UNIVERSITEIT VAN PRETORIA
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GORDON INSTITUTE
OF BUSINESS SCIENCE

MBA 2009/2010

"Do conglomerates in emerging economies suffer a diversification discount? An application on South African listed companies"

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A research project submitted to the Gordon Institute of Business Science, University of Pretoria, in partial fulfilment of the requirements for the degree of Master of Business Administration

November 2010

ABSTRACT

Corporate strategy forms the platform to consider fundamental strategic alternatives for an organisation. The recent financial crisis has been a sobering reality check for most companies. Diversification or specialisation are two of the more common configurations that corporate strategy theory would propose to grow and sustain financial performance, particularly during though times.

Research conducted in developed markets since the 1950's have tried to establish if diversification creates or destroys value. Conglomerates, defined as unrelated diversification, are often believed to translate into diversification discounts in developed economies. The application of this theory has been questioned with respect to emerging markets and the empirical results in these markets have been mixed.

A conceptual approach using different approaches, institutional, resource-based, adaptive and learning theories was used to try and explain the deviation in results attained by conglomerates within emerging markets and those in developed markets. Specific arguments and propositions were developed based on these different theoretical lenses for South Africa. These propositions were tested by statistical analysis of organisations listed on the Industrial sector of the Johannesburg Securities Exchange (JSE). The organisations were categorised into conglomerates or focused groups. The two groups were compared in terms of financial measures from the period 2001 to 2009 to determine which group performed better.

Key Words:

Diversification; conglomerate; institutional; resource-based view; adaptive; learning.

DECLARATION

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I have obtained the necessary authorization and consent to carry out this research.

_____ _____

Praven Subbramoney Date

ACKNOWLEDGMENTS

I would like to make the following acknowledgements of individuals who inspired and supported me, without whom the MBA and research project would not have been possible.

I would like to thank my research supervisor, Dr Raj Raina, for his guidance and support throughout the research project. You have provided me with direction, valuable comments and most especially, you challenged me to greater heights and for this I thank you.

I would like to thank my wife, Trish Subbramoney, for her understanding and support over the past two years. Your understanding, patience and love has not gone unnoticed. I would like to thank my baby daughter Arya Subbramoney for foregoing her time so that I may complete this MBA and to whom this MBA is dedicated.

I would also like to thank my family and friends who have always supported me and encouraged me throughout my academic and work career.

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1. INTRODUCTION TO RESEARCH PROBLEM

1.1. Problem Description and Background

The recent financial crisis has been a sobering reality check for most companies. Companies across the world have had to rethink their strategies by considering new and more innovative ways to buffer the impact of future similar events.

Corporate strategy forms the platform on which large scale companies that have been hardest hit are looking to invest in. The definition of corporate strategy according to Collis and Montgomery (2005) is the way companies create value through the configuration and co-ordination of activities. Diversification or specialisation are two of the more common configurations that corporate strategy theory would propose to grow and sustain financial performance, particularly during tough times.

Diversification has often been viewed as an essential vehicle for growth and improved performance from a strategic perspective (Nachum, 2004). Product diversification is often considered for companies looking to grow whilst geographic diversification would be for companies looking to stabilize earnings.

This is particularly important in emerging markets where economic cycles are often amplified.

According to Rushin (2006), diversification is a key strategic decision used as part of an organisation's corporate strategy to pursue different markets in anticipation of creating enhanced returns and ultimately greater profits. Ramanujam and Varadarajan (1989) defined diversification as the entry of a firm or business unit into new lines of activity, either by processes of internal business development or acquisition, which entail changes in its administrative structure, systems and other management processes. There are various degrees or levels of diversification that a company may choose to explore. Broadly categorised companies may choose to engage in diversification efforts that relate to their core business or competency often labelled as "related diversification". This is often considered to be a moderate level of diversification.

Alternatively, companies may decide to go the "unrelated diversification" route in which the company may choose to operate across multiple products and markets. Unrelated diversification companies are often also labelled as Conglomerates. David (1997) defines conglomerates to be companies that are willing to engage in adding new, but unrelated products or services.

Studies conducted by Markides (1995) suggested a negative relationship between conglomerate type diversification and the organisation's average profitability. Berger and Ofek (1995) calculated that on average, diversified

organisations in developed markets, during 1986 and 1991, had a value loss of between 13% and 15%. Often the degree of unrelatedness of diversification (conglomerate) is attributed to the poor performance of the company. This distinction between conglomerates and related diversification play a vital part in understanding why or if companies that diversify suffer poor performance or what is more commonly know as “diversification discounts.”

Several studies propose that diversification is less likely to be profitable in developed economies (Rumelt (1986), Berger and Ofek (1995)). However, it is important to consider the context in which these companies operate in and the inherent assumptions of these developed markets. In this study we will explore some of these inherent assumptions as well as the institutional frameworks that not only contributes to the growth of these markets but also act as contributing factors as to why companies that choose conglomerate type diversification may not be as profitable as those that are focused.

Often theories conceptualised in developed markets are assumed to hold in emerging markets based on the assumption that the same rationale or theories would apply despite the completely contrasting context of these two markets. In this study we will also look to challenge some of these assumptions and propose possible theories that are unique to emerging markets. This is despite the work done recently by Chakrabarti, Singh, and Mahmood (2007) who argue that diversified firms in emerging markets suffer greater performance declines than focused firms, similar to developed economies.

Within a South African context it has not yet been conclusively established which corporate strategy (i.e. Conglomeration or Focused) yields better financial results despite work done by (Bhana, 2004 and Rushin, 2006). During the apartheid era many South African based companies were forced to diversify from a product perspective to grow revenue, due to the restrictions on geographic expansion imposed on the country.

According to Rossouw (1997) the South African economy was dominated by six large conglomerates which accounted for 80% of the JSE market capitalisation in the 1970's and 1980's. Post apartheid, South Africa's integration into the global economy saw many companies rationalise their product portfolios and enter new markets to sustain their earnings.

The South African context poses a somewhat unique dimension to alternative emerging market studies since most emerging market studies are often rooted in transitional emerging markets. According to Arnold and Quelch, (1998) an emerging economy can be defined as a country that satisfies two criteria's: a rapid pace of economic development and government policies favouring economic liberalisation and the adoption of a free-market system. Transitional economies on the other hand are planned economies which were ruled by power relations and bureaucratic state controls.

However, more recently theses transitional economies have looked to strengthening their market mechanisms through liberalisation, stabilisation and

the encouragement of private enterprise (Hoskisson, Eden, Lau, Wright (2000)).

Recent work done by Rushin (2006) attempted to prove that diversified conglomerate companies within a South African context perform better than those focused in terms of financial results. The results of the study concluded no statistically significant evidence of out-performance by conglomerates. However, some evidence to support out-performance by focused companies over conglomerates was found. If South Africa is to compete on the global stage it is imperative that companies follow appropriate growth strategies that will enhance their revenue generation whilst reducing earnings volatility. This becomes particularly important during times of economic downturn.

Building on studies done on either product diversification (Montgomery, 1994; Palich, Cardinal and Miller, 2000; Ramanujam and Varadarajan, 1989); and geographic diversification (Lu and Beamish, 2004; Nachum, 2004; and Peng and Pleggenkuhle-Miles, 2009), this study will focus specifically on product diversification in an emerging market context to establish a relationship if conglomerates suffer a diversification discount vis-à-vis focused companies.

Work done by (Lu and Beamish, 2004; Rushin 2006; and Peng and Pleggenkuhle-Miles, 2009), will be used to establish a relationship between diversification and financial performance. Contrary to accepted corporate strategy beliefs in developed markets, this study will attempt to build theoretical arguments that a much more significant positive performance relationship may

exist between companies that have an unrelated product diversified offering rather than those that have focused product holdings. We hypothesise that conglomerates in emerging economies do not always suffer a diversification discount meaning that conglomerates are able to attain equal if not enhanced financial performance and that the theories that support diversification discounts in developed markets do not always hold true in emerging markets. To test our hypothesis we will need to look for any contrary evidence that supports underperformance of conglomerates over focused companies.

This study will look to build on work done by Rushin (2006) addressing some of weaknesses in his study. Key enhancements will incorporate: (i) The extension of the review period under consideration to 9 years (2001 to 2009). This will allow for a more extended review period that is more reflective of an economic cycle; (ii) A more robust interrogation of the SIC categorisation and its derivation by company's is required to establish the level of product diversification for each company. Companies will also need to be re-classified into focused and conglomerate companies using a combination of both the SIC categorisation and Rumelt's specialisation ratio methods. This will be done independently of work done by Rushin (2006); (iii) Refinement and measurement of performance indicators will need to be conducted to validate the hypotheses; (iv) Sophistication in statistical testing techniques will a be incorporated to enhance and supplement our finding.

1.2. Title

"Do Conglomerates in emerging economies suffer a diversification discount? An application on South African listed companies"

1.3. Research objectives

To ascertain if conglomerates suffer a performance discount to focussed companies in case of South Africa. The key hypothesis that we will look to test is 'do conglomerate companies in South Africa suffer from a diversification discount vis-à-vis focused companies'. This would imply that our null hypothesis points to conglomerates not suffering from diversification discounts and they are hence comparable with companies that choose to be focused.

We will segment all companies in the defined population into two distinct categories viz. conglomerates and focused. Unrelated diversification or conglomerates can be defined as firms that diversify into areas not related to their original skills and strengths other than financial resources whilst focused firms can be defined as distinct businesses that use common resources in the production of a common output.

Key financial indicators will be used to evaluate the performance of companies that are focused and those that are conglomerates. The aim is to prove that there is no difference in the level of profitability of each of the above two

categories or that conglomerates outperform focused companies in the South African emerging market context.

1.4. Research context

This paper examines the impact of conglomerate type of diversification activities in the case of emerging and developing country firms on their performance. The unique attributes of these firms and the circumstances under which conglomerate type diversification activities take place form an important part of the argument since the emerging markets cannot always be replicated or explained by developed markets. South Africa, a non-transitional emerging market will offer this study an alternative perspective to test developed market theories. South African listed firms in the industrial sector will provide the immediate context within emerging markets for this investigation.

2. LITERATURE REVIEW

2.1. Corporate Strategy

Corporate strategy is often considered to be the deployment of resources to achieve an objective. Through the effective utilisation and leveraging of these resources companies are able to distinguish themselves over their competitors. This is in the pursuit of the ultimate business objective which is to make profits (Vance, 1970).

According to Porter (1987) competition happens at the business unit level. Hamel and Prahalad (1989) argued that core competences nurtured at the corporate level and deployed at the business unit level can provide advantages for the corporate over businesses which are focussed on business unit performance.

Santalo and Becerra (2008) highlight that diversification and specialisation are just two strategies in a myriad of available strategies that a company could choose to follow. The main aim of corporate strategy is to ensure that the entire organisation is striving towards a common goal and that this goal or strategy is in the best interest of the organisation.

2.2. Specialisation - an alternative to Diversification

Specialisation or focused strategies within an organisation require a company to target a single particular aspect of business and to become the best in the market. By becoming the best in the market, firms' that specialise are likely to outperform competitors. Maksimovic and Phillips (2002) report that conglomerates have lower productivity than single-segment (focused) firms of similar size. It is often this competitive advantage in productivity that is attributed to the reasons why focused organisations outperform other organisations in developed markets.

Porter (1980) believes that focused firms have either a lower cost position, high differentiation or both. By aligning a firm to one aspect of business specialised firms are able to gain economies of scale and differentiation. This is likely to reduce the cost structures and increase both profitability and performance. A single focused strategy that is also more transparent is likely to be easier to implement and sustain.

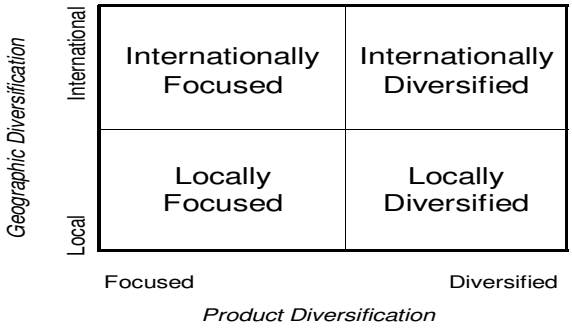
However, Santalo and Becerra (2008) also go on to highlight that the intrinsic superiority of focused companies is far from conclusive, particularly in emerging markets. This would imply that there is no conclusive proof that focused companies always outperform conglomerate companies.

2.3. Diversification

Extensive research has been done as to why firms diversify and the circumstances under which diversification can improve a firms performance (Ramanujam and Varadarajan, 1989; Montgomery, 1994; Palich et al. 2000; Lu and Beamish, 2004). When choosing to diversify companies usually tend to adopt either a product or geographic diversification strategy. Very few companies have the competencies to manage the complexity of both types of diversification.

The result is that all companies can be classified, in terms of their corporate strategy, into one of the following four categories (see Figure 1 below):

Figure 1: Diversification Matrix



Source: Ansof (1957)

Diversification can be further distilled in two categories. According to Rumelt's (1982) there are two primary diversification types:

- Related diversification, and
- Unrelated (Conglomerate) diversification.

Hill (1994) defines related diversification as realising economies of scope in the sharing of resources and / or the transfer of skills between two or more otherwise distinct businesses within an organisation. Unrelated diversification is defined by Rumelt (1986) as firms that diversify into areas not related to the original skills and strengths, other than financial resources.

2.3.1. Reasons for Diversification

Chakrabarti et al. (2007) highlight that diversification in general can be driven because of a range of perceived benefits associated with greater market power, more efficient allocation of resources through internal capital markets, utilization of excess productive factors, more efficient utilization of existing resources in new settings or reduced performance variability by virtue of a portfolio of imperfectly correlated set of businesses. Haberberg and Rieple (2001) go on to identify six key reasons for a company to adopt a diversification (product or geographic) strategy:

i. Spread risk:

Organisations might want to spread their risk and diversify into different businesses as a hedge.

ii. Prevent competitors from gaining ground:

From a defensive point of view organisations might want to diversify into other businesses to prevent their competitors from gaining a foothold in a specific market.

iii. Achieve synergy:

In achieving synergy the organisation would want to coordinate some functions by sharing the value chain. Activities such as purchasing and production across business units could lead to economies of scale and scope.

iv. Seek growth and capture value added opportunities:

Organisations might perceive opportunities for growth that are not available in their core businesses and by diversifying into other businesses; they could capture value and profits for the organisation.

v. Control the supply and distribution channel:

Organisations might want to diversify to gain control either by backward or forward integration therefore influencing prices and the supply of raw materials to the entire organisation.

vi. Personal ambition by senior management:

Managers might be rewarded for the size of the organisation rather than the financial performance thus leading to behaviour of management seeking diversification as the ultimate strategy.

2.3.2. Measuring Diversification

There are predominately two approaches to determine the organisation's level of diversification of which Montgomery (1982) found neither approach to be superior.

The first approach leverages of research done by Rumelt (1982) who developed a categorisation approach in which organisations could be categorised based on measurements obtained from financial data. According to Rumelt the level of diversification in an organisation is determined by establishing the ratios of revenues earned in a segment as a fraction of the total revenues within an organisation. A segment according to Rumelt (1982) would be defined as a product, a product line or set of product lines that have strong market interdependencies.

