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**2018**

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**UNIVERSITY OF THE WITWATERSRAND**

**SCHOOL OF ACCOUNTANCY**

**Masters Research Report**

# Broad-Based Black Economic Empowerment Ownership Deals and their Impact on Dividend Policy: An Empirical Study


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Ethics Clearance Number: CACCN/1137

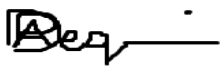




A research report submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, Johannesburg, in partial fulfilment of the requirements for the degree of Masters of Commerce (Accountancy).

# DECLARATION

I, Derrick Adrian Pequenino, declare that this research report is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Masters of Commerce (Accountancy) at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at this or any other university.



**Mr. Derrick Adrian Pequenino**

**Signed at:** UNIVERSITY OF THE WITWATERSRAND

**On the 28 Day of February 2018**

# ACKNOWLEDGEMENTS

I would like to thank the following individuals for their contribution towards the completion of this research paper:

- Nirupa Padia, Head of the Accountancy School at the University of the Witwatersrand, for granting me the opportunity to spend the year at the School and, in doing so, providing me with the platform to attempt the Master's programme;
- Andres Merino, my supervisor, for his valuable support, motivation and guidance. Without this support I would not have been able to produce this paper;
- Ezekiel Lengaram for his outstanding assistance with the work done on Stata to produce the statistical results seen in Chapter 4;
- My fellow 2017 Academic Trainees for the wonderful time we had in class gaining the tools necessary to complete this project;
- My parents, Manuel Pequenino and Elisabete Pequenino, for their support throughout all the stressful times and;
- My girlfriend, Jennifer De Franca, for her constant encouragement in keeping me focused on my ultimate goal of finishing this research paper.

## ABSTRACT

Broad-Based Black Economic Empowerment (BBBEE) has played a significant role in the transformation of the South African economy. One way in which this has been done is through the promotion of ownership by individuals previously disadvantaged under the Apartheid system. These BBBEE ownership promotions schemes are typically highly leveraged and require substantial as well as sustained dividend pay-outs to remain liquid. This may place additional pressure on firms with such BBBEE deals to adopt a more aggressive dividend policy. A panel data regression model was used to test whether firms with BBBEE deals do in fact have higher dividend pay-out ratios, after controlling for the other major determinant of dividend policy (Company Size, Capital Structure, Growth and Investment Opportunities, Liquidity, Profitability and Johannesburg Securities Exchange (JSE) Sector). The panel data regression model was run for JSE listed companies from the year 1999 to 2006. These years of study were selected in order to control for taxation on dividends as this period represented the largest period for which data could be obtained, and for which tax consequences on dividends remained the same. The results for the regression model found that, on average and while controlling for other factors influencing dividend pay-out, the dividend pay-out ratio for companies' party to a BBBEE deal increased by 7.9% after implementation of the deal. These finding imply that the liquidity of companies may be compromised which could have adverse effects for companies, investors and the overall economy as a whole. Implications for companies include liquidity and bankruptcy concerns as a result of paying out more cash as dividends. Investors, on the other hand, will have to consider whether an increased dividend pay-out ratio is desirable to them, or whether they should seek alternative investments offering higher capital appreciation and less dividend payments. Lastly, the overall economy could suffer from lower growth as a result companies paying higher dividends and keeping less cash on hand to be used for the purpose of fixed asset investment.



**Keywords:** Broad-Based Black Economic Empowerment (BBBEE), Dividend Policy, Dividend Pay-out in South Africa, Minorities.

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## LIST OF ABBREVIATIONS

| Abbreviation | Definition |
|---|---|
| Act | Broad-Based Black Economic Empowerment Act |
| BBBEE | Broad-Based Black Economic Empowerment |
| Codes | Codes of Good Practise |
| CSR | Corporate Social Responsibility |
| Deal | Broad-Based Black Economic Empowerment Deal |
| JSE | Johannesburg Securities Exchange |
| SPV | Special Purpose Vehicle |

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# CHAPTER 1 - INTRODUCTION

## 1.1 Broad-Based Black Economic Empowerment Deals

Evidence has, for a considerably long time, shown an increased level of participation in Corporate Social Responsibility (CSR) practices by major South African companies (Dawkins & Ngunjiri, 2008). This level of participation has grown extensively to the extent that it is currently recognised that CSR practices amongst the Top 100 South African listed companies exceed that of major blue chip companies found in other leading developed economies (Dawkins & Ngunjiri, 2008). A significant reason for this high level of success has been due to the efforts placed by these companies in addressing the sustainability concerns of their stakeholders. This, together with various other regulations enacted over time, have further aided in promoting this progressive mind-set (IoDSA King III Report, 2009).

CSR requires companies to go beyond their normal practices and consider the impact of their operations in the broader context (Siegel & Vitaliano, 2007). It is believed that CSR can best be achieved by instilling a complete change in the thought processes of companies (Wolmarans & Satorius, 2009). This means that a shift needs to be made in directing companies to becoming aware of social and other problems caused by their current operations (F.G.A De Bakker, Groenewegen, & Denhond, 2005). In doing so, companies should also not see these additional commitments as a burden, but should rather adopt a positive attitude and understand that they have the capacity to achieve change. Companies should also bear in mind that stakeholders pay particular attention to CSR commitments and will react negatively towards companies not committed to this way of thinking. In saying such, it can be said that CSR does indeed form an integral part of the concept known as stakeholder theory (Munilla & Miles, 2005).

The direction that CSR generally takes with specific reference to a particular company is primarily driven by their interests and immediate business environment. In South Africa, this is mainly aimed at addressing the high levels of social inequality which currently exists in most business communities. There is also a pattern of seeing these social issues overlapping with economic ones for the reason that

there currently exists a lack of economic resources within these aforementioned communities (Galan, 2006).

The cause of these high levels of inequality is a part of the history of the country and dates back to the earliest of days of the country's development. However, it only reached its peak during the period of Apartheid. Corporate Social Responsibility has, over the past two decades, played an important role in correcting the extreme levels of inequality created under the Apartheid regime (Wolmarans & Satorius, 2009). Broad-Based Black Economic Empowerment (BBBEE) can be viewed as a CSR attempt at rectifying those injustices of the past which caused the high levels of inequality still being seen in the South African economy today (Van der Merwe & Ferreira, 2014).

### *1.1.1 Reasons for Broad-Based Black Economic Empowerment*

As has been mentioned, Broad-Based Black Economic Empowerment is a policy which has been developed as a CSR initiative with the aim of targeting inequality from an economic point of view. Since its introduction, and even before first implementation as regulation in 2003, its principles have always been used as the key policy tool for achieving transformation in South Africa (B. Strydom, Christison, & Matias, 2009). While BBBEE has made major progress in reducing levels of inequality, it is still evident that plenty of work still needs to be done in getting the economy to a stage that ensures proper equality between all participants. This has also been recognised by legislators who have consistently made adjustments to BBBEE regulation so as to ensure effective transformation is taking place on a continuous basis.

An example of what BBBEE still remains committed to correcting is seen in the fact that the total Black ownership of shares traded on the Johannesburg Securities Exchange (JSE) have been shown to amount to only 23% in 2013. This is despite the fact that Black Africans make up over 90% of the South African population (Atherfold, 2015). While much has already been done through initiatives that will be discussed later on in this section, this figure still highlights the need for continued transformation within the South African economy, particularly from the angle of improving transformation at ownership level. It also further justifies the continuous changes being made to regulation so as to ensure fair and progressive change (Amended Act, 2013).

### *1.1.2 Broad-Based Black Economic Empowerment throughout the Years*

The initial introduction of BBBEE post the end of the Apartheid era, even though not yet legislated at this time, had an immediate impact on the way companies conducted their business. Companies were eager to make the change to an inclusive economy, as they recognised its goals and supported its objectives. This is despite the fact that it was only voluntary at this time, which showed the high level of support coming from those companies affected by what would, in 2003, become a regulatory change.

Upon reading this early directive, and mentioned before, it can be seen that regulators believed that the most effective way of enacting change would be through achieving an increase in the Black ownership levels of companies (Engdahl & Hauki, 2001). As such, BBBEE deals were identified as a way of achieving this change (Wolmarans & Satorius, 2009). BBBEE deals were a tool which directly targeted the main focus of regulators at the time which was to ensure that Black beneficiaries were able to increase their ownership levels in companies.

BBBEE deals have been highly popular from the beginning and many companies took to teaming up with BBBEE partners so as to enter into a deal of their own. This popularity is as a result of the fact that it was recognised as a socially accepted way of demonstrating social commitment to a new South Africa, and this demonstration of commitment was also commercially rewarded by various parties (Businessmap Foundation, 2005). The evidence of this high level of popularity could be seen in the fact that these deals caused an increase in the overall market capitalisation of companies listed on the JSE, shortly after their implementation (Engdahl & Hauki, 2001). Finally, the popularity of this tool of transformation, and the outstanding results which were achieved, lead to its official legislation in 2003. This legislation was known as the Broad-Based Black Economic Empowerment Act No. 53 of 2003 (Act, 2003).

The implementation of this Act was accompanied by the first Code of Good Practise (Codes) which also came into effect during this time (Werksmans Attorneys, 2015). The Codes set the tone for the introduction of the Generic Scorecard in 2007. The purpose of the Codes served to provide guidance on how companies could structure deals so as to be recognised for their efforts in achieving

transformation of this kind. The Scorecard is the outcome of the Codes and measures compliance to the Act in accordance with a predefined scoring system.

The Scorecard has recently been amended, together with the Codes. The latest amendment became effective from the 1st of May 2015 (Werksmans Attorneys, 2015). It can be seen through the weighted values provided in the updated Scorecard that the scoring system remains largely the same. The scoring system developed through the Scorecard is made up of a variety of different categories, with each category weighting expressing the emphasis to be placed on achieving a particular area of change in business practise. The only real difference between the new and old Codes is seen in the way its practices are now being enforced. Under the old Codes, BBBEE implementation followed a more voluntary approach, whereas the latest amended Codes have become more of a requirement. This is because penalties have now been introduced for poor compliance (Werksmans Attorneys, 2015).

One aspect of the Codes that has changed in absolute terms is the overall attainable score which increased from 107 points to 118 points. This means that if companies were to maintain their current emphasis towards the implementation of BBBEE, then there would be a chance that their existing ratings could be downgraded on a contribution recognition level. This is because while still earning the same points as before, companies would suffer from the impact of the change in weighing as a result of the increase in total available points. Therefore, companies will need to employ additional measures in order to retain a satisfactory compliance and BBBEE contribution level.

### *1.1.3 The Ownership Scorecard Element*

This can specifically be said to relate to the ownership element of the Scorecard. This is because the latest Scorecard amendment has seen an increase in the amount of maximum available points of the Ownership Scorecard Element from 20 points to 25 points. This means that this is an area where greater emphasis and consideration will need to be placed by companies, so as to further their commitment towards promoting Black ownership in the workplace. This is despite the fact that it has always remained on of the most significant standalone categories of the Scorecard.

One thing that can clearly be interpreted from analysing the Ownership Element of the Scorecard is that the most practical way of achieving compliance under this element is by entering into deals which transfer ownership to Black individuals. This is because the majority of the points allocated under this element comes from the transfer of voting rights or economic interest to Black individuals, with a slight preference towards Black females. It is therefore understandable why the majority of efforts placed by companies to achieving transformation has been by entering into BBBEE deals with selected beneficiaries. This is because these deals are one of the easiest ways in which companies can achieve a significant amount of points, while focusing only on a singular fulfilment criteria of the Scorecard. It is also the consideration of these BBBEE deals that will now form the basis of this research. More specifically, it is the structure by which these deals are funded that will be form primary consideration of this paper.

### *1.1.4 Structure of Broad-Based Black Economic Empowerment Deals*

The general structure of BBBEE deals begin first with a specified percentage of shares issued by the issuing company and in the name of a chosen beneficiary (Intellidex, 2015). Together with equity issued is a loan, or some other form of financing arrangement, which is also issued by the issuing company to the elected beneficiary. This loan or other financial obligation will need to be repaid by the beneficiary to the issuing company. In the case of a loan, the value of such a loan is normally set at a discount to the value of the shares at the date of inception. In other words, a discounted value on the loan is set as the opening balance of the financial obligation owed by beneficiaries (Intellidex, 2015). The financial obligation will then increase each year by an agreed upon interest rate. The norm is for this interest rate to be set equal to the prevailing prime interest rate at the time of entering into the transaction (Intellidex, 2015).

Subsequent to this, and generally applying regardless of whether a loan or guarantee is provided by the issuing company at inception, dividends are then paid by the issuing company to the BBBEE participant. These payments of dividends will assist the beneficiary in settling the outstanding portion of the financial obligation owed by them, consisting of both outstanding interest and capital payments. Any residual amounts of dividends are then transferred directly to BBBEE beneficiary to be used at

their discretion. On expiry of these deals, any outstanding portion of the obligation which still remaining is then settled by a subsequent buy back of shares. The size of any buyback is set equal to aggregate amount of the financial obligation still outstanding by the beneficiary (Intellidex, 2015). The remaining shares are then distributed to beneficiaries.. From here on out, the beneficiary can obtain further benefits from holding shares in the issuing company. This will appear in the form of additional capital appreciation and dividends. The alternative to this is then the immediate disposal of the shares for capital gain. It is also important to note that the structure of these deals, to a large extent, do not vary across the different types of beneficiaries' party to a deal.

### *1.1.5 Types of Beneficiaries*

We are able to identify three major classes of beneficiaries, all of whom fall into two broad categories. From a categorical perspective, these beneficiaries are defined as either internal or external beneficiaries. These two categories are then broken down into three classes of beneficiaries described as: staff schemes, strategic investment partners and broad-based community schemes (Intellidex, 2015).

A staff scheme is defined as a transaction entered into with employees originating from within the company issuing the deal. Out of the three classes of beneficiaries, it has been found that the smallest number of deals have been entered into with the staff of the issuing company (Intellidex, 2015). On the other hand, strategic investment partners consist largely of companies and prominent individuals external to the company. It has been found that 62% of total deals have been entered into with strategic investment partners, making them the most common type of beneficiary (Intellidex, 2015). Lastly, the final class of external beneficiaries are defined as broad-based community partners. This class of beneficiary consists primarily of members of the surrounding community, with many of these being non-profit organisations (Intellidex, 2015). Broad-based community partners are the second most popular type of beneficiary encountered in the market.

### *1.1.6 Dividend Policy Implications*

Due to the significantly large size of BBBEE deals, and the limited capital possessed by beneficiaries, it can realistically be said that a large portion of beneficiaries will be unable to pay off their

outstanding financial obligations all on their own (Intellidex, 2015). The result of this will be that the issuing company will need to assist beneficiaries in order to ensure that beneficiaries are able to fulfil their obligations in terms of the deal. The only way in which this can be achieved by virtue of this deal is either through the transfer of payments of capital or dividend to receiving beneficiaries.

Since parties are locked in, in terms of the capital component of these deals, it is unlikely that the contract will allow for repurchases of capital by companies prior to maturity of the deal. Another reason for companies not making payments of capital is due to the fact that the value accruing to the issuing companies, and which is inherent in these deals, is in fact tied up in the number of shares held by beneficiaries. This means that companies will instead choose to distribute large amounts of dividends, most likely over and above that which their current dividend policies allow, so as to assist beneficiaries with their repayment commitments. Further, this is an option which beneficiaries will prefer as opposed to having to wait for capital growth to accrue, due to their tight capital constraints (Lintner, 1956; Gordon, 1959).

