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# The association between South African listed companies' BEE scores and market performance

## An introductory study

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### Abstract

**Purpose** – The purpose of this paper is to investigate whether an association exists between a firm's black economic empowerment (BEE) score and its share returns.

**Design/methodology/approach** – The study uses linear regression that controls for the factors explaining share returns identified by Fama and French. The study includes the Top 200 BEE companies according to the Financial Mail/Empowerdex Top Empowerment Companies survey for 2005-2008.

**Findings** – The regression analysis shows a significant, negative association between a firm's BEE score and its share returns.

**Research limitations/implications** – The results suggest that managers may be over-investing in activities to improve their firms' BEE scores. This result is surprising. The long-term effect of BEE investment, the association between the different elements of the BEE score and share returns and the optimal BEE investment level are all fruitful avenues for future research.

**Originality/value** – One of the elements of the BEE score is the percentage of black ownership of the company. Various studies have found positive market reactions to BEE deal announcements, which relate to the percentage of black ownership of the company. By contrast, this study investigates the relationship between an entity's BEE score, as opposed to a BEE deal announcement, and this entity's market performance. The results would be of interest to government policy analysts, investors and managers.

**Keywords** South Africa, Organizational culture, Social responsibility, Black people, BEE, Black economic empowerment, Future performance, Share returns

**Paper type** Research paper

## 1. Introduction

South Africa's colonial and apartheid history contributed to black South Africans (blacks), who represent 79.3 per cent of the population (Statistics South Africa, 2009),

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owning less than 2 per cent of the shares listed on the Johannesburg Stock Exchange (JSE), South Africa's main stock exchange (Ntingi and Hlatshwayo, 2010). What makes this imbalance even more significant is the fact that the JSE accounts for 90 per cent of African market capitalisation (Yartey and Adjasi, 2007) and is one of the top 20 largest equities' exchanges in the world, in terms of market capitalisation (JSE, 2008). The South African Government introduced black economic empowerment (BEE) to correct these types of imbalances. One way in which the government supports black ownership is by awarding tenders and certain rights to companies that are implementing BEE, a process of wealth redistribution among the previously disadvantaged blacks. South African organisations may therefore take real action by implementing BEE to obtain preferential treatment, say, through the awarding of tenders.

However, BEE can be controversial and empowerment deals can generate problems. Ward and Muller (2008) discuss examples such as an Australian company, Drillcorp, selling its African subsidiary to avoid entering into a BEE deal. The Executive Director of the American Chamber of Commerce, Luanne Grant, warns that South Africa risks losing existing and future foreign direct investment if the government dictates that multinational companies must sell equity in their local subsidiaries. Since 2000, there has also been a gradual relaxation of exchange controls meaning that billions of South African rand (ZAR) have left the country as portfolios were diversified into foreign markets (Ward and Muller, 2008). The notion of giving away part of the business (ownership) for no immediate value in exchange has contributed to some whites emigrating (Jack and Harris, 2007). Jack and Harris (2007) also note that business should be motivated by economics, and not by a BEE scorecard. Companies may in fact have to be careful not to lose their investors, both local and foreign, by implementing BEE, as this could influence share prices negatively. The pursuit of an increased BEE score may therefore lead to negative share returns.

An entity obtains its BEE score from an independent verification agency. One of these verification agencies is Empowerdex, which assisted in developing the BEE scorecard. A higher BEE score shows the organisation to be socially responsible and companies have to implement real actions to increase their BEE score (Cahan and Van Staden, 2009). Managers will only pursue an increased BEE score if they foresee future benefits. However, the actions required to increase the BEE score are potentially costly and these costs could be greater than the future benefits received from higher BEE scores. Managers could therefore overinvest in actions to increase BEE scores.

The literature relating to BEE and share returns has focused on the association between a BEE deal announcement and share returns. Various studies have linked BEE deal announcements to a positive short-term effect on share prices (Jackson *et al.*, 2005; Strydom *et al.*, 2009; Ward and Muller, 2008; Wolmarans and Sartorius, 2009). However, increased black ownership, signalled by a BEE deal, is only one of the seven elements that make up the BEE score. The BEE score is calculated using a generic BEE scorecard with the following seven elements:

(1) ownership;
(2) management;
(3) employment equity;
(4) skills development;
(5) preferential procurement;

(6) enterprise development; and
(7) socioeconomic development.

The percentage weighting for each of these elements varies from 5 to 20 per cent (Jack and Harris, 2007). The market reaction to a BEE deal therefore does not fully reflect whether market participants believe that the pursuit of a higher BEE score is beneficial to a company. This study is interested in the association between a company's BEE score, as opposed to only the ownership element in the BEE score, and the company's share returns. Previous literature does not examine this association. Because the BEE score is a variable that changes continuously throughout the year, the study empirically tested the association between a company's BEE score and its share returns for a year. Hence the study examined the association between a company's BEE score (an indicator of corporate social responsibility) and its market performance (share returns) during a one-year period ending four months after the disclosure of BEE scores. Although a company's BEE score is a moving target, using a regression analysis mitigates this risk because the researchers are able to investigate the association between a company's BEE score and share returns, irrespective of the current target. The authors were able to investigate whether a company with a higher BEE score has a higher share return, irrespective of the BEE target at that time.

The results will be of interest to:

- government policy analysts, to assess the efficacy of their current policies;
- investors, to determine whether it is beneficial to invest in companies with higher BEE scores; and
- managers, to determine whether it might be beneficial to implement activities to increase their company's BEE score.

The structure of the rest of the paper is as follows: literature review, hypotheses, data and research method, results and conclusion.

