

Broad-Based Black Economic Empowerment and corporate financial health



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Background: Legislation was implemented in South Africa in 2003 and revised in 2013 to promote Broad-Based Black Economic Empowerment (B-BBEE).

Aim: To investigate the relationship between B-BBEE compliance and a range of financial health measures among publicly listed companies.

Setting: Altogether 379 companies listed on the Johannesburg Stock Exchange over the period 2004–2015.

Methods: Data on the sampled companies' B-BBEE scores (in total and per element) were sourced from Empowerdex, whereas financial data were downloaded from Bloomberg. Panel regressions were computed to investigate hypothesised relationships.

Results: A significant increasing trend was noted in B-BBEE compliance over the research period. No significant relationships were found between the total B-BBEE score, individual B-BBEE elements and any of the considered accounting-based measures (annual percentage change in turnover, return on sales, return on assets and return on equity). A significant negative relationship was observed between the market-based price/earnings ratio and total B-BBEE score, while a significant positive relationship was noted with the cost of equity. The latter seems to indicate a negative perception among shareholders towards B-BBEE.

Conclusion: Although B-BBEE legislation has been partially successful, more can be done to achieve its goal of empowering black employees and small business owners. Management teams should be more diverse and greater emphasis should be placed on socio-economic development and skills development. Companies should caution against overemphasising the importance of black ownership, as shareholders seem to view this B-BBEE element in a somewhat negative light.

Keywords: Broad-Based Black Economic Empowerment; social justice; financial performance; cost of equity; risk.

Introduction

A new era dawned in South Africa in 1994 as the apartheid regime was replaced by a democratic one and freedom for all citizens seemed possible at last. Amidst the changing political landscape, the late president Nelson Mandela pleaded for reconciliation among all racial groups. He stated that physical freedom was not sufficient, and that economic freedom had to be cultivated (Ponte, Roberts & Van Sittert 2007; Tangri & Southall 2008). A staggering 80% of black business owners felt that their foundation was weak at the end of apartheid, and that they could not compete fairly with white individuals (Masito 2007). One suggestion to level the playing field was to introduce legislation to promote Black Economic Empowerment (Acemoglu, Gelb & Robinson 2007; Jeffrey 2014).

Legislation has been introduced in other contexts to address race and gender imbalances in the labour force in general and at board level in particular. For example, in 2003, only 9% of all directors of listed companies in Norway were women. To address this imbalance, a 40% mandatory quota was introduced (Ahern & Dittmar 2012). Although the legislation was initially opposed (Wiesema & Mors 2016), attitudes have since changed (Seierstad 2016).

A number of laws were promulgated in South Africa to promote racial equality, the most prominent being the *Employment Equity Act* (No. 55 of 1998) and the *Broad-Based Black Economic Empowerment (B-BBEE) Act* (No. 53 of 2003) (hereafter referred to as the 2003 Act). In drafting the latter, the Black Economic Empowerment (BEE) Commission (2001) advocated that B-BBEE

should be a 'people-centred strategy' which should empower all black people in every sphere of life.

In contrast to Norway's board gender quotas, compliance with the 2003 Act is only mandatory for companies doing business with the South African government. As non-compliance does not result in penalties, a mere 60% of companies surveyed in 2016 achieved a desirable score (BEE Commission 2017). Although the average score increased slightly from the previous year, it does suggest that some companies are not taking B-BBEE compliance seriously.

As B-BBEE is aimed at rectifying the injustices of the past, Pike, Puchert and Chinyamurindi (2018) argued that the phenomenon should be studied through the lens of the social justice theory. Governments should accordingly aim to provide economic systems that promote the principles of equality and fairness (Rawls 1999). Sartorius and Botha (2008) reported that compliance soon after the promulgation of the 2003 Act was primarily driven by the view that B-BBEE is a necessary and important step in rebuilding the South African economy. Scholars have, however, become more critical as the years passed with many claiming that legislation only benefits a few elite citizens (Hoffman 2008; Patel & Graham 2012; Tangri & Southall 2008), while creating very little wealth for the disadvantaged majority in the country (Andrews 2008; Krüger 2011).

Compliance with the 2003 Act can furthermore be motivated by the organisational legitimacy theory. As initially explained by Dowling and Pfeffer (1975), organisational legitimacy refers to the combination of a company's values and objectives, and the values and objectives of the broader environment of which they form part. In the context of B-BBEE, attention should thus be given to economic upliftment and corrective action to amend past injustices to gain organisational legitimacy.

Apart from the social justice and legitimacy perspectives, South African and foreign companies are increasingly questioning whether there is a clear financial motivation to comply and improve compliance with the 2003 Act (De Wet 2016; Kleynhans & Kruger 2014). Contradictory results have been reported on the relationship between B-BBEE and financial performance in previous studies (Acemoglu et al. 2007; Kleynhans & Kruger 2014; Mathura 2009; Morris 2018; Van der Merwe & Ferreira 2014). It should, however, be noted that these authors utilised relatively small samples, mainly employed accounting-based and market-based performance measures and, with the exception of Morris (2018) and Van der Merwe and Ferreira (2014), focused on total B-BBEE scores without accounting for the individual elements of the scorecard.

