than women directors in better-governed firms.

To test whether the glass ceiling hypothesis or the competency gap hypothesis is dominant, we use the women and ethnic non-white director percentage (Gender and Race, respectively). Dalal and Zickar (2012) note high correlations between components and product terms used to capture non-linear relationships. This collinearity results in ill-conditioned data that inflate the variances and lead to unstable results (Sockloff, 1973; Dunlap and Kemery, 1987; Cohen, 2003). A common solution to reduce this collinearity is mean-centring (Dalal and Zickar, 2012). Mean-centring changes the scaling of the variables and removes non-essential ill-conditioning (Cohen et al., 2003) without altering the substantive conclusions of the analysis (Jaccard and Turrisi, 2003). Therefore, to reduce this collinearity, we mean-centre both Gender and Race before creating their quadratic terms ($Gender^2$ and $Race^2$).

We re-run model (1) by replacing *"Diversity"* with the percentage of women and ethnic non-white directors (Gender and Race, respectively) as well as their quadratic forms (i.e., $Gender^2$, $Race^2$). As reported in columns 7 and 9 of Table 4 (Panel A), we find that a 10% increase in the percentage of women directors (Gender) increases firm value by 0.09%. This finding is consistent with previous studies (Carter et al., 2003; Ntim, 2013). Moreover, we find a statistically non-significant quadratic relationship for the percentage of women directors. The coefficient is negative but not significant (*t*-statistic = -1.49). This evidence is consistent with the earlier finding that firms are rewarded with an increase in firm value when they appoint three or more women directors. Again, the lack of a quadratic relationship provides support for the call for the appointment of more women directors. The results provide support for H5a that the glass ceiling hypothesis is dominant in explaining the lack of women on SA corporate boards. That is, women have the required attributes and skills to perform their advisory and monitoring functions in a way that contributes positively to firm value. Therefore, their exclusion from boards is mainly due to discrimination and

stereotypical perceptions, which are unrelated to their abilities and experience (Baxter and Wright, 2000; Cotter et al., 2002). This is evidence also consistent with Cotter et al. (2001), who report evidence of the glass ceiling for women.

Furthermore, we note that the percentage of ethnic non-white directors has a positive relationship with firm value and is statistically significant at 5% (see columns 8 and 9 of Table 4, Panel A). This is consistent with previous studies (Carter et al., 2010; Ntim, 2013). More importantly, we find evidence of a concave relationship for ethnic non-white directors (coefficient of $Race^2$ = -0.016; *t*-statistic = -3.29). This evidence supports the dominance of the competency gap hypothesis (H5b) and is also consistent with the result of Cotter et al. (2001), who find no evidence of a glass ceiling for ethnic minorities.

[INSERT TABLE 4]

We investigate further the cause of the concave relationship for ethnicity. We run separate regressions for firms with ethnic non-white directors at the 50th, 75th and 95th percentiles.[11] The results in Table 4 (Panel B) indicate that at the 75th percentile (when ethnic non-white directors constitute more than 28.57% of total board size), ethnic non-white directors' contribution to firm value is negative (coefficient of Race in column 1 = -0.009; *t*-statistic = -2.63).[12] We further split this subsample into high CG and low CG using G_Dummy. The results presented in Table 4 (Panel B) show that the negative relationship of firm value with Race at the 75th percentile is driven by the sub-sample of lower-CG firms (G_Dummy = 0); the coefficient of Race in column 2 = -0.060; *t*-statistic = -41.09. This finding implies less monitoring by ethnic non-white directors. Therefore, in firms with lower CG score, increasing their numbers on boards simultaneously increases potential agency problems that

[11] For brevity, we only show results for firms above the 75th percentile. The other regression results (50th and 95th percentiles) are untabulated but available on request.
[12] For brevity, we do not report the results of the control variables.

cause a decline in firm value. In contrast, the coefficient for higher CG firms (G_Dummy = 1) at the 75th percentile is negative but not significant (the coefficient of Race in column 3 = -0.008; *t*-statistic = -1.92). This result implies that the stronger CG in these firms neutralises the negative effect of the agency problems on firm value causing a non-significant relationship.

Overall, we document a positive and significant effect for both board gender and ethnic diversity on firm value. We also find that the increase in firm value is greater when boards have three or more women directors. In contrast, ethnic minority directors contribute less to firm value when there are three or more on the board. Furthermore, we document that ethnicity has a concave relationship with firm value, but gender does not. We also demonstrate that in better-governed firms, ethnic diversity is more value relevant than gender diversity. Our evidence also suggests that increasing the number of ethnic non-white directorships can be more beneficial for better-governed firms.

6. FURTHER ANALYSIS

(i) Director Busyness

Labour markets reward competent and valuable directors with multiple directorships (Fama, 1980; Fama and Jensen, 1983). Therefore, it could be the case that the positive relation between gender/ethnicity non-white directors and firm value is driven by only a few with the skill which is demonstrated through large numbers of multiple directorships. This is even critical in the SA setting where women and ethnic non-whites have lower gross education participation rates and labour force absorption rates (see Appendix 1a). We, therefore, examine this relationship by taking into account multiple directorships. We allocate women/ethnic non-white directors into two groups: *BUSY* and *NON-BUSY*. Following previous literature (Felaye et al. 2011; Falato et al., 2014; Elyasiani and Zhang, 2015;

Mendez et al., 2015) we define a woman/ethnic non-white director as *BUSY* if he/she holds more than two multiple directorships. We re-run model (1) by replacing *Diversity* with *BUSY* and *NON-BUSY*.

Table 5 (Panel A) shows that for both gender and ethnicity, busy and non-busy directors exhibit a positive relationship with firm value. Nevertheless, busy directors seem more value relevant than non-busy directors for ethnicity whilst non-busy directors are more value relevant than busy directors for gender. Specifically, for gender, a 10% increase in non-busy (busy) directors increases firm value by 0.06% (0.04%) (see column 1 in Table 5 Panel A). In terms of ethnicity, a 10% increase in non-busy (busy) directors increase firm value by 0.03% (0.05%) (see column 2 in Table 5 Panel A). These findings imply that the gender/ethnicity-firm value relationship is not driven by a few qualified directors. Given that the appointment of women and ethnic non-white directors in SA may be associated with several legitimation benefits and linkages to critical resources (Ntim, 2013; Ntim and Soobaroyen, 2013), the increase in firm value is unlikely to flow from director skills alone; therefore, this finding is not surprising.

(ii) Executive versus Non-executive Directors

Following Liu et al. (2014) we also investigate whether the gender/ethnicity-firm value relationship is different for executive and non-executive directors. Consistent with Liu et al. (2014) we allocate women/ethnic non-white directors into one of two groups: executive and non-executive. We then replace *Diversity* in model (1) with executive and non-executive for both gender and ethnicity. The results in Table 5 Panel A indicate that, for both gender and ethnicity, non-executive directors exhibit a statistically significant relationship with firm value but executive directors do not. This finding is inconsistent with Liu et al. (2014) who report non-significant relationship for non-executive women in China. Specifically, a 10%

increase in non-executive woman (non-white) directors increases firm value by 0.03% (0.06%) (see columns 3 and 4 in Table 5 Panel A). A reasonable explanation may be that the SA firms use the appointment of non-executive directors to connect to critical resources outside the firm. Given that political power rests in the hands of black South Africans, non-executive director appointments may become an avenue for firms to connect with powerful black empowerment groups and politicians.

[INSERT TABLE 5]

(iii) Financial Crisis and Board Diversity

As discussed in Section 1, boards have a major objective to increase shareholder value. If women/ethnic non-white directors increase firm value, then boards may have a greater need for them in crisis periods. We test whether firms restructure their boards along gender and racial backgrounds during crisis periods. To do this, we create two additional dummy variables each for gender and ethnicity: *"Increase"* equal to "1" if $Gender_{it+1}/Race_{it+1} > Gender_{it}/Race_{it}$, otherwise "0"; and *"Decrease"* equal to "1" if $Gender_{it+1}/Race_{it+1} < Gender_{it}/Race_{it}$, otherwise "0". We create an additional dummy: *Crisis* equal to "1" for the years 2008 and 2009 and "0" for other years. The results for the conditional fixed effects logistic regressions as reported in Table 5 (Panel B) show that financial *Crisis* has a positive (negative) relationship with *Increase* (*Decrease*) for both gender and ethnicity. This indicates that in times of financial crisis, firms are likely to increase women and ethnic non-white directors on boards. More so, financial crisis decreases the likelihood to reduce the number of women and ethnic minority directors.

7. ROBUSTNESS TESTS

In this section, we test the robustness of our results.

(i) Alternative Measures of Diversity and Firm Value

First, following Carter et al. (2003), we test whether our results are sensitive to alternative measures of women and ethnic non-white directors. We, therefore, use a dummy variable set equal to "1" if a firm has at least one woman director and "0" otherwise. We do the same for the presence of ethnic non-white directors. We name these dummies GDIV and RDIV for women and ethnic minority directors, respectively. The results are shown in Table 6. We find that our previous assertions still hold; that is, women and ethnic non-white directors influence firm value positively.