The consideration of dividends by BBBEE beneficiaries has recently been made evident by their complaints regarding the change in the dividend tax rate. Such a change in tax rate has recently seen dividends become taxed at a rate of 20% as opposed to a preceding rate of 15% (SARS, 2017). The meaning of this change will be such that it will result in less post-tax dividend income in the hands of beneficiaries. Less dividends in the hands of beneficiaries will further mean that they will now have less money so as to meet the financial obligations owed by them in respect of BBBEE deals. This could increase interest rate risk and capital risk regarding these outstanding debts, provided that issuing companies do not subsequently further increase their dividend pay-out rate so as to ensure that beneficiaries' dividend income stream remains unaffected by this tax change.

## 1.2 Statement of the problem

Due to the high debt burden placed on beneficiaries as a result of BBBEE deals, it is likely that a high dividend pay-out ratio together with a steady stream of dividends will be paid out by companies. By doing this companies will ensure that their deals remain an active one. These large dividend payments will be needed by BBBEE participants in order for them to be able to fully settle their debt

obligations. Beneficiaries will need to rely on the dividend payments made by the company initiating the deal in order to be able to fully satisfy their loan commitments. This provides an incentive for issuing companies to increase their dividend pay-out ratios in order to make these deals a viable business decision for BBBEE participants.

The consequences of this for the company initiating the deal will be reduced money for internal investments and financing. This could potentially lead to the issuing company taking on substantially more financing of their own, which could cause an increase in their bankruptcy costs. Bankruptcy costs will lead to a further deterioration in the liquidity and solvency of these companies (C. Correia, Flynn, Uliana, Wormald, & Dillon, 2015).

In the case of existing or prospective investors, those who have a preference for a higher dividend pay-out will take the opportunity to invest in companies' party to BBBEE deals (Lintner, 1956; Gordon, 1959). An increased dividend pay-out could have further implications on the economy as a whole in the event that dividends are increased beyond the point allowed by existing economic conditions (Smith & Watts, 1992). This decision to make increased dividend payments might not be beneficial towards the growth of the economy as a whole. The South African economy is currently in need of fixed investment in order to stimulate growth which has been quite stagnant over recent years (Antelme, 2016; Jeffrey, 2016). Amounts paid out in the form of dividends should rather be retained to be used for the purpose of stimulating long-term economic growth (Jensen, 1986).

## 1.3 Purpose of the Research

The purpose of the study is to determine the impacts of BBBEE deals on the dividend pay-out policies of companies. More specifically, it will determine if these deals have caused the dividend pay-out ratio of firms to increase. This will be achieved by looking at the top 100 companies listed on the JSE from 1999 to 2006. These years of study have been chosen in order to control for the effects of tax on dividends. This is a result of the difficulty experienced in attempting to find an appropriate control variable for the impacts of changing tax legislature on dividend payments.

## 1.4 Contribution of the Study

The extent of the effect of Broad-Based Black Economic deals on the various aspects of operations of companies listed on the JSE represents an unexplored but extremely relevant area of study in South Africa. This, in particular, includes the impact of these deals on the dividend policy of a company. While various research conducted by Strydom et al. (2009); Ward & Muller (2010); and Wolmarans & Sartorius, (2009), among others, have explored the impacts of these deals on the share price of the company, no effort has yet been made on determining its effect on dividend policy.

Legislators and policy setters may be able to use this information to determine whether the consequences of a higher dividend pay-out is desirable. Higher dividend payments are generally seen as being of higher risk which is unfavourable to companies and the overall economy. This is particularly relevant within a South African context due to the fact that the South African economy is in a position where it needs further fixed asset investment so as to stimulate economic growth. Any undesirable consequences determined at this point can then be amended through corrective legislation.

In addition to this, there also exists various disagreements and uncertainties regarding factors that are known to have a definitive impact on the dividend policies of companies (Black, 1976). This level of uncertainty exists on both a global and national level. In order to address this high level of uncertainty, the paper will attempt to prove that BBBEE deals have a definitive impact on the dividend policy of companies in the local context.

## 1.5 Research Question

The research question of this study is as follows: do companies with BBBEE deals in place pay higher dividends than companies that do not have such a deal in place, all else equal?

## 1.6 Assumptions, Limitations and Delimitations

### *1.6.1 Assumptions*

It will be assumed that the companies forming part of the JSE top 100 companies will be a sufficient sample representation of all those companies listed on the JSE.

### *1.6.2 Limitations*

This study will not measure any other forms of non-financial determinants of dividend policy and their corresponding influence on the dividend pay-out ratio.

Missing values with respect to ownership and financial data will be removed from the sample data. However, this limitation will be compensated for by virtue of the large volume of data points arising from the data used, which consists of many years and numbers of observations.

The study will also focus only on those companies which qualified as being amongst the top 100 JSE listed companies on the JSE. Therefore, it will ignore all other companies listed on the JSE.

This study will be focused only on the impact of the ownership element of the Scorecard and its impact on dividend policy. Therefore, it will ignore any impact that any other such element could have on the dividend policy decisions of companies.

The study will not consider the impact of any other BBBEE funding structures on dividend policy and dividend pay-out, other than that which will serve as the focus of this research paper.

### *1.6.3 Delimitations*

Share repurchases will not be considered as a decision within the corporate pay-out policy.

This study will also not consider any companies listed on the AltX, the JSE's alternate board for smaller and less established companies.

## 1.7 Definitions

**Agency Cost:** Agency costs are an example of an internal cost that arises from an agent acting on behalf of a principal. These costs arise due to problems such as conflicts of interests between management and shareholders (Jensen & Meckling, 1976).

**Agency Theory:** Agency theory can be described as the relationship between two parties. The one of which is considered to be the principle while the other is referred to as the agent (Jensen & Meckling, 1976). The agent acts in his capacity in order to meet the objectives and carry out the desires of the principle (Jensen & Meckling, 1976). An example of this is when the shareholders of a company, who

are considered to be the owners, appoint management for the purposes of carrying out the instructions of the shareholders in generating the profit in accordance with their appetite. Issues may however arise in the case where management decide to not act in accordance with the interests and requests of those shareholders (Jensen & Meckling, 1976). The need for a tool to encourage the alignment of these varying interests is therefore an important part of maintaining a company (Fontrodona & Sison, 2006).

**Broad-Based Black Economic Empowerment:** means the practical economic empowerment of all black people. This in particular includes people such as women, workers, youth, those with disabilities and those living in rural areas. This is achieved through diverse socio-economic strategies such as:

•Increasing the number of black people that manage, own and control enterprises;

•Facilitating ownership and management of enterprises by qualifying communities and individuals;

•Human resource and skills development;

•Achieving equitable representation in all occupational categories and levels of the workforce;

•Preferential procurement from enterprises that are owned or managed by black people; and

•Investing in enterprises that are owned or managed by black people (Amended Act, 2013).

**Broad-Based Black Economic Empowerment Deal:** This is defined as those companies that had entered into BBBEE deals with black beneficiaries and where the deals had been enabled by the issuing companies. The issuing company must have been a facilitator of the deal either through vendor financing or guarantees for the deal to have been considered as one for the purpose of their study. This is further in line with the purpose of our research and conclusions reached in the literature review which found that the significant majority of BBBEE deals have been funded by companies in this manner (Intellidex, 2015).

**Dividends:** Distributions made by a company to its shareholders (included in the definition of "distributions" in section 1 of the South African Companies Act, 2008). Dividends is defined as the distribution of earnings, irrespective of whether earned in the past or present, among the shareholders of the firm and in proportion to their respective percentage ownership of the company (Kapoor, 2009).

**Dividend Policy:** Dividend policy is the set of guidelines a company uses to decide whether and how much of its earnings to be paid out to shareholders. A wide variety of factors impact on a firm's dividend policy (Damodaran, 1996).

**Dividend Pay-Out Ratio:** Measures the percentage of earnings that a company pays out to shareholders in the form of dividends. This formula is described as: Dividends/ Earnings (Damodaran, 1996).

**Earnings:** The sum of money that a company has earned at the end of the reporting period and which has been calculated based on the applicable accounting standards. The appropriate accounting standard in this regard is considered to be IAS33. Accounting earnings is a measure of a company's profitability (Damodaran, 1996).

**Leveraged Buy-Out:** The purchase of equity or other assets using relatively more borrowed money as compared to forms of equity. The use of debt will serve as a level so as to increase returns.

## 1.8 Structure of the Report

This research report is made up of five different chapters. The first chapter, Chapter 1, introduces the research topic and provides a background to BBBEE deals. It further provides an overview of the topic at hand, and highlights the significance of the study carried out.

Chapter 2 includes a literature review and discusses the main findings of prior researcher. It will look closely at both the forms of funding structures used to finance BBBEE deals as well as the claim that minorities have to payments of dividends.

Chapter 3 describes the research methodology to be used in carrying out the research study. In doing this is sets out the steps involved in the data collection process as well as the data analysis required for the successful execution of this research study.

Chapter 4 will analyse and discuss the research results from the statistical analysis performed.

Chapter 5 will conclude on the findings in the form of a summary. It will also provide insight into the form of implications arising from the findings of the study, together with recommending potential areas for further research.

# CHAPTER 2 – LITERATURE REVIEW

## 2.1 Broad-Based Black Economic Empowerment and Dividend Policy

The literature review will consist of two separate sections. The first section will consider the role of Broad-Based Black Economic Empowerment (BBBEE) funding institutions and funding structures used. A review of the different funding structures used to facilitate BBBEE deals is important as it will allow for the verification of the general funding structure proposed in the introduction (see Chapter 1 - Structure of Broad-Based Black Economic Empowerment Deals). It will also allow for the creation of the link between the funding structures used by companies and the need for regular payments of dividends by BBBEE beneficiaries.

The next section will then look at existing dividend policy determinants in the case of minorities. It is important to assess the current claim to dividends currently possessed by minority shareholders, together with the propensity and desire of companies to satisfy this need for dividend payments. A review of dividends from the perspective of the minority is especially important as this will likely be the position taken up by beneficiaries upon engagement in the transaction (Intellidex, 2015). A minority shareholder can be described as one which does not own the majority shareholding of a particular company. In doing this, it will be possible to understand potential changes, if any, that will affect a company's dividend policy in light of the existence of BBBEE deals.

## 2.2 Funding Institutions

The need for BBBEE funding institutions came as a result of the lack of capital and collateral possessed by Black beneficiaries. Government, one of the most prominent funding institutions, took it upon themselves to set up a wide range of funding institutions, so as to assist with the promotion of deals (Ngubane, 2010). This gave rise to two well-known government backed funding institutions still being used today. These two institutions are the National Empowerment Fund and the Industrial Development Corporation (Bwakira & Khumalo, 2004). The mandate of both institutions has had a big impact on the rate at which beneficiaries have been able to gain access to capital, and has had an overall positive impact on BBBEE deal productivity.

Together with government funding institutions, it has further been found that commercial banks also play a significant role in the facilitation of BBBEE deals (Ackermann & Meyer, 2007; Balshaw & Goldberg, 2005). This is seen by the significant amounts of debt funding provided by commercial banks to beneficiaries over time. Further, although banks make a significant contribution by providing funding to BBBEE beneficiaries, the banks apply uniform credit-worthiness criteria to all potential clients whether they are BBBEE beneficiaries or not. This may result in potential BBBEE beneficiaries not qualifying for loans.

### 2.3.1 Types of Broad-Based Black Economic Empowerment Funding Models

The lack of capital possessed by BBBEE participants has given rise to the creation of various different funding models (E. Burger, Munian, & Groot, 2003). This issue regarding the lack of capital at the hands of beneficiaries has also been made worse by the lack of collateral at their disposal to be used as security for the financing to be obtained, together with the fact that many beneficiaries come from different backgrounds (Nhlapo, 2008). The fact that many beneficiaries come from different backgrounds further complicates communication between them regarding issues of collateral. In order to address this, the rise of BBBEE deals has brought along with it extremely unique forms of financing. Many of these forms of financing even being developed solely for the purpose of assisting with the facilitation of deals (Nhlapo, 2008; Plaatjies, 2014).

With regards to the structure of the deals to be mentioned, many have further been created with the goal of reducing the liability of beneficiaries in the event of failure by them to repay amounts outstanding to the holder of the obligation (Nhlapo, 2008). As such, it can be said that BBBEE has played a role in the promotion of easy and fair access to funding for Black individuals.

### 2.3.2 First Phase of Funding Models

The first phase of BBBEE funding models took place during a period of significant economic change in South Africa (Nhlapo, 2008). The first years post the Apartheid era saw the acquisition, by Black South Africans, of portions of large companies which were previously solely owned and controlled by White South Africans (Nhlapo, 2008; Plaatjies, 2014). The purpose of this, as mentioned before, was

to slowly include Black individuals in the ownership of large corporations and score BBBEE credits. In order to facilitate these acquisitions, the following were the most common forms of financing used:

#### *2.3.2.1 Special Purpose Vehicle*

Certain special purpose vehicles (SPV) were created by BBBEE beneficiaries solely for the purpose of acquiring shares in a company seeking BBBEE partnership (Van der Nest, 2004). As such, the BBBEE transaction would be entered into between the SPV and the company issuing the shares to which the SPV would subscribe. Banks and other financial institutions would then provide the SPV with the required funding so as to allow them to acquire shares in the issuing company (Batchelor & Dunne, 1999). The most common form of financing being a 100% loan provided by the financial institution (Nhlapo, 2008). Other forms of financing came through the use of instruments such as: mezzanine debt, vendor financing, notional loans, as well as other senior debt instruments (Gradidge, 2009).

In the case of a loan, the loan would be provided in exchange for preference shares issued by the SPV and in the name of the financial institution (Nhlapo, 2008). This ensured that the original BBBEE beneficiary institutions, or natural persons, retained full control of the SPV in the form of ordinary shares held by them (Nhlapo, 2008). The terms of the preference shares held by the financial institution provided for redeemable preference shares which entitled them to a contractually agreed upon dividend to be paid out by the SPV (Nhlapo, 2008). This contractually agreed upon dividend rate was commonly expressed as a percentage of the prime lending rate at the time of entering into the contract (Nhlapo, 2008). Dividends paid out by the issuing company seeking BBBEE credentials would then be paid out to the SPV and would be used by the SPV to pay the preference share dividend owed to the financial institution (Nhlapo, 2008).

Many other methods were also used to fund SPVs, with funding provided by financial institutions not the only option available to beneficiaries. Other such measures included the creation of various SPVs in which assets would be sold between these various SPVs, and on a regular basis so as to fund the transaction (Nhlapo, 2008; Plaatjies, 2014).

*2.3.2.2 Others Funding Models*

While SPV's were the most common form of financing used by beneficiaries to acquire shares in issuing companies, various other models were also used to fund this type of transaction (Oyewole, 1996; Plaatjies, 2014). It was also not uncommon for the primary SPV structure, as described above, to have been combined with other funding methods. These three common alternative forms of financing which were also used throughout this period, and commonly combined with an SPV structure, will now be discussed.

The first such funding model is one which involves equity participation without economic facilitation (Oyewole, 1996; Plaatjies, 2014). With this type of financing, BBBEE participants purchased shares in the issuing company after it had formed the SPV structure described earlier (Oyewole, 1996). However, BBBEE beneficiaries did own the SPV at this point in time. This is because the creation of the SPV was supported by the funding of several private investors. These private investors purchased Class B shares in the SPV which gave them right to the economic benefits generated by the SPV, but did not provide them with control over the structure (Oyewole, 1996). On the other hand, beneficiaries retained control through Class A voting shares which they held solely on their own (Oyewole, 1996).