The second approach is based on product count measures whereby the organisation's primary activities are used to derive the organisations SIC code. The SIC categorisation method was developed for the classification of economic activity within a company and provides a standardised framework to compare companies. The SIC classification consists of a five digit number that filters down to the levels of economic activity (see Table 2 below for more detail). Work done by Ramanujam and Varadarajan, (1987) use this business or product count method to develop a model to analyse diversification.

Montgomery (1982) then goes on to use both the categorisation and the product count approach (SIC code) in her study. Her conclusion was that there are strengths and weaknesses in both approaches. Montgomery's view was later supported by research done by Rumelt (1986); Markides (1995); and Harper and Viguerie (2002) who also used both approaches to measure the level of diversification of the organisations in their studies.

2.3.2.1. Rumelt's Categorisation Model

The first approach developed by Rumelt (1982) was a categorisation approach in which financial data is used to categorise organisations into one of the categories listed in Table 1 below. In Rumelt's model, the least diversified (Single Business) is on the one side of the scale and the most diversified (Unrelated/Conglomerate Business) is on the other side of the scale. Rumelt (1986) then went on to further categorise the below diversification strategies into nine subcategories (for more detail see *Appendix 1: Rumelt's subcategories of diversification*). Rumelt used financial information to calculate the following two critical ratios required to determine an organisation level of diversification and position on scale:

i. **Specialization Ratio (SR):**

   This ratio measures the proportion of an organisation's revenues derived from its largest single business where a single business is defined to be

a distinct business that uses common resources in the production of a common output.

ii. Related Ratio (RR):

This ratio measures the proportion of an organisation's revenues derived from its largest single group of related businesses where a related business is defined to be a business leveraging of original skills and strengths other than financial resources.

Table 1: Rumelt's fist major categories of diversification

Category	Single Business	Dominant Business	Related Business	Unrelated Business
Definition	Company committed to a single business	Companies that have diversified to some extent but still obtain the predominance of their revenues from a single business	Nonvertical dominant companies that have diversified by building on some particular strength with the original dominant activity	Nonvertical companies that have chiefly diversified without regard to relationships between new businesses and current activities
Ratio	SR ≥ 0.95	0.7 ≤ SR < 0.95	SR < 0.7	RR < 0.7

Source: Rumelt (1982)

Subsequent researches (eg. Panday and Rao (1998), and Harper and Viguerie (2002)) looked to simplify the above categories as well as enhance the ratios calculated. Both the above researches argued that the SR values could be simplified to just three broad categories with similar levels of effectiveness.

Harper and Viguerie (2002) also argued that the SR threshold of 67% should be used and were confident that this threshold could vary by 10% in either direction and the results would be unaffected.

Various strengths and weaknesses of using Rumelt's classification as an approach to measure the level of diversity of an organisation have been highlighted. Conceptual rigour, according to Sambhaya (2000), has been noted as a strength. Sambhaya (2000) also goes on to note the following weaknesses of Rumelt's classification:

- Classification is subjective,
- Reliability is questionable,
- Classification process is time consuming and
- Extensive information on the organisation is required.

2.3.2.2. Standard Industrial Classification (SIC)

Standard Industrial Classification (SIC) system which is a product count measure was developed in the USA. The SIC classification system is a numerical system developed for classifying all types of economic activity within the economy (Montgomery, 1982).

The Standard Industry Classification (SIC) is a means to classify firms according to their business activity derived from the utilisation and production of common resources and output respectively. By implication the company's level of product diversification is derived. It is important to bear in mind that geographic diversification is not catered for in SIC. Although the SIC classification was developed in the USA the SIC system is fast becoming an

internationally accepted method to classifying companies. SIC provides a standardised framework for the collection and analysis of statistical economic data (CIPRO, 2006).

In most countries the SIC classification consists of a five digit number that maps back to the business activity that the company is operating in. The sequential ranking of the five digit number refers to the different levels of activity that a company is operating in (see Table 2: SIC Definition below).

Table 2: SIC Definition

SIC Digit	**Level of Business Activity**
First Digit	Major Division
Second Digit	Division
Third Digit	Major Group
Four Digit	Group
Fifth Digit	Sub-Group

Source: CIPRO (2010)

Similar work done by Berger and Ofek (1995), Delios and Beamish (1999) and Ushijima and Fukui (2004) on diversification use the SIC code approach as a measure of the level of diversification in an organisation.

2.3.3. Relationship between Diversification and Financial Performance

Early studies found no significant correlation between product diversification and profitability (e.g. Gort (1962); and Arnould (1969)). However, later Rumelt (1974) found that related product diversification was correlated with higher performance. It was this positive relationship that was used by Rumelt to later define and distinguish related diversification. More recently Ramanujam and Varadarajan (1989) observe that the relationship between diversification and performance will differ depending on the discipline, where discipline can be defined to be context (e.g. emerging versus developed markets).

Despite some positive evidences many subsequent studies that have been conducted to establish if conglomerate diversification has led to an increase in a firm's financial performance has been inconclusive. Inconsistency in the findings of the diversification-performance research for the last 30 years and the lack of consensus has been evident (Palich et al. 2000)

Research done by Panday and Rao (1998); Singh, Mathur, Gleason and Etebari (2001); Piscetello (2004) have found that the relationship between the level of diversification and the financial performance of an organisation is positively related in the case of emerging markets. Contrary to these findings work done by Markides (1995); Lins and Servaes (2002); and Gary (2005) point to a negative relationship in the case of emerging markets.

There is also evidence that points to the benefits of diversification declining after expansion beyond an optimal or threshold range, suggesting an 'inverted-U' relationship between performance and diversification. Firms can benefit from moderate diversification, but the broader diversification may harm performance (Hoskisson and Hitt, 1994; Palich et al. 2000; Ramanujam and Varadarajan, 1989). This would imply that there does not appear to be a clear and consistent relationship between diversification and financial performance.

2.3.3.1. Performance Measures

Over time, the business world has looked to various measures as profitability and financial performance indicators. The most common of measures used to evaluate financial performance is; Return on Assets (ROA); Return on Equity (ROE); Return on Capital (ROC); and Return on Investment (ROI) (Rumelt, 1986; Ramanujam and Varadarajan, 1987; Panday and Rao, 1998).

In studies that relate to conglomerate diversification, various alternate measures have been used as proxies to establish a better, more significant relationship between conglomerates and financial performance. Studies done by Rumelt (1986) on 246 organisations over a 19 year timeline use the following alternate performance measures: Annual rate of growth in Sales; Annual rate of growth in Earnings after Tax; Annual rate of growth in Earnings per Share; Price-Earnings Ratio and Internal Financial Ratios.

Research done by Panday and Rao (1998) in evaluating the financial performance of diversified companies builds on accounting variables such as Return on Equity (ROE) and Return on Assets (ROA) to incorporate market related variables like Market Return. These variables are much more subjective and difficult to establish but give a more holistic picture of the company's performance.

For the purpose of this research a combination of two previously applied studies will be used to investigate the causal relationship between conglomerates or specialisation and performance. The measures that will be evaluated are:

- Return on Equity
- Return on Assets
- Earnings per Share

2.3.3.2. Diversification Discount

Studies in both emerging and developed economies have highlighted diversification discount as a characteristic for most conglomerate companies. Work done on diversification discount (Montgomery and Wernerfelt, 1988; Ramanujam and Varadarajan, 1989) is supported by strong empirical evidence that conglomeration or unrelated diversification ultimately translates into a discount or a loss in company value.

As the size and complexity of conglomerates increase previously optimal internal allocation of capital, is likely to be replaced by inefficient allocation of capital (Hill, Hitt, and Hoskisson. 1992). Greater diversification increases managerial, structural, and organisational complexity, incurs greater coordination and integration costs and strains top management resources (Grant, Jammine, and Thomas, 1988).

Burch, Nanda and Narayanan (2004), suggest that diversification discounts follow from a weaker competitive position of firms that choose to diversify. This is likely to occur because often less productive firms are more likely to diversify in a bid to enhance earnings.

Ramanujam and Varadarajan, (1989) also highlight that there is limited benefits to diversification, particularly during systemic shocks. According to Chakrabarti et al. (2007), an economy wide shock decreases the benefits of diversification. Increasing economic turbulence also increases complexity, instability and therefore bureaucratic costs (Jones and Hill, 1988). These additional costs outweigh the benefits of diversification and are likely to result in a diversification discount.

Servaes (1996) suggests that there is strong evidence that conglomerates trade at a discount compared with focused companies because of this diversification discount. This suggests that firms pursuing an unrelated product

diversification (conglomeration) strategy are valued less than competing firms not pursuing such a strategy (Lee, Pen and Lee, 2008).

Contrary to developed economies emerging market literature more recently has focused on suggesting that an affiliation with conglomerates rarely entails a discount (Khanna and Rivkin, 2001). This is further supported by emerging economies studies (Guillen, 2000; Khanna and Rivkin, 2001; Nachum, 2004) that report a diversification premium for conglomerates.

However, it is becoming questionable if this diversification premium is infact sustainable. Work done by Lee et al. (2008) goes on to prove the decline of such a premium which eventually becomes a discount over time. Markides, (1992) suggest that the benefits of diversification decline after a threshold range, suggesting an 'inverted-U' relationship between performance and conglomeration.

2.4. Framework for Diversification Discounts

Literature supporting diversification discount in developed institutional countries (Montgomery and Wernerfelt, 1988; Ramanujam and Varadarajan, 1989) seems to be in abundance. However, the theories underpinning these studies seem to be approached from a single school of theory or ability of the corporate in leveraging (synergy) resources across business as the reason for diversification discounts. It seems unlikely that a single contributing factor may

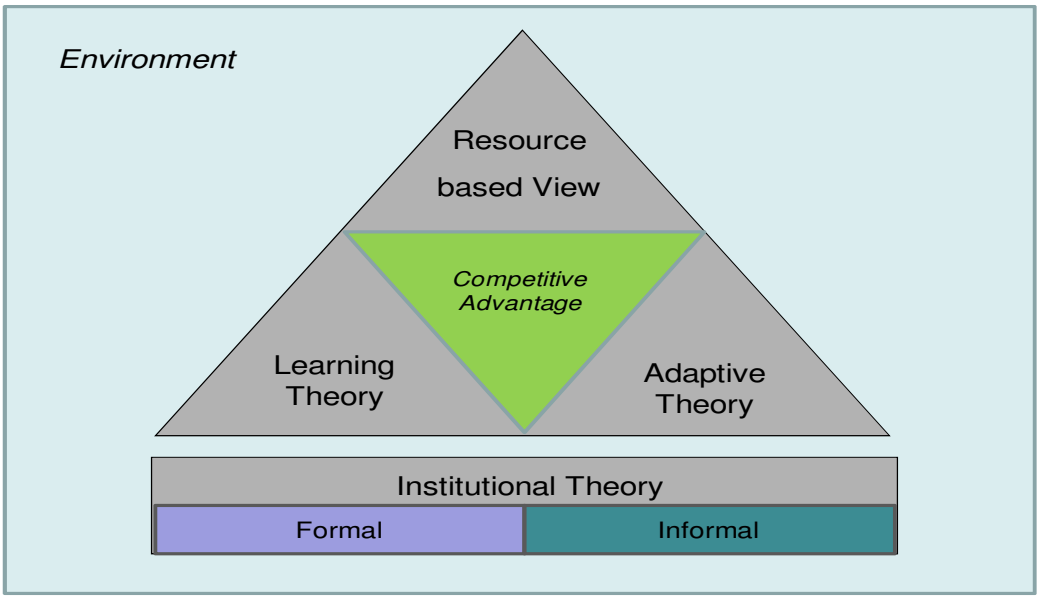
be responsible for diversification discounts but rather a culmination of multiple contributing factors.

Three conceptual theory perspectives, Institutional Theory (IT), Resource-based View (RBV) (including capabilities perspectives) and Learning Theory (LT) – have been identified by Hoskisson et al. (2000) in their context of understanding strategy and building a competitive advantage. Adding to the above three theories, Adaptive Theory (AT) has been highlighted as integrated responses to changed circumstances (Thompson, 1967). It is these four perspectives that help us interpret business decisions with respect to diversification.

These theories will form the basis of our argument that supports or undermines our primary hypothesis that organisations in emerging economies are likely to conclude a negative relationship between financial performance and a company's level of diversification and that this relationship is often characterised by a diversification discount (Montgomery and Wernerfelt, 1988).

The framework depicted in Figure 2 below looks to propose a linkage across all four theories listed above, in a bid to understand why conglomerate companies in developed countries trade at a discount.

Figure 2: Framework for diversification



RBV, LT and AT are all key schools of theory that can be used by an organisation to build a unique competitive advantage and outperform their competitors. Any one of these theories, if applied uniquely within a market would constitute a competitive advantage. According to Porter (1980) the degree of competitiveness of a firm largely determines a firm's performance.

According to Trott, Maddocks and Wheeler (2009), there are two key principles for any organisation or firm; (i) firms are different, (ii) and these differences are relatively stable. The key question in this case is *"how does one identify these differences that determine the success of a firm?"* By differences Trott et al. (2009) make reference to strengths. Strengths have been interpreted as resources, capabilities and competencies (Wernerfelt, 1984 and Barney, 1991).

In Figure 2 above, IT forms the basis or platform from which we build our framework and argument. IT in developed markets, unlike emerging markets, are more sophisticated thus providing a stable and integrated institutional environment for all organisations to operate in. According to Khanna and Palepu (1997) institutional context in developed markets are characterised by well-functioning capital, labour and product markets. However, the challenge for organisations looking to diversify in developed markets is the ability to use any of the above three (RBV, LT and AT) theories to build a competitive advantage.

Institutions directly determine what arrows a firm has in its quiver as it struggles to formulate and implement strategy (Ingram and Silverman, 2002). IT in developed markets provides organisations with a level playing field promoting stability and fairness. It is this stable institutional or more formal framework that prevents conglomerates from building and sustaining a competitive advantage using either RBV, LT or AT. This lack or inability to build a competitive position coupled with the added cost and complexity involved with diversification builds a strong argument for why the benefits outweigh the costs and why conglomerates result in a diversification discount.

If the theories and framework discussed above are to add any value, then the study of strategy which is most often applied to developed economies need to be extended to ascertain if these theories are suited to the unique social, political and economic environments as well as emerging economies (Wright, Peng, Filatotchev and Hoskisson, 2005).

Emerging economies provide a different context in which to understand the relative strengths and weaknesses of different theories. According to Wright et al. (2005) the challenge of wholesale adoption of developed economy-based theoretical and methodological approaches in emerging economies is magnified by the heterogeneity of emerging economies. Therefore emerging economies provide opportunities for verifying the existing theories as well as for extending new theories.

When we apply our initial framework (see Figure 2 above) to emerging markets, we notice one key change – an institutional environment influenced more by informal norms. It is this alternate institutional framework that is pre-eminent in helping to explain impacts on enterprise strategies because government and societal influences are stronger in these emerging economies (Hoskisson et al. 2000).