Following previous board diversity literature (e.g., Adams and Ferreira, 2009; Bohren and Strom, 2010; Liu et al., 2014) we re-examine the relationship using alternative firm value measures (ROA and ROE). The results reported in Table 6 show that both gender and ethnicity positively impact firm value when using both ROA and ROE.

[INSERT TABLE 6]

(ii) Self-selection Bias

Ferrel and Hersch (2005) suggest that a shortage of qualified women directors offers them the luxury of self-selection to serve on the boards of better-performing firms. Further, firms can also voluntarily choose to appoint women/ethnic minority directors. These raise two issues: sample selection bias and simultaneity, where our independent variables are also simultaneously determined by the dependent variable (Heckman, 1979; Wooldridge, 2002). Renders et al. (2010) note that lagging the independent variables may reduce simultaneity problems. However, Bellemare et al. (2015) note that lagging independent variables only hides reverse causality problems and does not reduce it. Consistent with this, Adams and Ferreira (2009) suggest the use of instrumental variables in dealing with reverse causality

problems. Therefore, we adopt the Heckman (1979) two-stage model and a 2SLS to mitigate potential self-selection bias and other forms of endogeneity.

In the first stage of the Heckman two-stage model, we analyse the decision to appoint a woman/ethnic non-white director. The dependent variable is GDIV/RDIV as defined in Table 1. We first identify independent variables that may affect firms' decision to appoint a woman/ethnic non-white director. Previous studies **(**Dharwadkar et al., 2000; Jiang, 2008; Su et al., 2008) suggest that principal-principal conflict, as opposed to the principal-agency conflict, is a major corporate governance problem in developing countries. The principal-principal conflicts refer to instances in which one group of shareholders appropriate the value of another group of shareholders by altering board level decisions (Su et al., 2008). Therefore, if board diversity improves board monitoring (Adams and Ferreira, 2009; Gul et al. 2011; Liu et al. 2014), then *ceteris paribus*, different classes of shareholders (depending on whether they want to expropriate or prevent expropriation) have the incentive to influence firm decisions to appoint women/ethnic non-white directors. Further, different shareholder classes may invest for different reasons because of their special positions in society (Dams and Scholtens, 2012). For example, the SA government may use its shareholdings to push for diverse boards because of the need for social integration in the post-apartheid period. Based on these, we identify ownership variables including block-ownership, executive director ownership, foreign ownership, and government ownership as factors that influence firms' decision to appoint women/ethnic non-white directors.

Further, companies tread on the heels of their peers when designing their CG structure (Anderson et al., 2011; Upadhyay, 2014). When a firm is linked to other firms that have female directors, it is more likely to appoint women directors (Hillman et al., 2007). The percentage of women directors of a firm may be affected by the percentage of women directors in its own industry (Liu et al., 2014). We argue that the percentage of ethnic non-

white directors of a firm may also be affected by the percentage of ethnic non-white directors in its own industry. All things being equal, firms' decision to appoint women/ethnic non-white directors may be influenced by the number of women and ethnic non-white directors in the industry in which they operate. Therefore, we also employ the women director ratio (G_Ratio) and the ethnic non-white director ratio (R_Ratio) as independent variables in the first stage Heckman model. We follow Liu et al. (2014) and measure the G_Ratio and the R_Ratio as (the total number of women/ethnic minority directors in an industry minus the total number of women/ethnic non-white directors in that firm) to (the total number of directors in that industry minus the number of directors in that firm). We, therefore, include G_Ratio/ R_Ratio and all the control variables in the first stage of standard Heckman two-stage model.

We obtain Lambda from the first-stage regression by following the standard Heckman methodology. The results of the first stage regression are shown in Table 7 (column 1). Column 1 shows that block ownership, foreign ownership, and the G_Ratio influence firms' decision to increase women directors. In contrast, executive director ownership and foreign ownership reduce the propensity to appoint ethnic non-white directors whilst government ownership and R_Ratio influence firms to appoint more ethnic non-white directors.

To control for self-selection bias, we estimate the second-stage regressions with Lambda as an additional control variable. The results in Table 7 show that the coefficient for Lambda is negative and significant at 10% for both gender and ethnicity. Nevertheless, gender and ethnicity still exhibit a positive relationship with firm value even after controlling for self-selection bias.

(iii) Instrumental Variables-2SLS

For the 2SLS, we use the same instruments in the first-stage Heckman-two stage estimation. In the first stage, we use the instruments as independent variables. In the second stage, we use the predicted Gender (Gender^) and Race (Race^) to estimate their relationship with firm value. The results, as presented in Table 7, confirm our earlier findings that both the percentage of women and ethnic non-white directors increase firm value. The coefficient on the predicted women directors is 0.004 and is significant at 10% while that of the ethnic non-white directors is 0.005 and significant at 10%. These results imply that gender and ethnicity still remain value relevant even after controlling for endogeneity.

[INSERT TABLE 7]

7. SUMMARY AND CONCLUSION

Prior research documented mixed results for the relationship between board diversity and firm value. In this study, we re-examine this relationship in three ways. First, we examine whether the relationship differs for firms with a certain number of women and ethnic non-white directors. Second, we explore how the strength of a firm's internal CG mechanism impacts this relationship. Finally, we examine whether the cause of board homogeneity (whether due to the glass ceiling or a competency gap) affects the nature of the relationship. In doing so, we focus on a more recent sample from the unique institutional setting of SA - a country with a history of legal racial segregation.

Specifically, we find that gender diversity has the greatest impact on firm value when firms have three or more women on the board. This evidence is consistent with Liu et al.'s (2014) findings in China. In contrast, ethnic non-white directors have the greatest positive influence on firm value when firms have one or two ethnic non-white directors. The impact of ethnic non-white directors on firm value declines with three or more non-white directors. This result is consistent with Carter et al.'s (2010) assertion that gender and ethnicity may

impact firm value differently. This result is also consistent with Cotter et al. (2001) who find no evidence of glass ceiling for ethnicity.

Our evidence suggests that although the "glass ceiling" hypothesis dominates the "competency gap" hypothesis for women directors, the "competency gap" hypothesis is dominant in explaining the absence of ethnic non-white directors on the board. Furthermore, we find that although women directors are less value relevant in better-governed firms, the relationship remains positive and statistically significant. This is contrary to the findings of Adams and Ferreira (2009), who reported a negative relationship in firms with higher levels of shareholder rights and attributed their results to over-monitoring. We attribute our finding to the weaker external corporate regulatory environment in developing countries that necessitates extra monitoring even in better-governed firms. In contrast, ethnic non-white directors have a greater positive impact on firm value in better-governed firms. Further analysis reveals that our results are not driven by director busyness and that firms restructure their boards based on gender/ethnicity in the financial crisis period. Overall, our results provide significant evidence on the board diversity-firm value relationship.

Notwithstanding the significant findings, our study is not without caveats. Specifically, previous studies (Kanter, 1977; Kirstie, 2011; Lu et al., 2014) suggest that women directors exert a substantial influence on firm value when there is more than one. Erkut et al. (2008) note that a critical mass (usually three or more) is required before women can exert a major influence on firm value. Unfortunately, only 16% of the sample firms in this study had three or more women directors. Also due to data limitations, we are unable to include director background information in our analysis.

Nevertheless, our results have two important policy implications. First, our study is particularly relevant to multi-racial countries that are striving to achieve social harmony in

the corporate endeavour and also for countries with a culture that reinforces the belief in the superiority of men over women. Our findings provide empirical evidence for policymakers, regulators, firms, and, in particular, the SA government, which appears bent on formulating policies aimed at eradicating the effects of apartheid. Second, our study sheds further light on how the "glass ceiling" hypothesis may explain the lack of women and ethnic minorities on corporate boards even in developed countries.

REFERENCES

Adams, R. B. (2009), 'Asking directors about their dual roles', Unpublished Working Paper. University of Queensland.

_____and D. Ferreira (2009), 'Women in the boardroom and their impact on governance and performance', Journal of Financial Economics, Vol.94, pp.291-309.

Alessandri, T. M., S.S. Black and W.E. Jackson (2011), 'Black Economic Empowerment Transactions in South Africa: Understanding When Corporate Social Responsibility May Create or Destroy Value', Long range Planning, Vol.44, Pp.229-249.

Anderson, R.C., D.M. Reeb, W. Zhao and A. Upadhyay (2011), 'Economics of director heterogeneity', Financial Management, Vol.40, pp. 5-38.

Andreason, S. (2011), 'Understanding corporate governance reforms in South Africa: Anglo American divergence, the King reports and hybridization', Business and Society, Vol.50, No.4. pp. 647-673.

Balasubramanian, N., S. Black, V. Khanna (2010), 'The relation between firm-level corporate governance and market value: A case study of India', Emerging Market Review, Vol. 11, pp. 319-340

Baltagi B. H. (1998), 'In Hand book of Applied Economics Statistics', New York.