With this type of funding structure, BBBEE beneficiaries would not obtain any immediate economic benefits until they had generated enough cash to purchase the Class B shares from private investors (Oyewole, 1996). It is only after this had been done, and private investors had been paid off, that the BBBEE beneficiaries would obtain the right to economic benefits generated by the SPV. This is because this funding structure had been created with the intention that the SPV would generate sufficient funds in order to facilitate this buy back of shares and subsequent transfer back to beneficiaries.

The second of these funding methods can be described as one which granted equity participation to beneficiaries at a discount (Oyewole, 1996; Plaatjies, 2014). With this form of funding, shares in the issuing company would be sold to the beneficiary at a discount. This discount would be in relation the prevailing market price at the date of issue of these shares (Oyewole, 1996). It is then the discount

received that would be recognised as the benefit which the BBBEE beneficiary would receive from the issuing company. This is because the difference between the market value of the shares at the date of issue and the discounted price charged to the beneficiaries would remain the possession of the beneficiaries (Oyewole, 1996). A common feature of this type of financing is that it would largely be restricted in terms of its dividends and tradability for a set period of time (Oyewole, 1996).

An example of this can be illustrated in the case where a BBBEE participant acquires a 10% shareholding in the issuing company as a result of a BBBEE transaction. Now, provided that this issue was made at a 10% discount to the market value of the shares issued, it can be said that the free benefit obtained by the beneficiary can equate to an amount of 1% of the entire market value of the shareholding issued by the company. In other words, this 1% received can be described as having been received for free by the beneficiary.

The final of the most commonly used forms of BBBEE financing used throughout the first funding stage is one where a put option was granted by the issuing company (Oyewole, 1996; Plaatjies, 2014). In this case, the BBBEE beneficiary obtained shares in the issuing company through the use of funding. This funding would have been provided by a financial institution, most likely in the form of a loan (Oyewole, 1996). The loan debt owed by the beneficiary would then be guaranteed by the issuing company in the form of a put option written up against the existing shareholders of the issuing company (Oyewole, 1996).

This structure is also very similar to the SPV structure described earlier (Oyewole, 1996). This is because the BBBEE beneficiary owned the entire ordinary shareholding in the SPV which was used to facilitate this transaction. The bank then provided this loan in exchange for preference shares issued to them by the SPV. The money generated from the issue of preference shares in the SPV would then be used to acquire shares in the issuing company. In the event that the Black beneficiary was then unable to settle the full amount owed to the financial institution, the bank would then be entitled to sell the preference shares held in the SPV to the existing shareholders.

### 2.3.3 Reasons for Failure of the First Phase Funding Models

It has been noted that the first funding phase of BBBEE deal came to an end in 1998. The reason for this failure was attributed to the Asian crisis which occurred at the same time (BusinessMap Foundation, 1999). The Asian crisis brought into light the unsustainable nature of the financing models previously discussed (Radebe, 2006). This unsustainability was focused around the high level of gearing which resulted from these financial arrangements (BusinessMap Foundation, 1999). This is because the SPVs did not have an adequate asset base in order to sustain these transactions. Instead of acquiring assets in order to generate a steady flow of income in the SPV, the borrowed funds were used by beneficiaries in their entirety to acquire shares in the issuing company.

With no other source of income being generated by the SPV, it became very dependent on the debt provided by financial institutions. It also became very dependent on the dividends received from the transacting company in order to satisfy their obligation owed to the financial institution. Due to the effect that the crisis had on issuing companies and their ability to pay dividends, the BBBEE beneficiary owned SPV found themselves in a position where they were unable to satisfy their commitments due to the financial institutions (BusinessMap Foundation, 1999).

These following are other disadvantages that materialised with the fall of the first wave of BBBEE funding in 1998 (Nhlapo, 2008; Plaatjies, 2014):

- Models were created to be sustained in a market which performed well. Therefore, as soon as the market began to perform poorly, the success of these deals began to decrease until the point where they disappeared completely.
- The shares owned by BBBEE beneficiaries in the issuing company generally did not provide them with any voting rights. The effect of this is that they could not voice their concerns in the strategic decision making process of the issuing company. As a result, they could not successfully bring to management's attention the problems being experiencing by them.

- The structure of the deal entered into with BBBEE beneficiaries were generally not flexible. This is because they were locked in for a fixed period of time. This meant that they could not be sold by the beneficiaries in order to resolve problems of financial distress being faced by them at the time.

### 2.3.4 Second Phase of Funding Models

The success of the second phase of funding models was dependent on the development of models which were not susceptible to the same problems that brought an end to the first funding phase. Further, one of the standout differences between the states of Black participants during the first phase, as compared to that at the start of the second phase, was that these individuals were now in a better capital position than before. This is because they previously had a tight capital constraint at the time that Apartheid had ended, but in the years since its end they were given the opportunity to participate in the economy and generate some capital of their own.

As such, Black individuals were, at this point in time, in a better position to sustain themselves financially. This was despite the fact that they were still very reliant on financial assistance being provided to them. In order to address these developments, and avoid making the same mistakes as those previously made, new financing models were created which were much more complex than those of the past. Some of these new financing models consisted of a combination of debt and equity (Pinnock & Butler, 2005). Examples of these include items such as deferred shares, options as well as preference shares (X. Mangcu, Marcus, Shubane, & Hadand, 2007). The objective of these new financial instruments was to ensure sustainability, along with the need to suit the individual needs of the transacting BBBEE participant. These new funding models have been discussed below:

#### *2.3.4.1 Third Party Finance*

The most popular type of financing used during the second phase was that of third party financing (Nhlapo, 2008; Plaatjies, 2014). The most popular of these being leveraged buy-outs and preference shares (Nhlapo, 2008; Plaatjies, 2014). They were generally provided by banks or similar financial institutions.

Third party finance in the form of leveraged buy-outs allowed BBBEE companies to acquire a part of a business from a transacting company seeking BBBEE credits (Jack & Harris, 2007). This business would then be empowered at the highest level by allowing beneficiaries to take on the majority of ownership positions. The newly acquired business would then be signed over as collateral as a result of the financing which was to be obtained by beneficiaries for the purpose of funding the business acquisition. This offered BBBEE beneficiaries the advantage of acquiring a business with an asset base that could be used to generate subsequent cash flows for the beneficiaries (Nhlapo, 2008). There would also be synergies which would help stimulate profits (Jack & Harris, 2007). The only real downside to this type of transaction was experienced by the issuing company. This is because, if the deal wasn't structured appropriately, issuing companies would be subject to extreme tax consequences (Nhlapo, 2008).

These newly formed BBBEE deals would obtain their funding by issuing non-voting shares to preference shareholders (Nhlapo, 2008). This finance would then be used to acquire shares in the parent of the company from which the business would be acquired. They would then use the dividends received from the parent company to assist in meeting their financial commitments. Preference shares were favoured in this regard due to the flexibility that they offered the issuer. This is because certain types of preference dividends had the option of being accumulated which would reduce the risk of default. They could also be converted into ordinary shares at the option of the issuer, or settled for cash.

The other form of third party finance is essentially the same as that which was described under the first phase (Nhlapo, 2008; Plaatjies, 2014). This form of finance involved an amount of preference shares issued by the BBBEE participant to a financial institution in exchange for cash. The BBBEE beneficiary will then use the cash acquired from this transaction in order to fund the acquisition of shares in the issuing company. These preference shares issued in the name of the financial institution will only be convertible to ordinary equity in the event that the BBBEE beneficiaries default on their contractually agreed payments owed to the bank. This again means that the BBBEE beneficiary will be dependent on the dividend payments made by the issuing company in order to satisfy its

contractual agreements with the financial institution. An example of this type of transaction includes that entered into by Standard Bank and Liberty Life (Nhlapo, 2008).

#### *2.3.4.2 Vendor Finance*

With this type of funding, the issuing company plays the role of a vendor by proving financing to the BBBEE beneficiary (Cargill, 2005:23; Balshaw & Goldberg, 2005). The beneficiary will then be able to use the funding provided to acquire shares in the issuing company. The type of assistance which the vendor provides could be in the form of loans, loan guarantees, price discounts, or other forms of debt financing at below market interest rates. In the event of a guarantee being provided to the BBBEE beneficiary, such a guarantee will reduce the risk profile of the beneficiary in the eyes of financial institutions (Gqubule, 2003).

The guarantee provided would especially exist in the event that financial institutions required collateral which BBBEE beneficiaries were not able to provide. These vendors would, through the provision of a guarantee, enable the BBBEE beneficiary to organise debt financing under less stringent conditions. The major disadvantage of this form of financing is that it left the beneficiary company highly levered and reduced their capacity to take on additional debt (Gounder, 2005). Examples of a transaction where vendor financing was used include, among others, the transaction entered into between beneficiaries and Alexander Forbes (Nhlapo, 2008).

#### *2.3.4.3 Derivatives*

A call option is one which gives an investor the right, but not the obligation, to acquire a share at an agreed upon price, and at an agreed upon future point in time. An example of how this form of financing works is that an investor purchases an option to buy 1 000 share options at an exercise price of R250 per share. The option can then be exercised at a future point in time. If at the day in which the option can be exercised the investor finds that the shares are trading at a price of R220 per share, he will choose to not exercise the option. This is because it would have been cheaper for the investor to acquire the shares in the open market as opposed to through the exercise of the call option. However, if shares are trading at a price higher than the exercise price on the exercise date, it is more likely that

the investor will choose to exercise the option in acquiring the shares as a result of the profit that would now be made by the investor.

The benefits of this form of agreement is that it provides the BBBEE beneficiary with the opportunity of benefiting from movements in the share price over time (Nhlapo, 2008). In the event that the option is net settled, it will provide the added opportunity of providing the beneficiary with a cheap way of making money. This is as the shares could be traded for a fraction of the price. The problem with this, on the other hand, is that the beneficiary won't become the owner of the shares. Further, they would not be entitled to any payments of dividends (Nhlapo, 2008). An example of a BBBEE oriented financing arrangement taking on this form of structure is that entered into between ABSA and Bidvest (Nhlapo, 2008).

#### *2.3.4.4 Conclusion*

It can be concluded that the various forms of financing discussed above all contain similar characteristics. One of these similar characteristics is that the company seeking the BBBEE credits play some role in assisting beneficiaries in the process of obtaining its funding. It can also be seen that the structure of these deals have always ensured that beneficiaries benefit from appreciation in the price of shares (Fauconnier & Mathur-Helm, 2008). This characteristic has even remained despite the fact that it played a role in the failure of the first phase of BBBEE funding, as described above. Further, the real transfer of shares generally only takes place once the beneficiaries have settled the financial obligation owed by them. Lastly, BBBEE beneficiaries are likely to have reduced ownership retention in the company upon maturity of the deal due to their inability to have paid back the full amount owing to them from the beginning.

This links back to the structure described earlier in the introduction and it can be said that the general structure proposed in the introduction section, at the very least, loosely describes the various forms of funding discussed throughout this section of the literature review. This further supports the statements made earlier regarding increased reliance for dividends by beneficiaries and how companies seeking BBBEE credits will need to play a role in financially supporting beneficiaries as they attempt to repay their outstanding obligation. The next section will focus on the expected change in the dividend

policies of companies that are likely to take place as a result of these companies being party to a BBBEE deal.

### 2.4.1 General Determinants of Dividend Policy

#### *2.4.1.1 Fundamental Theories*

Before dividends and dividend pay-out policy is looked at in the context of BBBEE beneficiaries, it is important to first acknowledge the main literature that has led to our current understanding of dividend behaviour. This is largely because prior literature has shown the reason with which companies choose to pay dividends to not be entirely self-evident. An example of this can be seen in the work performed by Black (1976). Black's (1976) findings support what still largely remains the current understanding of most researchers regarding dividend policy. This being that there is no logical or widely accepted explanation for the reason as to why dividend payments are made.

Many finance researchers have, throughout time, attempted to answer this question by providing their own theories for the payments of dividends. Some of these researchers even began with their attempt at unravelling the mystery behind dividend payments prior to the statement made in Black's (1976) publication. One such theory is described by Gordon (1959) and Lintner (1956) as the "Bird in the Hand Theory". This theory proposed that, due to the uncertainty inherent in investments, risk averse shareholders preferred the benefits of a dividend paid now as opposed to the uncertainty of future capital gains. This led to companies which consisted of a shareholding of risk averse investors, to make large payments of dividends on a regular basis.

Miller and Modigliani (1961) further expressed that dividends are irrelevant and that rational shareholders would be indifferent towards these payments. Black (1976) went further on to relax the assumptions made by Miller and Modigliani (1961) by introducing taxes as a determinant of corporate dividend policy decisions. The results of this were that some shareholders preferred either dividends or capital gain depending on which alternative resulted in the lowest amounts of tax being paid by them.

Another example of this includes the theory proposed by Bhattacharya (1979) in defence of the payment of dividends. The resulting "Signalling Theory" argued that management will utilise dividends to communicate information regarding the cash flow status of the firm. This signal would generally relate to the current and future expectations of the performance of the company paying dividends. The issue with this theory, and consistent with the other theories discussed, is that a particular action of the company regarding its dividend payments could be interpreted in different ways by the market and its participants.

Recent theories introduced by Fama and French (2001), and later developed by Baker and Wurgler (2004), focused on the different types of modern shareholders and their changing desire for dividends, depending on existing market conditions. This went on to be defined as the "Catering Theory". This is because the demand for dividends by shareholders of a company is not constant but changes with investor sentiment at different points in the economic cycle. In addition to this, Baker and Wurgler (2004) determined that different dividend pay-out policies set by different companies will, in turn, attract different kinds of shareholders. These different kinds of shareholder will invest in companies which satisfy their needs for dividends at a particular point in time. This is known as the "Clientele Effect" theory.

Despite the theories developed, none of these researchers were able to provide conclusive evidence regarding reasons for dividend payments to shareholders. The effect of this is such that the puzzle representing dividend payments remains unsolved (Black, 1976; H.K. Baker, Powell, & Veit, 2002). Therefore, it remains imperative that research continues to be conducted in order to provide a concrete determinant for the payment of dividends by companies. The importance of this lies in the economic impact that dividend payments have on the performance of companies.

### 2.4.2 Agency Theory on Dividend Policy

A more recent area of focus regarding the payment of dividends has attempted to address the use of dividend payments as a solution to the agency problem (Jensen, 1986). The agency problem can be described by two primary conflicts of interest existing between management and shareholders. These problems are especially a common feature of the modern limited liability corporation (Berle & Means,

1932). Limited liability companies have formed a large part of the way in which modern corporations have been structured and this indicates the widespread nature of the agency problem. The first of these problems relate to conflicts of interest between management and the individuals making up the shareholding of those particular companies. The second of these conflicts exist between controlling shareholders and their minority counterparts (Jensen & Meckling, 1976; M. Faccio, Lang, & Young, 2001; R. La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 2000).