An emerging market institutional framework is often characterised by a more informal environment, resulting in deviation as to how the other three theories (RBV, LT and AT) are employed. Peng and Heath (1996) argued that the internal growth of firms in transition economies is limited by institutional constraints as a result, network-based or informal growth strategies are expected to be more viable in emerging economies. This deviation can also be attributed to why theories that hold in developed markets do not always hold in emerging markets and why diversification discounts may not always be the case in emerging markets conglomerates. It is this deviation that may also be

attributed to the reason as to why developing market conglomerates perform relatively better than developed market conglomerates.

2.4.1. Institutional Theory (IT)

The rise of new institutionalism has been found throughout the social sciences since the 1970s. IT's ascendance as a leading perspective in strategy is a more recent phenomenon (Wan and Hoskisson, 2003). IT has been argued to be one of the three leading perspectives in strategic management - the other two being the Industry-based and RBV (Peng, 2009). IT focuses on the role of the political, social and economic systems surrounding firms in shaping their behaviour (North, 1990). North also goes on to loosely define IT as the "rules of the game" the organisations will need to adhere to.

The environment in which an organisation operates plays a vital role in determining its strategy. Systems surrounding organisations that shape social and organisational behaviour is defined as IT influences (Scott, 1995). IT also forms the platform or context in which other theories or strategic initiatives may be implemented. A change in institutional framework, as is characterised by developed and emerging markets, will thus require different approaches.

IT in developed economies has provided a platform to reduce both transaction and information costs through reducing uncertainty and establishing a stable structure that facilitates interactions (Hoskisson et al. 2000). It is this

institutional environment that has in some cases been accredited for developed economies outperforming emerging economies.

However, it is also this very same institutional platform that prevents conglomerates from acquiring a competitive advantage. By levelling the playing field, no one company is able to build a sustainable competitive lead. All advantages are eventually traded away in an attempt to support the perfect market hypothesis which most developed markets subscribe to. This reason can be attributed to why conglomerates suffer a diversification discount in developed economies. This is supported by recent evidence indicating that conglomerate strategies do not enhance the value of firms in the developed economies (Berger and Ofek, 1995; Servaes, 1996; Lins and Servaes, 1999).

Institutional environments (e.g. government, society and community groups) in developed markets often impose significant pressures on organisations to justify their strategic actions. These pressures in turn force organisations to increase their legitimacy with respect to institutional constituents and to conform within institutional rules, regulations, norms and expectations (Dacin, Ventresca, and Beal, 1999). It is this conformance across multiple businesses that often becomes costly thereby eroding profitability for conglomerate organisations.

Misalignment to Emerging Markets

Building on the "rules-of-the-game" metaphor, North (1990) more formally defined institutions as humanly devised constraints that structure human interaction, which include formal rules and informal rules - see Table 3 below.

Table 3: Dimension of IT

	Formal Institutes	Informal Institutes
Examples	Laws Regulation Rules	Cultures Norms Ethics

(Source: North, 1990)

Strategic choices are not only driven by industry conditions and firm capabilities but also a reflection of the formal and informal constraints of a particular institutional framework that managers confront (Jarzabkowski, 2008). Often it is the culture of the environment that determines the rules of the game and who the players are. Broadly defined, culture is a culmination of societal values, beliefs, norms and behavioural patterns (Hofstede, 1980).

Further to that, research on informal activities such as corruption also shows the importance of informal institutions in the recognition and exploitation of opportunities (Webb, Tihanyi, Ireland, and Sirmon, 2009). These undefined, informal rules are not explored in IT and a significant part of the decision of how or if a company should diversify.

Hoskisson et al. (2000) suggests that challenges are likely to arise in emerging economies because of weak institutional infrastructures due to uncertainties arising from political instabilities. Political shocks have greatly increased the uncertainty and risk for both domestic firms and foreign investors (Chakrabarti et al. 2007). However, it may be due to these political instabilities that emerging market firms more easily diversify and reap the financial benefits.

Often emerging market institutional frameworks take the form of protectionism and other barriers driven by political and social issues. These policies distort the value of resources, and make diversification more viable than in emerging markets (Kock and Guillen, 2001). However, it is this protectionism and barriers that may inhibit the very same companies from diversifying internationally since they are unable to compete on the global stage on a like for like basis.

Companies in emerging markets also face limited competition. The state curbed opportunism and allocated resources mean that there is little need for formal laws to define exchange relationships among economic actors (Hoskisson et al. (2000)). This limited competition driven mainly by inefficient markets or corruption allows conglomerates in these markets to retain their competitive advantage and not suffer from diversification discounts.

IT based studies on firms from emerging economies are helpful but they have barely scratched the surface of the impact of both formal and informal institutions on the strategies (Wright et al. 2005).

2.4.2. Resourced-Based View (RBV)

Resource-based View (RBV) was born from strategic management more than 30 years ago as the contemporary and dominant approach to strategy development. Theories developed in RBV have been centred in developed economies and have looked to explain characteristics and trends of such markets. RBV seeks to identify the circumstances under which a competitive advantage is likely to persist (Lockett and Thompson, 2010).

RBV views a firm as a bundle of resources and capabilities (Wernerfelt, 1984). Resources consist of tangible components like financial and physical assets like property, plant and equipment and intangible components like human capital, patent and technology know how (Amit and Schoemaker, 1993). Capabilities are "invisible assets", tangible or intangible organisational processes developed by a firm over a period of time that "cannot be easily bought; they must be built" (Teece, Pisano, and Shuen, 1997).

Co-ordination of resources is another critical part to the success of any business, particularly if the business is expected to compete in more than one industry. It is for this reason that resource-based theory or RBV would play a vital part of organisational strategy both in developed and emerging markets alike. Efficient and strategic allocation of limited resources is essential in highly diversified (conglomerate) companies (Nachum, 2004). RBV is concerned with the influence of firm resources and capabilities in explaining why firms differ

and how they achieve and sustain competitive advantage (Barney, Wright and Ketchen, 2001).

However, many of the RBV's key concepts - core competencies, dynamic capabilities etc., - are not directly observable which, as Godfrey and Hill (1995) acknowledge, creates difficulties in generating testable evidence. Despite the above even its fiercest critics do not deny the RBV's value, particularly in explaining the sustainability of competitive advantage (Lockett and Thompson, 2010).

However, conglomerisation in developed markets often increases the scope of operations, increasing costs and complexity. Other inefficiencies and costs arise from conflict between businesses, internal capital market conflicts and increased control and effort losses due to shirking (Markides, 1992). The lack or incapability of resources to manage these inefficiencies may mean that the additional costs involved with conglomerates lead to poorer performance and thus carry a diversification discount in developed markets (Ramanujam and Varadarajan, 1989).

The impact of higher cost structures becomes clearly evident during times of economic shocks for developed markets. These economic shocks primarily result from disruptions in demand, markets, suppliers and buyers; rapid increases in financial costs and risks; and changes in exchange rates (Singh and Yip, 2000). According to Chakrabarti et al. (2007) it is expected that these economic shocks that have a greatest performance impacts on conglomerates.

Recent developments of the RBV put emphasis on the notion of 'strategic flexibility' of firms. (Uhlenbruck, Meyer, and Hitt, 2003). There is a strong emphasis on the fact that the continuously changing market conditions require the development of 'strategic flexibility' that should help firms to take advantage of existing and new strategic opportunities. However, developed markets are characterised by more bureaucratic and formal institutional environments. This often results in a less strategic flexibility, particularly in conglomerates where purely from a logistics perspective, decisions take longer to be made. This constraint may reduce an organisations ability to adapt to its environment resulting in a reduced competitive advantage culminating in a diversification discount in developed markets.

Misalignment to Emerging Markets

Research on emerging economies started to accumulate a critical mass when the RBV literature gathered steam. This is based on the perception that emerging market countries are often resource rich. Research on emerging economies has significantly broadened and deepened RBV while raising new puzzles and questions (Meyer and Peng, 2004).

Firms in emerging markets need to compete in political markets characterised by informal relationships (Oliver and Holzinger, 2008) in order to secure access to capital or other scarce resources. This informal mechanism of resource procurement, which relates to IT, results in only a select few organisations

being able to secure capital. This is especially important since those companies that are able to acquire these scarce capital resources certainly have a competitive advantage over their rivals, thus alleviating possible diversification discounts associated with diversification in emerging markets.

Strategic flexibility of an organisation depends jointly on the inherent flexibility of resources available to the organisation and on managers' flexibility in applying those resources to alternative courses of action or flexibility in coordinating the use of resources (Sanchez, 1995). Conglomerates increase complexity whilst reducing their flexibility and responsiveness to external change. Strategic flexibility is characterised by complex ability to manage and adapt these resources in developed markets. Startup operations coupled with scarcity of resources in emerging markets mean that strategic flexibility may not be necessary. Within an emerging market context this may not be a requirement.

Matching of skill-sets to the environment is a major consideration for organisations looking to diversify into emerging markets. Often managerial expertise derived from previous experience seem unlikely to provide a resource in an emerging economy environment (Lyles and Baird, 1994). This RBV factor is likely to inhibit conglomeration efforts in emerging economies but also result in a competitive advantage for those conglomerate companies that are able to build competencies form unique skills acquired.

The strategy of related diversification enables firms to exploit economies of scope (Teece, 1982, Porter, 1987). This allows business units (BUs) to exploit any synergies between BU's to achieve advantages over competitors. Sharing and skills transfers enable the diversified firm to reduce overall operating cost (Hill, 1988). Conceptually, diversification should have a positive influence on firm performance as it helps the firms to achieve economies of scope, greater reach and leverage its experience in other markets (Rumelt, 1974). Within an emerging market context this competitive advantage may be retained because of the lack of institutional framework that would otherwise erode this advantage in an attempt to ensure market efficiency and fairness.

2.4.3. Learning Theory (LT)

Organisational learning has become a prominent concept in organisation theory and strategic management. LT argues that knowledge and experience are important predictors of a firm's performance the degree to which firms acquire knowledge through experience determines their success (Fiol and Lyles, 1985).

LT enables organisations to encode inferences from history into routines that guide behaviour (Levitt and March, 1988). Organisations learn if the knowledge acquired is recognised as potentially useful and can be applied at a later stage.

There appears to be little research that exists about organisational learning, diversification and firm performance (Hsu and Pereira, 2008). This is obviously an area were significant contribution is yet to be made.

However, Ghoshal (1987) argues that significant differences in basic knowledge and skills among business units greatly impede learning. If they have a similar background, it is less costly for units in related diversified firms to establish shared understanding about the skills and capabilities possessed by other divisions. However, in developed economies these learning capabilities are difficult to retain. This is on the back of a more sophisticated institutional framework that supports the ease of movement of force work through established recruitment and human resource management functions. This fluidity of the work force prevents learning and skills from being unique and thus allowing firms to build a competitive advantage. This is especially so for conglomerates in developed markets contributing to a diversification discount.

Diversity among business units can create greater value of learning (Inkpen, 2000). Learning is driven by diversity in experience. It is this diversity of individuals that add to the potential for new knowledge thus allowing the learning opportunity to be enhanced. Cultural and racial diversity is often limited in developed economies unlike emerging markets. This lack of diversity may have a limiting impact on the learning ability of both the staff and the company supporting the diversification discount argument in developed markets.

Developed economies looking to diversify often need to venture into new markets with new consumers. A lack of innovation coupled with an inability to assimilate the information to redeploy resources may put these conglomerates in developed markets at a major disadvantage. Hitt, Dacin, Levitas, Arregle and Borza (2000) argue that selection decisions are based on needs to acquire resources and potential organizational learning embedded in specific market contexts.

Misalignment to Emerging Markets

Diversification provides "greater learning or international experience" and better "global scanning of rivals, markets and other profit opportunities" (Kim, Hwang and Burgers 1993, p. 276). Kim et al. (1993) also goes on to say that diversity of national markets exposes firms to multiple stimuli which provide a broader learning opportunity to develop more diverse capabilities than are available to focused companies. Emerging market economies are often forced to pursue non-related diversification (conglomerate) strategies. This is primarily due to the limited scope in emerging markets as apposed to developed markets.

The greater diversity in the knowledge of managers and other workers aggregates to richer knowledge structures at the level of the firm (Walsh, 1995). In emerging markets experiential, cultural and racial diversity is in abundance unlike developed markets. Diversity of learning's also gives rise to new ideas. The infusion of new ideas and new practices sparks innovations and boosts technological capabilities (Miller and Chen, 1994).

According to Inkpen (2000), diversity creates greater value of learning which is often driven by diversity in experience. Cultural and racial diversity forms a vital part of emerging markets. This diversity is likely to have a positive impact on companies looking to diversify in developing markets. This ability to leverage learning's acquired from past experience can be utilised to create a competitive advantage.

The underdeveloped institutions in emerging markets force many companies to do more (diversify) activities than the companies in developed countries. These companies learn to build competencies of co-ordinating these activities early on. It is these competencies that allow conglomerates in emerging markets to thrive. Oliver (1991) argued that firms can change their institutional environments by developing strategic responses instead of adapting passively.

2.4.4. Adaptive Theory (AT)

The term "adaptation" literature is employed in a number of ways ranging simply from "change", including both proactive and reactive behaviour (Miles and Snow, 1978), to a more specific denotation of "reaction" to environmental forces or demands (Astley and Van de Ven, 1983). Adaptive action is likely to take the form of one of the following courses of action; reactive, concurrent or anticipatory, spontaneous or planned, short-term and tactical or longer-term and strategic (Pelling and High, 2005).

Adaptation often gives rise to organisational differentiation. Differentiation refers to the differences across organisational sub-units that arise as a consequence of their local adaptation to unit specific tasks and environments (Dougherty, 2001). Differentiation increases the responsiveness of the organisation and hence its ability to adapt to situations or circumstances. A firm's capacity to respond in a co-ordinated and co-operative manner to changing conditions is often labelled as adaptive capacity. Differences in capacity are reflected in performance.

According to March (1991) both exploration and exploitation are essential for long-run adaptation. Exploitation often leads to early success, which in turn reinforces further exploitation along the same trajectory, thereby creating a "success trap". However, in developed markets transparency and more efficient dissemination of information ensure that this exploitation does not remain consistent. Other companies are able to replicate similar exploitative measures and through ease of exploration driven by IT, they are able to diversify into your market thus eroding any above average market performance. New entrants will continue to enter to the market until all out-performance is eroded. It is for this reason that diversified businesses looking to exploit market opportunities in developed markets will deliver, at best, average market performance.

Institutional framework in developed markets contributes significantly to the stability of the economy and the business environment. It is this stability that provides conglomerate companies with a false sense of comfort. Fiske and

Taylor (1991) described how well-developed belief systems resist change. This seemingly non-dynamic environment prevents companies from building the skill set of adaptation thereby crippling the company in times of economic shock or turbulence. These companies are unable to adapt their resources to their new environment or to utilise learning that may be useful in directly revising the strategic intent.

Misalignment to Emerging Markets

AT has strong ties to both LT and RBV, since both these schools of theories are needed to be flexible enough to accommodate an organisations ability to adapt to its environment. Organisations in emerging markets have been able to employ learning's from the environment to re-organise resources to drive adaptation. According to Pelling and High, (2005) adaptation in terms of learning supports a valid adaptive strategy. This linkage plays a vital part in building or maintaining a competitive position.