Baranchuk, N., and P. Dybvig (2009),'Consensus in diverse corporate boards'. Review of Financial studies, Vol.22, pp.715-747.

Baxter J., and E.O.Wright (2000), 'The Glass Ceiling Hypothesis A comparable study of the United States, Sweden and Australia', Gender and Society, Vol.14, No.2, pp.275-294.

Bellemare, M. F., T. Masaki, and T.B. Pepinsky, (2015), 'Lagged Explanatory Variables and the Estimation of Causal Effects' (February 23, 2015). Available at SSRN: http://ssrn.com/abstract=2568724. Last accessed 23rd November, 2015.

Bem, S. L. (1983), 'Gender Schema Theory and Its Implications for Child Development: Raising Gender-Aschematic Children in a Gender-Schematic Society', Vol.8, No.4. pp. 598-616.

Bertrand, M., P. Mehto, and S. Mullainathan (2002), 'Ferreting out Tunneling: An Application to Indian Business Groups', Quarterly Journal of Economics, Vol.117, No.1, pp. 121-48

Bhagat, S., B. Black (2002), 'The non-correlation between board independence and long-term firm performance', Journal of Corporation Law, Vol. 27, pp.231–274

Bista M. (2004), 'Review of Research literature on Girls` Education in Nepal', UNESCO Kathmandu Series of Monographs and Working Papers: No. 3

Black, B. S., A. de Carvalho Gledson and J.O. Sampaio (2014), 'The Evolution of Corporate Governance in Brazil', Emerging Markets Review, Vol. 20, pp. 176-195

Bohren, O, and R. O. Strom (2010), 'Governance and politics: regulating independence and diversity in the board room', Journal of Business Finance and Accounting, Vol.37, No.9&10, pp.1281-1308.

Brancato, C. K., and D.J Patterson (1999), 'Board diversity in US corporations: Best practices for broadening the profile of corporate boards' Research Report 1230-99-RR, the Conference board.

Branco, M.C and L.L. Rodrigues (2008), 'Factors influencing social responsibility disclosure by Portuguese companies', Journal of Business Ethics, Vol.83, pp. 685-701.

Breusch, T. S. and A.R. Pagan (1980), 'The Lagrange Multiplier Test and Its Applications to Model Specification in Econometrics', Review of Economic Studies, Vol.47, No.1. pp.239-253.

British Broadcasting Corporation (2014), United Kingdom. Las accessed 2nd October, 2014. http://www.bbc.com/news/world-africa-29834776

Budig M. (2002), 'Male Advantage and the gender composition of jobs: Who rides the glass escalator', Social Problems, Vol.4, No.2, pp.258-277.

Butler, S. R. (2012), 'All on Board! Strategies for Constructing Diverse Boards of Directors', 7 Va. L. Bus. Rev. 61.

Byoun, S., K. Chang and Y. S. Kim. (2013) 'Does Corporate Board Diversity Affect Corporate Payout Policy?', Available at SSRN: http://ssrn.com/abstract=1786510 or http://dx.doi.org/10.2139/ssrn.1786510. Last accessed 1st November, 2015.

Campbell, K. and A. Minguez-Vera (2008), 'Gender diversity in the boardroom and firm financial performance', Journal of Business Ethics, Vol.83, pp. 435–451.

Carter, D. A., B.J. Simkins and W.G. Simpson (2003), 'Corporate governance, board diversity and firm value', Financial Review, Vol.38, pp.33-53.

———F. D'Souza, B.J. Simkins, and W.G. Simpson (2010), 'The gender and ethnic diversity of US boards and board committees and firm financial performance', Corporate Governance: An International Review, Vol.18, No. 5, pp.396–414.

Cashman, G.D., S.L. Gillan, and C. Jun (2012), 'Going overboard? On busy directors and firm value', Journal Banking and Finance, Vol.36, pp. 3248-3259.

Cazden, C. B. (1968) 'The Acquisition of Noun and Verb Inflections', Childhood Development, Issue 39, No. 2. pp. 433-448.

Cohen, J., P. Cohen, S.G. West and L.S. Aiken (2003), 'Applied multiple regression/correlation analysis for the behavioral sciences (3rd ed.)', Mahwah, NJ: Lawrence Erlbaum Associates.

Cotter, D. A., J.M. Hermsen, S. Ovadia, and R. Vanneman (2001), 'The Glass Ceiling Effect', Social Forces, Vol.80, No.2, pp.655-682.

Council on Higher Education (2013), 'A proposal for undergraduate curriculum reform in South Africa: The case for flexible curriculum structure', Pretoria

Duncan, H.F. (1969), 'A study of pictorial perception among Bantu and white primary school children in South Africa', Unpublished doctoral thesis. University of the Witwatersand.

Employment Equity Act, No. 55 of 1998. The South African Department of Labour.

Elyasiani E and L.Zhang (2015) 'CEO entrenchment and corporate liquidity management', Journal of Banking and Finance, Vol. 54, pp.115–128.

Falato, A., D. Kadyrzhanova, and U. Lel (2014), 'Distracted directors: Does board busyness hurt shareholder value?' Journal of Financial Economics, Vol.113, pp.404-428.

Faleye, O., R. Hoitash, and U. Hoitash (2011), 'The cost of intense monitoring' Journal of Financial Economics, Vol.10, pp.160-181.

Fama, E.F., (1980) 'Agency Problems and the Theory of the Firm' The Journal of Political Economy, Vol.88, No.2, pp. 288-307.

Fama, E.F., and M.C. Jensen (1983), 'Separation of Ownership and Control', Journal of Law and Economics, Vol.26, No.2, pp. 301-325.

Federal Glass Ceiling Commission (1995), 'Good for Business: Making full use of the Nation`s Human Capital', U.S. Department of Labour.

Ferris, S.P., M. Jagannathan, and A.C. Pritchard (2003), 'Too busy to mind the business? Monitoring by directors with multiple board appointments', Journal of Finance, Vol. LVIII, No. 3, pp.1087-1111.

Fich, E., and A. Shivdasani (2006), 'Are busy boards effective monitors', Journal of Finance, Vol. 61, pp. 689-724.

Field, A. (2005), 'Discovering statistics using SPSS' (2nd ed.). London: Sage.

Field, L., M. Lowry, and A. Mkrtchyan (2014), 'Are Busy Boards Detrimental?' Journal of Financial Economics, Vol.109, pp.63-82.

Fox, G (2011) 'Remembering Ubuntu:Memory, sovereignty and reconciliation in post-apartheid South Africa', Platforum, Vol. 12, pp.100-117.

Gibson, C. A. (1999), 'Do they do what they believe they can do? Group efficacy and group effectiveness across tasks and cultures', Academy of management Journal, Vol. 42. No.2, pp.136-157.

Glazer N. (1976), 'Affirmative discrimination', New York: Basic

Goodstein J., K. Gautam, and W. Boeker (1994), 'The Effects of Board Size and Diversity on Strategic Change', Strategic Management Journal, Vol.15, No.3, pp.241-250

Greene, W., H. (2008), 'Econometric analysis', 6th ed., Upper Saddle River, N.J.: Prentice Hall.

Gujarati, D.N.(2003), 'Basic Econometrics', New York: McGraw-Hill.

Gul, F.A., B. Srinidhi and A.C. Ng (2011), 'Does board gender diversity improve the informativeness of stock prices?', Journal of Accounting and Economics, Vol.51 No.3, pp.314–338.

Hammond, T., B. A. Clayton, and P.J. Arnold (2009), 'South Africa`s transition from apartheid: The role of professional Closure in the experience of black chartered accountants', Accounting Organization and Society, Vol. 34, No. 6/7, pp. 705-721.

Hausman, J. A. (1978), 'Specification tests in econometrics', Econometrica, Vol.46, No.6, pp.1251– 1272.

Heckman, J. J. (1979). 'Sample selection bias as a specification error', Econometrica, Vol.47, pp.153- 61.

Hillman, A. J., J.A.A. Cannella, and I.C. Harris (2002), 'Women and Racial Minorities in the Boardroom. How do directors differ?', Journal of Management, Vol.28. Pp.747-763.

———, C. Shropshire, A.A., Cannella, Jr. (2007), 'Organizational predictors of women on corporate boards', Academy of Management Journal, Vol.50, No. 4, pp.941-952.

_____, A J, C. Withers, and B.J Collins (2009), 'Resource Dependence Theory: A Review', Journal of Management, Vol.35, No.6, pp.1404-27.

Hsiao C. (1986), 'Analysis of Panel Data', Cambridge University Press, Cambridge.

Hughes, E. C. (1944), 'Dilemmas and Contradictions of status', American Journal of Sociology, Vol.50, pp.353-359.

Islam, M. A. and C. Deegan. (2008), 'Motivations for an organisation within a oeveloping Country to Report Social Responsibility Information: Evidence from Bangladesh', Accounting, Auditing and Accountability Journal, Vol.21, No.6, pp. 850–74.