The conflicts between controlling and minority shareholders arise from the fact that controlling shareholders will use the additional power that they have to extract as many benefits as possible from the company (Shleifer & Vishny, 1997). This additional power comes by virtue of their dominant shareholding. The result of this sees minority interests feel as though they have been left at the mercy of these controlling individuals. This is because, while controlling interests will extract the majority of company benefits for themselves, they will also leave minorities with the bare minimum in terms of which to gain for themselves. An example of the most common ways in which this is done by controlling interests is through the use inter-group transactions. These inter-group transactions will be structured at above market prices and at the expense of the company which these controlling shareholders have vested interests in (Maury & Pajuste, 2002).

Dividends have been recognised as a way of addressing and resolving this problem. This is because dividends will play the role of levelling out and equating each shareholder's claim to company profits (Jensen, 1986; M. Faccio et al., 2001). This is due to the fact that shareholders will each receive an equal share of company profits with the only difference being that this share will be calculated according to their percentage shareholding held by the different investors. Minority shareholders will now feeling less concerned regarding the possibilities of expropriation. This is because the payment of dividends will lead to less money being kept within the company and, as such, being subject to expropriation by controlling interests. (Maury & Pajuste, 2002).

#### *2.4.2.1 Conclusion*

BBBEE participants encounter this problem as they retain only a minority interest in the company whose shares they have purchased as a result of the deal. The result of this is that they subject

themselves to the same extent of expropriation as other minority shareholders. Therefore, it can be expected that the requirement of dividends for BBBEE beneficiaries, for the purpose of satisfying the risk of expropriation, to at the very least be in line with existing literature. However, one must also consider the extreme levels of capital constraints faced by these minority interests. This additional factor will cause BBBEE participants to place additional emphasis on the payment of dividends for reasons beyond that of fear of expropriation by controlling shareholders. The following section of the literature review will now explore the power of minorities and BBBEE beneficiaries to demand not only dividends, but the level of dividends that they require.

### 2.4.3 Minorities Claim to Dividends

There are three different ways that minorities can use to target payments of dividends. These three ways have been found to impact on the ability of minorities to influence dividend policy. The first of these can be described as the legal and corporate governance environment within which companies operate (R. La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 2000). The second is the need for companies to enter the capital market in order to obtain additional equity funding (Kapoor, 2000), while the third relates to the general ownership structure of a particular company (R. La Porta, Lopez-de-Silanes, & Shleifer, 1999). These three different ways will now be investigated in more detail:

#### *2.4.3.1 Dividend Outcome Due to Legal Protection and Corporate Governance*

Under this first way, dividends are paid out as a result of legal protection and emphasis is placed on corporate governance. This means that minority shareholders use the powers that they have to force management to pay out the amounts of dividends they feel entitled to. From a corporate governance point of view, minorities can display their dissatisfaction publically which will result in the company gaining a bad reputation. These companies will want to avoid a damage to their reputation at all costs (Klapper & Love, 2004).

Research conducted by La Porta et al. (2000) proposed an outcome model in support of the link between shareholder protection and dividend policy. The study performed a cross section on 4000 companies across a total of 33 countries and found a positive relationship in support of the fact that stronger rights in favour of minorities resulted in higher dividend pay-outs. On the other hand, other

research has found that companies operating within a poor legal environment will also offer payments of dividends. In this case, dividends will be offered as a substitute and compensation for the poor legal protection of minority shareholders (R. La Porta et al., 1999). In addition to this, minority shareholders will also be aware of any risk of expropriation that they may face upon subscribing to the shareholding of a particular company (Maury & Pajuste, 2002). In light of this realisation, they will aim to take increased measures aimed at forcing management to increase the amount of dividends paid. This will further ensure that their interests are protected.

This alternative outlook is also supported by Kapoor (2009) who found that, in the case of countries with poor legal protection, management were found to acknowledge the fact that dividend payments were recognised by minorities as a substitute for a lack of the existence of a legal framework and corporate governance structure. As such, more dividends were paid by companies operating in countries with poor legal protection, so as to compensate for this problem. However, this was opposed to the findings by La Porta (2000) who found no significant evidence in this regard. The conclusions made by La Porta (2000) in this case were that the minority shareholders will take whatever dividends they are able to get their hands on, and that the company will not adjust their strategy for the purposes of accommodating them. Therefore, we can conclude that this outlook on the implications of a poor legal environment on dividend policy provides no conclusive evidence in support of changes in dividends being made by minority shareholders as a result of this factor.

#### *2.4.3.2 Dividend Outcome Due to need for Capital Market Funding*

The second view, by La Porta et al. (2000), proposed that minorities claim to dividends will also be heard in the case where minority shareholders are needed by companies. An example of this is when companies wish to enter capital markets by way of a share issue. The significance of minorities in this case is due to the fact that it is generally those minority interests who will subscribe to shares in the event of a share issue. In order to come across as more appealing to minority interests the company will attempt to gain the reputation of a company striving for the fair treatment of minorities (Kapoor, 2009). This will be done by virtue of generous dividend payments in the months of even years prior to this public offering. This view has shown there to be a change in the dividend pay-out policy of

companies in the event that the controlling shareholders have no choice but to request the participation of minorities.

*2.4.3.3 Ownership Structure Implications on Dividend Policy*

The third view of ownership structure has also been found to have an effect on agency costs and the resulting dividend payments made to minorities. A cross-sectional study conducted by La Porta et al., (1999) on thirty three different countries found that the existence of large shareholders and shareholder concentration increased the extent of agency costs between these minority and controlling shareholders. Research conducted by Harada and Nguyen (2011) went on further to consider the impact of extreme ownership concentration on dividend pay-out. These researchers' findings were consistent with the "rent extraction" hypothesis that states that the higher the level of ownership concentration, the lower the amount of dividends paid out to shareholders (Harada & Nguyen. 2011; Farinha, 2003; G. Jensen, Solberg, & Zorn, 1992).

The presence of a second significant shareholder, on the other hand, was found to have controversial effects on the dividend payments of companies. Gugler and Yurtoglu (2002) realized that the presence of a second significant shareholder was found to increase dividend payments. However, Maury and Pajuste (2002) found the opposite, concluding that the presence of a second shareholder resulted in greater expropriation by the company. This is due to the fact that the second largest shareholder would collude with both the largest shareholder and management in order to further expropriate minority interests.

Significant minorities are likely to act in a similar manner to secondary controlling shareholders and will tend to express the same desires for dividends. This is due to the fact that they will have much more power than the average minority but will not be fully recognised as a controlling interest. As can be seen from the literature discussed, it is not known where their preference will lie. They could choose to put pressure on the ultimate controlling shareholder in favour of increased dividend payments or could be encouraged to join in on the expropriation of smaller minority interests.

#### *2.4.3.4 Conclusion*

Based on the literature reviewed and with specific reference to BBBEE deals, there exists a lack of evidence to show that minorities are successfully forcing companies to pay out their desired level of dividends. Despite this, there is one particular view that has been discussed that leads us to expect BBBEE deals to have a slight impact on the dividend policy decisions of companies. This is the one that represents the situation where BBBEE minority shareholders are needed by controlling interests. This need will mean that it will be in best interest of controlling interests to negotiate terms that are favourable with BBBEE minorities. This is because controlling shareholders require these BBBEE beneficiaries so that they can obtain BBBEE credits and increase both their compliance and contribution towards ensuring equality in South Africa. On this basis, we would expect the lack of funds possessed by BBBEE participants to push controlling interests towards forcing them to increase their dividend policies so as to become aligned with the increased cash flow needs of beneficiaries. This will ensure that the deal remains a valid one and that the controlling interests can continue to benefit from the BBBEE credits that they will obtain as a result of the deal.

# CHAPTER 3 - METHODOLOGY

## 3.1 Sample and Data

The study is based on panel data covering an eight year period from 1999 to 2006. These years of study have been chosen as they represent the largest number of observations for which information could be obtained, and for which the tax consequences on dividends in South Africa remained the same. This was done to avoid having to control for tax on dividends as a result of the difficulty in finding an appropriate control variable for the consequences of taxation on dividend pay-out.

The sample consisted only of those companies determined to be part of the top 100 companies listed on the JSE. This was the sample used as the information regarding BBBEE deals was obtained from an Intellidex Report titled*: "The Value of BEE Deals"*. Intellidex are a leading South African research company specialising in South African capital markets and financial services research. The quality of their research and reputation means that their research findings can be relied upon for the purpose of conducting this study. In this particular article, their aim was to calculate the market value of Broad-Based Black Economic Empowerment (BBBEE) deals for a selected sample of companies. Their sample consisted of a provisional list consisting of the Top 100 companies listed on the JSE.

This list was subsequently reviewed by Intellidex and companies with no substantial South African operations were then removed. Examples of the companies removed by Intellidex for the purpose of their study include: Richemont, British American Tobacco, as well as many other property companies with secondary listings on the JSE, but no substantial operations in South Africa. However, these companies removed were replaced with companies which were next in line to meet the above criteria, so as to still provide Intellidex with a total of 100 companies for the purposes of their research.

Therefore, the overall sample size consisted of a maximum of 800 observations (100 companies multiplied by 8 years). Further, upon analysis of the data collected it was found that some companies did not have information for some or all years of study. These observations were manually removed from the study. Moreover, some companies were also found to not have paid any dividends throughout any one of the eight given years of study. These companies were also manually removed from the study. This is because these companies were considered to be non-dividend paying

companies and were likely to distort the results of the study. This distortion would occur because it would be unlikely that there would be any factor causing these companies to pay dividends at all.

In addition, there were also some observations which were considered to be significant outliers. An example of this is where observations showed companies to be in a situation indicative of significant financial distress (D. Avramov, Chordia, Jostova, & Philipov, 2010). Financial distress for these observations were determined by companies which had negative price-to-book ratios for a specific year of study. These observations were correspondingly manually dropped from the study. Looking at the change in sample size as a result of the above amendments it is found that the sample size decreased by 168 observations to 632 observations.

Lastly, the remaining 632 observations were winsorized. It is important to note that the process of winsorization will only weight out the impact of the outlying observations, but will not remove them (L.F. Martins, Persson, Idris, Czygan, & Vothihong, 2017). In addition, the weighting of outliers will only take place in the event that they are found to disturb the normal distribution pattern of a particular variable (L.F. Martins et al., 2017).

Moreover, not all companies were in existence for all periods of the study. This creates an unbalanced panel. An unbalanced panel has both certain advantages and disadvantages. The advantage of an unbalanced panel is that it is free from the effects of survivorship bias (Gujarati, 2006). This is since companies that tend to drop out when moving from an unbalanced panel to a balanced panel are generally weaker companies that eventually delist. By not excluding these companies' one can ensure coefficients are not overstated. This will allow for a more realistic representation will be obtained. However, an unbalanced panel can also lead to a lopsided distribution of observations. This will prevent an equitable comparison from being made across all years of study (Gujarati, 2006). Thus, this study has chosen to use both balanced and unbalanced panels to take advantage of the benefits and mitigate the pitfalls of both approaches. Further, it is important to note that the sample size reduces by a further 144 observations when the switch is made from the unbalanced panel to the balanced panel.

The data relating to variables used to conduct the study was obtained from the INET BFA Expert. The INET BFA Expert database was previously known as the McGregor database. The data obtained from this database was then exported onto a Microsoft Excel 2013 spreadsheet.

## 3.2 Data Analysis

The implementation of BBBEE deals by companies in South Africa created the opportunity to conduct a Natural experiment study. The Natural experiment approach has been used in this study to determine the causal impact of BBBEE deals on the dividend policy of companies (Wang & Guo, 2011). A natural experiment is an empirical study in which individuals are exposed to unanticipated events that assign them randomly to treatment and control groups. This is appropriate for the study as the impact being tested is similar to that if unanticipated events were to be realised. Natural experiments are most useful when there has been a clearly defined exposure involving a distinct subpopulation while there has been an absence of that same exposure in a similar subpopulation. The effect of this being such that changes in resulting outcomes can then be reasonably attributed to the particular exposure being tested (Meyer, 1995). This random allocation resulting from the exposure then allows for a term called causal inference (M. Bertrand, Duflo, & Mullainathan, 2004).

As the implementation of BBBEE deals were not implemented by all companies in South Africa at the same time, this study has been able to clearly assign companies by reference to their participation in these types of transactions, and to either a treatment or control group. Companies which initiated and took part in BBEEE deals (see definitions section in Chapter 1) between 1999 and 2006 have been designated as part of the treatment group, and amount to a total of 139 observations across all years. On the other hand, those that didn't were categorised as part of the control group and totalled an amount of 493 observations across all years.

Panel data multiple regression models were used to determine the significance of BBBEE deals in impacting the dividend pay-out ratios of companies in South Africa, while controlling for other major determinant of dividend policy (Wang & Guo, 2011).

The model used can be represented by the formula described below:

$DPR_{it} = \alpha_{it} + \beta1*Deal_{it} + \beta2*Size_{it} + \beta3*Capital\ Structure_{it} + \beta4*Growth_{it} + \beta5*Liquidity_{it} + \beta6*Prof_{it} + \beta7*Sector + \varepsilon$

A summary of Model Variables and Supporting Explanations has been tabulated below:

**Table 1-Model Variables and Definitions:**

| Model variables and definitions | | | | |
|---|---|---|---|---|
| **Variable** | **Definition** | **Additional information** | **Type of variable** | **References for Measurement Determinants** |
| DPR | Dividend Pay-out Ratio (%) | DPS/EPS | Dependent variable | (Edgerton, 2013) |
| α | Intercept | | | |
| Deal | Whether the company in question takes part in a BBBEE deal at any point in time throughout the study. | A dummy variable; 0 corresponds to a company that did not have any BBBEE deal in place during that particular year of study. 1 will then represent a company that did have such a deal in place during the particular year of study. | Independent variable | |
| Size | Company Size | The Natural Logarithm of Total Assets | Control variable | (Wang & Guo, 2011) |
| Capital Structure | Capital Structure | The Ratio of Total Debt to Total Equity | Control variable | (Wang & Guo, 2011) |

| | | | | |
|---|---|---|---|---|
| Growth | Growth and Investment Opportunities | Price-to-Book Ratio | Control variable | (Fama & French, 2001) and (Bhattacharya, 1979) |
| Liquidity | Liquidity | The Ratio of Current Assets to Current Liabilities | Control variable | (Wang & Guo, 2011) |
| Profit | Profitability | The Percentage Return on Assets | Control Variable | (H.K. Kato, Loewenstein, & Tsay, 2002) |
| Sector | Sector | Coded dummy variables representing the JSEs's 8 main sectors (see table below) | Control variable | (Thanatawee, 2014) |
| ε | Error term | | | |
| i | Denotes the companies in the sample, with i = 1,2,...8. | Denotes the observation for each company in the sample | | |
| t | Denotes the time period | The interval for time will be measured in annual units of time with one year beginning representative of a particular time period. | | |

The dependent variable in the model is the dividend pay-out ratio of the sample companies. This has been measured as the dividend declared by a company as a percentage of the company's accounting earnings for that financial year (Harada & Nguyen, 2011). The decision to use this ratio as opposed to other measures such as dividend yield and dividend per share has been done in order to control for profitability (Edgerton, 2013). Dividend movements also tend to be highly correlated to that of earnings (Lintner, 1956).

The independent variable is a dummy variable representing the BBBEE deal implementation. This has designated both the treatment group as well as the control group (Wang & Guo, 2011). Companies forming part of the treatment group for a particular year of study have been coded with a 1, while companies forming part of the control group for that same year of study have been coded with a 0. This was then repeated for the entire eight year study period (Suits, 2012).