Uncertainty clouds the judgment of actors and the clues that inform decisions and actions emerge from the relevant institutions thus giving purpose and meaning for decision-makers such as strategists (Jarzabkowski, 2008). It is this uncertainty fuelled by institutional voids that often characterise emerging markets. In a market troubled by volatility and uncertainty, companies have no option but to look to diversify to stabilise earnings. This need for adaptation may take the form of either related or unrelated diversification.

Adaptive interactions between organization and environment are important to most firms, since few markets are stable and environments are increasingly perceived as complex (Prahalad and Hamel 1994). Uncertainty in emerging markets means that these conglomerate companies have also been able to acquire unique skills that allow them strategic flexibility. This ability to adapt to circumstances by shaping the business in accordance to the environmental needs, mean that these companies have a unique competitive advantage that may not be present or possible in developed economies.

2.5. Diversification Trends in Emerging Markets

An emerging economy can be defined as a country that satisfies two criteria: a rapid pace of economic development and government policies favouring economic liberalization and the adoption of a free-market system (Arnold and Quelch, 1998). The only constant in emerging economies seems to be change. (Wright et al. 2005). Hoskisson et al. (2000) identified that of the 64 emerging economies, 51 are rapidly growing developing countries and 13 are in transition from centrally planned economies (often called 'transition economies').

Emerging economies are assuming an increasingly prominent position in the world economy (Wright, Peng, Filatotchev and Hoskisson, 2005). The growing importance of emerging economies is reflected in the increasing amount of strategy research and literature in recent years. It is the entries of multinational enterprises (MNEs) from developed economies into emerging economies that

first created the rising appetite for knowledge about competition in these new markets (Meyer, 2004; Ramamurti, 2004). The extent to which performance can be linked to diversification plays an important part in determining if a firm chooses to diversify in emerging markets.

However, emerging economies are more likely to be at a disadvantage in global markets relative to firms from developed economies. This often forces emerging market firms to first engage in product diversification. Often companies in these markets preferred to diversify, in terms of products, into a number of related and unrelated businesses that are cantered on their traditional core business (Kranenburg, Cloodt, and Hagedoorn, 2001). Early work done by Khanna and Palepu (1997) argue that greater diversification (conglomeration) may not harm performance in emerging economies because of insufficient market and institutional development. It is these insufficient markets and institutions that prevent competitive advantages from being eroded and allow conglomerate companies in emerging markets to enhance their performance.

For reasons supported by the schools of theory above, it appears that diversification is a strategy that is more suited for emerging markets than developed markets. Literature supporting unrelated diversification is born from theories that have arisen in developed markets and assumed to hold in emerging markets. However, not all theories that hold for developed markets hold for emerging markets. Despite several studies that propose that unrelated conglomerate strategies are less likely to be profitable in emerging economies

(Guillen, 2000; Khanna and Palepu, 1997; Kock and Guillen, 2001), the above study argues from a theoretical perspective that conglomerates in emerging markets may not result in diversification discount but may result in better financial performance. From this we can infer that specialisation or focus strategies are likely to be on par if not inferior to conglomerate strategies.

2.5.1. Case Studies in South Africa

Khanna and Rivkin (2001) define business groups as a 'set of firms' which, though legally independent, are bound together by a constellation of formal and informal ties. The South African economy characterised by a similar institutional framework of both formal and informal aspects set a relatively unique environment to test the above framework given the history of the country. The history of the country has played a vital role in shaping the current institutional framework that allows conglomerates or large businesses to build and maintain a competitive advantage.

Linking back to the above framework we find that access to resources (RBV) in South Africa may be better than most other emerging markets but still heavily influenced by politics and corruption. According to Lockett and Thompson, (2010) the consequence is that some producers benefit from more advantageous access to resources than others, generating for themselves a potential competitive advantage. Learning and skills development that relate to IT is still much to be desired for most South Africans despite the world class

level of education that is available for those that can afford it. Lastly, because of the formal and informal institutional frameworks and adopted government policies, we find that the South African economy is highly susceptible to changes and volatility. This has forced organisations to build strong adaptive (AT) skills as response mechanisms.

The apartheid policies of the past drove South Africa into economic isolation, forcing many organisations to diversify from a product perspective until the early 1990's. Economic sanctions and regulation placed on South African organisations, forced organisations to invest within South Africa which led to the formation of large diversified conglomerates in the 1970's and 1980's (Rossouw, 1997). In more recent years post sanctions and the relaxing of regulation we have seen more South African organisations (e.g. SAB Miller, Anglo, Old Mutual, Investec and BHP) look to diversify from a geographic perspective and restructure their product portfolios. Diversification efforts often characterised by mergers and acquisitions increased dramatically from 1994 to a peak of 1019 deals in 1998 (Chabane, Goldstein and Roberts, 2006). The result has been a trend of increased geographic diversification in local and foreign markets for South African companies at the expense of local product diversification.

A recent South African study conducted by Bhana (2004), looked to measure the performance of corporate restructuring through spin-offs of organisations that were listed on the JSE. The study conducted from 1988 to 1999, focused on the divesture by the parent organisations via a spin-off. Bhana (2004) found

that of 47 voluntary spin-offs initiated by parent organisations 19 companies had positive abnormal returns for up to three years beyond the spin-off announcement date. This may allude to South African organisations benefiting from being more focused.

More recently, work done by Rushin (2006) attempted to prove that conglomerate diversification within a South African context lead to better financial performance. Rushin's analysis was confined to 58 companies found in the industrial sector of the JSE for the period 2001 to 2005. From the 58 companies, 15 companies were classified as focused and 15 as diversified. Rushin's study concluded that it cannot be statistically proven that diversified organisations outperform focused organisations. The results of the study proved to be inconclusive.

The above literature highlights that the reasons for positive performance of diversified companies in developed economies do not always hold in emerging economies. Supported by these arguments, this research report intends to conduct an empirical study to compare the financial performance of JSE listed companies divided into conglomerate organisations and focused organisations and to establish in the South African and hence emerging market context conglomerates do not suffer from a diversification discount.

3. RESEARCH PROPORTIONS AND QUESTIONS

3.1. Purpose of Research

As stated in Chapter 1, the main purpose of this study was to determine whether conglomeration in emerging markets results in a significantly lower level of profitability as is characterised by developed markets. To test this hypothesis we will test for any statistically significant evidence that highlights underperformance by conglomerates in South Africa. We suspect that there is likely to be no difference in the level of profitability for focused and conglomerate firms and that over time conglomerates attain comparable if not enhanced financial performance than product focused companies. The factors that are most important in evaluating performance relate purely to financial indicators. These measures have been established through literature as being a good measure of performance and are available on all South African listed companies.

3.2. Research Hypothesis

H0: Conglomerates do not suffer from a diversification discount hence are comparable with focused companies in emerging markets.

H1: Conglomerates suffer from a diversification discount in emerging markets.

H0a: *The Return on Equity (ROE) for companies that are conglomerates is greater than or equal to those that are focused.*

H1a: *The Return on Equity (ROE) for companies that are conglomerates is lower than those that are focused.*

H0b: *The average Return on Asset (ROA) for companies that are conglomerates is greater than or equal to those that are focused.*

H1b: *The average Return on Asset (ROA) for companies that are conglomerates is lower than those that are focused.*

H0c: *The rate of growth in Earnings per Share (EPS) for companies that are conglomerates is greater than or equal to those that are focused.*

H1c: *The rate of growth in Earnings per Share (EPS) for companies that are conglomerates is lower than those that are focused.*

4. RESEARCH METHODOLOGY

4.1. Research design

A literature review was conducted to identify research designs adopted by previous studies. A similar study done by Rushin (2006), would suggest that a quasi-experimental design would be the most appropriate research design given the nature of the study and its context.

According to (Harris, Baumgarten, Zuckerman, Fink and Perencevich, 2004) quasi-experiments differ from true experimental research in that the researcher cannot randomly assign a unit of analysis to the different groups of the study. For this study the limited ability to classify all companies by SIC code due to limited company information forced the researcher to adopt a quasi-experimental design and be less selective in the manner in which the sample was derived.

For most quantitative studies when choosing a set of control firms, the researcher has the option to match randomly, by size, by industry or by size and industry. This study focused on matching by industry, specifically the industrial sector of the JSE. A concerted effort was then made to include all companies that qualify especially the larger industrial sector companies so as to ensure that the sample was representative. Market capitalisation was used

as a proxy to represent the size of the company and to validate that the most significant sample of companies were included.

According to Kahle and Walkling (1996) if researchers wish to match by industry, they must choose coarse or fine levels of industry definition (e.g. two-digit or four-digit SIC code). Due to the limited SIC related data available in South Africa an attempt to find a balanced position was made. Similar to Rushin (2006) SIC categorisation for this study was concluded at a three-digit level validating and extending the SIC categorisation against McGregor BFA. Rumelt's specialisation ratio was then used to validate the level of diversification and separate the highly diversified companies from those companies that were moderately diversified or that had related diversification. This implies that both the categorisation and the product count approach (SIC code) was incorporated into this study.

A conscious effort was made to reclassify all qualifying organisations into SIC categories, independently of work done by Rushin (2006). A validation against Rushin's (2006) work was attempted so as to independently validate his SIC classification and add strength to the categorisation method. Were discrepancies existed the SIC classifications derived were verified against McGregor BFA for independent validation.

4.2. Population

The population consisted of all industrial sector listed companies on the main board of the Johannesburg Stock Exchange (JSE) for South Africa. The population was limited to the industrial sector for the following key reasons:

- This is a popular sector in the South African context with a fair sample size (n=67)
- Sector possesses a wide variety of companies adopting contrary (i.e. conglomerate and focused) strategies which we are looking to test
- Limited availability of financial and SIC related data made it difficult to include other sectors

Building on Rushin's (2006) study, the sample population was confined to companies that can either be classified as highly diversified (conglomerates) or highly focused. These companies needed to have originated prior to 2001, and needed to have remained either a focused or conglomerate company for the duration of the investigation period (2001-2009). A total of 67 companies were listed in the Industrial sector of the JSE and made up the full population size (see *Appendix 1:*).

4.3. Sampling Method and Size

A non-probability convenience sample technique was used. The benefits of using this sampling procedure was that a larger sample size was obtained quickly and economically (Zikmund, 2003). Unfortunately, due to the limited number of companies listed in the Industrial sector of the stock exchange and the strict qualifying criteria required to make up the sample population, not all companies listed qualified for each of the two categories. This reduced the sample population and limited the use of less bias probability sampling techniques.

The sampling procedure used had some key disadvantages. The variability and bias of estimates cannot be measured or controlled and projecting data beyond the sample is inappropriate (Zikmund, 2003). However, the sampling technique was still adopted because of the need to increase the sample size in view of the qualifying criteria.

The independent samples were made up of all companies within the population that met the qualifying criteria and were data on company information was available. An attempt to incorporate all companies that qualify was made. However, practical constraints relating to lack of data forced the researcher to eventually exclude some companies.

4.4. Unit of Analysis

A company listed on the Industrial sector of the South African JSE. These companies were sourced from the Inet-Bridge and McGregor BFA databases and relate to fully listed companies on the main board of the stock exchange. These companies have been categorised and remained in their respective categories for the full period of investigation.

4.5. Data Collection Process

Data collection was required at an individual company level. Data was required on each of the Industrial sector listed companies in order to facilitate the selection of the sample set of companies required to make up the two categories being investigated. Data investigation into a company's revenue/profit generation structure was required to ascertain the different business units within each listed company. These business units then needed to be classified, using the SIC classification method, into their respective industry categories. A three digit SIC classification was required to evaluate and establish diversification or specialisation of revenue generated.

McGregor BFA's unofficial SIC classifications listed on their website appeared to be the only valid indication of SIC classification for South African companies. It is important to bear in mind that South Africa has not fully adopted SIC classification and no formal directory exists in which SIC codes per company

may be readily sourced. This implies a rather manual exercise to classify and validate each company's SIC code.

Once the SIC classification was established each companies level specialisation ratio was calculated aggregating by business activity. Rumelt (1982) developed an index to determine the level of diversification by evaluating the quantum of revenue generated through activities of a similar nature. For this investigation we focused only on the two extreme categories of conglomerates and focused, as apposed to the 9 categories developed by Rumelt (1982). Companies with specialisation ratios above 90% (Rumelt used 95%) were deemed as focused whilst companies with ratios under 70% (similar to Rumelt (1982)) were deemed as conglomerates.

Financial performance data of each company was required to establish if there was a significantly different level of performance between companies that had focused versus those that had conglomerate type operations. Data was gathered on an annual basis across the full review period.

Building on the work done by Rushin (2006) financial data was effectively sourced from McGregor's Bureau of Financial Analysis (BFANet) database. All listed South African companies were reported and well represented in the database. In-depth technical data into company performance was available on a bi-annual basis to assist in analysis.

4.6. Instrument

This research project was based on the analysis of secondary data. Secondary data was defined as data collected but not for the intended purpose of a particular research or analysis. The secondary data in this case was publicly disclosed information and was required by law to be made available. Data required for the purpose of this research was required in three stages.

Firstly, data was required to ascertain the level of diversification or specialisation of each company. This information required a review of each company's income statement and the makeup of revenue generation by each business unit within the company. This secondary data was sourced from the McGregor's BFA and INet Bridge websites which appeared to be the most accessible and accurate source of information.

Using the McGregor BFA classifications each business unit was classified into 3 digits SIC classifications so as to establish whether the different business units operate in similar or different industry sectors. This classification was done independently of work done by Rushin (2006), but was validated against it. Companies whose income was predominantly derived from a single sector were categorised into the focused sample set whilst those that derived income from multiple sectors were deemed as conglomerate companies. The use of Rumelts (1986) specialisation ratio was then employed to further assist in the classification process and establish those companies that were highly diversified conglomerates.

Secondly, data that related to market capitalisation was reviewed so as to ensure that the sample being analysed was representative of the industrial sector. The strict qualifying criteria meant that small sample sizes could result in inaccurate findings. Market capitalisation was used as a measure of size ensuring that final sample size was representative of the full population further lending creditability to any findings.

Lastly, performance data was required at a company level and on an annual basis for the full review period. Financial information that related to key performance measures (e.g. ROE, EPS and ROA) were tracked and analysed. Financial information was collected at company level from McGregor's BFA or INet Bridge websites before being screened and categorised.

Key performance variables were extracted from available secondary data sources. Methods of calculation were assumed to be correct and consistent across all companies. Were key performance measures were not readily available, key variables that were used in the formulation of those variables were extracted and the relevant ratios calculated.

4.7. Data Analysis

The process of analysis used to evaluate the results of the study conducted was a combination of both descriptive and inferential statistics. Descriptive and

inferential statistics were applied to both the data as well as the various outputs to provide insights to the results gained.

4.7.1. Descriptive Statistics

According to Zikmund (2003), descriptive statistics, describe or summarise information about a population. Descriptive statistics applies to a group or unit of analysis. Descriptive statistics for each performance measure was calculated and presented in a tabular format. Key elements considered were: number (N), mean, median, minimum, maximum, standard deviation, skewness, kurtosis. The definitions of the various elements are represented in the Table 4 below.