## 2. Literature review

During the apartheid era, black South Africans (blacks) could not fully participate in government, corporate and social affairs. During this era, the South African business community was practically excluded from international financial markets (Jackson *et al.*, 2005). This changed in the early 1990s with the release of Nelson Mandela from prison and the country's first democratic elections in 1994, when the African National Congress (ANC) came to power. Since 1994, the ANC has embarked on a strategy of transformation and the emphasis has been on the reversal of past injustices and the empowerment of the previously disadvantaged.

As part of the transformation process, including increasing the representation of blacks in the ownership of companies, on boards and in other structures of South African firms, the concept of BEE was introduced and implemented by the South African Government. BEE led to the development and promulgation of the Broad-Based Black Economic Empowerment (BBBEE) Act in 2003 by the South African Government, which states the following as part of its objectives (South Africa, 2003, p. 3):

(1) "promoting economic transformation in order to enable meaningful participation of black people in the economy";

(2) "achieving a substantial change in the racial composition of ownership and management structures and in the skilled occupations of existing and new enterprises";

(3) "increasing the extent to which communities, workers, cooperatives and other collective enterprises own and manage existing and new enterprises and increasing their access to economic activities, infrastructure and skills training";

(4) "increasing the extent to which black women own and manage existing and new enterprises, and increasing their access to economic activities, infrastructure and skills training";

(5) "promoting investment programmes that lead to broad-based and meaningful participation in the economy by black people in order to achieve sustainable development and general prosperity";

(6) "empowering rural and local communities by enabling access to economic activities, land, infrastructure, ownership and skills"; and

(7) "promoting access to finance for BEE".

The act also specifically states that "black people" is a generic term used for Africans, Coloureds and Indians.

It is not mandatory for entities to apply BEE, but government has put policies in place which would make it difficult for entities to operate in South Africa if they are not BEE compliant. BEE therefore addresses the following two issues:

(1) Entities might choose to be BEE compliant because of the inequalities of the past and be socially responsible.

(2) Entities might find it difficult to operate as a business in South Africa without being BEE compliant.

BEE follows the principle that corporate behaviour will be determined by social responsibility, and not by state disciplinary action (Ponte and Van Sittert, 2007). Entities cannot manage the BEE score without real actions (as they might manage earnings with accounting choices) because the BEE score reflects real actions taken by the entity (Cahan and Van Staden, 2009).

Although one could argue that the BEE score could be manipulated by setting up BEE front companies, and therefore not representing any real actions taken by management, it is important to note that ownership represents only one of the seven pillars, and a score of only 20 per cent is allocated to ownership. Furthermore, setting up fraudulent BEE front companies is a punishable offence (BEE Institute, 2010).

Government has put in place certain measures to encourage BEE compliance. Thus, for example, government spending will show procurement preference towards BEE-compliant (-rated) entities or show preference in granting licences to entities that are BEE compliant (Ponte and Van Sittert, 2007). Government will also show preference to BEE-compliant entities when selling state-owned assets and when entering into public private partnerships (Jack and Harris, 2007). One of the reasons why government will show preference to BEE-compliant entities and not exclude non-compliant entities from their dealings outright is because of monopolies in certain industries or products (Jack and Harris, 2007).

The preferential treatment referred to above is included in the Preferential Procurement Policy Framework Act of 2000 which states that the specific goals include "contracting with persons, or categories of persons, historically disadvantaged by unfair discrimination on the basis of race, gender or disability" (South Africa, 2000, p. 2). Government subsequently released a draft revised act which specifically includes the use of BEE levels in determining preferential procurement.

Government realised that if BEE was to only influence the above-mentioned type of industries (i.e. industries which require licences from the government or which deal directly with the government), BEE would not affect a broad spectrum of entities in South Africa. The Codes of Good Practice was subsequently developed. The codes resulted in a measure for BEE, a so-called "BEE rating", which results in an entity acquiring a BEE score. Empowerdex, an economic empowerment rating agency, helped develop the codes for the Department of Trade and Industry. Government uses the score to show preference for entities with higher ratings. One of the elements of the BEE score is preferential procurement. If an entity buys its goods and services from an entity with a high BEE score, the acquiring entity will receive a higher BEE score (Jack and Harris, 2007). In this way, the BEE imperative becomes more compelling for companies that do not directly supply government.

The following example proves this point: entity A is in the fishing industry and requires a licence from the government. Entity A has to acquire a boat. Entity A can acquire the boat from entity X, which has a high BEE score, or entity Z, which has a low BEE score. Entity A will choose to purchase the asset from entity X, because this will, in turn, influence entity A's BEE score positively, which, in turn, will enhance entity A's chances of receiving a licence. An understanding of this concept is vital because it shows that the preferential procurement element will cause more entities to be BEE compliant (Jack and Harris, 2007). This illustrates that while BEE is not legally binding, it can be economically binding (Jack and Harris, 2007).

### *2.1 The history of BEE: the initial phase*

The initial phase of BEE was characterised by numerous ownership deals, while various pieces of legislation were enacted to address issues of employment equity, labour rights and skills development. However, this was done in the absence of an overarching framework (Ponte *et al.*, 2007).

Initially, BEE was implemented without a legislative framework, mainly through the preferential awarding of government contracts and the granting and renewal of licences to firms with black control or black partners (Jackson *et al.*, 2005). This was an effective starting point because the national government spends more than ZAR180 billion annually buying goods and services from the private sector (Iheduru, 2004). In addition, state-owned enterprises such as Eskom (electricity monopoly) and Transnet (transportation conglomerate) spend billions of rand in private sector procurement. This preferential treatment regime was formally legislated in the Preferential Procurement Policy Framework Act of 2000, which implemented a points system of which 10 per cent, and in certain circumstances 20 per cent, was allocated to BEE criteria (Iheduru, 2004).