In this study, a more comprehensive analysis was therefore conducted. Attention was not only given to the total B-BBEE score that a company achieved on the Department of Trade and Industry's (DTI) scorecard, but also to the individual elements of the scorecard, including ownership,

management, employment equity, skills development, preferential procurement, enterprise development and socio-economic development. The study covered a large sample of 379 companies that were listed on the Johannesburg Stock Exchange (JSE) for more than a decade (2004–2015). Broad-Based Black Economic Empowerment data were sourced from Empowerdex, a leading B-BBEE rating agency in South Africa. Financial health was measured in terms of accounting, market-based and value-based performance, a company's cost of equity and default risk probability. Data on all of these measures were downloaded from the Bloomberg (2018) database.

The aim of the study was to investigate the relationship between B-BBEE scores (in total and per element) and various financial health measures. Directors and managers are more likely to implement B-BBEE strategies if increased compliance is associated with improved financial results. Wider acceptance of B-BBEE among locally listed companies could have a positive economic impact in many ways. A discussion on the rationale and application of B-BBEE will be presented next, followed by pertinent research on the financial motives to enhance B-BBEE compliance. Thereafter the methods used to collect and analyse secondary data will be outlined, followed by pertinent findings. Recommendations will then be offered to policymakers, corporate decision-makers and shareholders.

The rationale and application of Broad-Based Black Economic Empowerment codes in South Africa

Following the transition from the apartheid government to a democratic government in 1994, political equality was deemed insufficient to rectify the social and economic inequalities permeating South African society at the time (Acemoglu et al. 2007). In line with the belief that policy was vital to affect economic transformation, the 2003 Act was promulgated, and revised in 2013 (DTI 2013; Republic of South Africa 2003).

The 2003 Act compelled all companies with a turnover of more than R10 million per year to comply with a set of requirements to promote equality and increase broad-based and effective participation of black people in the local economy (Republic of South Africa 2003). The 2004 draft of the Codes of Good Practice focused on seven elements of economic empowerment, namely ownership, management, employment equity, skills development, preferential procurement, enterprise development and other elements (collated as the residual element) (DTI 2004). These elements provide a common base for measuring compliance with the 2003 Act.

The 2004 Codes were adjusted in 2007 and 2013 to promote companies' level of participation. The latest 2013 Codes came into effect on 01 May 2015 (Empowerdex 2016). The weightings and requirements of the compliance levels were amended. According to Empowerdex (2016), the 2013 Codes were likely

TABLE 1: Elements and weightings of the Broad-Based Black Economic Empowerment Codes.

Element	Weighting (points)		
	2004	2007	2013
Ownership	20	20	25
Management control	10	10	15
Employment equity	10	15	n/a
Skills development	20	15	20
Preferential procurement	20	20	n/a
Enterprise development	10	15	n/a
Residual element	10	n/a	n/a
Enterprise and supplier development	n/a	n/a	40
Socio-economic development	n/a	5	5
Total	100	100†	105†

Source: Department of Trade and Industry (DTI), 2004, *Codes of good practice*, viewed 03 July 2016, from https://www.thedti.gov.za/economic_empowerment/docs/bee_archive_docs/CodeofGoodPractice.pdf; Department of Trade and Industry (DTI), 2007, *Codes of Good Practice*, viewed 04 April 2016, from https://www.gov.za/sites/default/files/gcis_document/201409/2961750.pdf; Department of Trade and Industry (DTI), 2013, *Codes of good practice*, viewed 04 April 2016, from https://www.thedti.gov.za/business_regulation/acts/BEE-Amendment_ACT2013.pdf

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†, Bonus points were available.

n/a, not applicable.

to have a negative impact on the B-BBEE ratings of businesses, as the requirements became stricter. The difference in elements and weighting for the respective elements of the 2004, 2007 and 2013 Codes are shown in Table 1.

Perusal of Table 1 reveals that there has been limited change in the weightings of the elements in the 2004 draft Codes compared to the 2007 Codes. There were only slight changes in the employment equity and skills development weightings. The 2004 Codes also made provision for a residual element, which entailed a company's corporate social investment activities. In the 2007 Codes, the residual element was renamed socio-economic development initiatives.

A number of changes occurred in 2013. The entire weighting for employment equity was distributed to ownership, management control and skills development in equal proportions. Emphasis shifted to a representative workforce and the empowerment of black owners and managers. Preferential procurement and enterprise development were consolidated into enterprise and supplier development. The aim is to assist and accelerate the development of small to medium enterprises owned by black people (DTI 2013).

According to Magure (2012), reformative policy should be a by-product of economic policy focusing on economic growth. Marazanye (2016) added that stakeholder buy-in is critical for the success of any reforming act. Without stakeholder buy-in, the act becomes a legal and financial burden to conducting business and is likely to result in failure. Chidede and Warikandwa (2017) added that foreign direct investment is critical to economic growth. As such, a reformative Act should be implemented in such a way that foreign direct investors are not deterred from investing in a country.