Table 4: Description of statistical elements

Statistical Element	Description
Number (N)	Number of observations in a sample
Mean	Long-run average
Median	Midpoint of the distribution
Minimum	Smallest value in set of numbers
Maximum	Largest value in set of numbers
Standard deviation	Square root of variance that provides an indication of the spread of the data
Skewness	Measure of asymmetry of the probability of distribution around the mean
Kurtosis	Measure of height of the probability of distribution around the mean

Zikmund (2003)

4.7.2. Inferential Statistics

Inferential statistics were used to make inferences about the sample data using hypothesis testing. Different inferential techniques (i.e. parametric or non-parametric testing) were adopted depending on the normality of the sample distribution. Albright, Winston and Zappe (2006) state that a sample size greater than 30 is an accepted norm to analyse under the premise of a normal distribution.

In order to prove or disprove the hypothesis for each of the profitability measures, the sample mean of the categories under evaluation (i.e. conglomerate and focused) were compared on an annual basis to determine if they deviated from the hypothesised distribution. According to Zikmund (2003) the process to be followed in testing a hypothesis is as follows:

- The null hypothesis (H_0) was stated
- The alternate hypothesis (H_{1a}) was stated
- The significance level alpha(α) was chosen
- The sample size (N) was chosen
- The ρ-value was needed to be calculated and compared against the significant alpha(α) level
    - If $\rho \geq \alpha$, the null hypothesis (H_0) would not be rejected
    - If $\rho < \alpha$, the null hypothesis (H_0) would be rejected

4.7.2.1. T-Test

In this study, the difference of performance for focused and conglomerate companies were evaluated to verify whether statistical differences existed between the two groups. A t-test, for the difference of performance, was used to test the above mentioned hypothesis that the mean scores of the different categories (focused and conglomerate) were significantly different for the two independent groups (Zikmund, 2003).

Due to the small sample size normality of data may be difficult to verify. For this reason both parametric and non-parametric tests were employed to validate the results. The tests used are listed below:

- Equal-Variance T-Test**- *Parametric test***
- Aspin-Welch unequal-variance test**- *Parametric test***
- Mann-Whitney U test for difference in medians**- *Non parametric test***

Due to the sequential nature of the data being reviewed (longitudinal study from 2001 to 2009) the data was suspected to be highly correlated. This meant that financial data collected for a specific year was highly related to the data collected for the previous year. For this reason, t-tests were firstly done at a point in time basis, comparing the two categories only on an annual basis.

Secondly, the data was then aggregated into three independent samples made up of every third year (e.g. 2001, 2004 and 2007). By using every third year's data, the chances of autocorrelation would be reduced significantly. The three samples (2001_04_07; 2002_05_08 and 2003_06_09) were then independently tested so as to validate the findings.

4.8. Research Limitations

- The annual reports of companies were not always transparent and could have resulted in misrepresentation.
- Segmentation of divisions were not always clearly defined and aligned to SIC code definitions.
- Levels of diversification and specialisation were validated at the beginning and end of the review period and assumed to remain constant for the full review period.
- Study was based on one emerging market which may not hold true for other emerging markets.
- Research was limited to highly specialised or diversified companies and therefore the study does not investigate the relationship of a firm's performance across the diversification spectrum.
- Sample bias and macro economic factors could distort results.
- Study confined to listed companies which could result in different results if applied to unlisted companies. Listed companies often behave differently to unlisted companies since they need to manage shareholder interests.
- Study confined to a single country which could result in different results if applied to a different country.
- Composition and accounting rules across companies may have been inconsistent.

5. RESULTS

The results of the research are divided into three key sections. The first section show the results of the independent classification of the organisations into either focused or conglomerate organisations using a combination of the SIC classification and the Specialisation Ratio methods. The second section then establishes the significance of the sample population used in relation to those excluded. The third section shows the results of the performance data for the two categories of companies in relation to the hypothesis testing.

5.1. Company Categorisation

A summary of the results of the independent classification by organisation into the two categories (focused or conglomerates) are reflected Table 5 below.

Table 5: List of Focused and Conglomerate Companies Sampled

19 focused organisations and 14 conglomerate organisations were identified and listed alphabetically in Table 5 above. Both the three-digit SIC Code and corresponding SR's were verified for year 2001 and 2009, to ensure that the organisation remained either focused or conglomerate at the beginning of the period as well as the end of the period of study. A more detailed analysis into the derivation of the three-digit SIC Code by organisation can be viewed in *Appendix 3: Focused Organisations* and *Appendix 4: Conglomerate Organisations*.

A total of 67 organisations were listed in the industrial sector of the JSE. A portfolio compromising of 33 (i.e. 19 focused plus 14 conglomerates)

organisations were compiled to form the sample of the study. The balance of the organisations, compromising of 34 organisations (see *Appendix 5: Exclusion Reasons* for more detail) were excluded from the sample due to the following key reasons:

- Organisations which obtained their JSE listings after 2001 were not included in the samples- ***Listed after 2001***.
- The organisations failed to remain constant as focused or conglomerate for the full duration of the review period - ***Change in Strategy*.**
- Organisations that were partially diversified with SR between 0.9 and 0.7 have not been used in the data- ***Relative Diversification.***
- Organisations that did not have their primary operations in South Africa were not included in the samples- ***Geographical Diversification.***
- Organisations that did not report their segmented revenues sufficiently to be able to link the revenues with a particular three-digit SIC code- ***No Data Available.***

5.2. Significance of Sample Population

A hypothesis test was then used to establish the significance of the sample population used. The results include a combination of parametric and non-parametric tests with ρ-values. This analysis was done to lend credibility to the results obtained and to prevent us from later on mistakenly rejecting-(Type I

error) or accepting-(Type II error) the null hypotheses that relate to financial performance.

5.2.1.1. Hypothesis: Sample Significance

The null hypothesis (H_0):

The Market Capitalisation of sample organisations is less than or equal to the Market Capitalisation of the industrial sector organisations excluded.

The alternative hypothesis (H_1):

The Market Capitalisation of sample organisations is greater than the Market Capitalisation of the industrial sector organisations excluded.

H_0: $\mu_{MktCapSample} \leq \mu_{MktCapExcluded}$

H_1: $\mu_{MktCapSample} > \mu_{MktCapExcluded}$

Where μ_x = mean

A t-test was calculated on an annual basis for the full review period as indicated in Table 6 below. Due to the small sizes of around 30, the Central Limit Theorem that assumes normality was difficult to establish in all cases. For this reason annual hypothesis testing using both parametric and non-parametric tests were conducted. The two categories tested were made up of companies included in the "Sample" and those companies in the Industrial sector that were "Excluded". Descriptive statistics that relate to frequency, mean standard deviation and standard error are also displayed. It is important to note that

rejection of the *H0* does imply the acceptance of the alternate hypothesis and that the alternative hypothesis is significant at the 5% alpha level.

Table 6: Hypothesis Test Market Capitalisation

			Descriptive Stats				One-tailed test Equal Var		Aspin-Welch unequal-var test		Mann-Whitney U test	
Mkt_Cap_2001	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result	Prob. Level (ρ)	Result	Prob. Level (ρ)	Result
	Sample	33	4,588.55	7,335.59	1,276.96	0.05	0.0687	*Don't Reject H0*	0.0695	*Don't Reject H0*	0.0423	*Reject H0*
	Excluded	34	2,165.03	5,781.41	991.50							
			Descriptive Stats				One-tailed test Equal Var		Aspin-Welch unequal-var test		Mann-Whitney U test	
Mkt_Cap_2002	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result	Prob. Level (ρ)	Result	Prob. Level (ρ)	Result
	Sample	33	2,014.49	3,786.58	659.16	0.05	0.0039	*Reject H0*	0.0053	*Reject H0*	-	*Reject H0*
	Excluded	34	204.29	672.32	115.30							
			Descriptive Stats				One-tailed test Equal Var		Aspin-Welch unequal-var test		Mann-Whitney U test	
Mkt_Cap_2003	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result	Prob. Level (ρ)	Result	Prob. Level (ρ)	Result
	Sample	33	2,069.15	3,594.84	625.78	0.05	0.0021	*Reject H0*	0.0030	*Reject H0*	-	*Reject H0*
	Excluded	34	204.97	643.92	110.43							
			Descriptive Stats				One-tailed test Equal Var		Aspin-Welch unequal-var test		Mann-Whitney U test	
Mkt_Cap_2004	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result	Prob. Level (ρ)	Result	Prob. Level (ρ)	Result
	Sample	33	2,753.24	4,720.21	821.68	0.05	0.0026	*Reject H0*	0.0036	*Reject H0*	-	*Reject H0*
	Excluded	34	351.94	1,091.84	187.25							
			Descriptive Stats				One-tailed test Equal Var		Aspin-Welch unequal-var test		Mann-Whitney U test	
Mkt_Cap_2005	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result	Prob. Level (ρ)	Result	Prob. Level (ρ)	Result
	Sample	33	3,972.12	6,820.07	1,187.22	0.05	0.0040	*Reject H0*	0.0052	*Reject H0*	0.0000	*Reject H0*
	Excluded	34	664.03	1,735.78	297.68							
			Descriptive Stats				One-tailed test Equal Var		Aspin-Welch unequal-var test		Mann-Whitney U test	
Mkt_Cap_2006	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result	Prob. Level (ρ)	Result	Prob. Level (ρ)	Result
	Sample	33	5,137.21	8,714.47	1,517.00	0.05	0.0050	*Reject H0*	0.0063	*Reject H0*	0.0000	*Reject H0*
	Excluded	34	993.94	2,617.46	448.89							
			Descriptive Stats				One-tailed test Equal Var		Aspin-Welch unequal-var test		Mann-Whitney U test	
Mkt_Cap_2007	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result	Prob. Level (ρ)	Result	Prob. Level (ρ)	Result
	Sample	33	7,357.46	11,525.69	2,006.37	0.05	0.0034	*Reject H0*	0.0045	*Reject H0*	0.0005	*Reject H0*
	Excluded	34	1,639.88	3,056.01	524.10							
			Descriptive Stats				One-tailed test Equal Var		Aspin-Welch unequal-var test		Mann-Whitney U test	
Mkt_Cap_2008	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result	Prob. Level (ρ)	Result	Prob. Level (ρ)	Result
	Sample	33	5,205.30	8,573.81	1,492.51	0.05	0.4011	*Don't Reject H0*	0.4004	*Don't Reject H0*	0.0939	*Don't Reject H0*
	Excluded	34	4,406.27	16,182.92	2,775.35							
			Descriptive Stats				One-tailed test Equal Var		Aspin-Welch unequal-var test		Mann-Whitney U test	
Mkt_Cap_2009	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result	Prob. Level (ρ)	Result	Prob. Level (ρ)	Result
	Sample	30	5,126.37	7,639.94	1,394.86	0.05	0.0247	*Reject H0*	0.0294	*Reject H0*	0.0040	*Reject H0*
	Excluded	37	1,925.46	5,428.53	892.45							

5.3. Descriptive statistics of the performance measures

The descriptive statistics relating to the performance measures are summarised in Table 7 below. The aim of the research is to present and test all observable (n=297) data points for each financial measure since these observations represent actual financial data that was recorded by the organisations.

Table 7: Descriptive statistics of performance measures

	ROE		ROA		EPSGR	
Descriptive Stats	**Focused**	**Conglom**	**Focused**	**Conglom**	**Focused**	**Conglom**
Sample Size (n)	**171**	**126**	**171**	**126**	**171**	**126**
Mean	18.52	22.51	13.79	17.25	6.98	27.93
Median	18.60	20.95	13.20	15.95	18.66	17.01
Range	322.20	143.40	86.10	40.40	2,629.17	2,536.19
Minimum	-203.70	-34.70	-34.90	-1.30	-1,662.50	-476.19
Maximum	118.50	108.70	51.20	39.10	966.67	2,060.00
Skewness	-3.80	2.17	0.33	0.86	-3.14	8.65
Kurtosis	36.34	12.11	5.46	1.08	26.76	90.70
Standard deviation	25.27	15.24	9.98	7.15	229.94	197.91

Table 7 above highlights descriptive statistics for each of the three performance measures (ROE, ROA and EPS) that we will look to test. These statistics are further broken down into the two categories (conglomerate and focused) for each of the descriptive statistic variables.

5.3.1. Hypothesis test results

The results of the three hypothesis tests are presented below in tabular form. The results include the one-tailed t-test with the ρ-value approach as well as

descriptive statistics. Parametric and non-parametric tests are displayed when normality of data could not be verified.

5.3.1.1. Hypothesis 1: ROE

The null hypothesis (H_0):

The ROE of conglomerate organisations is greater than or equal to the ROE of the focused organisations.

The alternative hypothesis (H_1):

The ROE of conglomerate organisations is less than the ROE of the focused organisations.

H_0: $\mu_{ROEConglom} \geq \mu_{ROEFocus}$

H_1: $\mu_{ROEConglom} < \mu_{ROEFocus}$

Where μ_x = mean

A t-test was calculated on an annual basis for the full review period as indicated in Table 8 below. Due to the relatively small size associated with annual hypothesis testing only non-parametric tests were conducted. It is important to note that **failure to reject the H_0** does not imply the acceptance of the null hypothesis, rather that the alternative hypothesis is not significant at the 5% alpha level and that the difference in the ROE between the conglomerate organisations and the focused organisations is due to sampling error.

Table 8: Point in time Hypothesis Test ROE

			Descriptive Stats				Mann-Whitney U test	
ROE_2001	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result
	Conglom	14	16.42	18.60	4.97	0.05	0.5507	*Don't Reject H0*
	Focus	19	17.00	18.73	4.30			
			Descriptive Stats				Mann-Whitney U test	
ROE_2002	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result
	Conglom	14	21.21	11.78	3.15	0.05	0.8188	*Don't Reject H0*
	Focus	19	15.96	12.86	2.95			
			Descriptive Stats				Mann-Whitney U test	
ROE_2003	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result
	Conglom	14	24.07	13.85	3.70	0.05	0.9051	*Don't Reject H0*
	Focus	19	15.85	12.58	2.89			
			Descriptive Stats				Mann-Whitney U test	
ROE_2004	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result
	Conglom	14	22.86	6.13	1.64	0.05	0.9598	*Don't Reject H0*
	Focus	19	4.91	52.51	12.05			
			Descriptive Stats				Mann-Whitney U test	
ROE_2005	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result
	Conglom	14	21.94	7.08	1.89	0.05	0.6354	*Don't Reject H0*
	Focus	19	25.24	26.30	6.03			
			Descriptive Stats				Mann-Whitney U test	
ROE_2006	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result
	Conglom	14	22.46	7.45	1.99	0.05	0.7076	*Don't Reject H0*
	Focus	19	23.08	14.72	3.38			
			Descriptive Stats				Mann-Whitney U test	
ROE_2007	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result
	Conglom	14	29.99	23.65	6.32	0.05	0.8706	*Don't Reject H0*
	Focus	19	23.48	15.22	3.49			
			Descriptive Stats				Mann-Whitney U test	
ROE_2008	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result
	Conglom	14	24.56	18.25	4.88	0.05	0.4349	*Don't Reject H0*
	Focus	19	24.32	18.47	4.24			
			Descriptive Stats				Mann-Whitney U test	
ROE_2009	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result
	Conglom	14	19.10	19.99	5.34	0.05	0.4277	*Don't Reject H0*
	Focus	19	15.82	24.18	5.55			

This analysis was then replicated using longitudinal data, testing our initial hypothesis over the full review period. Due to the sequential nature of the data, every third year was used to compile a sample thus reducing the effects of autocorrelation. The three samples were then independently tested using only parametric tests (n>30) to evaluate results of ROE performance of conglomerates and focused companies over time as indicated in Table 10 below.