The BEE agenda was further advanced through the government's privatisation programme of large state-owned enterprises, such as Eskom, Transnet, Telkom and Denel. Because the energy and mining sectors are heavily subsidised and protected

by government, they were further able to advance their BEE strategy in these sectors. Government has thus used licences and quotas effectively in other sectors to advance its BEE strategy. Examples include the facilitation of the entry of black empowerment companies into the fishing industry as a result of the Marine Living Resources Act of 1998, generally characterised by the acquisition of equity by blacks in industry giants such as the Oceana Fishing Group and Premier Fishing (Iheduru, 2004).

*2.2 The history of BEE: towards BBBEE*

The mining charter clearly embraced the concept of BBBEE and introduced seven pillars of BBBEE, namely equity/ownership, human resources development, employment equity, beneficiation, housing, affirmative procurement and community development. The charter incorporated a scorecard, listing five- and ten-year targets for the industry.

Other charters were released in response to the promulgation of the 2003 BBBEE Act. This act grants the Minister of Trade and Industry the right to issue BBBEE Codes of Good Practice, which are aimed at standardising the definitions, targets and weightings for the purposes of BEE through the establishment of a generic scorecard. The legal standing of the codes suggests that they could increase the power of government to achieve its BEE objectives, especially where government licensing and procurement are key factors (Ponte *et al.*, 2007).

The generic BEE scorecard, which is used to determine the BEE score, has seven different elements. These elements and their respective weighting are shown in Figure 1 (Jack and Harris, 2007).

It is interesting to note that the ownership and preferential procurement elements have the same weights, respectively. An entity could therefore receive 20 points by simply buying from BEE-compliant entities. To further encourage procurement from BEE-compliant entities, procurement recognition levels are given to the BEE-compliant entities. A level one contributor is a company with 100 or more points in the scorecard. A level one contributor has a procurement recognition level of 135 per cent. The lowest contributor is a non-compliant contributor, a company with 0-29 points in the scorecard. Such a company will have a procurement recognition level of 0 per cent. The other

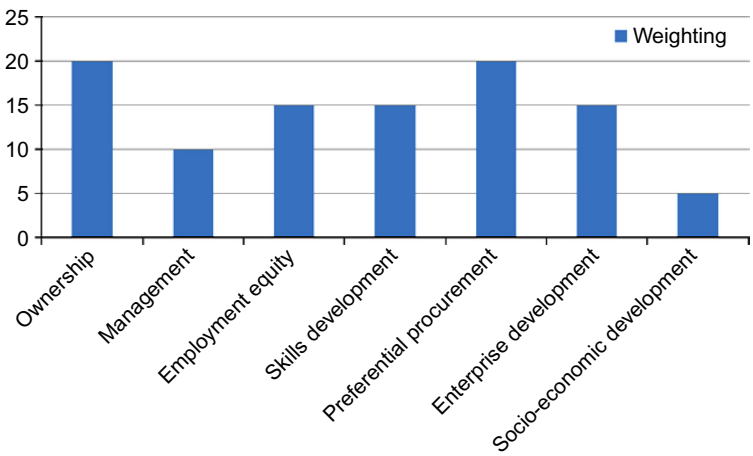


**Figure 1.**
Elements of the BEE scorecard

contribution levels, level two to eight, have a procurement recognition level of between 10 and 125 per cent, depending on the points in the scorecard (Jack and Harris, 2007).

An entity would therefore rather purchase services and goods from a higher level contributor because this will, in turn, influence its BEE score. Jack and Harris (2007) refer to this as the trickledown effect. This may cause BEE entities with higher ratings to generate greater revenues which may lead to an increase in the share price. While the BEE score has various elements, the preferential procurement element eventually causes most entities to purchase from BEE entities (i.e. the trickledown effect comes into play).

*2.3 Previous literature: corporate social responsibility*

Various studies have been done on corporate social responsibility, both from a disclosure point of view and a real activities point of view. Roberts (1992) shows that economic performance is significantly related to levels of corporate social disclosure. Bernardi *et al.* (2005) suggest that by requiring the inclusion of photographs of board members in regulatory findings and annual reports, the presence of gender and race diversity on the board of directors would increase. Mackey *et al.* (2007) posit that publicly traded firms' managers might fund socially responsible activities (real activities implemented by management) that do not maximise the present value of their firms' cash flows but yet still maximise the firms' market value.

There are several arguments for being socially responsible, which include long-term self-interest, public image, the viability of business, avoidance of punitive measures that may be effected by government and socio-cultural norms. There are also several arguments against being socially responsible which include profit maximisation, the cost of social involvement, a lack of social skills and a dilution of the primary purpose of business (Davis, 1973).

According to Waddock and Graves (1997), corporate social performance is positively associated with prior financial performance as well as (positively associated with) future financial performance. McWilliams and Siegel (2001) indicate that there is an ideal level of corporate and social responsibility by using a supply and demand theory of the firm's framework. McGuire *et al.* (1988) argue that firms with low risk and high performance may be better able to afford to act socially responsible. According to Fombrun and Shanley (1990), a firm's reputation influences the actions of its stakeholders. Both McWilliams and Siegel (2000) and Aupperle *et al.* (1985) contend that there is no significant association between corporate and social responsibility and financial performance. A meta-analysis performed by Orlitzky *et al.* (2003) shows that social, and to a lesser extent, environmental responsibility, is likely to pay off.

As indicated above, there are reasons for and against social responsibility. In the context of BEE, the demand for social responsibility is high, and poorly performing entities would want to increase their BEE score to benefit from the preferential procurement element of the BEE scorecard.