Jackson,S. E., A. Joshi, and N.L. Erhart (2003), 'Recent Research on Team and Organizational Diversity: SWOT Analysis and Implications', Journal of Management, Vol.29, No.6, pp.801-830.

Jehn, K.A., and K. Bezrukova (2004), 'A field study of group diversity, workgroup context, and performance', Journal of Organisational Behaviour, Vol.25, pp.703-729.

Jensen, M., C. (2005), 'Agency Costs of Overvalued Equity', Financial Management, Vol.34, No.1, pp.5-19

Jiraporn, P., M. Singh, C.I.Lee (2009), 'Ineffective corporate governance: Director Busyness and committee memberships', Journal of Banking and Finance, Vol.33, pp.819-828.

Jonsen, K., M.L. Maznevski, S. C. Schneider (2011), 'Diversity and it's not so diverse literature: an international perspective', International Journal of Cross Cultural Management, Vol.11, No.1, pp.35-62.

Jurkus, A. F., J.C. Park, and L.S. Woodard (2010), 'Women in top management and agency costs', Journal of Business Research, Vol. 64. No.2. pp. 180-186.

Kainuwa, K., and N.B.M. Yusuf (2013), 'Cultural Traditions and Practices of Parents as Barriers to Girl-child Education in Zamfara State Nigeria', International Journal of Scientific and Research Publications, Vol.3, Vol.11, pp.1-8.

Kanter, R. (1977), 'Men and women of the corporation', New York: Basic Books.

Kennedy, P. (2008), 'A guide to econometrics', 6th ed. Malden, MA: Blackwell Publishing.

Kramer, V. W., A.M. Konrad, S. Erkut, and M.J. Hooper (2007), 'Critical mass on corporate boards: why three or more women enhance governance', Dir. Mon., Vol. 31 No.2, Pp.19–22.

Kravitz, D., A. (2003), 'More women in the workplace: Is there a payoff in firm performance?' Acad.Manage. Exec., Vol.17, No.3, pp.148-148

Kristie, J. (2011), 'The power of three' Dir. Boards. Vol.35, No.5, pp. 22–32

LaPorta, R., F. Lopez-de Silanes, A. Shleifer, and R. Vishny (2000), 'Investor Protection and Corporate Governance', Journal of Financial Economics, Vol.48, pp.3-27.

Lapping, B. (1987), 'Apartheid: A history', George Braziller Inc. New York.

Levi, M., K. Li, and F. Zhang (2014), 'Director gender and mergers acquisitions', Journal of Corporate Finance, Vol.28, Pp.185-200.

Lewis,M., and J. Brooks-Gunn (1979), 'Social Cognition and the Acquisition of Self', New York: Plenum Corp. P. 270.

Liao T, and C. J. Yu (2012) 'Knowledge transfer, regulatory support, legitimacy, and financial performance: The case of foreign firms investing in China', Journal of World Business, Vol. 47, No. 1, pp.114–122.

Liu Y., Z. Wei, and F. Xie (2014), 'Do Women directors improve firm performance in China?', Journal of Corporate Finance, Vol.28, pp.169-184.

Mahadeo, J. D., T. Soobaroyen, and V.O. Hanuman (2012), 'Board Composition and Financial Performance: Uncovering the effects of diversity in an Emerging Economy', Journal of Businss Ethics, Vol.105, pp.375-388.

Mangena, M., and V. Tauringana (2008), 'Audit committees and voluntary external auditor involvement in U.K. interim reporting', International Journal of Auditing, Vol.12, No.1, pp.45-63.

Carlos Fernández Méndez C. F., S. Pathan, R. A.García (2015) 'Monitoring capabilities of busy and overlap directors: Evidence from Australia', Pacific-Basin Finance Journal Forthcoming.

McWilliams, A. and D. Siegel (2001). 'Corporate social responsibility: A theory of the firm perspective', Academy of Management Review, Vol.26, pp. 117-127.

Nolde, J. (1991), 'South African women Under Apartheid: Employment Rights, with Particular Focus on Domestic Service and Forms of Resistance to Promote Change', Third world Legal studies, Vol.10, No.10, pp.202-223.

Ntim , C. G., K. Opong, and J.Danbolt (2012), 'The Relative Value Relevance of Shareholder versus Stakeholder Corporate Governance Disclosure Policy Reforms in South Africa', Corporate Governance: An International Review, Vol. 20, No.1,pp.84-105.

——— and T. Soobaroyen (2013), 'Corporate Governance and Performance in Socially Responsible Corporations: New Empirical Insights from a Neo-Institutional Framework', Corporate Governance: An International Review, Vol.21, No.5, pp.468-494

——— (2013), 'Board Diversity and Organizational Valuation: Unravelling the effects of Ethnicity and Gender', Journal of Management Governance, (Forthcoming)

Park, H. M. (2011), 'Practical Guides to Panel Data Modeling: A Step by Step Analysis Using Stata', Working Paper. Graduate School of International Relations, International University of Japan.

Peloza, J., and L. Papania, (2008). 'The missing link between corporate social responsibility and financial performance: Stakeholder salience and identification', Corporate Reputation Review, Vol.11, No.2, Pp. 169-181.

Petersen, M. (2009), 'Estimating standard errors in finance panel data sets: comparing approaches', Review of Financial Studies, Vol.22, Pp.435–480.

Pfeffer, J., and G.R. Salancik. (1978), 'The external control of organizations: a resource dependence perspective', New York: Harper & Row.

Plan International (2012), 'Because I am a Girl. Progress and Obstacles to Girls` Education in Africa',

Ragins, B.R., B. Townsend, and M. Mattis (1998), 'Gender gap in the executive suite: CEOs and female executives report on breaking the glass ceiling', The Academy of Management Executive, Vol. 12, No.1,pp. 28-42.

Renders, A., A. Gaeremynck, and F. Sercu (2010), 'Corporate governance ratings and performance: A cross-European study', Corporate Governance an International Review, Vol.18. pp:87-106.

Rose, C. (2007), 'Does female board representation influence firm performance? The Danish evidence', Corporate Governance: An International Review, Vol.15, Pp.404–413.

Rwelamila, P. D., A.A. Talukhaba, and A.B. Ngowi (1999) 'Tracing the African failure syndrome: the significance of 'ubuntu'', Engineering, Construction and Architectural Management, Vol.6, No. 4, pp. 335-346.

Samaha, K., K. Dahawy, K. Hussainey, P. Stapleton (2012), 'The extent of corporate governance disclosure and its determinants in a developing market: The case of Egypt', Advances in Accounting, incorporating Advances in International Accounting, Vol.28, pp.168-178.

Saeidi S.P., S. Sofian, P. Saeidi, S. P. Saeidi, and S. A. Saaeidi (2015) 'How does corporate social responsibility contribute to firm financial performance? The mediating role of competitive advantage, reputation, and customer satisfaction', Journal of Business Research. Vol. 68. Pp.341–350.

Schroeder, M. A. (1990), 'Diagnosing and dealing with multicolinearity' Western Journal of Nursing Research, Vol. 12, No. 2, pp. 175-187.

Sealy, R., S. Vinnicombe, and V. Singh (2008), 'The female FTSE report 2008: A decade of delay', Cranfield, UK.

Segal, B. E. (1962), "Male nurses: a case study in status contradiction and prestige loss". Social Forces, Vol.41, Pp.31-48.

Simpson, W., D. Carter and F. D'Souza (2010), 'What do we know about women on boards?', Journal of Applied Finance, Vol.20, pp.27–39.

Singh, V., S. Terjesen, and S. Vinnicombe (2008), 'Newly appointed directors in the boardroom: How do women and men differ ?' European Journal of Management, Vol. 26, No. 1. pp.48.58.

Smith, N., V. Smith, and M. Verner (2006), 'Do women in top management affect firm performance? A panel study of 2500 Danish firms', International Journal of Productivity and Performance Management, Vol.55, pp.569–593.

Satorius, K. and G. Botha (2008) 'Black economic empowerment ownership initiatives: a Johannesburg Stock Exchange perspective', Development Southern Africa, Vol.25 No.4, Pp.437-453.

Spangler, E., M.A. Gordon, R.M. Pipkin (1978), 'Token Women: An empirical Tests of Kanter`s hypothesis', American Journal of Sociology, Vol.84, No.1, pp. 160-170.

Staeheli L. A., D. Hammet (2013), 'For the future of the nation: Citizenship, Nation and Education in South Africa', Political Geography, Vol.32, pp.32-41.

Statistics South Africa (2011), Gender Statistics in South Africa Report.

——— (2011), Census. Statistical Release .P0301.4.

Sunden, A,E., and B. J. Surette (1998), 'Gender Differences in the Allocation of Assets in Retirement Savings Plans', American Economic Review, Vol.88, Issue 2, pp. 207-11.

Taylor D.F.P (2014) 'Defining ubuntu for business ethics – a deontological approach', South African Journal of Philosophy, Vol.33, No.3, pp.331-345.

Tenzer, H., M. Pudelko, A-W Harzing (2014), 'The impact of language barriers on trust formation in multinational teams', Journal of International Business Studies, Vol.45, pp.508-535.