Table 9: Longitudinal Hypothesis Test ROE

		Descriptive Stats					One-tailed test Equal Var		Aspin-Welch unequal-var test	
ROE_2001_04_07	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result	Prob. Level (ρ)	Result
	Conglom	42	23.09	18.18	2.80	0.05	0.9160	*Don't Reject H0*	0.9328	*Don't Reject H0*
	Focus	57	15.13	33.67	4.46					
		Descriptive Stats					One-tailed test Equal Var		Aspin-Welch unequal-var test	
ROE_2002_05_08	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result	Prob. Level (ρ)	Result
	Conglom	42	22.57	12.95	2.00	0.05	0.5817	*Don't Reject H0*	0.5870	*Don't Reject H0*
	Focus	57	21.84	20.07	2.66					
		Descriptive Stats					One-tailed test Equal Var		Aspin-Welch unequal-var test	
ROE_2003_06_09	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result	Prob. Level (ρ)	Result
	Conglom	42	21.88	14.47	2.23	0.05	0.8583	*Don't Reject H0*	0.8659	*Don't Reject H0*
	Focus	57	18.25	17.90	2.37					

5.3.1.2. Hypothesis 2: ROA

The null hypothesis (H_0):

The ROA of conglomerate organisations is greater than or equal to the ROA of the focused organisations.

The alternative hypothesis (H_1):

The ROA of conglomerate organisations is less than the ROA of the focused organisations.

H_0: $\mu_{ROAConglom} \geq \mu_{ROAFocus}$

H_1: $\mu_{ROAConglom} < \mu_{ROAFocus}$

Where μ_x = mean

A t-test was similarly calculated on an annual basis for the full review period as indicated in Table 10 below. Due to the relatively small size associated with annual hypothesis testing only non-parametric tests were conducted. It is important to note that **failure to reject the H_0** does not imply the acceptance of the null hypothesis, rather that the alternative hypothesis is not significant at the 5% alpha level and that the difference in the ROA between the conglomerate organisations and the focused organisations is due to sampling error.

Table 10: Point in time Hypothesis Test ROA

			Descriptive Stats				Mann-Whitney U test	
ROA_2001	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result
	Conglom	14	15.66	9.08	2.43	0.05	0.9082	*Don't Reject H0*
	Focus	19	11.86	9.28	2.13			
			Descriptive Stats				Mann-Whitney U test	
ROA_2002	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result
	Conglom	14	16.58	5.43	1.45	0.05	0.9614	*Don't Reject H0*
	Focus	19	12.77	7.48	1.72			
			Descriptive Stats				Mann-Whitney U test	
ROA_2003	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result
	Conglom	14	19.11	7.53	2.01	0.05	0.9774	*Don't Reject H0*
	Focus	19	13.02	7.77	1.78			
			Descriptive Stats				Mann-Whitney U test	
ROA_2004	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result
	Conglom	14	18.36	4.84	1.29	0.05	0.9835	*Don't Reject H0*
	Focus	19	10.22	14.82	3.40			
			Descriptive Stats				Mann-Whitney U test	
ROA_2005	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result
	Conglom	14	18.36	6.06	1.62	0.05	0.9582	*Don't Reject H0*
	Focus	19	14.82	10.02	2.30			
			Descriptive Stats				Mann-Whitney U test	
ROA_2006	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result
	Conglom	14	18.19	7.60	2.03	0.05	0.9299	*Don't Reject H0*
	Focus	19	15.75	10.45	2.40			
			Descriptive Stats				Mann-Whitney U test	
ROA_2007	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result
	Conglom	14	18.66	8.32	2.22	0.05	0.8628	*Don't Reject H0*
	Focus	19	16.37	9.54	2.19			
			Descriptive Stats				Mann-Whitney U test	
ROA_2008	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result
	Conglom	14	17.30	8.69	2.32	0.05	0.5651	*Don't Reject H0*
	Focus	19	16.47	9.76	2.24			
			Descriptive Stats				Mann-Whitney U test	
ROA_2009	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result
	Conglom	14	13.04	5.37	1.44	0.05	0.4349	*Don't Reject H0*
	Focus	19	12.77	9.07	2.08			

This analysis was then replicated using longitudinal data, testing our initial hypothesis over the full review period. Due to the sequential nature of the data, every third year was used to compile a sample thus reducing the effects of

autocorrelation. The three samples were then independently tested to evaluate results of ROA performance of conglomerates and focused companies over time as indicated in Table 11 below.

Table 11: Longitudinal Hypothesis Test ROA

		Descriptive Stats					One-tailed test Equal Var		Aspin-Welch unequal-var test	
ROA_2001_04_07	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result	Prob. Level (ρ)	Result
	Conglom	42	17.56	7.58	1.17	0.05	0.9885	*Don't Reject H0*	0.9921	*Don't Reject H0*
	Focus	57	12.82	11.59	1.54					
		Descriptive Stats					One-tailed test Equal Var		Aspin-Welch unequal-var test	
ROA_2002_05_08	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result	Prob. Level (ρ)	Result
	Conglom	42	17.41	6.75	1.04	0.05	0.9472	*Don't Reject H0*	0.9546	*Don't Reject H0*
	Focus	57	14.69	9.12	1.21					
		Descriptive Stats					One-tailed test Equal Var		Aspin-Welch unequal-var test	
ROA_2003_06_09	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result	Prob. Level (ρ)	Result
	Conglom	42	16.78	7.26	1.12	0.05	0.9557	*Don't Reject H0*	0.9608	*Don't Reject H0*
	Focus	57	13.85	9.10	1.21					

5.3.1.3. Hypothesis 3: EPSGR

The null hypothesis (H_0):

The EPSGR of conglomerate organisations is greater or equal to the EPSGR of the focused organisations.

The alternative hypothesis (H_1):

The EPSGR of conglomerate organisations is less than the EPSGR of the focused organisations.

H_0: $\mu_{EPSGRConglom} \geq \mu_{EPSGRFocus}$

H_1: $\mu_{EPSGRConglom} < \mu_{EPSGRFocus}$

Where μ_x = mean

A t-test was similarly calculated on an annual basis for the full review period as indicated in Table 12 below. The relatively small size associated with annual hypothesis testing resulted in only non-parametric tests being conducted. It is important to note that **failure to reject the H_0** does not imply the acceptance of the null hypothesis, rather that the alternative hypothesis is not significant at the 5% alpha level and that the difference in the EPS between the conglomerate organisations and the focused organisations is due to sampling error.

Table 12: Point in time Hypothesis Test EPS

			Descriptive Stats				Mann-Whitney U test	
EPS_2001	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result
	Conglom	14	140.84	561.89	150.17	0.05	0.6006	*Don't Reject H0*
	Focus	19	45.82	255.19	58.54			
			Descriptive Stats				Mann-Whitney U test	
EPS_2002	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result
	Conglom	14	-32.85	141.36	37.78	0.05	0.5145	*Don't Reject H0*
	Focus	19	-80.44	396.18	90.89			
			Descriptive Stats				Mann-Whitney U test	
EPS_2003	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result
	Conglom	14	49.18	78.16	20.89	0.05	0.9051	*Don't Reject H0*
	Focus	19	18.20	84.69	19.43			
			Descriptive Stats				Mann-Whitney U test	
EPS_2004	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result
	Conglom	14	17.05	28.75	7.68	0.05	0.8373	*Don't Reject H0*
	Focus	19	-129.33	388.87	89.21			
			Descriptive Stats				Mann-Whitney U test	
EPS_2005	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result
	Conglom	14	12.54	27.28	7.29	0.05	0.1539	*Don't Reject H0*
	Focus	19	31.48	92.91	21.32			
			Descriptive Stats				Mann-Whitney U test	
EPS_2006	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result
	Conglom	14	20.93	35.75	9.56	0.05	0.1454	*Don't Reject H0*
	Focus	19	85.81	216.64	49.70			
			Descriptive Stats				Mann-Whitney U test	
EPS_2007	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result
	Conglom	14	46.02	69.01	18.44	0.05	0.5435	*Don't Reject H0*
	Focus	19	45.68	84.44	19.37			
			Descriptive Stats				Mann-Whitney U test	
EPS_2008	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result
	Conglom	14	2.37	43.72	11.68	0.05	0.0630	*Don't Reject H0*
	Focus	19	30.24	87.88	20.16			
			Descriptive Stats				Mann-Whitney U test	
EPS_2009	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result
	Conglom	14	-4.68	66.75	17.84	0.05	0.2679	*Don't Reject H0*
	Focus	19	15.40	98.18	22.52			

This analysis was then replicated using longitudinal data, testing our initial hypothesis over the full review period. Due to the sequential nature of the data, every third year was used to compile a sample thus reducing the effects of autocorrelation. The three samples were then independently tested to evaluate results of EPS performance of conglomerates and focused companies over time as indicated in Table 11 below.

Table 13: Longitudinal Hypothesis Test EPS

		Descriptive Stats					One-tailed test Equal Var		Aspin-Welch unequal-var test	
EPS_2001_04_07	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result	Prob. Level (ρ)	Result
	Conglom	42	67.9715	323.64	49.94	0.05	0.9055	*Don't Reject H0*	0.9004	*Don't Reject H0*
	Focus	57	-12.61	280.65	37.17					
		Descriptive Stats					One-tailed test Equal Var		Aspin-Welch unequal-var test	
EPS_2002_05_08	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result	Prob. Level (ρ)	Result
	Conglom	42	-5.98	86.98	13.42	0.05	0.5027	*Don't Reject H0*	0.5030	*Don't Reject H0*
	Focus	57	-6.24	241.89	32.04					
		Descriptive Stats					One-tailed test Equal Var		Aspin-Welch unequal-var test	
EPS_2003_06_09	Variable	n	Mean (μ)	Std. Deviation	Std. Error	Alpha (α)	Prob. Level (ρ)	Result	Prob. Level (ρ)	Result
	Conglom	42	21.81	65.20	10.06	0.05	0.2302	*Don't Reject H0*	0.2069	*Don't Reject H0*
	Focus	57	39.80	146.86	19.45					

Overall the results indicate that the average performance measures of ROE, ROA and EPS from the three hypotheses are not statistically significant. These hypotheses indicate that there is no statistically significant difference in the performance of focused organisations over the performance of the conglomerate organisations and is in line with what the hypothesis intended to prove.

6. DISCUSSION OF RESULTS

The discussion of results chapter is divided into three sections similar to chapter 5. The first section reviews the company categorisation as either focused or conglomerate, the second section reviews the significance of the sample population analysed, and the third section discusses the performance data per hypothesis.

6.1. Company Categorisation

The SIC code classification and SR categorisation per organisation for the review period 2001 to 2009 and the results are presented in Table 5 for focused and conglomerate organisations. *Appendix 3: Focused Organisations (2001-09)* and *Appendix 4: Conglomerate Organisations (2001-09)* details the complete analysis for each of the organisations that are part of the focused or conglomerate categories by the three-digit SIC code, SR and by Activity.

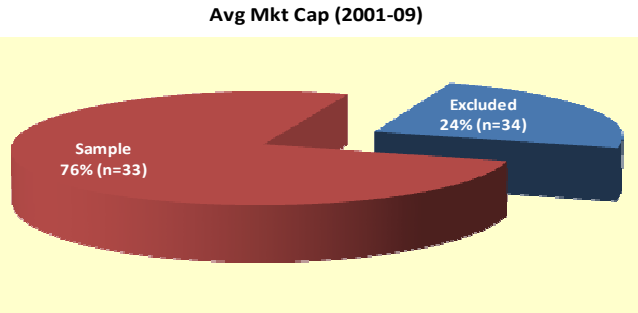
It is evident from Table 5 that there appears to be more companies that have chosen to pursue a focused strategy as opposed to a conglomerate type diversified strategy in the industrial sector of the JSE. The majority of the companies registered after 2001- start of the review period- also appear to have chosen a focused strategy.

6.2. Significance of Sample Population

The test to determine the significance of the sample tested is represented in Table 6 above. The results are divided in those companies that have been included in the sample population being tested and those companies that are in the industrial sector that have been excluded, for valid reasons stated above.

Table 6 tests the market capitalisation generated by the two categories on an annual basis for the full review period. The sample size for these test remain relatively small with 33 companies making up the sample category and 34 companies making up the excluded category. The relatively small sample sizes would result in uncertainty in terms of assuming a normal distribution. For this reason both parametric and non-parametric statistical tests were performed to ensure consistency of results. The null hypothesis is rejected in all instances across the review period except year 2001 and 2008, using the parametric approach. When we adopt a non-parametric approach we see that only 2008 fails to reject the null hypothesis. This would imply that despite the number of companies included in the sample being less than those excluded, the sample population is significant at a 5% level of significance for all years except 2008.

Figure 3: Average Market Cap (2001-09)



In Figure 3 above we can clearly see that the sample population represents on average 76% of the Industrial sector market capitalisation for the full review period. This would imply a very representative population of the full JSE Industrial Sector. A more detailed analysis representing annual distribution of market share can be seen in *Appendix 6: Detailed Market Capitalisation Analysis*.

6.3. Performance Measures

The key question in the research is to determine if conglomerate type diversified organisations have inferior financial performance over organisations that follow a focused strategy. The answer to this question will have an important bearing on which future strategy South African companies will look to pursue. As South African organisations integrate into the world economy it is necessary to determine if conglomerate diversification strategies over-perform or under-perform focused strategies.

This research report does not find there to be any significant differences in performance between the two groups in any of the three hypotheses.

6.3.1. Hypothesis 1: AROE

The ROE results of each category as being either focused or conglomerate from the period 2001 to 2009 is presented in Table 8 and Table 9 .

Table 8 tests the ROE's generated by the two categories on an annual basis for the full review period. The sample size for these tests remains relatively small with 14 companies making up the conglomerate category and 19 companies making up the focused category. The small sample sizes would result in the rejection of normality and equal variance tests, for the sample. For this reason only non-parametric statistical tests were performed to ensure accuracy of results. The null hypothesis fails to reject in all instances across the review period. The mean AROE of the conglomerate organisations is greater than the mean AROE of the focused organisations for all years except 2001, 2005 and 2006; though not statistically significant. This implies for most years we would expect the AROE for conglomerates to outperform focused.