*2.4 Prior literature: BEE studies in accounting and finance*

BEE studies in the field of accounting and finance have mainly focused on the ownership element of BEE. Ward and Muller (2008) found that positive (insignificant) returns during the three days preceding the announcement of a BEE ownership deal quickly dissipate, while positive cumulative abnormal returns of around 15 per cent are evident over the next 240 trading days. Strydom *et al.* (2009) reported similar results.

They indicate that if firms make a BEE deal announcement, it leads to positive, same-day, abnormal returns for shareholders on average, but claim that the results are far from conclusive. They further indicate that such a reaction may be related to firm and/or transaction specific characteristics. Wolmarans and Sartorius (2009) also investigated the announcement of a BEE deal and the effect on the share price. They found that the announcement and the shareholder wealth creation have a positive relation, but only during the last part of the sample period. Finally, in their study, Jackson *et al.* (2005) reported positive, abnormal returns over both a three-day and a five-day window period after a firm had announced a BEE deal. They further investigated whether these firms experienced negative stock price performance after the announcement. They conclude that the firms making BEE deal announcement outperform the JSE market index by 30.76 per cent over the one-year period immediately after the BEE transaction announcement. Overall, these studies indicate that shareholders view the ownership element of BEE favourably.

Cahan and Van Staden (2009) focused on the broader perspective of BEE by relating BEE scores, which measure elements of the BEE scorecard, to the voluntary decision to disclose a value-added statement. They found that South African firms use disclosure of a value-added statement and BEE performance as elements of a strategy to establish substantive legitimacy with labour (Cahan and Van Staden, 2009).

### *2.5 Contribution*

Previous research shows that the market reacts positively to the announcement of a BEE ownership deal. The fact that market participants favour such BEE deals suggests that they believe BEE compliance will result in improved economic conditions for the entity.

All of the prior research studies were based on the announcement of the BEE transaction. All of the studies investigated the returns around the announcement date, while two of the studies also investigated the returns one year after the announcement. Of these two studies, the one by Ward and Muller (2008) had a sample size of 60 companies, while the one by Jackson *et al.* (2005) had a sample size of 20 companies. The long-term effect (one year) of the BEE score on the share price is therefore still unclear. This study therefore contributes by examining the relationship, if any, between the entity's BEE score and its share price, over a one-year period.

This study makes a welcome contribution to the limited literature on BEE in South Africa, by indicating whether or not it is beneficial for an entity to be BEE compliant. The study may also indicate that the BEE scoring mechanism has the best of both worlds built into it, in that the preferential procurement element results in real social activities being undertaken by the entity, which, in turn, lead to better economic performance for the entity.

## 3. Hypotheses, data and research method

### *3.1 Hypotheses*

The purpose of this study is to examine whether a company's BEE score is statistically related to its future share returns. There are two opposing hypotheses.

One hypothesis suggests that the trickledown effect, as well as an increased corporate reputation, would cause higher sales. These higher sales would then be imputed in the current share price by the market. If the company's share price is higher, the company would have higher share returns. Ponte and Van Sittert (2007) note that government

spending will show procurement preference, or show preference in granting licences, to BEE-compliant entities. These companies would then obtain higher sales because of the procurement preference and licences granted to them. According to Jack and Harris (2007), preference will be given to BEE-compliant entities when the government sells state-owned assets and when entering into partnerships with private sector entities, both of which should lead to higher profits.

Sartorius and Botha (2008, p. 443) note the following three main reasons why companies invest in BEE:

(1) "BEE is essential for South Africa to sustain its economic and democratic structures".

(2) "Companies see BEE as an opportunity to grow their business and market share".

(3) "Companies are committed to the principles of BEE".

Although the reasons for investing in BEE may vary, this study does not investigate the actual reason for investing, but instead whether a company's BEE score is statistically related to its future share returns. The reason for investing in BEE is therefore not considered, but what is of importance is the effect the investment has on the share price and consequently on shareholders' wealth, irrespective of the reason for investing.

As noted in the introduction, various studies have found that a BEE ownership deal announcement had a positive effect on share returns. Jackson *et al.* (2005) further note that firms that participate in BEE deals increase their corporate reputations through favourable media attention. The same might therefore be expected of a company's BEE score. The following hypothesis was formulated on the basis of the above arguments:

*H1.* A higher BEE score will result in higher future share returns for the entity.

An opposing hypothesis suggests that the market could also view a high BEE score as overinvesting in social activities. Some examples which could be interpreted as overinvesting in order to obtain a higher BEE score could include the following:

- implementing suboptimal strategies;
- hiring incompetent personnel;
- purchasing inferior products from BEE suppliers;
- providing excessive discounts when issuing shares to blacks; and
- promoting employees who do not deserve it and the excessive use of resources in BEE development.

There has also been scepticism about whether these deals are broad based or only influence a few elite well-placed blacks (McNeil, 1998). Another negative impact on the share returns might be the reaction of the minorities, which still control the majority of the JSE, to the BEE score (Jackson *et al.*, 2005).

Managers may overinvest in BEE scores, even if it is to the detriment of the company, owing to the so-called "agency problem" as identified by Healy and Palepu (2001). They argue that managers have an incentive to expropriate investor's funds, thus creating an agency problem. This incentive will be driven by self-interest. In a BEE context, some of these benefits for the manager may include the following:

- the perception that the manager is socially responsible by investing in BEE development;
- the manager obtaining large number of contracts because of a high BEE score, even if the contract results in negative returns; and
- the manager's ability to maintain good relations with the government, especially where the company deals with the government.

These are all examples of benefits for the manager resulting from a higher BEE score. The managers would also want to avoid the political costs associated with not being BEE compliant. These factors combined may result in the market perceiving the manager as being socially responsible, which could lead to increased personal stature for the manager in a country whose blacks represent 79.3 per cent of the population (Statistics South Africa, 2009).