According to De Wet (2016), investors allocating capital to companies with high B-BBEE scores are typically interested

in the potential financial benefit in addition to the moral justification. In this study focus is therefore placed on the possible financial motives for companies to engage in B-BBEE compliance.

Prior studies on the financial motives for companies to engage in Broad-Based Black Economic Empowerment activities

Financial benefits that are related to B-BBEE compliance can be measured by using accounting-based, market-based, value-based and risk-based metrics. While accounting-based metrics measure the historic profitability of a company, market-based measures account for the creation of shareholder wealth and expectations regarding future profits (Verweire & Van den Berghe 2004). Value-based measures reflect profit relative to the cost of the capital. Default risk probability indicates whether companies with increased B-BBEE compliance would be more or less likely to meet their debt repayments (Bloomberg 2018).

A number of researchers considered the relationship between a company's total B-BBEE score and accounting-based financial performance (Acemoglu et al. 2007; Kleynhans & Kruger 2014), and between total B-BBEE score and market-based financial performance (De Villiers & Ferreira 2011; Mathura 2009; Morris 2018; Van der Merwe & Ferreira 2014). These scholars reported inconclusive results. In their evaluation of the individual elements of the B-BBEE scorecard, Van der Merwe and Ferreira (2014) also reported conflicting observations. Whereas a significant positive association existed between management control and total share returns for the top empowerment companies over the period 2005–2011, significant negative associations were noted between the ownership and preferential procurement elements of the B-BBEE scorecard and total share returns. The authors concluded that the costs relating to these two B-BBEE elements exceeded the perceived benefits of being compliant in the short term.

Morris (2018) took a slightly different approach and evaluated the link between business risk and the individual elements of the DTI's B-BBEE scorecard. She found no significant relationships between any of the elements and the sampled companies' unleveraged betas (which she used as a proxy for business risk). This study covered 137 industrial firms listed on the JSE over the period 01 January 2010 to 30 April 2015. Based on the empirical evidence, Morris (2018) concluded that B-BBEE:

... should not be classified as a business risk factor [for JSE-listed industrial companies] and should not be treated with underlying bias (racial or otherwise) as a problematic issue to be addressed as part of an entity's corporate risk management strategy. (p. 115)

Other authors in the field performed event studies to compute cumulative abnormal returns before and after B-BBEE equity

deal announcements. With the exception of Mehta and Ward (2017) who reported a significant positive short-term and significant negative long-term impact, others reported insignificant results (Chipeta & Vokwana 2011; Strydom, Christison & Matias 2009; Ward & Muller 2010; Wolmarans & Sartorius 2009). Akinsomi (2016) compared the risk-adjusted returns between listed B-BBEE compliant and non-compliant property companies in South Africa from 2006 to 2012. The author found that investors are more likely to provide capital to compliant companies as they have significantly higher returns than their non-compliant counterparts. The growing number of scholars evaluating the market impact of B-BBEE activities (which are reflected in companies' B-BBEE scores) attest to the importance that local and foreign investors attach to the topic.

The mixed evidence presented by prior researchers compelled the authors to look at more aspects of financial health. This more holistic approach provided a different perspective on financial performance and risk. As far as could be established, no previous studies employed a combination of accounting-based, market-based, value-based and risk-based measures when assessing B-BBEE compliance. A summary of local and international studies on the relationship between B-BBEE (in the South African context) and ethnic diversity (in the international context) and various financial performance measures are presented in Table 2.

Care should be taken when interpreting some of the results indicated in Table 2, given the small sample sizes that were considered. Kleynhans and Kruger (2014) rightfully

suggested that a longer-term study should be conducted to draw valid conclusions on the relationship between profitability and B-BBEE. As indicated in Table 2, international authors typically measured ethnic diversity in terms of the percentage of minority directors serving on boards. The majority of these studies yielded positive results. In contrast, Mans-Kemp and Viviers (2015) reported a negative relationship between the percentage of black directors and total share returns for a sample of JSE-listed companies.

Given the stated gaps in the literature, a comprehensive analysis was conducted by including B-BBEE scores in total and per element. The relationships between these B-BBEE measures and a range of accounting-based, market-based and value-based measures, cost of equity and default risk probability were investigated over a longer study period and for a larger sample in comparison to previous authors. The following hypotheses were formulated:

Ha1: There was a relationship between total B-BBEE scores and the financial health of selected JSE-listed companies over the period 2004–2015.

Ha2: There was a relationship between the individual B-BBEE element scores and the financial health of selected JSE-listed companies over the period 2004–2015.

Methods

In this section, the collection and analysis of quantitative B-BBEE and financial health data for 379 companies (1767 observations over 12 years) will be explained.

TABLE 2: Overview of studies on empowerment and financial performance measures.