Terjesen, S., R. Sealy, and V., Singh, (2009), 'Women directors on corporate boards: A review and research agenda', Corporate Governance: an International Review, 17:320-337.

Tharenou, P., S. Latimer, and D., Conroy (1994), 'How do you make it to the top? An examination of the influences on women`s and men`s managerial advancement', The Academy of Management Journal, Vol. 37, No.4, pp.899-931.

The Economist (2014), 'The spread of gender quotas for company boards', http://www.economist.com/blogs/economist-explains/2014/03/economist-explains-14 Last accessed 8th December, 2014.

Thomas, D. E., L. Eden (2004), 'What is the shape of the multinationality-performance relationship?', The Multinational Business Review, Vol.12, No.1, pp.89–110.

Thompson, S., B. (2011), 'Simple formulas for standard errors that cluster by both firm and time', Journal of Financial Economics, Vol. 99, pp. 1–10.

Triana, M. C., T.L. Miller, and T.M Trezebiatowski (2014), 'The Double-edged nature Of board gender diversity: Diversity, firm performance, and the power of women directors as predictors of strategic change', Organization Science, Vol.5, No.2, pp. 609-632.

Upadhyay, A. (2014), 'Social concentration on boards, corporate information environment and cost of capital', Journal of Business Finance and Accounting, Vol. 41, No.7&8, pp. 874-1001.

——— H. Zeng (2014), 'Gender Diversity on Boards and Corporate Information environment', Journal of Business Research, 67, pp.2457-2463.

Villa-Vicencio, C. (2009) 'Walk with Us and Listen: Political Reconciliation in Africa', Washington DC: Georgetown University Press.

Wadesango, N, S. Rembe, and O. Chabaya (2011), 'Violation of Women`s Rights by Harmful Traditional Practices', Anthropologist, Vol.13, No.2, pp.121-129.

Wang, T., M. Song, and Y.L. Zhao (2014), 'Legitimacy and the Value of Early Customers', Journal of Product Innovation Management, Vol.31, pp. 1057–1075

Wooldridge, J.M. (2002), 'Econometric Analysis of Cross Section and Panel Data', MIT Press: Cambridge, MA.

Xiao S. and S. Zhao (2014), 'How do agency problems affect firm value? Evidence from China',European Journal of Finance, Vol.20, No.7-9, pp. 803-828.

Appendix 1a

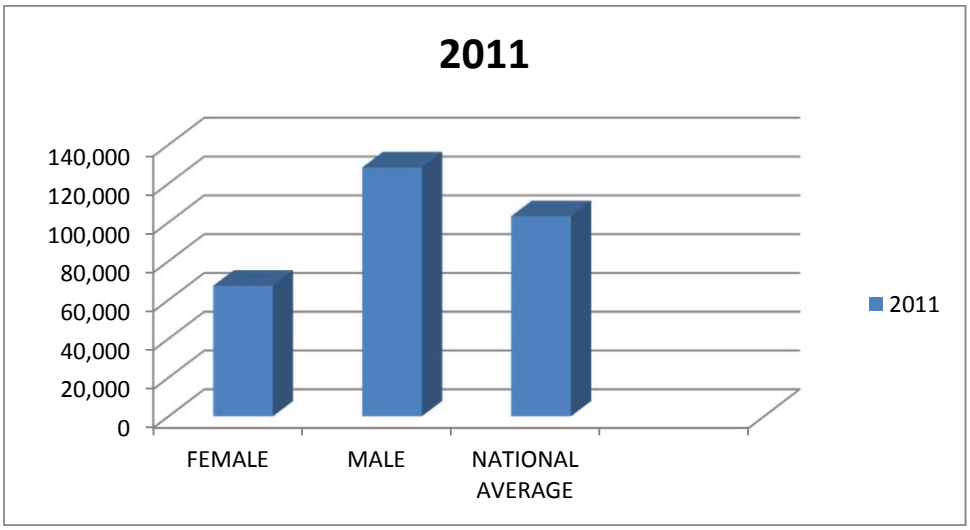
Demographic Information on South Africa as at 2011

	Black African%	Coloured%	Indian/Asian%	White%
Population Data				
Total Population		51,770,560		
Population Distribution	79.2	8.9	2.5	9.5
Male	38.5	4.3	1.3	4.0
Female	40.7	4.6	1.2	4.5
Working Age Group (15-64)	64.7	66.8	72.7	69.2
Male	31.5	31.9	37.0	33.6
Female	33.2	34.9	35.7	35.6
First Language				
Afrikaans	1.5	75.8	4.6	60.8
English	2.9	20.8	86.1	35.9
Education				
Gross Higher Education Participation Rate	14.0	14.0	47.0	57.0
Highest level of Education for persons aged >19				
No School	10.5	4.2	2.9	0.6
Completed Primary	4.9	13.8	2.8	0.7
Some Secondary	35.5	42.0	26.1	21.4
Grade 12/Std 10	26.9	25.2	40.0	39.5
Higher	8.3	7.4	21.6	36.5
Persons aged >14 With no education				
Male	20.9	16.5	6.4	1.9
Female	23.2	16.7	11.3	2.0
Labour Market				
Labour force Participation rate	53.7	60.4	61.7	73.3
Male	58.7	65.7	71.9	79.7
Female	49.0	55.5	51.4	67.2
Labour force absorption rate	34.6	46.9	54.6	69.0
Male	40.8	52.0	64.9	75.7
Female	28.8	42.0	43.9	62.5
Unemployment Rate	35.6	22.3	11.7	5.9
Male	30.5	21.0	9.7	5.0
Female	41.2	23.8	14.5	6.9

Source: Statistics South Africa (2011) and Council on Higher Education (2013).

Appendix 1b

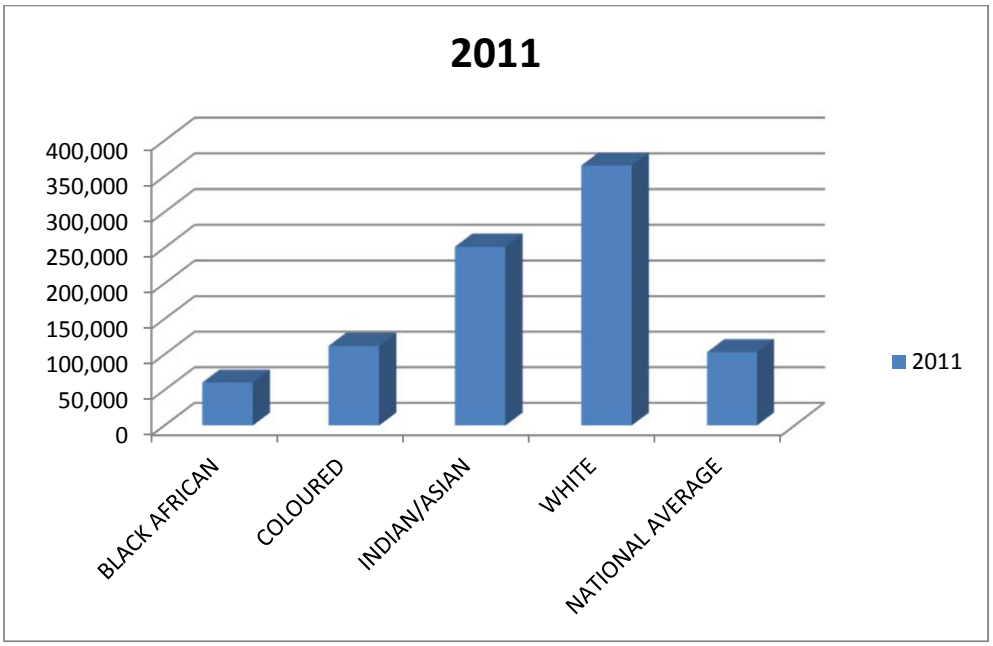
Average Annual Income by Gender of Household Head



Source: Statistics South Africa (2011)

Appendix 1c

Average Annual Household Income by Ethnicity of Household Head



Source: Statistics South Africa (2011)

Appendix 2

Full List of the South African Corporate Governance Provisions Based on the Third Corporate Governance Code (King III)

Board of Directors

1. Whether the board meets at least four times a year.
2. Whether individual directors' meetings record is disclosed.
3. Whether the board chair person's performance and effectiveness is evaluated and disclosed.
4. Whether the finance director is a member of the board.
5. Whether board members are clearly classified into executive, non-executive and independent non-executive directors.
6. Whether there is a company secretary.
7. Whether the board sub-committee performance and effectiveness is evaluated.
8. Whether the board`s effectiveness and performance is evaluated.
9. Whether the effectiveness and performance of individual directors are evaluated.
10. Whether director remuneration is disclosed.
11. Whether the remuneration of the three highest paid non-director employees are disclosed.
12. Whether the remuneration policy is disclosed.
13. Whether shareholder approval was sought for the remuneration policy.
14. Whether the board sub committees` performance and effectiveness are evaluated.
15. Whether director`s biography, experience and responsibilities are disclosed.
16. Whether a nomination committee has been established.
17. Whether the nomination committee consists of a majority of independent directors.
18. Whether the chairperson of the nomination committee is an independent NED.
19. Whether the membership of the nomination committee is disclosed.
20. Whether the nomination committee members meeting attendance record is disclosed.
21. Whether a remuneration committee has been established.
22. Whether the remuneration committee is constituted entirely by independent NED.
23. Whether the chairperson of the remuneration committee is an IND.
24. Whether the membership of the remuneration committee is disclosed.
25. Whether the remuneration committee members` meetings attendance record is disclosed.
26. Whether the chairman and other non-executive directors do not receive share options or other incentive awards geared to share price or corporate performance.
27. Whether directors' remuneration, interests, and share options are disclosed.
28. Whether director remuneration policy and procedure is disclosed.
29. Whether directors have access to free independent legal advice.