If the above-mentioned costs of obtaining a higher BEE score are greater than the benefit, with the benefit being the increased future sales and subsequent increased cash flows, the opposite hypothesis will hold, that is, that a BEE score is significantly negatively associated with future share returns. On the basis of these arguments, the following hypothesis was formulated:

*H2.* The higher an entity's BEE score, the lower its future share returns will be, because the cost of being BEE compliant outweighs the benefit.

*3.2 Data*

The researchers used the top 200 BEE companies, based on their BEE scores, according to the annual Financial Mail/Empowerdex Top Empowerment companies survey. The four annual lists (2005-2008) were obtained from the Financial Mail web site (Empowerdex, 2010). There were 185 companies in 2005 and 200 companies in 2006-2008, respectively.

The researchers obtained the annual share returns, company industry, size, earnings-to-price ratio and book-to-market ratio from the McGregor BFA database. The natural log of market capitalisation was used as an indication of company size, and the data were winsorised at 1 per cent. The researchers calculated the share returns as the share returns of the company over a one-year period, ending four months after the announcement of the BEE rankings. The top 200 BEE companies are announced in April each year. The annual share returns were calculated at four months (August) after the top 200 BEE companies had been announced. A four-month period would be sufficient for the market to take the information into account. The share price would therefore have imputed the costs and benefits of the BEE score four months after the release of the BEE score. Furthermore, the annual return was used instead of only the four-month period after the top 200 BEE companies had been announced, because the information relating to calculating the BEE score was available during the year. The market participants would therefore have imputed some of the benefits and cost in the share price continuously throughout the year and not only after the announcement date. The researchers therefore compared the BEE score for the year to the share price information for the year, with a four-month lag.

After obtaining all the data, certain companies were eliminated from the sample. These included companies for which the researchers were unable to obtain

all the variables from the BFA McGregor database, companies that had no BEE score and delisted companies. The final sample over the four-year period included 594 firm years. The firms per industry in the sample are shown in Table I.

*3.3 Research method*

This study investigated the association between future share returns and BEE score. The Fama and French model is used in various corporate social responsibility studies (albeit adapted for each study) to examine the association between returns and corporate social responsibility (Barnett and Salomon, 2006; Brammer *et al.*, 2006; Scholtens, 2008; Van de Velde *et al.*, 2005). Although the authors of the current study did consider other measures of performance, the scope of this study was limited to determining whether an association between returns and a BEE score exists. According to Fama and French (1998), future share returns are associated with firm size, book-to-market ratio and earnings-to-price ratio. The authors of the current study included the BEE score as an independent variable to those identified by Fama and French (1998) in order to examine whether there is an association between returns and the BEE score, and when such an association does exist, whether it is significant.

Future share returns therefore represent the dependent variable, while the annual BEE score, firm size, earnings-to-price ratio and book-to-market ratio act as independent variables. Firm size, earnings-to-price ratio and book-to-market ratio will control for various factors including risk, size and growth. The researchers also controlled for the nine industries in which these entities trade. Thus, after controlling for the variables identified, the researchers would be able to investigate the possible association between returns and BEE score.

Both hypotheses were tested by means of regression (1). If a significant and positive relationship between share returns and BEE score is observed, *H1* is supported. If a significant but negative relationship between share returns and BEE score is observed, *H2* is supported:

$$SR = B_0 + B_1 BEEscore + B_2 Size + B_3 EP + B_4 BM + (IND) + E \quad (1)$$

where:

SR represents share returns over a one-year period, after taking into account a four-month lag period.

The BEE score represents the BEE score as provided in the annual Empowerdex ranking.

**Table I.**
Industry breakdown

| Industry | Frequency | % |
|---|---|---|
| Basic materials | 106 | 17.8 |
| Consumer goods | 65 | 10.9 |
| Consumer services | 95 | 16.0 |
| Financials | 119 | 20.0 |
| Health care | 14 | 2.4 |
| Industrials | 128 | 21.5 |
| Oil and gas | 4 | 0.7 |
| Technology | 51 | 8.6 |
| Telecommunications | 12 | 2.0 |
| Total | 594 | 100.0 |

Size represents the natural log of market capitalisation at the beginning of the share return period as indicator of firm size.

EP represents the earnings-to-price ratio at the beginning of the share return period.

BM represents the book-to-market ratio at the beginning of the share return period.

IND represents the industry in which the firm trades.

## 4. Results

The main descriptive statistics are provided in panel A in Table II. Further descriptive statistics are divided into two groups, namely firm-year observations with BEE scores above and below the median of the sample. Panel B in Table II shows the means and a comparison of the means *t*-test results of the further descriptive statistics. Panel B indicates that the companies with a higher BEE score are generally larger companies and have a lower book-to-market ratio, significant at the 1 and 5 per cent levels, respectively. This might indicate that larger companies are more aware of their BEE scores because they are more visible and are therefore cautious to avoid political costs (Watts and Zimmerman, 1978). However, growth companies may be less preoccupied with BEE scores because they are focused on growing their business, while mature firms explore avenues such as BEE in order to add value. Furthermore, the returns for the companies with a higher BEE score are lower than for those companies with a lower BEE score, although not significantly lower.