Control variables were used to control for the impact of other factors influencing dividend payments. This needed to be done in order to isolate the impact of the BBBEE deal implementation on dividend pay-out ratios. The control variables used have catered for (1) Size, (2) Capital Structure, (3) Growth (4) Liquidity, (5) Profitability and (6) JSE Sector. Control variable coefficients are represented by the variables $\beta 2$ to $\beta 7$ in the model above.

Despite all the control variables listed in Table 1, a control variable for tax did not need to be incorporated into the formula in order to account for any differing effects of tax on the dividends paid throughout the entire period of study. This is due to the fact that Secondary Tax on Companies was the only tax on dividends throughout the period of study and remained the same between the years 1999 and 2006. Secondary Tax on companies was only replaced with Dividends Tax in the year 2012. However, the rate of Secondary Tax on Companies did change on either side of the sample period selected. This was, again, the major reason for choosing the particular period of study described in the Sample and Data section of this Chapter.

Fama and French (2001) found the size of a firm to be a key determinant of dividend payments. They observed that companies paying dividends tend to be larger in size as compared to nonpayers. This is due to the limited growth prospects that these larger companies generally face. It has also been determined that there are distinct differences in the dividend policy of companies over their life cycles. The factors causing this are due to changes in growth rates, cash flows and project availability. All these factors can be appropriately determined to be a proxy of that companies' respective firm size. The natural logarithm of total assets is the widely used control variable for firm size and has been used to control for firm size for the purposes of completing this study (Wang & Guo, 2011).

The second control variable refers to the capital structure of selected companies. A firm's level of debt will impact on its capacity to pay a dividend. Highly leveraged companies will have less ability to pay dividends. This is due to the fact that conditions such as loans covenants will have to first be met (Damodaran, 1996). The ratio of total debt to total equity is used as a measure of capital structure and has been used for the purpose of carrying out this study (Wang & Guo, 2011). This measure of total debt used to calculate this ratio consisted of both long-term and short-term debt.

The availability of growth and investment opportunities also affect companies' dividend decisions. Due to this, it will be considered to be another variable which will need to be controlled for. Companies with various potential high growth projects are more likely to use internally generated equity to fund these investments instead of giving these funds away to shareholders (Miller & Modigliani, 1961). This is due to the fact that internal forms of financing are considered to be cheaper than alternate external financing options. The price-to-book ratio is often associated with growth opportunities (Fama & French, 2001), with Bhattacharya (1979) stating that the relationship between the price-to-book ratio and dividend pay-outs should be negative. The price-book ratio has been calculated as the market price per share divided by book value of equity per share.

The fourth control variable is liquidity. A company's liquidity levels impact on its ability to pay dividends (R. Brealey, Myers, & Marcus, 2007). Section 46 of the Companies Act, 2008 requires companies in South Africa to satisfy the liquidity test before dividends can be declared by them. Even though this regulation only came into effect after the study period, it is believed that it is in response to evaluations conducted and problems identified during the study period at hand. Therefore, it is likely that liquidity levels during the time period selected will have an impact on dividend pay-out policies. As such, it is likely that highly liquid companies will be the ones paying higher amounts of dividends. To control for this effect, the current ratio of companies will be included in the study. The ratio of current assets to current liabilities has been used to measure liquidity (Wang & Guo, 2011).

The next variable controlled for was the profitability of the companies included in the study. Profitability is represented in this study by the percentage return on assets of companies. This is

because, in prior studies, profitability and dividend pay-outs have shown to be correlated. Firms with more profits tend to distribute higher dividends as they are able to afford it. This is compared to companies with lower profits who will choose to distribute less and retain more of these profit cash flows (H.K. Kato et al., 2016).

Finally, the dividend policy of different sectors listed on the JSE further influences companies' dividend policy decisions within a particular sector. This is because shareholders have different expectations of different sectors' dividends and each sector is governed by its own practices (Thanatawee, 2014). Therefore, coded dummy variables have been created to represent the eight JSE sectors controlled for in the study. The coding will work as such that when coding for a particular sector all companies forming part of that sector will be coded with a 1. All other companies will then be coded with a 0. This process will be repeated eight times for all 8 JSE sectors included in the study.

The data analysis has been performed using Stata, which is a statistical analysis programme.

## 3.3 Validity and Reliability

The study conducted used panel data over an eight year period for observing the before and after effects of the implementation of BBBEE deals on the dividend policy of companies. A panel data set is described as one that follows a given sample of individual companies over time, and by doing so, is able to provide multiple observations on each individual company included in the sample (Hsiao, 2003:2).

Panel data has certain distinct advantages when compared to cross sectional data. One of the reasons for this is due to the fact that cross sectional data restricts observations to a single point in time. This is because panel data allows for the identification and measurement of effects that are not apparent in pure cross sectional or time series data. Panel data is also more beneficial in aggregating time series data as compared to cross sectional data. This is because it allows the underlying dynamics of the data to not be obscured by aggregation (Hsiao, 2007). The improved empirical analysis offered by panel data has been particularly valuable to this study, as panel data has allowed for a considerable increase to the sample size (Hsiao, 2007). This ability to increase sample size correspondingly increased the

degrees of freedom and allowed for a reduction in the collinearity among explanatory variables. This results in an improvement in the efficiency of estimates (Hsiao, 2007).

The linear regression model used to conduct the panel data study has been based on four distinct assumptions. The first of these assumptions is that model residuals should be normally distributed. The second of these assumptions state that explanatory variables should not be serially correlated. Third is that there should be no autocorrelation between the disturbances, and the last assumption states that variables should be homoscedastic (Gujarati, 2009).

Further, endogeneity is described as the risk that explanatory variables are correlated with the error term (Damodaran, 1996). This correlation can be a result of measurement errors, autoregression with autocorrelated errors, simultaneous causality, omitted selection and omitted variables (Damodaran, 1996). The risk of endogeneity in this study has been reduced by the natural experiment approach. Furthermore, common observable factors that could potentially differ between the control and treatment groups, as well as over time, and impact on dividend pay-out have been controlled for in the regression study (Wang & Guo, 2011).

Should the above data analysis tools prove to be insufficient for the purpose of providing significant, valid and reliable results, additional tests will need to be used so as to ensure that this is achieved. These include various diagnostics that will be performed on all models used in order to test whether the assumptions raised in this section have been satisfied.

# CHAPTER 4: RESULTS

## 4.1 Descriptive Statistics

### *4.1.1 Overall Descriptive Statistics*

In order to begin analysing the results from this study, first reference will be made to the descriptive statistics of the variables. The use of descriptive statistics allows for the identification of standout features and trends in the data set (Holcomb, 2017). For the purpose of this study, the descriptive statistics were calculated after the data had been winsorized (see Chapter 3-Sample and Data).

This part of the analysis begins with a description of the overall statistics. The overall statistics include companies forming part of both the treatment group and the control group. Therefore, the overall descriptive statistics presented below have been calculated based on all observations included in the data set. This information has been presented in the table below:

**Table 2- Descriptive Statistics for the Overall Data Set:**

| | (1) | (2) | (3) | (4) | (5) |
|---|---|---|---|---|---|
| VARIABLES | N | Mean | SD | Min | Max |
| DPR | 632 | 0.376 | 0.273 | 0 | 1.061 |
| Deal | 632 | - | - | 0 | 1 |
| Size | 632 | 15.78 | 1.578 | 12.72 | 19.63 |
| CS | 632 | 2.391 | 3.669 | 0.0548 | 15.41 |
| Growth | 632 | 3.364 | 3.507 | 0.257 | 18.13 |
| Liquidity | 632 | 1.408 | 0.776 | 0.205 | 4.237 |
| Profit | 632 | 12.31 | 10.05 | -4.475 | 37.25 |

(Source: Stata)

This section will first begin with the description of the dependent variable. The average dividend pay-out ratio is 37.6 percent. This is in line with prior research which found that the average dividend pay-out ratio of South African companies was 35 percent over a similar period of study (Wolmarans, 2003). Further, the standard deviation of the dividend pay-out ratio is high at 0.273. This could indicate that the variation of dividend pay-out ratio is large across years, and that this measure of dividends could potentially vary significantly across companies. This high level of variability is further reflected in the wide range between the maximum dividend pay-out ratio of 106.10 percent and the minimum of 0 percent.

The second variable described is the Deal variable of whether or not companies had BBBEE deals in place in a given year of study. This variable is a dummy variable and has been used to designate either the treatment group (1) or the control group (0).

Size is the first of the control variables used in the study. The average company size, expressed as a natural logarithm of total assets, was 15.78, with a minimum size of 12.72 and a maximum size of 19.63. This is in line with prior research which has found the average South African company to have had a total assets balance amounting to R 2 761 649 million in the year 2006 (Statistics South Africa, 2006). The natural logarithm of this amount is equal to 14.8313. The natural logarithm effect has reduced the extreme variability that would otherwise have been expected to have been visible from the variable. This is seen in the low standard deviation of 1.578. The natural logarithm was calculated in order to avoid potential problems of multicollinearity with other variable (discussed in Chapter 3 of the study).

The second control variable to be described is that of capital structure, or CS as per the above table. The average debt to equity ratio of companies included in the data set is 2.391. This is also in line with prior research which found the average total debt-equity ratio of all South African companies to amount to 2.1 in 2005 and 2.2 in 2006 (Statistics South Africa, 2016). This indicates that companies are, on average, very highly leveraged. The standard deviation of this variable is extremely high at an amount of 3.669. This high variation can further be seen in the large difference between the maximum debt-to-equity of 15.41 and the minimum debt-to-equity ratio of 0.0548. These large differences could potentially be explained as a result of the different preference for capital structure policies across the different JSE sectors (Statistics South Africa, 2016). This difference in industry policy norms will lead to companies in different sectors having different funding preferences for the purpose of funding their operations (Statistics South Africa, 2016). This is because these different sectors are subject to different conditions which will naturally affect capital structure policy.

The third control variable is that of growth. The growth variable is calculated according to the price-to-book ratio of a company for a particular year of study. The average price-to-book ratio has been

calculated at an amount of 3.364 with a standard deviation of 3.507. This high variation in the value is further seen in comparing the minimum price-to-book ratio of 0.257 to the maximum price-to-book ratio of 18.13. A potential reason for this great level of variation can also be attributed due to differences arising between JSE sectors (Thanatawee, 2014). This is because market participants could have had extremely different perceptions regarding the performance of companies operating in different sectors, as well as throughout the entire study period. This is seen in the average price-to-book ratio of 3.364 which is, in itself, considered to be a high value. The efficiency of markets at the time should also be questioned as it could serve as an additional driver for the high mean and standard deviation.

The fourth control variable, as depicted in the above table, is that of liquidity. Liquidity, for the purposes of this study, has been calculated as the current ratio of a company for a given year of study. The average current ratio has been calculated to be an amount of 1.408. This means that, on average, companies paying dividends meet the liquidity ratio required by the Companies Act No.71 of 2008 to be able to pay dividends. This is in line with prior literature which found the average current ratio of all South African companies to amount to 1.2210 in 2006 (Statistics South Africa, 2006). The standard deviation is considered to be quite reasonable at an amount of 0.776.

The fifth control variable is that of the profit variable. The profit variable is calculated as the return on assets ratio of a particular company for a given year of study. The average return on assets ratio is calculated at an amount of 12.31 percent with a standard deviation of 10.05 percent. This mean result is in line with prior research which found the average return on assets ratio of all South African companies to amount to 16.70 percent during a similar period (T. Gwatido, Ntuli, & Mlilo, 2015). The standard deviation seen as arising from the observations included in the data set is also considered to be reasonable.

The final control variable to be used is that of a JSE sector placeholder variable. These placeholders have been determined by assigning a number to a JSE sector in order to represent that particular

sector. The table below depicts the manner in which the different sectors were identified and labelled with respect to a given placeholder value:

**Table 3- Johannesburg Securities Exchange Sector Breakdown:**

| Johannesburg Securities Exchange Sector Breakdown | |
|---|---|
| **Symbol** | **Johannesburg Securities Exchange Sector** |
| S=1 | Oil and gas |
| S=2 | Basic Materials |
| S=3 | Industrials |
| S=4 | Consumer goods |
| S=5 | Healthcare |
| S=6 | Consumer Services |
| S=7 | Telecommunications |
| S=8 | Financials |

The placeholders generated have then been used to create coded dummy variables in order to run the regression in the data analysis described in Chapter 3. Despite the fact that not much information can be deduced with regards to this variable from the information provided in the above table, the same cannot be said if one were to calculate the respective mode of the variable. This is because the mode is calculated at an amount of 8. Looking at the data set it can be seen that a wide range of companies have been assigned a number 8 JSE sector placeholder. This is appropriate as it is those financial services companies that dominate the South African economy. It is therefore appropriate that companies within this sector number make up the majority of observations in the data set.

### *4.1.2 Comparing the Treatment Group to the Control Group*

The descriptive statistics calculated above can further be analysed in terms of either the control group or the treatment group. This will provide additional insight by allowing us to compare the characteristics of firms included in the control group to that of the treatment group. The results for the descriptive statistics of both the control and treatment group can be seen in the tables below. Table 4 shows the results for the control group while Table 5 will illustrate the results for those companies that form part of the treatment group:

**Table 4- Descriptive Statistics Relating to the Control Group:**

| VARIABLES | (1) N | (2) Mean | (3) SD | (4) Min | (5) Max |
|---|---|---|---|---|---|
| DPR | 493 | 0.365 | 0.273 | 0 | 1.061 |
| Deal | 493 | - | - | 0 | 0 |
| Size | 493 | 15.532 | 1.492 | 12.720 | 19.428 |
| CS | 493 | 2.248 | 3.348 | 0.055 | 14.720 |
| Growth | 493 | 3.170 | 3.432 | 0.257 | 18.128 |
| Liquidity | 493 | 1.395 | 0.736 | 0.255 | 4.237 |
| Profit | 493 | 12.217 | 9.666 | -4.475 | 37.251 |

(Source: Stata)

**Table 5- Descriptive Statistics Relating to the Treatment Group:**

| VARIABLES | (1) N | (2) Mean | (3) SD | (4) Min | (5) Max |
|---|---|---|---|---|---|
| DPR | 139 | 0.414 | 0.270 | 0 | 1.004 |
| Deal | 139 | - | - | 1 | 1 |
| Size | 139 | 16.640 | 1.576 | 13.783 | 19.631 |
| CS | 139 | 2.895 | 4.612 | 0.0548 | 15.407 |
| Growth | 139 | 4.050 | 3.691 | 0.676 | 16.810 |
| Liquidity | 139 | 1.454 | 0.904 | 0.205 | 4.237 |
| Profit | 139 | 12.637 | 11.324 | -4.311 | 37.251 |

(Source: Stata)

The average dividend pay-out ratio of companies designated as part of the treatment group is on average higher than that for companies designated to the control group. The difference in dividend pay-out ratio between these two groups is an amount of 4.9 percent. This is a significant difference and supports the possibility of it potentially arising as a result of companies having BBBEE deals in a given year of study. Therefore, this is in line with expectations, together with that of the findings documented in the literature review.

It can also be seen that companies that form part of the treatment group vary on other metrics as compared to those companies forming part of the control group. Treatment group companies seem to be larger in size. This is consistent with large companies having the need and the additional resources required to enter into BBBEE deals.

With regards to capital structure, it can be seen that companies forming part of the treatment group tend, on average, to be more highly leveraged as compared to those companies in the control group. This could potentially be as a result of the increased level of dividends that will need to be paid out of their existing reserves. This will leave these companies with less internal reserves to be used for the purpose of funding their operations and expansion opportunities. As such, they will need to obtain external sources of funding so as to be able to expand their operations and grow (Harris & Raviv, 1991).