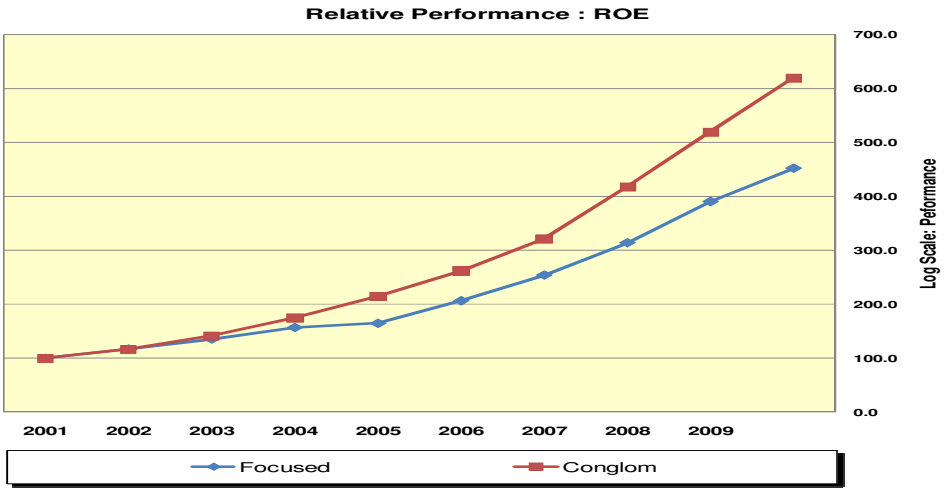
The longitudinal test yields similar overall results, with the AROE of each of the three samples (n=99) resulting in no rejection of the null hypothesis. In this test we also find the mean AROE of the conglomerate organisations to be greater than the mean AROE of the focused organisations in all samples. A lower

standard deviation for all three samples for conglomerate organisations point to lower volatility and more concentrated distribution of AROE's for conglomerates. This could be an indication that the focused organisations are more susceptible to volatility making them more prone to economic cycle.

The more diverse a portfolio of investments are, the more likely the return on investment will be close to the return of the overall market. The larger variance and standard deviation for focused companies is also an indication of a higher beta coefficient (relative volatility) than conglomerate companies, making the return more erratic over time.

Although there is no statistically significant evidence that conglomerates underperforms focused companies. However, there appears to be some evidence that suggests that conglomerates possess higher and less volatile AROE's than focused companies. This is clearly evident in Figure 4: Relative Performance: ROE below, that there is a relative out-performance in terms of AROE for conglomerate companies over focused companies. This representation of performance on a log scale graph clearly highlights the difference in performance for the two categories over time.

Figure 4: Relative Performance: ROE



In comparison of this study, is the study of Hall and Lee (1999) in developed markets. The ROE of the USA conglomerate organisations performed weaker than the ROE of the focused organisations and is found to be statistically significant at the 1% alpha level. This is not aligned to developed market thinking and does not support the diversification discount theory.

Hall and Lee (1999) also expanded this study to emerging markets to test for difference. Emerging market organisations showed similar results as this study, with the ROE of diversified organisations performing better than focused organisations, although it was not found to be statistically significant.

6.3.2. Hypothesis 2: AROA

The ROA results of each category as being either focused or conglomerate from the period 2001 to 2009 is presented in Table 10 and Table 11.

Table 8 tests the ROA's generated by the two categories on an annual basis for the full review period. The sample size is relatively small with 14 companies making up the conglomerate category and 19 companies making up the focused category. The small sample sizes would result in the rejection of normality and equal variance tests, for the sample. For this reason only non-parametric statistical tests were performed. The null hypothesis fails to reject in all instances across the review period. The mean AROA of the conglomerate organisations is greater than the mean AROA of the focused organisations for all years although it is not statistically significant.

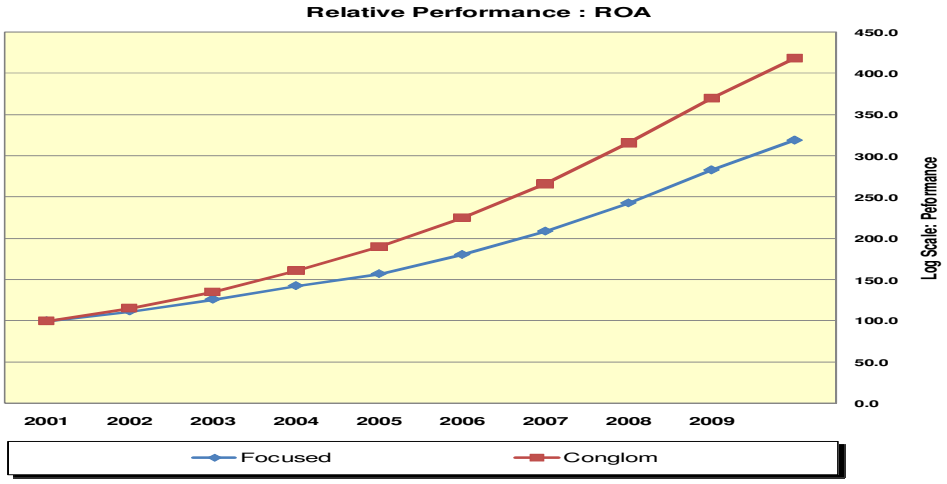
The longitudinal test yields the same overall result, with the AROA of each of the three samples (n=99) resulting in no rejection of the null hypothesis. In fact there appears to be statistically significant evidence at the 5% alpha level - (test not included in this study) - that conglomerates outperform focused companies in terms of AROA in some years. In the results we also find the mean AROA of the conglomerate organisations are greater than the mean AROA of the focused organisations.

When evaluating the standard deviation for conglomerate and focused companies, we find similar results as that derived for AROE. The variance or

volatility attached to conglomerates appears to be significantly lower than that of focused alluding to more stable performance.

For ROA's there appears to be no statically significant evidence that suggests that conglomerates tend to possess lower AROA's than focused companies. However, there appears to be some evidence that suggests that conglomerates tend to possess higher AROA's than focused companies, for some years. This is clearly evident in Figure 5 below, which highlights the relative out-performance in terms of AROE for conglomerate companies over focused companies. This representation of performance on a log scale graph clearly highlights the difference in performance for the two categories over time.

Figure 5: Relative Performance: ROA



Studies by Hall and Lee (1999), found statistically significant results that the ROA of the USA diversified conglomerate type organisations performed weaker than the ROA of the focused organisations. Contrary to this research finding, a

study by Singh et al. (2001) on emerging markets also revealed that on an annual basis between 1994 and 1996 the ROA of conglomerate organisations perform weaker than the focused organisations.

6.3.3. Hypothesis 3: AEPSGR

The EPS results of each category as being either focused or conglomerate from the period 2001 to 2009 is presented in Table 12 and Table 13 .

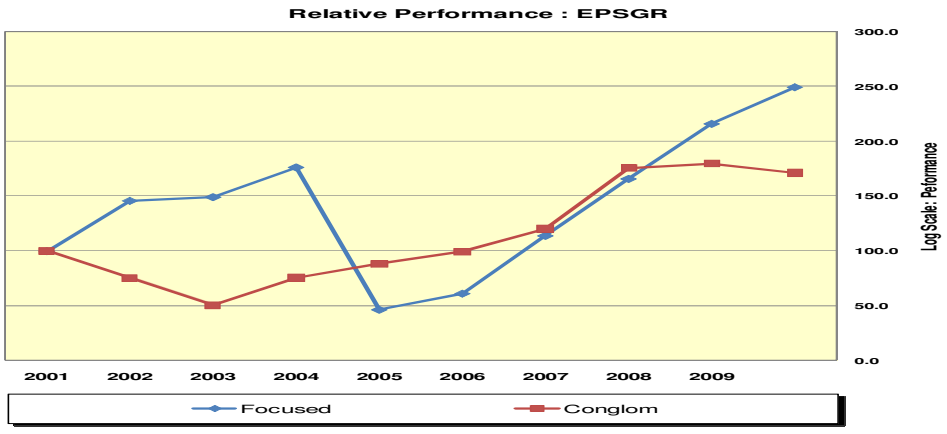
Table 12 tests the EPS growth rate generated by the two categories on an annual basis for the full review period. Again, 14 companies make up the conglomerate category and 19 companies make up the focused category. The small sample sizes would result in the rejection of normality for the sample. Non-parametric statistical tests were performed. The null hypothesis fails to reject in all instances across the review period. The mean AEPSGR of the conglomerate organisations is greater than the mean AEPSGR of the focused organisations for all years except 2005, 2006, 2008 and 2009, although it is not statistically significant.

The longitudinal test yields the same overall result, with the AEPSGR of each of the three samples (n=99) resulting in the no rejection of the null hypothesis. In the test we find that the higher AEPSGR tends to alternate over the review period between conglomerate and focused organisations making it difficult to establish a clear out-performer.

This result is supported by higher, more erratic standard deviations for all three samples across both categories. This could be an indication that the both categories are susceptible to volatility making them more prone to economic cycles, from an earnings perspective.

For AEPSGR there appears to be limited statistically significant evidence that suggests that conglomerates tend to possess lower AEPSGR than focused companies. In Figure 6: Relative Performance: EPS below, we see that the relative out-performance in terms of AEPSGR by either conglomerate or focused companies does not appear to be clear. This representation of performance on a log scale graph clearly highlights the difference in performance for the two categories over time.

Figure 6: Relative Performance: EPS



From the Figure 6 above, it would appear that conglomerates showed more stable growth in earnings over time despite producing an overall lower level of earnings for the full review period. The lower variance and standard deviation

associated with conglomerates is indicative of a lower beta coefficient (Relative volatility) attached to conglomerate companies.

7. CONCLUSION

7.1. Introduction

In this chapter the main findings of the research are highlighted. Based on a framework that was developed suggesting that conglomerates in emerging markets perform differently to those in developed markets an empirical analysis was done and the results presented in Chapter 5 and the discussion in Chapter 6. Thereafter, recommendations are presented for implications to relevant stakeholders and lastly recommendations are made for future research.

7.2. Findings

The findings of the research show that the relationship between financial performance and conglomerates in the case of South Africa is different to that of developed markets and other emerging market studies. Largely influenced by four strategic theories viz:

- Institutional Theory
- Resource based View
- Learning Theory
- Adaptive Theory

The first contribution made by this study was the conceptualising of a framework that explains the difference in financial performance for conglomerates across both emerging and developed markets and why conglomerates in emerging markets do not translate into a diversification discount.

The second contribution made by this study was to independently derive the SIC classification for the companies in the sample population and to validate these classifications against previous work done by Rushin (2006). The revised classification of samples was validated against independent sources (i.e. McGregor BFA) and assumed to be a more accurate reflection of conglomerate and focused companies.

The third contribution made by this study was to extend the period of analysis. The review period of previous South African studies were too short and not reflective of a full economic cycle- which on average is assumed to be eight to nine years. This longitudinal study is conducted over 9 years and should be fairly reflective of a full economic cycle thus adding credibility to the results derived.

The last findings of this study relate to an empirical contribution that validates that conglomerates in South Africa (non-transitional emerging market) do suffer diversification discounts as is characterised by that of developed markets and transitional emerging markets. The results of the empirical study proves that no statistically significant evidence of conglomerate diversification discounts can

be establish, in fact the results point to a positive relationship between conglomerates and financial performance, though no significance of this positive relationship could be established.

7.3. Recommendations to Stakeholders

In order for organisations in emerging markets to improve overall organisational effectiveness, a deep understanding of the factors influencing competitiveness of business strategy is required. Past studies from developed markets have shown that conglomerates possess a negative correlation to financial performance which ultimately affects effectiveness and value of the organisation.

Leadership should have a clear understanding of the factors that support competitive advantages within the context in which they find themselves in. They should not assume learning's or theories developed in alternate markets to always be correct but rather question if these learning's or theories may be applied to their context. Leadership should also be agile enough to respond to market conditions allowing the business to be flexible and resilient. Strategies developed should not be hard and fast preventing the company from responding to its environment.

Influenced by the framework and empirical analysis, presented in the previous section, organisations in emerging markets need to develop and drive business

strategies that will ensure that the companies adopt a strategy that will allow it to compete on the global stage. Organisations need to give particular thought to the context and associated bias in which they operate in before embarking on either a focused or conglomerate type strategy.

7.4. Recommendations for Future Research

Whilst this study has contributed to the body of knowledge on conglomerate or diversification strategies within the emerging market context, several limitations of the research were highlighted in Chapter 4. Given the important role played by emerging markets within the global economy, more attention needs to be focussed on understanding emerging market strategies and their deviation from more developed markets.

Areas for future research are suggested below:

- This study only considers only two extreme strategies namely; conglomerates and focused. An increase in the number of categories used in the research to incorporate alternate strategies that reside between the ranges of focused and conglomerate would be beneficial in understanding how the results differ by strategy.

- This study was restricted to only one sector of the JSE in South Africa. The study needs to be conducted across the entire JSE with a larger and more diverse sample representative of emerging markets.

- This study was also restricted to only one emerging economy being South Africa. Given the large number of emerging market economies, with diverse economic and social backgrounds, it cannot be assumed that this study is representative of all emerging market economies. It would be prudent to replicate the study across all emerging (transitional and non-transitional) markets.

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APPENDIX

Appendix 1: Rumelt's subcategories of diversification

Category	Definition
Single Business	Organisation committed to a single business
Dominant Vertical	Vertically integrated organisations that produce and sell a variety of end products, no one of which contributes more tan 95% of total revenues.
Dominant Constrained	Nonvertical dominant organisations that have diversified by building on some particular strength with the original dominant activity.
Dominant Linked	Nonvertical dominant organisations that has diversified by building on new strengths, skills, or resources as they are acquired.
Dominant Unrelated	Nonvertical dominant organisations in which the prevalence of the diversified activities are unrelated to the dominant business.
Related Constrained	Related organisations that has diversified by relating new businesses to a specific central skill or resource and in which each business activity is related to almost all of the other business activities.
Related Linked	Related organisations that have diversified by relating new businesses to some strength or skill already possessed, but not always the same strength or skill. These organisations diversify in several directions and become active in a widely disparate business.
Unrelated Passive	Unrelated organisations that do not qualify as acquisitive conglomerates.
Acquisitive Conglomerates	Nonvertical organisations that have aggressive programs for the acquisition of new unrelated businesses.