Author	Research period	Sample size	Independent variables	Dependent variables	Results
South African studies on the relationship between B-BBEE scores and financial performance measures					
Acemoglu et al. (2007)	2004–2007	159	Total B-BBEE and ownership scores	Return on sales; investment; productivity (sales value per employee)	No significant relationships
Mathura (2009)	2004–2009	209	Total B-BBEE and ownership scores	Compound annual growth rate; Tobin's Q; price/earnings ratio	No significant relationships
De Villiers and Ferreira (2011)	2005–2008	200	Total B-BBEE score	Short-term share returns	Significant negative relationship
Van der Merwe and Ferreira (2014)	2005–2011	905	Total B-BBEE and element scores	Short-term share returns	Significant negative relationship with total B-BBEE score, ownership and preferential procurement. Positive relationship with management control
Kleynhans and Kruger (2014)	2009–2011	26	Total B-BBEE scores	Operating profit; turnover	No significant relationships
Morris (2018)	2010–2015	47	Total B-BBEE and element scores	Unlevered beta	No significant relationships
Global studies on the relationship between diversity measures and financial performance measures					
Richard (2000)	1995–1996	574	Percentage minorities in workforce	Productivity; return on equity (ROE)	No significant relationships
Erhardt et al. (2003)	1997–1998	112	Percentage women and percentage minorities on board	Return on assets (ROA); return on investment (ROI)	Significant positive relationship between ethnic diversity and ROI
Richard et al. (2004)	1998	153	Percentage women and percentage minorities in management	ROE	No significant relationships
Marimuthu (2008)	2000–2005	100	Percentage minorities on board	ROA	Significant positive relationship
Marimuthu and Kolandaisamy (2009)	2000–2006	100	Percentage minorities and percentage women in management	ROA; ROE	No significant relationships
Carter et al. (2010)	1998–2002	641	Percentage minorities and percentage women on board and board committees	ROA; Tobin's Q	Significant positive relationship between ethnic diversity and ROA
Shukeri et al. (2012)	2011	300	Percentage minorities and percentage women on board	ROE	Significant positive relationship with ethnic diversity

B-BBEE, Broad-Based Black Economic Empowerment.

Note: Please see the full reference list of the article, Dreyer, J.A., Viviers, S. & Mans-Kemp, N., 2020, 'Broad-Based Black Economic Empowerment and corporate financial health', *South African Journal of Economic and Management Sciences* 23(1), a3652. <https://doi.org/10.4102/sajems.v23i1.3652>, for more information.

Sample selection

Since the study focused on the financial health of companies listed on the JSE, the population included all companies listed on the bourse over the study period (see Table 3). The sample included all companies that were included in Empowerdex's list of most empowered companies from 2004 to 2015. The list is annually populated based on voluntary participation by companies. Empowerdex ranks these companies based on their total B-BBEE scores and releases the scores of the most empowered companies.

As the B-BBEE scores were not available for all the sampled companies for the entire study period, an unbalanced panel

TABLE 3: Details on the population and sample.

Year	Population	Empowerdex sample
2004	389	198
2005	373	184
2006	389	200
2007	411	199
2008	411	188
2009	398	200
2010	397	100†
2011	395	110
2012	387	99
2013	375	82
2014	380	99
2015	382	108

Source: World Federation of Exchanges, 2016, *Monthly reports tool*, viewed 06 September 2016, from <http://www.world-exchanges.org/home/index.php/statistics/monthly-reports>
 †, Since 2010, Empowerdex reported the scores of approximately 100 companies per annum, in comparison to 200 companies prior to 2010. For the purpose of this study, unlisted companies were excluded.

TABLE 4: Operationalisation of the variables.

Variable type	Variable name	Description
Independent	Total B-BBEE score	Level of compliance is based on this score. Maximum value of 100 (2007 Codes); bonus points could result in a score of more than 100.
	Ownership score	Score out of 20 based on the percentage of black shareholders.
	Management score	A maximum score of 10 is available for having black directors and managers.
	Employment equity score	15 points are allocated if a company complies with all the requirements of the Employment Equity Act.
	Skills development score	Skills development can add 15 points to the total B-BBEE score, should a company adequately train workers.
	Preferential procurement score	20 points could be earned if a company procured from companies with high levels of B-BBEE compliance.
	Enterprise development score	A maximum of 15 points are available if a company assisted in developing small black-owned enterprises.
Dependent	Socio-economic development score	Corporate social initiatives could earn a company 5 points.
	Annual percentage change in turnover	Change in sales or revenue from continued operations for the trailing 12 months.
	Return on sales	Net operating profit after tax, divided by revenue or sales.
	Return on assets	Net operating profit after tax, divided by the average total assets.
	Return on equity	Net profit after tax, divided by average equity.
	Compound annual growth rate (CAGR)	Change in share price from the current financial reporting date to the previous financial reporting date.
	Market-to-book value	The ratio between market capitalisation at date of current financial year-end and total equity in the statement of financial position at the same date.
	Price-earnings	Share price at financial year-end, divided by basic earning per share, as reported at the same date.
	Cost of equity	Return required by ordinary shareholders. This value was computed by Bloomberg using the capital asset pricing model.
	Excess return	Excess return was calculated as CAGR minus cost of equity.
	Economic value added	Net operating after tax minus weighted average cost of capital, timed by total equity and interest-bearing liabilities at the start of the financial year.
Control	Default risk probability	Default risk probability measures the likelihood of a company not meeting its financial commitments within the following year.
	Log (10) of total assets	Total assets were defined as the total of the statement of financial position assets.
	Log (10) of market capitalisation	Total ordinary shares in issue multiplied by share price at date of financial year-end of the respective company.
	Log (10) of total sales	Total sales were defined as total revenue as reported in the statement of profit or loss of the company for the trailing 12 months before reporting date.