The authors subsequently investigated correlations between the variables in regression (1). Table III shows the correlations between the variables with the Pearson correlation indicated below the diagonal line and the Spearman correlation indicated

Panel A – main descriptive statistics

| | *Mean* | *SD* | *Minimum* | *Maximum* |
|---|---|---|---|---|
| BEE score | 28.901 | 22.867 | 1.390 | 77.812 |
| Returns | 22.011 | 44.567 | −63.402 | 217.383 |
| Size | 21.645 | 2.116 | 16.451 | 26.083 |
| Earnings-to-price ratio | 0.083 | 0.108 | −0.536 | 0.408 |
| Book-to-market ratio | 0.566 | 0.455 | 0.004 | 2.773 |

Panel B – further descriptive statistics: high versus low BEE score companies

| | *Means of variables for companies with a BEE score above the mean BEE score (SD)* | *Means of variables for companies with a BEE score below the mean BEE score (SD)* | *t*-stat. |
|---|---|---|---|
| BEE score | 48.710 (14.862) | 9.100 (6.295) | 42.292*** |
| Returns | 19.034 (35.991) | 24.987 (51.634) | −1.630 |
| Size | 22.168 (2.108) | 21.122 (1.993) | 6.209*** |
| Earnings-to-price ratio | 0.082 (0.098) | 0.083 (0.118) | −0.044 |
| Book-to-market ratio | 0.522 (0.342) | 0.610 (0.541) | −2.371** |

**Notes:** Significance at the *10, **5 and ***1 per cent levels (two-tailed); where: returns represent share returns over a one-year period, after taking into account a four-month lag period; size represents the natural log of market capitalisation at the beginning of the share return period as indicator of firm size; the earnings-to-price ratio represents the earnings-to-price ratio at the beginning of the share return period; the book-to-market ratio represents the book-to-market ratio at the beginning of the share return period

**Table II.**
Descriptive statistics

above the diagonal line. In both these correlations, the BEE score is negatively correlated with the returns (at the 1 and 5 per cent levels, respectively).

It therefore seems that there is a significant negative correlation between BEE score and future returns, indicating that the higher a company's BEE score is, the lower its future returns are. The highest correlation is between size and book-to-market ratio, but at 0.428, it is far below the levels suggestive of multicollinearity. For further assurance, the authors calculated variance inflation factors and found the highest to be 1.66, again suggesting that multicollinearity is not likely to be an issue here.

Fama and French (1998) indicate the need to control for firm size, book-to-market ratio and earnings-to-price ratio, because these variables are associated with future share returns. In the current study, the authors controlled for these factors as well as for industry. Table IV shows the regression results.

Table IV shows that the BEE score is significantly negatively associated with returns at the 5 per cent level, after controlling for the variables indicated. This indicates that the higher an entity's BEE score is, the lower its returns are. The second hypothesis, namely that "the higher an entity's BEE score, the lower its future share returns are, because the cost of being BEE compliant outweighs the benefit," is therefore supported.

| | BEE score | Returns | Size | Earnings-to-price ratio | Book-to-market ratio |
|---|---|---|---|---|---|
| BEE score | | $-0.098^{**}$ | $0.258^{***}$ | $-0.137^{***}$ | $-0.059$ |
| Returns | $-0.124^{***}$ | | $-0.071^{*}$ | $0.168^{***}$ | $0.148^{***}$ |
| Size | $0.245^{***}$ | $-0.164^{***}$ | | $-0.156^{***}$ | $-0.310^{***}$ |
| Earnings-to-price ratio | 0.002 | $-0.088^{**}$ | $-0.010$ | | $0.345^{***}$ |
| Book-to-market ratio | $-0.099^{**}$ | $0.199^{***}$ | $-0.428^{***}$ | $0.176^{***}$ | |

**Notes:** Significance at the $^{*}$1, $^{**}$5 and $^{***}$10 per cent levels; where: the BEE score represents the BEE score as provided in the annual Empowerdex ranking; returns represent share returns over a one-year period, after taking into account a four-month lag period; size represents the natural log of market capitalisation at the beginning of the share return period as indicator of firm size; the earnings-to-price ratio represents the earnings-to-price ratio at the beginning of the share return period; the book-to-market ratio represents the book-to-market ratio at the beginning of the share return period

**Table III.**
Correlation coefficients

| | Parameter estimate | *t*-stat. | *p*-value (two-tailed) |
|---|---|---|---|
| (Constant) | 49.280 | | |
| BEE score | $-0.170$ | $-2.070$ | $0.039^{**}$ |
| Size | $-1.467$ | $-1.362$ | 0.174 |
| Earnings-to-price ratio | $-50.192$ | $-2.865$ | $0.004^{***}$ |
| Book-to-market ratio | 19.450 | 4.232 | $0.000^{***}$ |

**Notes:** Significance at the $^{*}$10, $^{**}$5 and $^{***}$1 per cent levels; dependent variable: returns; where: returns represent share returns over a one-year period, after taking into account a four-month lag period; the BEE score represents the BEE score as provided in the annual Empowerdex ranking; size represents the natural log of market capitalisation at the beginning of the share return period as indicator of firm size; the earnings-to-price ratio represents the earnings-to-price ratio at the beginning of the share return period; the book-to-market ratio represents the book-to-market ratio at the beginning of the share return period

**Table IV.**
Results of regression (1)

This indicates that the cost, or perceived cost, of obtaining a high BEE score potentially outweighs the future benefits. In order to examine the reliability of the model, the study investigated the data with respect to outliers, leverage and influence. A Cook's value of 0.103 confirmed that all the observations should be retained. Furthermore, the multivariate model generated an *F*-stat. of 4.287*** and an adjusted coefficient of determination of 6.2 per cent. The adjusted coefficient of determination is acceptable because the aim of the authors was not to explain returns, but study the association between BEE score and returns.

The authors tested the robustness of the results in various ways, as shown in Table V. For the first robustness test, the authors used regression (1) and changed the returns period from a four-month lag period to a one-month lag period. This confirmed the authors' main result, albeit at a lower level of significance (10 per cent).