Audit Committee

30. The existence of an audit committee
31. Whether the audit committee meet at least twice a year.
32. Whether audit committee consists entirely of independent non-executive directors.
33. Whether the audit committee reported on the effectiveness of the company`s system of internal controls.
34. Whether the audit committee consist of at least three members.
35. Whether the board chairman is not a member of the audit committee.
36. Whether the audit committee reviewed the appropriateness of the expertise and adequacy of resources of the finance function.
37. Whether the audit committee reported to shareholders in the annual report.
38. Whether the names of all audit committee members are disclosed
39. Whether the qualifications of all audit committee members are disclosed.
40. Whether the period for which audit committee members have served on the audit committee is disclosed.
41. Whether the number of audit committee meetings are disclosed.
42. Whether member attendance at audit committee meetings are disclosed.

The Governance of Risk

43. Whether a risk committee has been established.
44. Whether the risk committee members meeting attendance record is disclosed.
45. Whether a narrative on how current and future company risks will be managed is disclosed.
46. Whether how the board has satisfied itself that risk assessments responses and interventions are effective is disclosed.
47. Whether membership of the risk committee is disclosed.
48. Whether membership of the risk committee include both executive and non-executive directors.
49. Whether the risk committee has a minimum of three members.
50. Whether the risk committee met at least twice per year.
51. Whether key sustainable risks as well as the responses to these risks are disclosed.
52. Whether the board`s view on the effectiveness of the company`s risk management processes is disclosed.

Internal Audit

53. Whether the board`s comments on the effectiveness of the system of internal controls is disclosed.
54. Whether the audit committee`s comment on the state of the internal financial control environment in the company is disclosed.

Integrated Reporting and Disclosure

55. Whether an integrated report was produced.
56. Whether the annual financial statement is included in the integrated report.

57. Whether the board`s comment about the going concern status of the company is included in the integrated report.

Sustainability and Stakeholder Relationships

58. Whether narrative on the existence of code of ethics are disclosed.
59. Whether a narrative on how a firm is addressing the threats posed by the HIV/aids pandemic in South Africa is disclosed.
60. Whether a narrative on the actual measures taken by a firm to address occupational health and safety of its employees is disclosed.
61. Whether a narrative on how a firm is actually complying with and implementing rules and regulations on the environment is disclosed.
62. Whether the sustainability report was independently assured.
63. Whether the scope of the assurance to be provided on the sustainability report is disclosed.
64. Whether the stakeholder policies are disclosed
65. Whether stakeholder groupings are disclosed
66. Whether the nature and outcomes of the board's dealings with stakeholders are disclosed

Table 1
Variable Definitions

Panel A: Performance Measure	
Tobin's Q	Ratio of total assets minus book value of equity plus market value of equity to total assets
Independent Variables	
Panel B: Ethnic Minority Director Variables	
Race	The number of non-white directors on the board expressed as a percentage of total board size.
RDIV	A dummy variable equal to "1" if a firm has at least one non-white director on the board otherwise "0"
D1_Race	A dummy variable equal to "1" if a firm has one non-white director on the board otherwise "0"
D2_Race	A dummy variable equal to "1" if a firm has two non-white directors on the board otherwise "0"
D3_Race	A dummy variable equal to "1" if a firm has three or more non-white directors on the board otherwise "0"
Panel C: Women Director Variables	
Gender	The number of women directors on the board expressed as a percentage of total board size.
GDIV	A dummy variable equal to "1" if a firm has at least one woman director on the board otherwise "0"
D1_Gender	A dummy variable equal to "1" if a firm has one woman director on the board otherwise "0"
D2_Gender	A dummy variable equal to "1" if a firm has two women directors on the board otherwise "0"
D3_Gender	A dummy variable equal to "1" if a firm has three or more women directors on the board otherwise "0"
Panel D: Control Variables	
LEV	Percentage of total debt to total assets
BIG4	A Dummy variable equal to "1" if a firm is audited by a big four audit firm otherwise "0"
GROWTH	The percentage of current year`s sales minus previous year`s sales to previous year's sales
AGE	The age of the CEO
DBL	A dummy variable equal to "1" if the board chair and CEO positions are separated otherwise "0".
BSIZE	Total number of board members
BIND	Fraction of non-executive directors expressed as a percentage of total board size.
SIZE	Natural log of total assets
GOVIN	A corporate governance compliance index consisting of 66 provisions in the 2009 King code of corporate governance.

Table 2
Descriptive Statistics and Industry Distribution of Sample

Panel A: Descriptive Statistics

	Full Sample					***Gender***				***Ethnicity***			
						With Women		*Without Women*		*With Blacks*		*Without Blacks*	
Variable	Mean	Std	Median	75th	95th	Mean	Std	Mean	Std	Mean	Std	Mean	Std
Q	1.43	0.66	1.35	1.49	2.32	1.49	0.55	1.34	0.76	1.48	0.52	1.37	0.77
Ethnic Minority Director Variables:													
Race	15.04	19.3	0	28.57	50	23.71	20.55	4.38	10.27				
RDIV	0.49	0.50	0	1	1	0.72	0.44	0.20	0.40				
D1_Race	0.12	0.32	0	0	1	0.10	0.30	0.13	0.33				
D2_Race	0.11	0.31	0	0	1	0.17	0.37	0.03	0.19				
D3_Race	0.26	0.44	0	0	1	0.44	0.49	0.03	0.19				
Women Director Variables:													
FEMALES	16.75	26.72	9.09	20	100					16.34	14.59	17.2	34.66
GDIV	0.54	0.50	1	1	1					0.80	0.39	0.28	0.45
D1_Gender	0.20	0.40	0	0	1					0.32	0.46	0.08	0.28
D2_Gender	0.18	0.38	0	0	1					0.29	0.45	0.05	0.23
D3_Gender	0.16	0.37	0	0	1					0.17	0.38	0.14	0.35
Control Variables:													
LEVERAGE	16.32	15.89	12.14	22.67	48.49	17.71	16.54	14.61	14.86	18.41	16.88	14.3	14.55
BIG4	0.53	0.50	1	1	1	0.58	0.49	0.47	0.49	0.60	0.48	0.45	0.49
GROWTH	-1.51	26.71	0	0	52	-3.05	26.48	0.43	26.90	-2.04	28.38	-1.00	24.97
CEOAGE	50.41	7.30	50	55	62	50.55	7.50	50.16	6.96	50.52	7.43	50.26	7.11
DBL	0.75	0.44	1	1	1	0.79	0.40	0.66	0.47	0.78	0.41	0.69	0.46
BSIZE	7.94	4.20	8	11	15	8.83	4.00	6.86	4.18	8.96	3.95	6.95	4.19
BIND	42.56	19.18	33.33	62.5	70	44.7	20.1	39.96	17.67	44.25	19.97	40.9	18.24
TA (100 Million ZAR)	22.1	102	13.14	945	1150	19	86.8	26	119	28.4	125	15.8	71.9
GOVIN	52.43	28.6	61.31	75.1	85.08	66.04	16.92	35.07	30.97	68.83	15.41	36.1	29.35

This panel shows the descriptive statistics for the racial, gender, and the control variables. As discussed in section 4, the sample consists of all listed firms (excluding financial and utility firms) on the Johannesburg Stock Exchange. Table 1 defines all the variables.

[Table 2 continues on next page]

Table 2 (continued)

Panel B: Industry Distribution of Sample

JSE Industry*	***Number of Firms (% of firms)***	***Number of firms with women Directors (% of women directors)***	***Number of firms with Black Directors (% of firms with black directors)***	***Number of Firms with both Blacks and women Directors (% of firms with both black and women directors)***
Basic Material	69 (28.16)	52 (75.36)	46 (66.67)	43 (62.32)
Industrials	78 (31.84)	63 (80.77)	59 (75.64)	56 (71.79)
Consumer Services	35 (14.29)	31 (88.57)	26 (74.29)	23 (65.71)
Consumer Goods	28 (11.43)	22 (78.57)	18 (64.29)	16 (51.14)
Health Care	9 (3.67)	9 (100)	7 (77.78)	7 (77.78)
Telecommunication	6 (2.45)	6 (100)	5 (83.33)	5 (83.33)
Technology	18 (7.35)	16 (88.89)	15 (83.33)	14 (77.78)
Oil and Gas	2 (0.82)	2 (100)	2 (100)	2 (100)
Total	245	201 (82.04)	178 (72.65)	166 (67.76)

*Industry is based on JSE classification.