B-BBEE, Broad-Based Black Economic Empowerment.

design was used. As indicated earlier, the financial health data were downloaded from the Bloomberg database, whereas the B-BBEE scores were sourced from Empowerdex (measured based on the 2007 Codes). The operationalisation of the variables is explained in Table 4.

Fixed, random and pooled ordinary least square (OLS) panel regression models were employed to investigate the nature of the relationships between the dependent, independent and control variables. The F-test and Hausman test were used to determine the appropriate regression model. The equations for the pooled OLS model (Equation 1), fixed effects panel regression (Equation 2) and random effects panel regression (Equation 3) are presented below:

$$y_{it} = \beta_0 + \beta_1 x_{it} + \epsilon_{it} \quad [\text{Eqn 1}]$$

In Equation 1:

- y_{it} = dependent variable
- β_0 = intercept
- β_1 = regression coefficient
- x_{it} = independent variable
- ϵ_{it} = error term

$$y_{it} = \beta_{0i} + \delta_t + \beta_1 x_{it} + \epsilon_{it} \quad [\text{Eqn 2}]$$

In Equation 2:

- y_{it} = dependent variable for entity i at time t
- $b_{0i} = (i = 1 \dots n)$, the intercept for each entity (separate intercepts are indicated for each unit)
- d_t = dummy variable for each time period
- b_1 = regression coefficient

- x_{it} = independent variable for entity i at time t
- ϵ_{it} = error term

$$y_{it} = \beta_{0i} + \beta_1 x_{it} + \mu_i + \omega_t + \epsilon_{it} \quad [\text{Eqn 3}]$$

In Equation 3:

- y_{it} = dependent variable for entity i at time t
- b_0 = intercept
- b_1 = regression coefficient
- x_{it} = independent variable for entity i at time t
- μ_i and ω_t = separate error terms for entity i and time t
- ϵ_{it} = within-entity error

Where applicable, the results were adjusted for heteroskedasticity. In an attempt to address autocorrelation, a 1-year lag was used in line with the release of the B-BBEE scores. The Empowerdex lists of most empowered companies reflected scores that were measured for companies during the previous year, whereas the financial health data were used for the year in which the list was published (e.g. the 2012 B-BBEE activities of a company were measured in 2013 and the scores released in 2013. The 2013 financial health data were then used, since the potential financial health effect should be dependent on the B-BBEE score). Multicollinearity was addressed by calculating variance inflation factors and were all found to be less than 10.

To ensure the reliability and validity of the financial data, checks were conducted in instances where the parameters changed considerably over time, and parameters that were deemed very high or low. Extreme values were winsorised. The cost of equity analysis was reperformed removing the low and negative values, with the results not differing. Delisted companies were included for the years that they were listed on the bourse. Empowerdex's B-BBEE scores were verified, where available, against the audited B-BBEE certificates. The robustness of the results was improved by including several control variables, and testing and adjusting for specification errors.

Results

An overview of the B-BBEE scores will be provided, followed by a discussion of the financial health measures. The panel regression results will then be presented.

Descriptive overview

The descriptive statistics for the total B-BBEE score are provided in Table 5 and the B-BBEE elements are provided in Table 6. The total B-BBEE score is divided per year, while the B-BBEE elements are presented in total.

As seen in Table 5, the total B-BBEE scores were widely distributed for the sample companies. During 2012, one company had a very high B-BBEE score. This achievement

TABLE 5: Descriptive statistics for the total Broad-Based Black Economic Empowerment score.

Year	Total score observations†	Mean	Median	Standard deviation	Minimum	Maximum
2004	198	19.717	15.670	13.543	4.470	69.580
2005	184	24.396	19.290	20.311	1.250	80.070
2006	200	25.433	21.270	20.890	0.890	76.440
2007	199	26.849	20.090	21.258	1.830	79.280
2008	188	33.607	31.245	23.042	0.430	81.690
2009	200	33.584	29.755	26.411	1.000	88.711
2010	100	64.106	67.878	13.253	30.740	90.800
2011	110	70.390	72.825	13.147	34.400	92.830
2012	99	76.497	75.780	8.801	59.990	100.000
2013	82	78.293	77.785	7.953	65.230	94.870
2014	99	75.330	76.040	10.379	55.600	95.170
2015	108	77.334	79.590	11.984	45.100	98.390
Total	1 767	42.905	44.590	29.056	0.430	100

†, Varied according to the number of companies' total B-BBEE scores released by Empowerdex.

TABLE 6: Descriptive statistics for the Broad-Based Black Economic Empowerment elements.

Elements	Points available	Mean	Median	Standard deviation	Minimum	Maximum†
Ownership	20	10.112	9.090	7.915	0	25
Management control	10	4.237	3.670	3.087	0	15
Employment equity	15	4.203	3.870	4.058	0	15
Skills development	15	5.710	5.210	5.454	0	20
Preferential procurement	20	8.276	7.500	7.614	0	25
Enterprise development	15	6.756	4.400	6.779	0	16
Socio-economic development	5	3.372	3.895	3.203	0	12

†, Bonus points are available that could allow a company to score more than the available points.

could be ascribed to the bonus points available in the 2007 Codes. This company managed to comply with some of the additional criteria for bonus points, which enhanced its total B-BBEE score.