The authors subsequently again used regression (1) and replaced the BEE score with the BEE level multiplied by negative one. As discussed earlier, the BEE score is used to determine the BEE level. The higher an entity's BEE score, the lower its level is. The authors therefore multiplied the BEE level by negative one, which, if their results hold, will result in a negative relationship between BEE level $\times -1$ and future returns. The results (Table V) indicate a significant negative relationship between BEE level $\times -1$ and future returns at the 1 per cent level. This would indicate that the BEE level is a better indicator of the effect that BEE has on share returns than the BEE score.

To support the BEE level argument above even further, the authors used BEE level changes instead of levels (as above). They used regression (1) and replaced the BEE score with the variable "increase in BEE level" (a dummy variable coded 1 for movement to a higher level, i.e. from levels 2-1). Their main result will be supported if the regression results show that when an entity's BEE level increases, which will happen when their BEE score increases from one year to the next, the company should show negative market returns. Table V indicates that the initial result still holds because there is a significant negative relationship, at the 10 per cent level,

| Variable | Parameter estimate<br>Returns: one month | Returns | Returns |
|---|---|---|---|
| BEE score | −0.075* | | |
| BEE level × −1 | | −0.116*** | |
| Increase in BEE level | | | −0.080* |
| Size | −0.050 | −0.066 | −0.072 |
| Earnings-to-price ratio | −0.049 | −0.123*** | −0.120*** |
| Book-to-market ratio | 0.156*** | 0.201*** | 0.199*** |

**Notes:** Significance at the *10, **5 and ***1 per cent levels; where: returns: one month represents share returns over a one-year period, after taking into account a one-month lag period; returns represent share returns over a one-year period, after taking into account a four-month lag period; the BEE score represents the BEE score as provided in the annual Empowerdex ranking; the BEE level represents the firm year BEE level (1-9); the increase in the BEE level represents a binary variable, 1, where an entity's BEE level increased; size represents the natural log of market capitalisation at the beginning of the share return period as an indicator of firm size; the earnings-to-price ratio represents the earnings-to-price ratio at the beginning of the share return period; the book-to-market ratio represents the book-to market ratio at the beginning of the share return period

**Table V.**
Robustness results

between an increase in the BEE level and the market returns for the year ended four months after the announcement of BEE scores.

## 5. Conclusion

This study investigated the relationship between a company's BEE score and future returns. The results suggest that there is a significant negative relationship between the BEE score and market returns. The negative relationship is even more noticeable between the BEE level (determined by using the BEE score) and the future returns. However, it is important to note that the study investigated the share returns over a one-year period as opposed to the effect over a longer period. Furthermore, there could be an optimum level of investment which would result in optimal share returns for the shareholders. The results therefore suggest that companies may be overinvesting in the short term, in attempting to obtain a higher BEE score. Although a higher BEE score could result in higher sales, certain costs may outweigh the benefit of higher sales. Some of these costs are incurred by employing suboptimal strategies that would result in various costs for the companies, which would negatively affect share returns. Another cost may include inferior products being purchased from BEE suppliers in order to obtain a higher BEE score. Although the higher BEE score will result in higher sales, the possible inferior products may result in a high level of returns, which would increase the company's repairs expense, which would result in lower profit and thus lower share returns for the company. Another possible cost associated with overinvesting in BEE could include hiring incompetent personnel who may require additional training, and the cost of the training could outweigh the higher sales in the short term.

This does not mean that managers will not pursue higher BEE scores because there may be other reasons for doing so. These reasons could include long term as opposed to short-term benefits, which include the following:

- Managers could have their own self-interests at heart and thus increase their company's BEE score for their own benefit (employment security).
- Being perceived as legitimate by the government may be crucial in some sectors, and the public image of the company may suffer long-term consequences if it does not attempt to be BEE compliant.
- In the future, the government may effect punitive measures for non-compliant BEE entities.

Possible future research studies could include studying the relationship between future returns and the seven elements of the BEE score, investigating whether there is an optimal BEE score or BEE level and examining the association between BEE score change and revenue change. A theoretical framework could also be developed indicating the positive and negative factors resulting from BEE. Because BEE is still a relatively new concept, it is important to keep investigating whether BEE is financially beneficial.

## References

Aupperle, K.E., Carroll, A.B. and Hatfield, J.D. (1985), "An empirical examination of the relationship between corporate social responsibility and profitability", *Academy of Management Journal*, Vol. 28 No. 2, pp. 446-63.

Barnett, M.L. and Salomon, R.M. (2006), "Beyond dichotomy: the curvilinear relationship between social responsibility and financial performance", *Strategic Management Journal*, Vol. 27 No. 11, pp. 1101-22.

BEE Institute (2010), "Government gets serious about dealing with fronting", available at: http://beeinstitute.wordpress.com/2010/05/24/government-gets-serious-about-dealing-with-fronting/ (accessed 6 September 2010).

Bernardi, R.A., Bean, D.F. and Weippert, K.M. (2005), "Minority membership on boards of directors: the case for requiring pictures of boards in annual reports", *Critical Perspectives on Accounting*, Vol. 16 No. 8, pp. 1019-33.

Brammer, S., Brooks, C. and Pavelin, S. (2006), "Corporate social performance and stock returns", *Financial Management*, Vol. 35 No. 3, pp. 97-116.

Cahan, S.F. and Van Staden, C.J. (2009), "Black economic empowerment, legitimacy and the value added statement: evidence from post-apartheid South Africa", *Accounting and Finance*, Vol. 49 No. 1, pp. 37-58.

Davis, K. (1973), "The case for and against business assumption of social responsibilities", *Academy of Management Journal*, Vol. 16 No. 2, pp. 312-22.

Empowerdex (2010), *Top BEE Companies 2009*, available at: www.empowerdex.co.za/RESEARCH/TopBEECompanies/tabid/193/Default.aspx (accessed 14 July 2010).

Fama, E. and French, K. (1998), "Value versus growth: the international evidence", *The Journal of Finance*, Vol. 53 No. 6, pp. 1975-99.