Table 3
Pearson's Correlation Matrix

	GDIV	RDIV	D1_Race	D2_Race	D3_Race	D1_ Gender	D2_ Gender	D3_ Gender	Race	Gender	GOVIN	GROWTH	BIG4	BSIZE	SIZE	AGE	LEV	DBL
GDIV																		
RDIV	.52+																	
D1_Race	-.03	.37+																
D2_Race	.22+	.36+	-.13+															
D3_Race	.45+	**.60+**	-.22+	-.21+														
D1_Gender	.47+	.30+	.08+	.22+	.12+													
D2_Gender	.42+	.32+	-.01	.09+	.30+	-.23+												
D3_Gender	.40+	.04+	-.13+	-0.04	.17+	-.22+	-.20+											
Race	.50+	**.79+**	-.03+	.16+	**.81+**	.20+	.30+	.16+										
Gender	.57+	-.02	-.10+	-0.01	.06+	-0.09	.07+	**.79+**	.06+									
GOVIN	.54+	.58+	.15+	.22+	.38+	.23+	.27+	.18+	.44+	.20+								
GROWTH	-.06	-.02+	-.04+	-.03+	-.03+	0.01	-.03+	-.06+	-.03+	-.07+	.04+							
BIG4	.11+	.15+	-.03+	0.01	.18+	-.02+	.14+	.02+	.12+	-.06+	.21+	.00						
BSIZE	.23+	.24+	.04+	.01+	.29+	.04+	.19+	.06+	.19+	-.04+	.26+	-0.01	-.49+					
Size	-.03+	.06+	.14+	.02+	-.03+	.08+	-.06+	-.06+	-.01	-.06+	0.07	.09+	-.11+	-.07				
LEV	.10+	.13+	.000	.05+	.11+	-.07+	.11+	.09+	.12+	.05+	.11+	0.02	.20+	.35+	-0.1			
AGE	.19+	.21+	.04+	.03+	.18+	.06+	.18+	.00	.15+	-0.02	.24+	0.01	.33+	.46+	-.12+	.22+		
DBL	.15+	.11+	.00	-.06+	-.07+	-.03+	-.09+	-.07+	-0.10	-.13+	-.21+	-.05+	.08+	0.02	.02+	.04+	-.07+	
BIND	.12+	.09+	-.07+	0.02	.14+	.08+	.00	.08+	0.09+	.02+	.04+	.00	.17+	.26+	-.08+	.05+	.17+	-.05+

This table presents the Pearson`s correlation coefficients for the independent variables. + indicates statistical significance at the 5%. All variables are as defined in Table 1.

Table 4
Board Diversity and Firm Value

Panel A: Number of Women/Ethnic Minority Directors, Corporate Governance Interaction and Non-Linear Relationship

	Critical Mass		***Corporate Governance Interaction***			***Non-Linear Relationship***			
	1	2	3	4	5	6	7	8	9
					Tobin`s Q				
D1_Gender	0.246**								
	(3.62)								
D2_Gender	0.221**								
	(2.77)								
D3_Gender	0.349**								
	(3.06)								
D1_Race		0.319**							
		(2.83)							
D2_Race		0.329**							
		(2.81)							
D3_Race		0.234**							
		(3.31)							
G_Dummy			0.207**						
			(3.14)						
Gender*G_Dummy				0.002***					
				(4.38)					
Race*G_Dummy					0.007**				
					(3.71)				
Gender						0.004***	0.009*		
						(4.37)	(2.22)		
$Gender^2$							-0.000		
							(-1.49)		

Race								0.005**	0.009**
								(2.92)	(3.48)
$Race^2$									-0.016^**
									(-3.29)
LEVERAGE	-0.002*	-0.003**	-0.002*	-0.002*	-0.002*	-0.002	-0.002*	-0.003*	-0.003*
	(-2.11)	(-2.77)	(-2.16)	(-2.29)	(-2.49)	(-1.78)	(-2.11)	(-2.55)	(-2.53)
BIG4	-0.060	-0.051	-0.085	-0.063	-0.056	-0.054	-0.046	-0.054	-0.063
	(-1.39)	(-1.07)	(-1.83)	(-1.06)	(-0.99)	(-1.12)	(-1.08)	(-0.94)	(-1.26)
GROWTH	0.076^	0.044^	0.024^	0.052^	0.038^	0.076^	0.074^	0.042^	0.038^
	(1.47)	(0.85)	(0.42)	(0.93)	(0.67)	(1.25)	(1.34)	(0.80)	(0.77)
AGE	0.002**	0.002**	0.002**	0.003***	0.002**	0.003***	0.003***	0.002**	0.002**
	(3.74)	(3.38)	(3.85)	(4.45)	(3.81)	(4.26)	(4.68)	(3.62)	(3.00)
DBL	0.093**	0.087*	0.089**	0.101*	0.094*	0.104**	0.099**	0.091*	0.095**
	(2.75)	(2.45)	(2.74)	(2.52)	(2.52)	(2.70)	(2.61)	(2.40)	(2.94)
BSIZE	-0.005***	-0.006**	-0.007***	-0.008***	-0.007**	-0.007**	-0.006***	-0.007**	-0.005**
	(-4.41)	(-3.90)	(-4.89)	(-4.75)	(-3.50)	(-3.94)	(-4.30)	(-3.72)	(-3.19)
BIND	-0.011^	0.029^	0.064^	0.039^	0.023^	0.005^	-0.003^	0.005^	0.045^
	(-0.21)	(0.40)	(0.99)	(0.57)	(0.32)	(0.09)	(-0.08)	(0.07)	(0.62)
SIZE	0.051*	0.031	0.059**	0.061**	0.057**	0.061**	0.057**	0.050**	0.046**
	(2.52)	(1.24)	(3.33)	(3.32)	(3.65)	(3.01)	(2.90)	(2.82)	(3.31)
Constant	1.346***	1.365***	1.429***	1.556***	1.539***	1.428***	1.400***	1.510***	1.424***
	(12.9)	(12.17)	(19.45)	(24.88)	(25.67)	(16.79)	(14.84)	(19.81)	(15.9)
R-sq	0.187	0.182	0.164	0.143	0.148	0.167	0.176	0.156	0.171
Industry-Firm	YES	YES	YES	YES	YES	YES	YES	YES	YES
Year	YES	YES	YES	YES	YES	YES	YES	YES	YES
N	1169	1169	1169	1164	1167	1164	1164	1167	1167

This table presents fixed effects regressions for the number of women directors and firm value(Column 1-2), the effect of CG on the gender ethnicity firm value relationship(column 3-5) and the nom-linear relationship between gender/ethnicity and firm value(column 6-9). All regressions are run with robust-standard errors to reduce heteroscedasticity. The Dependent variables in all regressions is Tobin`s Q. All variables are as defined in Table 1. T-statistics are shown in parenthesis. ***, **, and * indicate statistical significance at 1%, 5% and 10% levels, respectively. [Table 4 continues on next page]

Table 4 (Continued)

Panel B: Analysis of Ethnicity at the 75th Percentile

	Ethnicity> 75th Percentile (28.57%)		
	Before partioning the sub-sample	G_Dummy = 0	G_Dummy = 1
	1	2	3
Race	-0.009**	-0.060***	-0.008
	(-2.63)	(-41.09)	(-1.92)
Constant	1.854***	3.127***	1.780***
	(8.24)	(55.43)	(8.03)
R^2	0.15	0.57	0.15
Control Variables	YES	YES	YES
Industry-Firm	YES	YES	YES
Year	YES	YES	YES
N	299	33	266

This table presents fixed effects regressions for ethnicity at the 75th percentile. All regressions are run with robust-standard errors to reduce heteroscedasticity. The dependent variables in all regressions is Tobin`s Q. All variables are as defined in Table 1. T-statistics are shown in parenthesis. ***, **, and * indicate statistical significance at 1%, 5% and 10% levels, respectively.