Based on the mean scores, companies almost doubled their compliance scores from 2009 to 2010. The 2010 scores were based on approximately the 100 most empowered companies, as opposed to approximately the 200 most empowered companies prior to 2010. A slight reduction in the mean and median total B-BBEE scores was noted during the last part of the study period. The revised Codes were published in 2013. Companies could arguably have spent more time understanding the newly released 2013 Codes, as opposed to focusing their efforts on compliance with the 2007 Codes. As mentioned earlier, the 2013 Codes were stricter and could arguably have required more time from companies to fully understand the new requirements.

Except for enterprise development, the mean and median for all the elements of the B-BBEE scorecard were close to each other. The standard deviations indicate considerable variation in the elements' scores. The maximum values typically correspond with the maximum points available as per the B-BBEE scorecard. In some cases, more points than the maximum were achieved due to bonus points available

through certain sector charters, and through the 2007 Codes. The financial health descriptive statistics are shown in Table 7.

The relatively large standard deviations, in comparison with the mean and median values of the respective measures, were expected due to the diverse industries represented within the sample and the unstable economic climate during the period under review. The 2004–2007 period represented the commodity boom, while from 2008 to 2010 the global financial crisis had a detrimental impact on the financial results of local companies. The effect the economic climate could have had on the sampled companies' performance was moderated, to a certain extent, by controlling for variables such as market capitalisation, total revenue and total assets.

The sampled companies generated approximately 19% return on equity on average over the duration of the study period, which is in excess of the required return (cost of equity). This difference resulted in an average excess return percentage of almost 9%. The market values of shares were, on average, double the book values, which is an indication of a positive market sentiment (Damodaran 2007). This positive sentiment is also reflected in the economic value-added mean value. The likelihood of the sample companies not being able

to meet their future financial commitments is small, given the low default risk probability.

Panel regression results

Significant panel regression results were reported for three financial health variables, namely the price/earnings (P/E) ratio, cost of equity and default risk probability. The results adjusted for heteroskedasticity will now be presented. The panel regression results for total B-BBEE score and the B-BBEE elements as the independent variables and the P/E ratio as the dependent variable are shown in Table 8.

In Table 8, a significant negative relationship is observed between the sampled companies' P/E ratios and total B-BBEE scores. The negative link could indicate that investors were not willing to pay more for the shares of companies with high B-BBEE scores. Van der Merwe and Ferreira (2014) also found a negative relationship between a price-based measure (total share return) and B-BBEE scores which seemingly confirms negative sentiment among market participants. No prior studies investigated the relationship between B-BBEE and earnings per share (the numerator in the P/E ratio). A possible explanation could be that earnings per share is susceptible to manipulation and hence not a very reliable accounting-based performance measure (The CFA Institute 2016).

Significant relationships are also reported in Table 8 between the sampled companies' P/E ratios and two of the individual scorecard elements. Whereas a significant negative relationship was observed between P/E ratio and skills development, a positive relationship existed between P/E ratio and socio-economic development. There is no apparent reason for this contradiction, as both of these elements require financial commitments from companies. To further investigate whether the observed negative relationships could be attributed to risk, default risk probability was evaluated (refer to Table 9).

TABLE 7: Descriptive statistics for the financial health variables.

Variable	Mean	Median	Minimum value	Maximum value	Standard deviation
Change in turnover (%)	14.201	11.740	-43.807	69.983	23.733
Return on sales (%)	13.637	10.701	-21.059	46.824	14.376
Return on assets (%)†	9.021	8.819	-11.045	29.190	7.817
Return on equity (%)	19.259	18.641	-27.794	66.177	19.305
Compound annual growth rate (%)	19.405	15.662	-97.013	145.201	45.925
Market-to-book value	2.442	1.985	0.099	6.451	1.617
Price/earnings ratio	13.224	11.854	0.022	29.963	6.775
Economic value added (R'm)	70.998	27.051	-1260.972	1402.070	653.720
Economic value added (log10)	9.398	9.406	9.101	9.594	0.122
Default risk probability	0.001	0.000	0.000	0.003	0.001
Excess return (%)	8.765	5.354	-117.942	136.649	46.641
Cost of equity (%)	10.695	10.286	-11.768	25.525	3.139

†, Not computed for companies listed in the financials and basic materials industries.

TABLE 8: Price/earnings ratio and total Broad-Based Black Economic Empowerment score and individual elements.