Fombrun, C. and Shanley, M. (1990), "What's in a name? Reputation building and corporate strategy", *Academy of Management Journal*, Vol. 33 No. 2, pp. 233-58.

Healy, P.M. and Palepu, K.G. (2001), "Information asymmetry, corporate disclosure, and the capital markets: a review of the empirical disclosure literature", *Journal of Accounting and Economics*, Vol. 31, pp. 405-40.

Iheduru, O.C. (2004), "Black economic power and nation-building in post-apartheid South Africa", *Journal of Modern African Studies*, Vol. 42 No. 1, pp. 1-30.

Jack, V. and Harris, K. (2007), *Broad Based BEE: The Complete Guide*, 1st ed., Frontrunner Publishing, Johannesburg.

Jackson, W.E. III, Alessandri, T.M. and Black, S.S. (2005), "The price of corporate social responsibility: the case of black economic empowerment transactions in South Africa", Working Paper Series No. 29, Federal Reserve Bank of Atlanta, Atlanta, GA, pp. 1-30.

JSE (2008), "JSE ranked the 10th largest derivatives exchange", available at: www.jse.co.za/About-Us/Media/Press-Releases/08-09-17/JSE_Ranked_the_10th_Largest_Derivatives_Exchange.aspx (accessed 13 July 2010).

McGuire, J.B., Sundgren, A. and Schneeweis, T. (1988), "Corporate social responsibility and firm financial performance", *Academy of Management Journal*, Vol. 31 No. 4, pp. 854-72.

McNeil, D. (1998), "Heavily laden black chips: empowerment deals thrive in South Africa, but sniping and skepticism mount", *The New York Times*, April, available at: www.nytimes.com/1998/04/17/business/international-business-heavily-laden-black-chips-empowerment-deals-thrive-south.html?pagewanted=all (accessed 5 August 2010).

McWilliams, A. and Siegel, D. (2000), "Corporate social responsibility and financial performance: correlation or misspecification?", *Strategic Management Journal*, Vol. 21 No. 5, pp. 603-9.

McWilliams, A. and Siegel, D. (2001), "Corporate social responsibility: a theory of the firm perspective", *Academy of Management Review*, Vol. 26 No. 1, pp. 117-27.

Mackey, A., Mackey, T.B. and Barney, J.B. (2007), "Corporate social responsibility and firm performance: investor preferences and corporate strategies", *Academy of Management Review*, Vol. 32 No. 3, pp. 817-35.

Ntingi, A. and Hlatshwayo, B. (2010), "Blacks own less than 2% of JSE", available at: www.fin24.com/Business/Blacks-own-less-than-2-of-JSE-20100328 (accessed 10 May 2010).

Orlitzky, M., Schmidt, F.L. and Rynes, S.L. (2003), "Corporate social and financial performance: a meta-analysis", *Organization Studies*, Vol. 24 No. 3, pp. 403-41.

Ponte, S. and Van Sittert, L. (2007), "The chimera of redistribution in post-apartheid South Africa: black economic empowerment (BEE) in industrial fisheries", *African Affairs*, Vol. 106 No. 424, pp. 437-62.

Ponte, S., Roberts, S. and Van Sittert, L. (2007), "Black economic empowerment: business and the state in South Africa", *Development and Change*, Vol. 38 No. 5, pp. 933-55.

Roberts, R.W. (1992), "Determinants of corporate social responsibility disclosure: an application of stakeholder theory", *Accounting, Organizations and Society*, Vol. 17 No. 6, pp. 595-612.

Sartorius, K. and Botha, G. (2008), "Black economic empowerment ownership initiatives: a Johannesburg Stock Exchange perspective", *Development Southern Africa*, Vol. 25 No. 4, pp. 437-53.

Scholtens, B. (2008), "A note on the interaction between corporate social responsibility and financial performance", *Ecological Economics*, Vol. 68, pp. 46-55.

South Africa (2000), *Preferential Procurment Policy Act 5 of 2000*, Government Printer, Pretoria.

South Africa (2003), *Broad Based Black Economic Empowerment Act of 2003*, Government Printer, Pretoria.

Statistics South Africa (2009), "Mid-year population estimates", available at: www.statssa.gov.za/publications/P0302/P03022009.pdf (accessed 10 May 2010).

Strydom, B., Christison, A. and Matias, J. (2009), "An empirical investigation of the effect of black economic empowerment transactions on share prices: 1996-2006", *African Journal of Accounting, Economics, Finance and Banking Research*, Vol. 5 No. 5, pp. 67-76.

Van de Velde, E., Vermeir, W. and Corten, F. (2005), "Corporate social responsibility and financial performance", *Corporate Governance*, Vol. 5 No. 3, pp. 129-38.

Waddock, S.A. and Graves, S.B. (1997), "The corporate social performance – financial performance link", *Strategic Management Journal*, Vol. 18 No. 4, pp. 303-19.

Ward, M. and Muller, C. (2008), "The long-term share price reaction to black economic empowerment announcements on the Johannesburg Securities Exchange", available at: http://ssrn.com/abstract=1261282

Watts, R.L. and Zimmerman, J.L. (1978), "Towards a positive theory of the determination of accounting standards", *The Accounting Review*, Vol. 53 No. 1, pp. 112-34.

Wolmarans, H. and Sartorius, K. (2009), "Corporate social responsibilty: the financial impact of black economic empowerment transactions in South Africa", *South African Journal of Economic and Management Sciences*, Vol. 12 No. 2, pp. 180-93.

Yartey, C.A. and Adjasi, C.K. (2007), "Stock market development in sub-Saharan Africa: critical issues and challenges", available at: http://ssrn.com/abstract=1012992

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