Furthermore, companies with BEE deals seem to exhibit more growth opportunities. This may also be the reason for their higher debt levels, as they need greater levels of financing to invest in these future projects, and to be able to sustain their growth. The increased growth opportunities of those companies forming part of the treatment group could also be as a result of the benefits provided from the increased BBBEE credentials (Siegel & Vitaliano, 2007; Woolley, 2005).

Looking at the differences in liquidity between those companies designated as being part of the treatment and control group, it can be seen that companies with BBBEE deals tend to, on average, be more liquid than those companies without such a deal in place. The effect of this is that they will be better able to pay dividends as compared to those companies in the control group. This will further support the fact that of dividend pay-out ratio of companies in the treatment group being higher than those of the control group (Intellidex, 2015).

Moreover, this higher level of liquidity may also be associated with higher levels of profitability for companies designated to the treatment group. This is seen in comparing the return on assets ratio of 12.63 percent for the treatment group to the 12.217 percent seen for the control group. This higher profitability in turn could be linked higher levels of growth opportunities and size which is seen

amongst companies in the treatment group (Siegel & Vitaliano, 2007; Woolley, 2005). This can also, once again, be associated with the more favourable BBBEE credentials possessed by companies in the treatment group.

In terms of the JSE sector, better interpretation of this variable can be provided by comparing the percentage number of companies falling into each particular sector and forming part of either the treatment or control group. Table 6 presented below shows the percentage number of companies in the data set that fall into a particular JSE sector and that have been allocated to the control group, while table 7 will do the same for JSE sector companies forming part of the treatment group:

**Table 6-Percentage JSE Sector Companies Forming Part of the Control Group:-**

| | JSE Sector | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Percentage Companies without a BBBEE Deal in Place | 53.85 % | 65.00 % | 87.23 % | 90.00 % | 64.00 % | 89.43 % | 100.00 % | 71.43 % |

(Source: Stata)

**Table 7-Percentage JSE Sector Companies Forming Part of the Treatment Group:-**

| | JSE Sector | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Percentage Companies with BBBEE Deal in Place | 46.15 % | 35.00 % | 12.77 % | 10.00 % | 36.00 % | 10.57 % | N/A | 28.57 % |

(Source: Stata)

Looking at the tables above it is found that companies falling in the Oil and Gas sector, shown as sector (1), Basic materials, shown as sector (2), and Healthcare, shown as sector (5), have the greatest percentage number of observations allocated to the treatment group. In identifying this it is important to note that the Healthcare sector is represented by only 25 observations throughout the entire study period. This is while the Basic Materials sector and the Oil and Gas sector are much better represented in the data set, with significantly larger numbers of total observations in each of these two groups. The results for the latter two sectors are understandable as it is these two sectors that have stricter

regulations regarding transformation. This means that it is these two sectors which are most likely to contain a significantly higher number of BBBEE deals as a result of being under greater pressure to achieve transformation through ownership.

### *4.1.3 Deals and Dividends across Time*

The next section of the descriptive statistics review will look at the average dividend pay-out ratio across time by looking at companies having entered into BBBEE deals as a percentage of all companies for a particular year of study. Table 8 below shows the percentage of companies with a BBBEE deal in place for a given year of study and Table 9 shows the average dividend pay-out ratio for each year of study:

**Table 8- Overall Annual Percentage of Total Companies Party to a BBBEE Deal:**

| | Time | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
| Percentage Companies with BBBEE Deal in Place | 1.00% | 4.23% | 6.67% | 8.97% | 13.41% | 23.17% | 47.67% | 60.92% |

(Source: Stata)

**Table 9- Overall Average Annual Dividend Pay-Out Ratio Throughout the Entire Study Period:**

| | Time | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
| Average Dividend Pay-out Ratio | 36.39% | 34.13% | 35.49% | 36.56% | 36.54% | 40.94% | 39.56% | 39.92% |

(Source: Stata)

Table 8 shows that the percentage of companies with BBBEE deals increased throughout the years of study. The introduction of the Broad-Based Black Economic Empowerment Act No.53 in the year 2003 seems to have had a significant effect (See Chapter 1- Introduction). The percentage number of companies in the data set with BBBEE deals in place almost doubled from 2003 to 2004 after the introduction of the Act. This response led to the big jump in companies' party to these Deals between 2003 and 2004. This number further increased significantly in 2005 and 2006. Table 9 indicates that

the average dividend pay-out ratio of the entire sample does vary year on year. Moreover, there seems to be an upward trend with later years paying higher dividends then earlier years.

This table showing the overall average dividend pay-out ratio throughout the study period can further be broken down based on companies forming part of either the control group or treatment group. These tables are presented below with Table 10 showing the breakdown for companies forming part of the treatment group with Table 11 illustrating that for companies allocated to the control group:

**Table 10- Average Annual Dividend Pay-Out Ratio for the Treatment Group Over the Entire Study Period:**

| | Time | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
| Average Dividend Pay-out Ratio | 25.28% | 58.10% | 54.80% | 43.36% | 45.15% | 49.37% | 35.89% | 39.69% |

(Source: Stata)

**Table 11- Average Annual Dividend Pay-Out Ratio for the Control Group Over the Entire Study Period:**

| | Time | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
| Average Dividend Pay-out Ratio | 36.39% | 33.08% | 34.10% | 35.89% | 35.21% | 38.40% | 42.93% | 40.27% |

(Source: Stata)

The results from this comparison show companies forming part of the treatment group to have a higher dividend pay-out ratio as compared to companies designated to the control group. One exception shown in 1999 can be understood as there was only one company designated to the treatment group for that year while there were several companies from various sectors which formed part of the control group for that same year. Other exceptions shown in 2005 and 2006 do contradict expectations. It would have been expected that, with a larger percentage of companies forming part of the treatment group for those two years, as shown in Table 10, that the results would have shown even higher dividend pay-out ratios for companies designated to the treatment group, as compared to

preceding years. However, this difference could be as a result of the variables being controlled for in the study and not a consequence of the BBBEE deal being in place.

### *4.1.4 Conclusion*

To conclude, it can been seen that companies designated as part of the treatment group were found to have a higher dividend pay-out ratios as compared to companies forming part of the control group. It is also important to note that the treatment group and control group are not similar. This is due to the fact that companies forming part of the treatment groups are found to be more profitable, among other things, as compared those of control group. Therefore, panel data multiple regression models are rightly needed to control for these other differing factors (see Regression Results Section of Chapter Four).

It can further be seen that the percentage number of companies with a BBBEE deal are not found to be stable over time. These BBBEE deals are found to have an upward trend as the study period progresses from the early years to the latter. This potentially indicates that the results might be sensitive to the time period chosen and that a robustness test will need to be performed over a shorter period of time to confirm the validity of the results (see Robustness Section of Chapter Four).

The next section will discuss Regression Results and how these results were achieved in order to determine the most appropriate model in terms of which to report the findings of this research.

## 4.2 Regression Results

In order to assess the appropriateness of using a pooled regression model, as discussed in Chapter 3 of the study, diagnostic tests, which confirm the normality of the data were performed. In order to test the normality of the variables included in the data set, skewness and kurtosis tests were performed (Gujarati, 2006). The results for the tests are shown in Figure A of Appendix A. The combined skewness and kurtosis results showed that the data was normally distributed. This was further confirmed through the use of a normality plot. The normality plots have been presented in Figure B of Appendix A.

The normality plot further confirms the normality of the data and provided additional support for the use of the pooled regression model. This is because it was found that the residuals approximated that of a normal distribution (Pallant, 2013). This was mostly likely assisted by the winsorization of the data (as discussed in the Sample section of Chapter 3). As has been discussed in Chapter 3, the study will make use of both a balanced panel and an unbalanced panel for the purpose of analysing the impact of BBBEE deals on the dividend pay-out ratio of companies. Pooled regressions have subsequently been performed using both a balanced panel and unbalanced panel.

Upon comparison of the balanced panel to the unbalanced panel it was found that the results across the two regressions did not vary significantly (see Figure J of Appendix A). However, the R-squared of both regressions were relatively low (Miles, 2014). The R-squared of these regression results indicated that only 13.4% of the movement in the dependent variable, in the case of the unbalanced panel (Regression labelled UPR_D in Figure J), and 20.5% of the movement of the dependent variable, in the case of the balanced panel (Regression labelled BPR_D in Figure J), was explained by the independent variables used in the equation. The reason for this low value can be attributable to three potential primary causes. These three primary causes are known as autocorrelation, multicollinearity or/and heteroscedasticity, which occur within and between the variables used in the study. The existence of these problems will result in an understatement in the significance of the results calculated by the regression.

The first potential problem tested for was that of multicollinearity. Multicollinearity is defined as the event where two or more independent variables have been found to be highly correlated with each other (Gujarati, 2009). In order to test for multicollinearity, the Variance Inflation Factor Test was performed (Gujarati, 2006). The results of this test can be found in Figure C of the Appendix. A Variance Inflation Factor score of above 5 would indicate multicollinearity between the variables (Gujarati, 2006). Upon review of the results from the test performed, there appeared to be no indication of the existence of multicollinearity between any of the variables. This was further confirmed through the use of a correlation matrix (see Figure D of Appendix A) (Gujarati, 2006). A correlation of 0.7 and above is considered to be problematic and representative of correlation between

the variables (Pallant, 2013). The results of the correlation matrix showed that none of the variables were shown to have a problem with correlation.

The second diagnostic performed tested for the existence of autocorrelation. Autocorrelation is defined as the existence of a relationship between a given variable and itself over various time intervals (Gujarati, 2009). The Woolridge Test was used to test for the existence of autocorrelation in panel data (Woolridge, 2002). The results of this test are shown in Figure E of Appendix A. The null hypothesis for this test was that there would not be any first-order correlation amongst any of the variables over time (Woolridge, 2002). The results of the test needed to show a Prob>F of at least 0.05 in order to show that autocorrelation was not present in the data (Woolridge, 2002). The results of the Woolridge Test showed a Prob > F equal to 0.0158. This meant that autocorrelation did in fact exist in the data and that the pooled regression models, calculated above, were inappropriate. This is due to violation of the underlying assumptions of the regression stating that there should not be autocorrelation amongst any of the variables included in the regression.

The inappropriateness of the pooled regression model was further confirmed with the Durbin -Wu-Hausman Test (Chmelarova, 1995). The purpose of this test is to determine whether a pooled regression or a fixed effects model would provide a better prediction of results (Chmelarova, 1995). The results for this test are shown in Figure F of Appendix A. If the results from the Durbin -Wu-Hausman Test were to show a p-value for the resi_2 coefficient to be less than 5%, then the use of the pooled regression model would be found to be inappropriate (Chmelarova, 1995). The results from the test showed a p-value of 0. This is sufficient to conclude that the pooled regression model is not a good predictor of results.

Once again, the presence of autocorrelation renders the pooled regression model inappropriate for this study. Fixed effects models and random effects models are more suited for panel data containing autocorrelation (Baltagi, 2002). The choice between the most appropriate models to use, out of the two models discussed, is dependent on assumptions made about the error term (Baltagi, 2002). This is because the random effects model assumes that the individual heterogeneity of the variables are

random while the fixed effects model ignores the unit specific residual (Gwatidzo & Ojah, 2009). In order to determine the more appropriate of the two models to be used, the Hausman Test was performed (Baltagi, 2002). The results from the Hausman Test are shown in Figure G of Appendix A. They demonstrate that the fixed effects model would be the superior model to use for the purposes of conducting the test. This is because the Beta coefficients under the fixed effects model were higher than that under the random effects model. One of the benefits of using the fixed effects for panel data is that it will control for autocorrelation (Baltagi, 2002). This is appropriate as the Woolridge Test did in fact show autocorrelation to exist within certain variables over time (Figure E of Appendix A).

The next step was to check the suitability of the fixed effects model by running regressions for both a balanced and an unbalanced panel. Upon inspection of the results from both the balanced and unbalanced panel regression performed, it is still seen that the R-squared for both the balanced and unbalanced panels remains extremely low (see Figure J of Appendix A). The R-squared using the balanced panel is 7.2% (Regression labelled BFE_ND in Figure J) and that of the unbalanced panel is 5.4% (Regression labelled UFE_ND in Figure J). This, once again, indicates that the independent variables are a bad predictor of the dependent variable. As this problem cannot be a result of multicollinearity or autocorrelation, which has already been tested and treated for, it could be due to the existence of heteroscedasticity in the panel data used. Heteroscedasticity can be described as a circumstance in which the variability of a particular variable is unequal across the range of values of the second variable that is used to predict it (Gujarati, 2009).

In order to test for heteroscedasticity in the fixed effects model, the Modified Wald Test was used (Woolridge, 2002). The results for the Modified Wald Test have been shown in Figure H of Appendix A. The null hypothesis for this test is that the variables are homoscedastic (Woolridge, 2002). In order for heteroscedasticity to be successfully detected from this test, a Prob>Chi2 of less than 5% will need to have been shown (Woolridge, 2002). The results from the test actually showed a Prob>Chi2 equal to 0%. As the actual results of 0% were less than the 5% needed to indicate heteroscedasticity, the results therefore showed that heteroscedasticity did in fact exist.

In order to further confirm the existence of heteroscedasticity in the data set, a heteroscedastic test can also be performed under the pooled regression model. This test to detect heteroscedasticity in the pooled regression model is known as the Breusch-Pagan / Cook-Weisberg test for heteroscedasticity (Gujarati, 2009). The results for this test have been presented in Figure I of Appendix A. The null hypothesis in this test is that the variance of each variable remains constant over time (Gujarati, 2009). The results from the test showed Prob > chi2 to be equal to zero which will lead us to reject the null hypothesis (Gujarati, 2009). This is because heteroscedasticity in the model is shown to exist, which is consistent with the results of the Wald Test.

In order to counter for the effects of heteroscedasticity, together with the problems of autocorrelation mentioned above, a fixed effects weighted least squares model has been used (Baltagi, 2008). This model weighs the error term and, by doing this, removes variations which may exist within the variables across time. It is also important to note that this model can only be prepared with the use of a balanced panel (Baltagi, 2008). However, there has been limited variation in results between the balanced and unbalanced panel models shown above, which leads to the conclusion that using only a balanced panel to perform the next regression is unlikely to significantly bias the results.

The results for the weighted least squares model are labelled FEBXTGLS_D in Table 12. The results from this model show 11 of the 13 independent variables to be significant. This is a significant relative improvement from the initial models used. The Prob>F in this model supports the significance of the results provided by this model. This is because a Prob>F value of 0.000 indicates that the independent variables are a significant predictor of the dependent variable and this can be said with a 99.9 percent degree of confidence (Baltagi, 2008).

This is further supported by the Rho value seen in the above table. The Rho value provides the same information as the R-Squared value in detailing the movement of the dependent variable explained by the independent variables used in the model. A value of 64.59 percent is significantly greater than that previously obtained under the two previous models. This highlights the superiority of the above model in providing the most accurate results out of all the models run in this section. As a result of the fact that this model appears to provide the most accurate results, it will be the model used to report and

answer the research question regarding the influence of BBBEE deals on the dividend pay-out ratios of companies.