Table 5
Further Analysis

Panel A: Director Busyness and Executive versus Non-Executive

	Director Busyness		**Executive Versus Non-Executive**	
	Gender	***Ethnicity***	***Gender***	***Ethnicity***
	1	2	3	4
		Tobin`s Q		
BUSY	0.004**	0.005**		
	(3.77)	(2.82)		
NON-BUSY	0.006***	0.003*		
	(4.17)	(2.14)		
Executive			0.005	0.001
			(1.02)	(0.28)
NON-Executive			0.003***	0.006**
			(4.25)	(2.32)
LEVERAGE	-0.002	-0.002*	-0.002	-0.002*
	(-1.68)	(-2.50)	(-1.66)	(-2.50)
BIG4	-0.051	-0.057	-0.054	-0.056
	(-1.02)	(-1.03)	(-1.13)	(-0.97)
GROWTH	0.001	0.041^	0.001	0.039^
	(1.26)	(0.78)	(1.23)	(0.74)
CEOAGE	0.003***	0.002**	0.003***	0.002**
	(4.29)	(3.61)	(4.33)	(3.64)
DBL	0.099**	0.093*	0.104**	0.092*
	(2.80)	(2.46)	(2.73)	(2.36)
BSIZE	-0.007**	-0.007**	-0.007**	-0.007***
	(-3.82)	(-3.74)	(-3.43)	(-4.21)
BIND	0.003^	0.009^	0.007^	0.003^
	(0.05)	(0.13)	(0.12)	(0.05)
SIZE	0.061**	0.097**	0.062**	0.049**
	(3.04)	(2.80)	(2.93)	(2.75)
Constant	1.422***	1.438***	1.427***	1.444***
	(19.46)	(14.59)	(16.93)	(14.04)
R^2	0.17	0.16	0.17	0.16
Industry-Firm	YES	YES	YES	YES
YEAR	YES	YES	YES	YES
N	1164	1167	1164	1167

This table presents fixed effects regressions for executive directors and non-executive directors and firm value. It also has regressions for the effect of busy and non-busy directors on firm value. Executive (non-executive) is the percentage of women/ethnic minority directors who are executive (non-executive) directors. Busy is the percentage of women/ ethnic minority directors with more than two directorships. Non-busy is the percentage of women/ethnic minority directors with two or less directorships. All other variables are as defined in Table 1. T-statistics are shown in parenthesis. ***, **, and * indicate statistical significance at 1%, 5% and 10% levels, respectively.

Table 5 (continued)
Panel B: Crisis Periods and Propensity to Change Board Composition on Gender/ Ethnicity Grounds

	GENDER		ETHNICITY	
	1	2	3	4
	INCREASE	DECREASE	INCREASE	DECREASE
CRISIS	0.389**	-0.647***	0.559***	-0.844***
	(2.10)	(-3.18)	(3.06)	(-3.64)
Control Variables	YES	YES	YES	YES
Industry-Firm	NO	NO	NO	NO
Year	NO	NO	NO	NO
LR Chi^2	55.90***	114.59***	65.75***	120.01***
N	731	913	757	800

This table presents conditional fixed effects logistic regressions results for the effect of financial crisis on the propensity to restructure boards on Gender and ethnicity grounds. Crisis is a dummy variable equal to "1" for the 2008 & 2009 years otherwise "0". Increase is a dummy variable equal to "1" if there is an increase in the number of ethnic minority directors otherwise "0". Decrease is a dummy variable equal to "1" if there is a decrease in the number of women/ethnic minority directors otherwise "0". T-statistics are shown in parenthesis. ***, **, and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Table 6
Alternative Measures of Diversity and Firm Value

	Alternative Diversity Measures		*Alternative Firm Value Measures*			
	Q		ROA		ROE	
	1	2	3	4	5	6
GDIV	0.274**					
	(3.88)					
RDIV		0.281**				
		(3.59)				
GENDER			0.082*		0.048*	
			(2.23)		(2.22)	
RACE				0.178***		0.132***
				(4.05)		(5.71)
LEVERAGE	-0.003*	-0.003**	0.033	0.011	0.048**	0.036*
	(-2.30)	(-2.76)	(1.37)	(0.41)	(3.66)	(2.03)
BIG4	-0.052	-0.053	2.710**	3.199***	0.609	0.856
	(-1.25)	(-1.10)	(3.02)	(4.23)	(0.81)	(0.99)
GROWTH	0.072^	0.040^	0.028***	0.020**	0.013**	0.008
	-1.41	-0.81	(5.89)	(3.65)	(3.02)	(1.79)
AGE	0.002**	0.002**	0.015	0.004	-0.007	-0.017
	(3.84)	(3.07)	(0.49)	(0.16)	(-0.57)	(-1.33)
DBL	0.093**	0.085*	1.908	1.54	0.719	0.423
	(2.95)	(2.38)	(1.40)	(1.19)	(0.94)	(0.59)
BSIZE	-0.006***	-0.006**	-0.371***	-0.343**	-0.191**	-0.166*
	(-4.43)	(-3.73)	(-4.75)	(-3.93)	(-3.36)	(-2.08)
BIND	-0.008^	0.019^	-0.010	-0.017	-0.006	-0.011
	(-0.16)	(0.26)	(-0.28)	(-0.54)	(-0.22)	(-0.40)
SIZE	0.050**	0.037*	0.071*	0.033	0.515**	0.236
	(2.69)	(2.21)	(2.34)	(1.3)	(2.59)	(1.42)
Constant	1.347***	1.361***	15.96***	12.65***	10.71***	7.737***
	(13.26)	(11.96)	(10.29)	(9.24)	(6.12)	(4.36)
R^2	0.182	0.18	0.22	0.24	0.26	0.30
Industry-Firm	YES	YES	YES	YES	YES	YES
Year	YES	YES	YES	YES	YES	YES
N	1165	1168	1164	1167	1163	1166

This table presents fixed effects regressions using alternative measures of gender and ethnicity (Columns 1& 2) and alternative firm value measures (column 3-6).ROA and ROE refers to return on assets and return on equity respective. T-statistics are in parenthesis. ***, **, and * represent statistical significance at 1%, 5% and 10% levels, respectively.

Table7
Sample Selection and Endogeneity

	Heckman Selection Model				**2SLS**	
	Gender		*Ethnicity*		*Gender*	*Ethnicity*
	1	2	3	4	5	6
	GDIV	Q	RDIV	Q	Q	Q
BLKOWN	0.020***		0.024***			
	(7.08)		(6.56)			
EDOWN	0.014***		0.006			
	(2.61)		(1.17)			
GOWN	0.842		0.945***			
	(0.26)		(2.88)			
FOROWN	-0.001		0.020*			
	(-0.10)		(1.92)			
G_Ratio/R_Ratio	0.287***		1.964***			
	(5.21)		(6.59)			
GENDER/RACE		0.004***		0.003**	0.004*	0.005**
		(8.95)		(3.31)	(1.87)	(2.03)
LEVERAGE	0.005	-0.003*	0.007	-0.003**	-0.002*	-0.003**
	(1.11)	(-2.14)	(1.19)	(-2.74)	(-1.74)	(-2.10)
BIG4	-0.111	-0.044	0.004	-0.057	-0.052	-0.052
	(-0.54)	(-0.89)	(0.02)	(-1.07)	(-0.80)	(-0.81)
GROWTH	-0.002	0.001	0.003	0.001^	0.082^	0.043^
	(-1.25)	(1.80)	(1.47)	(0.03)	(1.38)	(0.76)
CEOAGE	0.007*	0.002**	0.013***	0.001	0.003***	0.002**
	(1.95)	(2.83)	(2.87)	(1.51)	(2.72)	(2.21)
DBL	0.156	0.080	0.365*	0.054	0.103**	0.089**
	(0.88)	(1.67)	(1.78)	(1.00)	(2.47)	(2.12)
BSIZE	0.012	-0.007***	-0.004^	-0.006**	-0.006	-0.007
	(0.55)	(-4.78)	(-0.00)	(-3.93)	(-1.07)	(-1.09)
BIND	0.005	-0.090^	0.002	-0.038^	0.000	-0.003
	(1.26)	(-1.71)	(0.39)	(-0.65)	(0.00)	(-0.03)
SIZE	0.069	0.043	0.045***	0.017	0.064***	0.052**
	(1.04)	(1.90)	(3.84)	(0.64)	(2.98)	-2.34
LAMBDA(λ)		-0.228*		-0.182*		
		(-2.24)		(-2.05)		
Constant	-2.447***	1.622***	-3.516***	1.721***	1.135***	1.161***
	(-5.70)	(30.1)	(-7.43)	(39.14)	(14.98)	(16.02)
N	1155	1154	1158	1157	1154	1157

The table presents results for the Heckman model and 2SLS. Column 1-4 show the Heckman Two Staged model. In the first stage (Columns 1&3), the dependent variable is GDIV and RDIV respectively for gender and ethnicity. GDIV and RDIV are as defined in table 1. The instruments used in the first stage regressions include Block Ownership (BLKOWN), executive director ownership (EDOWN), government ownership (GOWN), foreign ownership (FOROWN) and women/race ratio (G_Ratio/R_Ratio).The dependent variable in the second stage (Column 2&4) is Tobin-Q (Q) as defined in table 1. Mills Lambda (λ examines the effect of self-selection bias. Columns 5&6 show the Two-Staged Least Squares (2SLS) regressions. The same instruments used in the first stage Heckman Model are used in the first stage of the 2SLS. Predicted values of Gender and Race are then used as independent variables in the Second stage 2SLS. T-statistics are shown in parenthesis. ***, **, and * represent statistical significance at 1%, 5% and 10% levels, respectively. All other variables are as defined in table 1.