Variable	Regression coefficient	Standard error	t-value adjusted for heteroskedasticity	Pr > t
Total score	-0.154	0.014	-2.220*	0.027
Ownership	-0.095	0.042	-1.661	0.097
Management control	0.021	0.117	0.370	0.712
Employment equity	0.079	0.095	1.404	0.161
Skills development	-0.089	0.053	-1.961*	0.050
Preferential procurement	0.129	0.052	1.944	0.052
Enterprise development	0.040	0.057	0.638	0.524
Socio-economic development	0.091	0.084	2.164*	0.031
Total revenue	0.090	5.594	1.047	0.295
Market capitalisation	0.735	1.077	5.234**	0.000
Total assets	-0.469	1.049	-3.859*	0.000

Note: Adjusted R-squared: 0.20; the quality of fit of the regression model was significant; fit of the model: F 19.08**, df 10, 764. Preferred model: Two-way random effects; test for fixed effects (F): 3.00**, Hausman test for random effects (F): 17.94. Breusch-Pagan heteroskedasticity: 579.26**.

*, Significant at the 5% level; **, Significant at the 1% level.

TABLE 9: Default risk probability and total Broad-Based Black Economic Empowerment score and individual elements.

Variable	Regression coefficient	Standard error	t-value adjusted for heteroskedasticity	Pr > t
Total B-BBEE score	0.069	0.000	1.849	0.065
Ownership	0.036	0.000	0.717	0.474
Management control	-0.032	0.000	-0.656	0.512
Employment equity	0.036	0.000	0.739	0.460
Skills development	-0.041	0.000	-0.874	0.383
Preferential procurement	0.068	0.000	1.054	0.292
Enterprise development	0.016	0.000	0.307	0.759
Socio-economic development	-0.015	0.000	-0.467	0.640
Total revenue	0.184	0.001	2.836**	0.005
Market capitalisation	-1.485	0.000	-13.172**	0.000
Total assets	0.840	0.000	6.416**	0.000

Note: Adjusted R-squared: 0.50; the quality of fit of the regression model was significant; fit of the model: F 67.88**, df 10, 691. Preferred model: Two-way random effects; test for fixed effects (F): 5.17**, Hausman test for random effects (F): 0.00. Breusch-Pagan heteroskedasticity: 375.49**.

*, Significant at the 5% level; **, Significant at the 1% level.

A positive relationship is noted between the total B-BBEE score and default risk probability (Table 9). The result was, however, only significant at the 10% level. This result could partly explain the low P/E ratio (as reported in Table 8), as companies with higher risk of default would be likely to have a lower market valuation (Correia et al. 2013). Another measure that can be impacted by risk is cost of equity. The analyses reported in Table 10 were performed to investigate whether this perceived higher risk is reflected in a higher cost of equity. The cost of equity of a company indicates the return that ordinary shareholders require on their investment. If a company has higher risk, it would most likely result in a higher cost of equity. In this study, the capital asset pricing model (CAPM) was used. Despite several shortcomings, CAPM is often used in the South African context (Nel 2011).

A significant positive relationship is noted between the total B-BBEE score and cost of equity in Table 10. This finding seems to corroborate the significant negative regression coefficient reported for the P/E ratio (Table 8) and the positive regression coefficient for default risk probability (Table 9). An increase in default risk probability (especially in emerging economies) often results in higher cost of equity and a lower P/E ratio. Significant positive relationships are furthermore noted between the cost of equity and ownership, employment equity, preferential procurement and enterprise development (Table 10). The empirical evidence suggests that ordinary shareholders in this sample may have regarded the companies with higher total B-BBEE scores as having more risk, resulting in a higher cost of equity. The findings contradict those of Morris (2018) who found no relationship between B-BBEE scores and risk and Akinsomi (2016) who showed that B-BBEE compliant companies had less risk than their non-compliant counterparts did. Cost of equity was negatively correlated with management control and with skills development.

The significant positive relationship between cost of equity and employment equity came as a surprise, given that a negative relationship existed between management control

and cost of equity. Even though these results may seem to contradict each other, they are in line with the findings of Bouslah, Kryzanowski and M'Zali (2012) who investigated the link between employee diversity concerns and company risk. The significant negative relationship between cost of equity and management control appears to be in line with findings of Marimuthu (2008), albeit for different measures. Marimuthu found a positive association between board diversity and return on assets, but it could be seen as a similarity to the decrease in cost of equity as both point towards improved financial health. A significant positive relationship between cost of equity and preferential procurement was also noted, indicating that the sentiment towards preferential procurement could be negative. The significant negative link between cost of equity and skills development could be seen as contradicting the negative relationship noted between the P/E ratio and skills development. This ambiguity may point towards positive and negative perceptions towards skills development. It could also indicate that either the association with P/E ratio or the relationship with cost of equity, or both, might be spurious. Significant relationships with the control variables were also typically reported, strengthening the notion that these control variables could have a moderating effect on the results, had they not been controlled for.

Both alternative hypotheses (H_{a1} and H_{a2}) were accepted. A significant positive relationship between total B-BBEE score and cost of equity was reported, and a significant negative relationship between total B-BBEE score and P/E ratio was observed. These two observations were further supported by a positive (significant at the 10% level) relationship between total B-BBEE score and default risk probability. Significant relationships between the elements of the B-BBEE scorecard and cost of equity, and between the elements of the B-BBEE scorecard and P/E ratio were noted. A significant positive relationship between socio-economic development and P/E ratio was noted. Similarly, positive relationships with cost of equity were observed between ownership, employment equity, enterprise development and preferential procurement. Based on the findings of Van der Merwe and Ferreira (2014), it could be assumed that certain investors do look at the B-BBEE activities and scorecards of companies. Therefore, based on the empirical results, it is deduced that stakeholders yield a positive sentiment towards management control, skills development and socio-economic development. Stakeholders do not, however, seem favourable towards ownership, employment equity, preferential procurement and enterprise development.