**Table 12- Weighted Least Squares Regression Model Prepared Using a Balanced Panel:**

| VARIABLES | (5)<br>FEBXTGLS_D |
|---|---|
| Deal | 0.079*** |
| | (8.34063e-03) |
| Profitability | 0.002*** |
| | (6.44579e-04) |
| Capital Structure | -0.006*** |
| | (1.54733e-03) |
| Growth | 0.009*** |
| | (1.82523e-03) |
| Liquidity | 0.008 |
| | (7.38881e-03) |
| Size | 0.006 |
| | (4.67716e-03) |
| Sector 1 | -0.137*** |
| | (3.09678e-02) |
| Sector 2 | -0.031** |
| | (1.47340e-02) |
| Sector 3 | 0.019*** |
| | (5.26090e-03) |
| Sector 4 | -0.013*** |
| | (4.82537e-03) |
| Sector 5 | -0.063*** |
| | (7.92167e-03) |
| Sector 6 | -0.008** |
| | (3.53461e-03) |
| Sector 7 | -0.050*** |
| | (3.95652e-03) |
| Constant | 0.258*** |
| | (8.54626e-02) |
| Observations | 488 |
| Prob>F | 0.0000 |
| Number of companynum | 61 |
| Wald-chi2 | 683.1 |
| Rho | .64588224 |

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

(Source: Stata)

## 4.3 Findings

### *4.3.1 Deals*

The results in Table 12 show that companies with BBBEE deals in place do in fact pay higher dividends than companies without a deal in place, when controlling for other potential determinants of dividend pay-outs. The Deal variable was found to significant at the 1% level. Moreover, the size of the coefficient was found to be material. Having a BBBEE deal in place was, on average, found to increase a firm's dividend pay-out ratio by 0.079 (21.92% of the average for the control group), holding everything else equal. This is consistent with the finding of the literature review in Chapter 2, which found that companies with BBBEE deals in place were under pressure to assist beneficiaries in the funding of the deal through higher dividends (Nhlapo, 2008; Plaatjies, 2014).

### *4.3.2 Profitability*

Consistent with prior literature, profitability has been found to be a significant and positive determinant of dividend pay-outs (H.K. Kato et al., 2016). This variable is significant at the 1% level with a positive coefficient of 0.2%. This coefficient indicates that, on average, a 1% increase in a company's return on assets will result in a 0.002 increase in its dividend pay-out ratio. This is a small amount and indicates that profitability consideration by the companies included in the sample is not a major contributor towards the dividend pay-out ratios of these companies. Further, the relationship trend between dividends and earnings being observed, being that dividends lag earnings, exists as profitability will need to first increase before there can be an increase in dividends (Fama & Babiak, 1968)

### *4.3.3 Capital Structure*

In accordance with prior literature, capital structure has also been found to be a significant determinant of dividend pay-out (Kumar, 2006; Myers, 1984). For the purpose of this study, capital structure has been found to be significant at the 1% level. Also, consistent with prior literature is the negative relationship between the amount of debt in the capital structure of a company and the amount of dividends paid by them (Kumar, 2006). However, the impact is relatively small. Based on the results, an increase in a company's debt to equity ratio of 1 (i.e. going from 2 to 3), will on average cause the dividend pay-out ratio to only fall by 0.006. This could potentially be due to the fact that

South African companies are generally profitable and, as such, have no problems with meeting their interest commitments. This will mean that they will not have to sacrifice dividend payments much in order to meet increased interest commitments from higher debt levels.

### *4.3.4 Growth*

Growth, on the other hand, is one of the variables that has been found to be inconsistent with prior literature. Prior literature found there to be a negative relationship between growth and dividend pay-out (Fama & French, 2002), whereas the results shown in Table 12 show there to be a positive relationship between these two variables. This is because prior literature has shown that companies with higher growth opportunities, holding everything else constant, will choose to use internal reserves to fund these growth opportunities and, thus, will forego dividends (Miller & Modigliani, 1961).

Further, and in analysing the results of this variable, it can be seen that growth and investment opportunities are found, for the purpose of this study, to be significant at the 1% level. However, the size of the variable of 0.09 is considered to be small. The size of this variable indicates that a change in growth and investment opportunities for the companies included in the sample does not have a major impact on dividend pay-out ratios. For example, given a change in the price-to-book ratio from 2 to 3, which is considered large, relating dividend pay-out ratios would only reduce by 0.09. This effect is also likely the consequence of reverse causation because firms that pay higher dividends are more attractive to investors and will thus trade at a higher premium above their book values (Gordon 1959; Lintner, 1956).

### *4.3.5 Liquidity*

Consistent with prior literature, companies with higher levels of liquidity were found to pay higher dividends (I. Deniz, de Paula, & Pinheiro, 2006). However, the results were not statistically significant. This could potentially be explained by the fact that most South African companies have been known to keep substantial cash reserves on hand (Nyamgero, 2015). The result of this would mean that a small change in the level of cash kept on hand would not materially on impact the amount of dividends paid by these companies.

### *4.3.6 Size*

In accordance with existing literature, the results of the model show that larger companies pay more dividends (Fama & French, 2001). However, this relationship was not found to be statistically significant. The reason for this could be because the size variable has been used as a proxy for the maturity and life cycle of a particular company. This would mean that during the growth phase of the life cycle it would be expected that less dividends would be paid out by that particular company. However, in the mature phase it would be expected that companies would pay a substantial amount of dividends. In considering this it is important to highlight that the sample used to conduct the study consists of the top 100 companies listed on the JSE. These top companies are all large in size. This would mean that they would all be in a similar stage of their life cycle and there would be no resulting variation from this factor. This lack of variation in the data makes the variable a less powerful explainer for the purpose of this particular study.

### *4.3.7 Sector*

The results from the above table show Sector coefficients for seven sectors while the initial data included data for eight separate sectors. This is because one sector needed to be dropped for comparison purposes. The Stata programme selected sector (8) to be dropped as it was found to be the sector that, once dropped, would provide the most significant comparative results between itself and the other seven sectors included in the study.

Consistent with prior research findings, industry sectors have been found to have a significant influence on the dividend payment made by companies (Thanatawee, 2014). As per the results of the research shown in Table 12, all sector dummy variables have been shown to contribute significantly and at least at the 5% level to the payment of dividends. Sector (1) appears to contribute the lowest amount to an increasing dividend pay-out ratio, while sector (3) appears to contribute the highest amount. This is understandable as companies operating within a particular sector of the JSE tend to herd together and move in line with their competitors (Bikhchandi & Sharma, 2001).

### *4.3.8 Conclusion*

In conclusion, it can be said that the research conducted found BBBEE deals to cause an overall increase in the dividend pay-out ratio of companies. The quality of the results can be justified by the Prob>F of 0.000 obtained from the FEBXTGLS_D model, together with the reasonableness of the results seen from the control variables used in the study. Therefore, it can be said that the results obtained provide a high level of confidence in support of the purpose of the study, which was to show that companies' party to BBBEE transactions do in fact pay higher dividends as compared to those companies not party to this same transaction.

## 4.4 Robustness

Before the robustness checks considered for this section are performed, it is important to provide a reminder of the diagnostic tests conducted in the previous section of this Chapter. This is because those diagnostics performed have also played a role in confirming the robustness of the results provided, and ensuring validity of the findings reported. Based on the outcomes of those diagnostic tests conducted, a good degree of confidence already exists regarding the results obtained. However, for completeness purposes, additional test were carried out to further confirm the validity of results.

The first robustness test has looked at the effect of a change in time period on results. In order to perform this test, the original period used in the study has been reduced to show only the last four years of the original time period. Therefore, data from the year's 1999 to 2002 were removed. This left only year's 2003 to 2006 (years post the introduction of the Broad-Based Black Economic Empowerment Act of 2003, when the number of deals began to increase significantly). The results from this test have been shown in Figure K of Appendix A, and are consistent with the results.

This test, once again, highlights that BBBEE deals do in fact cause companies to increase their dividend pay-out ratios. Results from this analysis showed that companies with BBBEE deals in place, on average, were found to have a pay-out ratio 0.019 higher than firms without BBBEE deals. While this figure is lower than that reported from the main results, it is still important to note that the trend of an increasing dividend pay-out for companies with BBBEE deals is still evident.

Furthermore, it can also be said that the trend of an increased dividend pay-out for companies' party to a BBBEE transaction has been shown to be insensitive to time.

Moreover, the coefficients of the control variables are also similar. There are three exceptions: the liquidity variable as well as two of the sector variables. Under this model the liquidity variable differs in the way that it has a negative coefficient where the model used to report the findings showed the coefficient to be positive. The same discrepancies can further be found with JSE sector (4) and sector (6), where the robustness test reported positive coefficients for both these variables. This is while the main results had reported negative variables. However, all three of these were found to be statistically insignificant.

The second test conducted to ensure the validity of the data is known as a unit root test. The purpose of a unit root test is to confirm the stationarity of the model variables used throughout the period covered by the study (Baltagi, 2008). Stationarity amongst the variables means that various features of the variables used in the study have remained constant over time and are not distorted by trends in the data (Baltagi, 2008). The Phillips-Perron test, commonly used in time series analysis, has been used to test for stationarity (Baltagi, 2008).

The null hypothesis in this test is that all panels contain unit root data (Baltagi, 2002). In order to reject the null hypothesis a significant p-value outcome will need to be observed for each of the variables tested (Baltagi, 2002). The results of the test performed on all variables, apart from the dummy variables, showed the p-value to be significant. The stationarity test was not conducted on the coded dummies as a result of the nature of these variables (Gujarati, 2006). This is because, due to the binary nature of the coding, there would not be variation between the two outcomes. As such, the overall null hypothesis was rejected in favour of the alternate hypothesis. The significant p-value obtained confirms the stationarity of the variables included in the study.

### *4.4.1 Conclusion*

To conclude, all robustness tests conducted confirm the validity of the results obtained from model FEBXGLS_D. They highlighted the consistency of the results, where the results did not differ

meaningfully across the different models used. Further, tests conducted in this study also showed the time period used to conduct this study to not have a material impact on results. Lastly, the unit root test conducted confirmed stationarity amongst all variables used in the study. These results provide a significant degree of confidence with regards to the results obtained in this Chapter and provide reliability in showing that these results can be replicated by other researches using the same data used to conduct this research.

# CHAPTER 5: CONCUSION

## 5.1 Conclusion

This paper has looked at Broad-Based Black Economic Empowerment (BBBEE) and its role in assisting with the transformation of the South African economy. BBBEE has emphasised transformation of the economy with specific focus being placed on increasing Black ownership levels of the major corporations of South Africa. One way in which this has been accomplished is through the wide use of BBBEE Ownership Deals. The problem with this form of BBBEE transaction is that beneficiaries have trouble funding them and require assistance from the company which has issued them these shares. Assistance is generally provided by these companies to beneficiaries in the form of dividend payments which they use to satisfy the debt obligation owed by them. The purpose of this paper has been to investigate whether BBBEE deals do in fact result in increased dividend pay-out by issuing companies party to a BBBEE transaction.

A panel data regression model was used to test whether firms with BBBEE deals do in fact have higher dividend pay-out ratios, after controlling for the other major determinant of dividend policy (Company Size, Capital Structure, Growth and Investment Opportunities, Liquidity, Profitability and Johannesburg Securities Exchange (JSE) Sector). The panel data regression model was run for those companies considered to be the Top 100 companies listed on the JSE as at the 31 December 2014, and from the year 1999 to 2006. The results showed BBBEE deals to have a significant impact on the dividend decisions of companies. The results for the regression model found that, on average and while controlling for other factors influencing dividend pay-out, the dividend pay-out ratio for companies' party to a BBBEE deal increased by 7.9% post the implementation of the deal. It is also important to highlight that these findings are robust across time and various statistical models.

These finding have serious implications for companies, investors and policy makers in South Africa. Companies that are compelled to pay additional dividends may be inadvertently increasing their liquidity risk as well as their bankruptcy risk. This is because an increasing cash dividend paid out will reduce money which could otherwise have been retained by the company and used to finance its short-term commitments. In order to mitigate this, firms that enter into BBBEE deals should maintain

additional cash reserves in anticipation that they will potentially be required to pay increased amounts of dividends. Another implication is that companies that have limited access to additional financing may have to forgo profitable future investment opportunities to pay the additional dividends to BBBEE shareholders. This will serve to reduce future profitability of these companies who make this sacrifice.

These findings also have implications for investors, especially those who are seeking high dividend paying investments. Given the Catering theory, investors with a preference for higher dividends should take advantage of the increased dividend pay-outs of firms that are party to BBBEE deals, and invest in them. Conversely, investors interested in significant future capital growth should rather find stocks in companies that are not party BBBEE deals.

As for policy setters, higher dividend payments made by companies' party to BBBEE deals contradict their efforts in attempting to encourage firms to invest in the South African economy, thereby promoting job creation and growth. These deals create an adverse incentive for these companies as a result of them resorting to making payments of dividends as opposed to investing in new projects. As such, policy setters will need to look at ways of minimising this effect.

## 5.2 Areas for Future Research

The findings from this study also form a good basis for further research to be conducted. The quantitative findings can be supported by additional qualitative research to provide further conclusive evidence as to the role of BBBEE deals in increasing the dividend pay-outs of companies. An example of this can be in the form of surveys and questionnaires directly aimed at Chief Executive Officers of companies, and asking them whether being party to a BBBEE deals places additional pressure on them to increase dividend payments to beneficiaries.

Other areas for further research also include the opportunity to expand on the research conducted by taking into account all those companies listed on the JSE, not just the top 100. The research can also be conducted over a longer and more recent time period to determine whether the results remain the

same. However, this would require the inclusion of a tax variable into the regression to control for the significant changes in taxation on dividends in South Africa since 2006.

In addition to a tax variable, ownership concentration levels can also be considered and taken into account as a control variable for the purpose of conducting this study. This is because research has found that different levels of ownership concentration have different impacts on the amounts of dividends paid out to shareholders. Popular research in this area has found increased levels of ownership concentration to be associated with reduced dividend payments and dispersed ownership levels to be associated with higher dividend payments, all else equal (Harada & Nguyen, 2011). It can therefore be seen that ownership levels are an important determinant of a company's dividend policy.

Lastly, BBBEE deals should also be looked at in terms of their implications on the future liquidity and growth of companies. This will directly address the implications of companies and policy setters raised earlier. It is important to understand the impact of these deals on liquidity as companies may find that they are placed under greater pressure to meet short-term debt commitments as a result of suddenly spending increased amounts of cash making dividend payments, without having made the appropriate provisions for making these payments. The same can be said with regards to the impact of BBBEE deals on growth opportunities. This is as increased dividend payments have the potential of further impacting the cash reserves that companies have allocated to seeking expansion opportunities.