Despite the fact that the relationships with total B-BBEE score indicate a negative relationship with financial health, there are elements that were positively related to economic health, as discussed above. As such, directors should strive to have a more diverse management team, invest in socio-economic development and skills development. Directors should be wary of the negative associations between ownership, employment equity, preferential procurement, enterprise development and financial health.

TABLE 10: Cost of equity and total Broad-Based Black Economic Empowerment score and individual elements.

Variable	Regression coefficient	Standard error	t-value adjusted for heteroskedasticity	Pr > t
Total score	0.231	0.003	7.569**	0.000
Ownership	0.138	0.014	3.380**	0.001
Management control	-0.094	0.041	-2.246*	0.025
Employment equity	0.128	0.033	3.139**	0.002
Skills development	-0.299	0.025	-6.640**	0.000
Preferential procurement	0.172	0.019	3.355**	0.001
Enterprise development	0.175	0.022	3.382**	0.001
Socio-economic development	0.005	0.027	0.194	0.846
Total revenue	0.046	1.692	0.862	0.389
Market capitalisation	-0.014	0.340	-0.153	0.878
Total assets	0.244	0.455	2.229*	0.026

Note: Adjusted R-squared: 0.24; the quality of fit of the regression model was significant; fit of the model: F 25.40**, df 10, 811. Preferred model: Pooled ordinary least squares; test for fixed effects (F): 1.12; Hausman test for random effects (F): not applicable. Breusch-Pagan heteroskedasticity: 475.20**.

*, Significant at the 5% level; **, Significant at the 1% level.

Conclusion

Broad-Based Black Economic Empowerment legislation was implemented in 2003 to redress the adverse economic impact of the apartheid regime on ordinary citizens. The Act was revised in 2013 and three Codes of Good Practice were published since 2004. Since the introduction of B-BBEE legislation, the question is increasingly being raised whether there is a financial motivation for companies to achieve a higher level of compliance.

Previous authors reported inconclusive evidence of the nature of the relationship between B-BBEE and financial performance. The authors of this study investigated the relationships between B-BBEE scores (in total and per element) and a range of financial health measures for 379 JSE-listed companies over the period 2004–2015. The sample consisted of all the listed companies for which Empowerdex provided compliance scores. A larger sample, a longer time frame and more comprehensive measures were used than those considered by previous authors.

An increasing trend was noted in B-BBEE compliance over time.

The panel regression analyses revealed no significant relationship between the total B-BBEE scores, or any of the respective B-BBEE elements, and the considered accounting-based measures. In contrast, a significant negative relationship was observed between the market-based P/E ratio and total B-BBEE score, while a significant positive relationship was noted for the cost of equity. This negative association might indicate a negative perception of shareholders regarding B-BBEE. Companies with high B-BBEE scores may be perceived to have more risk, as is shown by the positive link with default risk probability.

Compliance with B-BBEE can be seen as one of the ways in which companies can be good corporate citizens who promote social justice. It is, however, not the only way in which companies can contribute to sustainable development. Corporate leaders and policymakers are encouraged to reflect on how they can truly contribute to a more empowered South African society. Directors who are responsible for developing and implementing empowerment strategies play an integral role in the sustainable future of B-BBEE.

Directors could focus on the elements of the B-BBEE scorecard that seem to be viewed in a positive light by shareholders. Based on the findings of this study, a more diverse management team should be pursued, and a greater emphasis should be placed on socio-economic development and skills development. Corporate decision-makers should caution against overemphasising the importance of ownership, given that shareholders seem to view this element in a negative light, based on the link with cost of equity.

The provision of capital by shareholders is essential to ensure a sustainable future for companies. Meaningful

engagements between shareholders and managers could lead to enhanced B-BBEE practices. The importance of B-BBEE compliance should not only be stressed in private, as is currently the case (see Viviers, Mans-Kemp & Fawcett 2017), but should also be raised at companies' annual general meetings. It is foreseen that an engagement regarding race diversity will eventually lead to discussions on enhanced gender and age diversity as well, following international trends.

Future researchers can take a closer look at some of the contradictory relationships observed in this study and could use one or more multi-factor asset pricing models to compute cost of equity in a follow-up study. Broad-Based Black Economic Empowerment can also be studied from a qualitative perspective by conducting interviews with foreign and South African investors and companies to gauge their views on the effectiveness of empowerment initiatives. For the purpose of this study, the sample was limited to Empowerdex's list of most empowered companies. In future, a B-BBEE compliance index can also be compiled for small, medium and large companies based on their reporting on the matter.

Broad-Based Black Economic Empowerment appears to have positive and negative dimensions. If the positive dimensions are embraced and the negative ones addressed, the reformatory Act can truly help South Africa to become more equal.

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