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# APPENDIX A

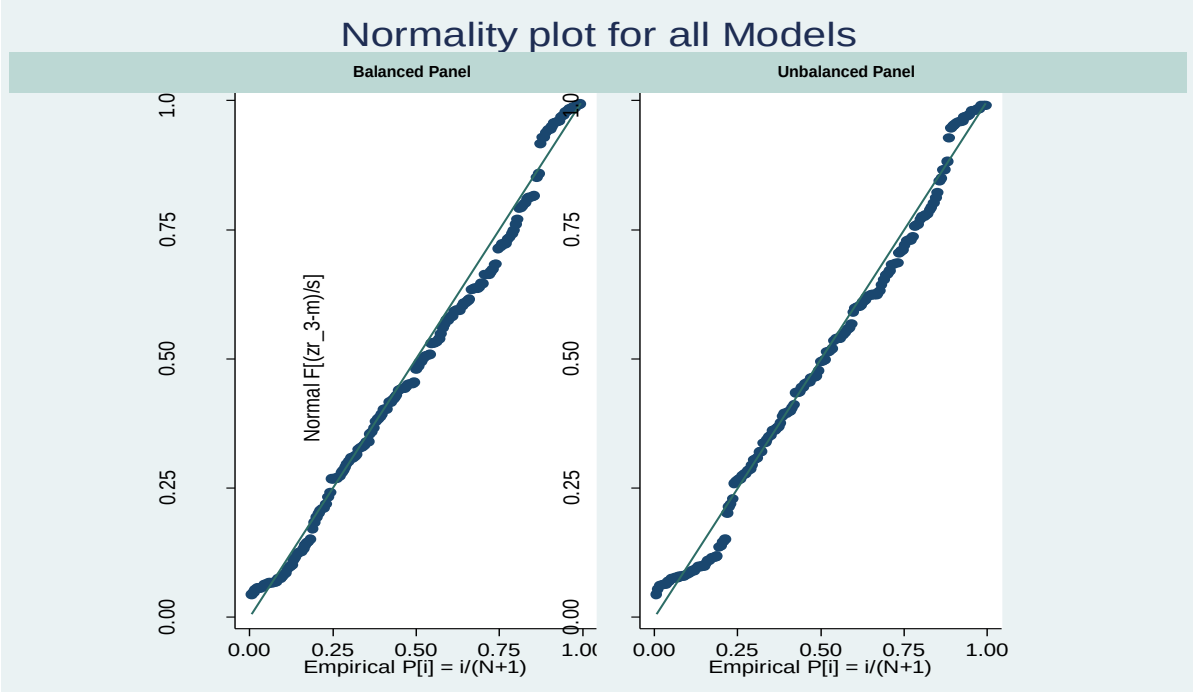
| Figure | Figure Description |
|---|---|
| A | Skewness/Kurtosis Test for Normality |
| B | Normality Plots for all Models |
| C | Variance Inflation Factor Test for Multicollinearity |
| D | Correlation Matrix Test for Multicollinearity |
| E | Woolridge Test for Autocorrelation |
| F | Durbin -Wu-Hausman Test to Test between Pooled Regression and Fixed Effects |
| G | Hausman Test to Test between Fixed Effects and Random Effects |
| H | Modified Wald Test for Groupwise Heteroskedasticity |
| I | Breusch-Pagan / Cook-Weisberg Test for Heteroskedasticity |
| J | Table Comparing Models Prepared on a Balanced Panel to the Same Models Prepared on an Unbalanced Panel |
| K | Table Showing Fixed Effects Weighted Least Squares Model Prepared using a Shorter Time Period |

**Figure A: Skewness/Kurtosis Test for Normality**

| | | | | Joint | |
|---|---|---|---|---|---|
| **Variable** | **Observations** | **Pr(Skewness)** | **Pr(Kurtosis)** | **adj chi2(2)** | **Prob>chi2** |
| DPR | 632 | 0.0000 | 0.5864 | 28.3600 | 0.0000 |
| Deal | 632 | 0.0000 | 0.4053 | . | 0.0000 |
| Profit | 632 | 0.0001 | 0.0004 | 23.0000 | 0.0000 |
| CS | 632 | 0.0000 | 0.0000 | . | 0.0000 |
| Growth | 632 | 0.0000 | 0.0000 | . | 0.0000 |
| Liquidity | 632 | 0.0000 | 0.0000 | . | 0.0000 |
| Size | 632 | 0.0000 | 0.1099 | 26.0200 | 0.0000 |
| Sector1 | 632 | 0.0000 | 0.0000 | . | 0.0000 |
| Sector2 | 632 | 0.0000 | 0.0024 | . | 0.0000 |
| Sector3 | 632 | 0.0000 | 0.0000 | . | 0.0000 |
| Sector4 | 632 | 0.0000 | 0.0000 | . | 0.0000 |
| Sector5 | 632 | 0.0000 | 0.0000 | . | 0.0000 |
| Sector6 | 632 | 0.0000 | 0.0683 | . | 0.0000 |
| Sector7 | 632 | 0.0000 | 0.0000 | . | 0.0000 |

(Source: Stata)

**Figure B: Normality Plots for both Balanced and Unbalanced Panel Models**



(Source: Stata)

**Figure C: Variance Inflation Factor Test for Multicollinearity**

| Variable | VIF | 1/VIF |
|---|---|---|
| Deal | 1.25 | 0.802223 |
| Profit | 1.62 | 0.618033 |
| CS | 2.09 | 0.477879 |
| Growth | 1.23 | 0.8151 |
| Liquidity | 1.4 | 0.712964 |
| Size | 1.93 | 0.518439 |
| Sector1 | 1.15 | 0.870011 |
| Sector2 | 1.66 | 0.602772 |
| Sector3 | 1.5 | 0.664827 |
| Sector4 | 1.54 | 0.651438 |
| Sector5 | 1.25 | 0.802032 |
| Sector6 | 1.64 | 0.609995 |
| Sector7 | 1.3 | 0.770631 |
| Mean VIF | 1.5 | |

(Source: Stata)

**Figure D: Correlation Matrix Test for Multicollinearity**

**Correlation Matrix**

| | DPR | Deal | Profit | CS | Growth | Liquidity | Size | Sector1 | Sector2 | Sector3 | Sector4 | Sector5 | Sector6 | Sector7 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **DPR** | 1.0000 | | | | | | | | | | | | | |
| **Deal** | 0.0752 | 1.0000 | | | | | | | | | | | | |
| **Profit** | 0.1584 | 0.0173 | 1.0000 | | | | | | | | | | | |
| **CS** | 0.0515 | 0.0730 | 0.3423 | 1.0000 | | | | | | | | | | |
| **Growth** | 0.0553 | 0.1041 | 0.1101 | 0.2683 | 1.0000 | | | | | | | | | |
| **Liquidity** | 0.1331 | 0.0315 | 0.1038 | 0.4451 | 0.1972 | 1.0000 | | | | | | | | |
| **Size** | 0.0405 | 0.2911 | 0.3646 | 0.4141 | 0.0317 | 0.2594 | 1.0000 | | | | | | | |
| **Sector1** | 0.0049 | 0.0845 | 0.1230 | 0.0666 | 0.0395 | 0.0291 | 0.1380 | 1.0000 | | | | | | |
| **Sector2** | 0.0887 | 0.1520 | 0.1222 | 0.2129 | 0.1916 | 0.0510 | 0.0814 | 0.0702 | 1.0000 | | | | | |
| **Sector3** | 0.0140 | 0.0931 | 0.0031 | 0.1012 | 0.1514 | 0.0181 | 0.1662 | 0.0606 | 0.2024 | 1.0000 | | | | |
| **Sector4** | 0.0163 | 0.1022 | 0.1009 | 0.1273 | 0.0403 | 0.0157 | 0.1158 | 0.0511 | 0.1709 | 0.1475 | 1.0000 | | | |
| **Sector5** | 0.1673 | 0.0686 | 0.1473 | 0.0321 | 0.0237 | 0.0125 | 0.1123 | 0.0294 | 0.0982 | 0.0848 | 0.0716 | 1.0000 | | |
| **Sector6** | 0.0759 | 0.1356 | 0.1136 | 0.1088 | 0.0823 | 0.0838 | 0.2433 | 0.0712 | 0.2380 | 0.2055 | 0.1735 | 0.0988 | 1.0000 | |
| **Sector7** | 0.0999 | 0.0739 | 0.0908 | 0.0528 | 0.0214 | 0.0831 | 0.1046 | 0.0202 | 0.0674 | 0.0582 | 0.0491 | 0.0282 | 0.0684 | 1.0000 |

(Source: Stata)

**Figure E: Woolridge Test for Autocorrelation**

| Ho: No first order autocorrelation |
|---|
| F(1,72) = 6.110 |
| Prob>F = 0.0158 |
| |
| . *If the Prob>F <0.05 there is autocorrelation, otherwise no autocorrelation. |

(Source: Stata)

**Figure F: Durbin -Wu-Hausman Test to Test between Pooled Regression and Fixed Effects**

Panel Variable: Compannum (Strongly Balanced)
Time Variable: time,2003 to 2006
Delta: 1 Unit

| Source | SS | df | MS | Number of Observations | 292 |
|---|---|---|---|---|---|
| Model | 21.0229 | 7 | 3.0033 | Prob>F | 0.000 |
| Residual | 1.5647 | 284 | 0.0055 | R-Squared | 0.931 |
| Total | 22.5876 | 291 | 3.0088 | Adj R-Squared | 0.929 |
| | | | | Root MSE | 0.074 |

| DPR | Coefficient | Standard Error | t | P>[t] | [95% Confidence Interval] | |
|---|---|---|---|---|---|---|
| Deal | -0.0101 | 0.0098 | -1.0400 | 0.2990 | -0.0293 | 0.0091 |
| Profit | 0.0018 | 0.0005 | 3.5500 | 0.0000 | 0.0008 | 0.2228 |
| CS | -0.0042 | 0.0014 | -2.9600 | 0.0030 | -0.0070 | -0.0014 |
| Growth | 0.0082 | 0.0015 | 5.5500 | 0.0000 | 0.0053 | 0.0112 |
| Liquidity | 0.0562 | 0.0064 | 8.7600 | 0.0000 | 0.0436 | 0.0689 |
| Size | 0.0190 | 0.0036 | 5.2500 | 0.0000 | 0.0119 | 0.0261 |
| resi_2 | 1.0000 | 0.0165 | 60.5700 | 0.0000 | 0.9675 | 1.0325 |
| _cons | -0.0300 | 0.0634 | -0.4700 | 0.6360 | -0.1548 | 0.0948 |

. * if p-value of resi_2 coefficient <5% OLS is not consistent

(Source: Stata)

**Figure G: Hausman Test to Test between Fixed Effects and Random Effects**

| | Coefficients (b) Fixed | (B) Random | (b-B) Difference | sqrt(diag(V_b-V_B)) S.E |
|---|---|---|---|---|
| **Deal** | 0.0654 | 0.0499 | 0.0155 | 0.0083 |
| **Profit** | 0.0034 | 0.0052 | -0.0018 | 0.0008 |
| **CS** | -0.004 | -0.0017 | -0.0024 | 0.0038 |
| **Growth** | 0.0065 | -0.0064 | 0.0002 | 0.0028 |
| **Liquidity** | 0.0351 | 0.0336 | 0.0015 | 0.0087 |
| **Size** | -0.0213 | 0.0013 | -0.0226 | 0.1225 |

b = consistent under Ho and Ha; obtained from xtreg
B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(6) = (b-B)'[(V_b-V_B)^(-1)](b-B)
= 27.01
Prob>chi2 = 0.0001

. *If Prob>chi2 <5% i.e significant use fixed effects

(Source: Stata)

**Figure H: Modified Wald Test for Groupwise Heteroskedasticity**

| |
|---|
| H0: sigma(i)^2 = sigma^2 for all i |
| chi2 (73) = 2.4e+05 |
| Prob>chi2 = 0.0000 |
| |
| . *If the Prob>Chi2 <0.05 there is heteroskedasticity |

(Source: Stata)

**Figure I: Breusch-Pagan / Cook-Weisberg Test for Heteroskedasticity**

| |
|---|
| Ho: Constant variance |
| Variables: fitted values of DPR |
| chi2(1) = 16.66 |
| Prob > chi2 = 0.0000 |
| |
| . * if prob<5% reject the null hypothesis( there is heteroscedasticity) |

(Source: Stata)

**Figure J: Table Comparing Models Prepared on a Balanced Panel to the Same Models Prepared on an Unbalanced Panel**

| VARIABLES | BPR_D | UPR_D | BFE_ND | UFE_ND |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Deal | 0.043 | 0.008 | 0.079*** | 0.065*** |
| | (2.91341e-02) | (2.69232e-02) | (2.45556e-02) | (2.36589e-02) |
| Profitability | 0.005*** | 0.007*** | 0.002 | 0.003** |

| | | | | |
|---|---|---|---|---|
| | (1.38169e-03) | (1.22520e-03) | (1.41340e-03) | (1.39931e-03) |
| Capital Structure | -0.007 | -0.004 | -0.011 | -0.004 |
| | (4.54951e-03) | (3.99996e-03) | (7.09049e-03) | (6.17188e-03) |
| Growth | 0.009** | 0.004 | 0.009** | 0.007 |
| | (3.69792e-03) | (3.26061e-03) | (4.41418e-03) | (4.38348e-03) |
| Liquidity | 0.063*** | 0.047*** | 0.043** | 0.035** |
| | (1.72534e-02) | (1.53119e-02) | (1.85345e-02) | (1.72396e-02) |
| Size | 0.006 | 0.025*** | -0.002 | -0.021 |
| | (9.64916e-03) | (8.58276e-03) | (1.70610e-02) | (1.64106e-02) |
| Sector 1 | -0.268*** | -0.197** | | |
| | (9.24068e-02) | (7.83639e-02) | | |
| Sector 2 | -0.072*** | -0.034* | | |
| | (2.02856e-02) | (1.79185e-02) | | |
| Sector 3 | -0.028** | -0.015 | | |
| | (1.32392e-02) | (1.22126e-02) | | |
| Sector 4 | -0.040*** | -0.019* | | |
| | (1.05758e-02) | (1.01089e-02) | | |
| Sector 5 | -0.085*** | -0.067*** | | |
| | (1.18010e-02) | (1.16895e-02) | | |
| Sector 6 | -0.037*** | -0.020*** | | |
| | (6.31793e-03) | (5.73933e-03) | | |
| Sector 7 | -0.069*** | -0.048*** | | |
| | (1.30742e-02) | (1.16240e-02) | | |
| Constant | 0.264 | -0.102 | 0.318 | 0.594** |
| | (1.65595e-01) | (1.47034e-01) | (2.71383e-01) | (2.59537e-01) |
| Observations | 488 | 632 | 488 | 632 |
| R-squared | 0.205 | 0.134 | 0.072 | 0.054 |
| F | 9.382 | 7.352 | 5.439 | 4.657 |
| Number of companynum | | | 61 | 139 |

(Source: Stata)

**Figure K: Table Showing Fixed Effects Weighted Least Squares Model Prepared using a Shorter Time Period**

| VARIABLES | (6)<br>RXTGLS_D |
|---|---|
| Deal | 0.019** |
| | (9.29660e-03) |
| Profitability | 0.001* |

| | |
|---|---|
| | (5.39143e-04) |
| Capital Structure | -0.011*** |
| | (1.70203e-03) |
| Growth | 0.028*** |
| | (2.81000e-03) |
| Liquidity | -0.005 |
| | (6.60145e-03) |
| Size | 0.031*** |
| | (4.21275e-03) |
| Sector 1 | -0.136*** |
| | (4.79448e-02) |
| Sector 2 | -0.045*** |
| | (1.08215e-02) |
| Sector 3 | 0.020*** |
| | (6.14576e-03) |
| Sector 4 | 0.003 |
| | (6.16341e-03) |
| Sector 5 | -0.061*** |
| | (1.15157e-02) |
| Sector 6 | 0.005* |
| | (2.72301e-03) |
| Sector 7 | -0.062*** |
| | (3.73740e-03) |
| Constant | -0.141* |
| | (7.30441e-02) |
| Observations | 292 |
| Number of companynum | 73 |
| Wald-chi2 | 1369 |

(Source: Stata)