Appendix 2: Listed Companies in the Industrial Sector

#	Company_Industrial Sector	JSE Ticker
1	ADCORP HOLDINGS LIMITED	ADR
2	AFRIMAT LIMITED	AFT
3	AG INDUSTRIES LIMITED	AGI
4	ALLIED ELECTRONICS CORPORATION LTD	ATN
5	AMALGAMATED ELECTRONIC CORPORATION LD	AER
6	ARB HOLDINGS LIMITED	ARH
7	ASTRAPAK LIMITED	APK
8	AUSTRO GROUP LTD	ASO
9	AVENG LTD	AEG
10	BARLOWORLD LIMITED	BAW
11	BASIL READ HOLDINGS LIMITED	BSR
12	BELL EQUIPMENT LIMITED	BEL
13	BICC CAFCA LIMITED	BIC
14	BOWLER METCALF LIMITED	BCF
15	BUILDMAX LIMITED	BDM
16	CARGO CARRIERS LIMITED	CRG
17	CERAMIC INDUSTRIES LIMITED	CRM
18	CIC HOLDINGS LTD	CCI
19	COMMAND HOLDINGS LIMITED	CMA
20	CONTROL INSTRUMENTS GROUP LIMITED	CNL
21	DIGICORE HOLDINGS LIMITED	DGC
22	DISTRIBUTION AND WAREHOUSING NETWORK LTD	DAW
23	ELB GROUP LIMITED	ELR
24	EQSTRA HOLDINGS LIMITED	EQS
25	ESORFRANKI LTD	ESR
26	EXCELLERATE HOLDINGS LIMITED	EXL
27	GRINDROD LIMITED	GND
28	GROUP FIVE LIMITED	GRF
29	HOWDEN AFRICA HOLDINGS LIMITED	HWN
30	HUDACO INDUSTRIES LIMITED	HDC
31	ILIAD AFRICA LIMITED	ILA
32	IMPERIAL HOLDINGS LIMITED	IPL
33	INVICTA HOLDINGS LIMITED	IVT
34	JASCO ELECTRONICS HOLDINGS LIMITED	JSC
35	KAIROS INDUSTRIAL HOLDINGS LIMITED	KIR
36	KAP INTERNATIONAL HOLDINGS LIMITED	KAP
37	KAYDAV GROUP LIMITED	KDV
38	KELLY GROUP LIMITED	KEL
39	MARSHALL MONTEAGLE HOLDINGS SOCIETE ANONYME	MTE
40	MASONITE (AFRICA) LIMITED	MAS
41	MAZOR GROUP LIMITED	MZR
42	METROFILE HOLDINGS LIMITED	MFL
43	MICROMEGA HOLDINGS LIMITED	MMG
44	MIX TELEMATICS LTD	MIX
45	MOBILE INDUSTRIES LIMITED	MOB
46	MURRAY AND ROBERTS HOLDINGS LIMITED	MUR
47	MVELAPHANDA GROUP LIMITED	MVG
48	NAMPAK LIMITED	NPK
49	NET 1 UEPS TECHNOLOGIES INC	NT1
50	PRETORIA PORTLAND CEMENT COMPANY LD	PPC
51	PRIMESERV GROUP LIMITED	PMV
52	PROTECH KHUTHELE HOLDINGS LTD	PKH
53	RAUBEX GROUP LIMITED	RBX
54	REMGRO LIMITED	REM
55	REUNERT LIMITED	RLO
56	SANYATI HOLDINGS LIMITED	SAN
57	SEA KAY HOLDINGS LTD	SKY
58	SOUTH OCEAN HOLDINGS LIMITED	SOH
59	STEFANUTTI STOCKS HOLDINGS LTD	SSK
60	SUPER GROUP LIMITED	SPG
61	THE BIDVEST GROUP LIMITED	BVT
62	TRANSPACO LIMITED	TPC
63	TRENCOR LIMITED	TRE
64	UNIVERSAL INDUSTRIES CORPORATION LTD	UNI
65	VALUE GROUP LIMITED	VLE
66	WILSON BAYLY HOLMES-OVCON LIMITED	WBO
67	WINHOLD LIMITED	WNH

Appendix 2: SIC Code Description

THE DETAILED CLASSIFICATION

The italic headings indicate a logical grouping normally on a level between that of the Division and the Major group and which does not have a code but corresponds to "Division" in the ISIC. In cases where these groupings correspond with major groups, the major group heading is also in italics.

MAJOR DIVISION 1: AGRICULTURE, HUNTING FORESTRY AND FISHING

MAJOR DIVISION 2: MINING AND QUARRYING

Division	Major Group	Group	Sub Group	Title of Category
29	290	2900	29000	SERVICE ACTIVITIES INCIDENTAL TO MINING OF MINERALS

MAJOR DIVISION 3: MANUFACTURING

Division	Major Group	Group	Sub Group	Title of Category
30				MANUFACTURE OF FOOD PRODUCTS, BEVERAGES AND TOBACCO PRODUCTS
	304			MANUFACTURE OF OTHER FOOD PRODUCTS
		3041	30410	Manufacture of bakery products
		3042	30420	Manufacture of sugar, including golden syrup and castor sugar
		3043	30430	Manufacture of cocoa, chocolate and sugar confectionery
		3044	30440	Manufacture of macaroni, noodles, couscous and similar farinaceous products
		3049		Manufacture of other food products n.e.c.
			30491	Manufacture of coffee, coffee substitutes and tea
			30492	Manufacture of nut foods
			30499	Manufacture of spices, condiments, vinegar, yeast, egg products, soups and other food products n.e.c.
			30523	Manufacture of malt
32				MANUFACTURE OF WOOD AND OF PRODUCTS OF WOOD AND CORK, EXCEPT FURNITURE; MANUFACTURE OF ARTICLES OF STRAW AND PLAITING MATERIALS; MANUFACTURE OF PAPER AND PAPER PRODUCTS; PUBLISHING, PRINTING AND REPRODUCTION OF RECORDED MEDIA
				MANUFACTURE OF WOOD AND PRODUCTS OF WOOD, EXCEPT FURNITURE; MANUFAC-TURE OF PAPER AND PAPER PRODUCTS; MANUFACTURE OF ARTICLES OF STRAW AND PLAITING MATERIALS (321 AND 322)
	323			***MANUFACTURE OF PAPER AND PAPER PRODUCTS***
		3231	32310	Manufacture of pulp, paper and paperboard

Division	Major Group	Group	Sub Group	Title of Category
			32321	Manufacture of corrugated paper and paperboard
			32322	Manufacture of containers of paper and paperboard
		3239		Manufacture of other articles of paper and paperboard
			32391	Stationery
			32399	Other paper products
				PUBLISHING, PRINTING AND REPRODUCTION OF RECORDED MEDIA (324, 325 AND 326)
33				MANUFACTURE OF COKE, REFINED PETROLEUM PRODUCTS AND NUCLEAR FUEL; MANUFACTURE OF CHEMICALS AND CHEMICAL PRODUCTS; MANUFACTURE OF RUBBER AND PLASTIC PRODUCTS
				MANUFACTURE OF COKE, REFINED PETROLEUM PRODUCTS AND NUCLEAR FUEL (331, 332 AND 333)
				MANUFACTURE OF CHEMICALS AND CHEMICAL PRODUCTS (334, 335 AND 336)
	334			MANUFACTURE OF BASIC CHEMICALS
		3341	33410	Manufacture of basic chemicals, except fertilizers and nitrogen compounds
		3342	33420	Manufacture of fertilizers and nitrogen compounds
		3343	33430	Manufacture of plastics in primary form and of synthetic rubber
	335			MANUFACTURE OF OTHER CHEMICAL PRODUCTS
		3351	33510	Manufacture of pesticides and toher agro-chemical products
		3352	33520	Manufacture of paints, varnishes and similar coatings, printing ink and mastics
		3353	33530	Manufacture of pharmaceuticals, medicinal chemicals and botanical products
		3354		Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations
			33541	Manufacture of soap and other cleaning compounds
			33542	Manufacture of perfumes, cosmetics and other toilet preparations
			33549	Manufacture of other preparations such as polishes, waxes and dressings
		3359		Manufacture of other products n.e.c.
			33591	Manufacture of edible salt
			33592	Manufacture of explosives and pyrotechnic products
			33593	Manufacture of adhesives, glues, sizes and cements
			33599	Manufacture of other chemical products n.e.c.
	338	3380	33800	MANUFACTURE OF PLASTIC PRODUCTS
34				***MANUFACTURE OF OTHER NON-METALLIC MINERAL PRODUCTS***

Division	Major Group	Group	Sub Group	Title of Category
	341	3411		MANUFACTURE OF GLASS AND GLASS PRODUCTS
			34111	Manufacture or sheet and plate glass, glass blocks, tubes and rods; glass fibres and glass wool
			34112	Manufacture of glass containers; glass kitchenware and tableware; scientific and laboratory glassware, clock and watch glasses and other glass products n.e.c.
	342			MANUFACTURE OF NON-METALLIC MINERAL PRODUCTS N.E.C.
		3421	34210	Manufacture of non-structural non-refractory ceramicware
		3422	34220	Manufacture of refractory ceramic products
		3423	34230	Manufacture of structural non-refractory clay and ceramic products
		3424	34240	Manufacture of cement, lime and plaster
		3425	34250	Manufacture of articles of concrete, cement and plaster
		3426	34260	Cutting, shaping and finishing of stone
		3429		Manufacture of other non-metallic mineral products n.e.c.
			34291	Abrasives
			34299	Other non-metallic mineral products n.e.c.
35				MANUFACTURE OF BASIC METALS, FABRICATED METAL PRODUCTS, MACHINERY AND EQUIPMENT AND OF OFFICE, ACCOUNTING AND COMPUTING MACHINERY
				MANUFACTURE OF BASIC METALS (351, 352 AND 353)
	351	3510		MANUFACTURE OF BASIC IRON AND STEEL
			35101	Basic iron and steel industries, except steel pipe and tube mills
			35102	Steel pipe and tube mills
				MANUFACTURE OF FABRICATED METAL PRODUCTS (354 AND 355)
	354			MANUFACTURE OF STRUCTURAL METAL PRODUCTS, TANKS, RESERVOIRS AND STEAM GENERATORS
		3541		Manufacture of structural metal products
			35411	Manufacture of metal structures or parts thereof
			35419	Other structural metal products, e.g. metal doors, windows and gates
		3542	35420	Manufacture of tanks, reservoirs and similar containers of metal
		3543	35430	Manufacture of steam generators, except central heating hot water boilers
	355			MANUFACTURE OF OTHER FABRICATED METAL PRODUCTS; METALWORK SERVICE ACTIVITIES
		3551	35510	Forging, pressing, stamping and roll-forming of metal; powder metallurgy
		3552		Treatment and coating of metals; general mechanical engineering on a fee or contract basis

Division	Major Group	Group	Sub Group	Title of Category
			35521	Treating and coating of metals
			35522	General mechanical engineering on a fee or contract basis
		3553	35530	Manufacture of cutlery, hand tools and general hardware
		3559		Manufacture of other fabricated metal products n.e.c.
			35591	Manufacture of metal containers, e.g. cans and tins
			35592	Manufacture of cables and wire products
			33593	Manufacture of springs (all types)
			35594	Manufacture of metal fasteners
			35599	Manufacture of other metal products n.e.c.
				MANUFACTURE OF MACHINERY AND EQUIPMENT N.E.C. (356, 357 AND 358)
	357			MANUFACTURE OF SPECIAL PURPOSE MACHINERY
		3571	35710	Manufacture of agricultural and forestry machinery
		3572	35720	Manufacture of machine tools
		3573	35730	Manufacture of machinery for metallurgy
		3574	35740	Manufacture of machinery for mining, quarrying and construction
		3575	35750	Manufacture of machinery for food, beverage and tobacco processing
		3576	35760	Manufacture of machinery for textile, apparel and leather production
		3577	35770	Manufacture of weapons and ammunition
		3579	35790	Manufacture of other special purpose machinery
	358	3580	35800	MANUFACTURE OF HOUSEHOLD APPLIANCES N.E.C.
	359	3590	35900	***MANUFACTURE OF OFFICE, ACCOUNTING AND COMPUTING MACHINERY***
36				MANUFACTURE OF ELECTRICAL MACHINERY AND APPARATUS N.E.C.
				MANUFACTURE OF ELECTRICAL MACHINERY AND APPARATUS N. E.C. (361, 362, 363, 364 AND 365)
	361	3610	36100	MANUFACTURE OF ELECTRIC MOTORS, GENERATORS AND TRANSFORMERS
	362	3620	36200	MANUFACTURE OF ELECTRICITY DISTRIBU-TION AND CONTROL APPARATUS
	363	3630	36300	MANUFACTURE OF INSULATED WIRE AND CABLE
	364	3640	36400	MANUFACTURE OF ACCUMULATORS, PRIMARY CELLS AND PRIMARY BATTERIES
	365	3650		MANUFACTURE OF ELECTRIC LAMPS AND LIGHTING EQUIPMENT
			36501	Manufacture of electric bulbs and fluorescent tubes
			36502	Manufacture of illuminated signs and advertising displays
			36503	Manufacture of lamps and lampshades

Division	Major Group	Group	Sub Group	Title of Category
	366	3660	36600	MANUFACTURE OF OTHER ELECTRICAL EQUIPMENT N.E.C
37				MANUFACTURE OF RADIO, TELEVISION AND COMMUNICATION EQUIPMENT AND APPARATUS AND OF MEDICAL, PRECISION AND OPTICAL INSTRUMENTS, WATCHES AND CLOCKS
				MANUFACTURE OF RADIO, TELEVISION AND COMMUNICATION EQUIPMENT AND APPARATUS (371, 372 AND 373)
	371	3710	37100	MANUFACTURE OF ELECTRONIC VALVES AND TUBES AND OTHER ELECTRONIC COMPONENTS
	372	3720	37200	MANUFACTURE OF TELEVISION AND RADIO TRANSMITTERS AND APPARATUS FOR LINE TELEPHONY AND LINE TELEGRAPHY
	373	3730	37300	MANUFACTURE OF TELEVISION AND RADIO RECEIVERS, SOUND OR VIDEO RECORDING OR REPRODUCING APPARATUS AND ASSOCIATED GOODS
				MANUFACTURE OF MEDICAL, PRECISION AND OPTICAL INSTRUMENTS, WATCHES AND CLOCKS (374, 375 AND 376)
38				MANUFACTURE OF TRANSPORT EQUIPMENT
				MANUFACTURE OF MOTOR VEHICLES, TRAILERS AND SEMI-TRAILERS (381, 382 AND 383)
	381	3810	38100	MANUFACTURE OF MOTOR VEHICLES
	382	3820	38200	MANUFACTURE OF BODIES (COACHWORK) FOR MOTOR VEHICLES; MANUFACTURE OF TRAILERS AND SEMI-TRAILERS
	383	3830		MANUFACTURE OF PARTS AND ACCESSORIES FOR MOTOR VEHICLES AND THEIR ENGINES
			38301	Manufacture of radiators
			38302	Activities of specialised automotive engineering workshops working primarily for the motor trade
			38309	Manufacture of other motor vehicle parts and accessories
				MANUFACTURE OF OTHER TRANSPORT EQUIPMENT (384, 385, AND 386)
	387			MANUFACTURE OF TRANSPORT EQUIPMENT N.E.C.
		3871	38710	Manufacture of motor cycles
		3872	38720	Manufacture of bicycle and invalid carriages
		3879	38790	Manufacture of other transport equipment n.e.c.
39				MANUFACTURE OF FURNITURE; MANUFACTURING N.E.C.; RECYCLING
				MANUFACTURE OF FURNITURE; MANUFACTURING N.E.C. (391 AND 392)
	391	3910		MANUFACTURE OF FURNITURE
			39101	Manufacture of furniture made predominantly of metal
			39102	Manufacture of furniture made predominantly of plastic

Division	Major Group	Group	Sub Group	Title of Category
				materials
			39103	Manufacture of furniture made predominantly of materials other than metal, plastic or concrete
	395			RECYCLING N.E.C.
		3951	39510	Recycling of metal waste and scrap n.e.c.
		3952	39520	Recycling of non-metal waste and scrap n.e.c.

MAJOR DIVISION 4: ELECTRICITY, GAS AND WATER SUPPLY

MAJOR DIVISION 5: CONSTRUCTION

Division	Major Group	Group	Sub Group	Title of Category
50				CONSTRUCTION
				CONSTRUCTION (501, 502, 503, 504 AND 505)
	501	5010	50100	SITE PREPARATION
	502			BUILDING OF COMPLETE CONSTRUCTIONS OR PARTS THEREOF; CIVIL ENGINEERING
		5021		Construction of buildings
			50211	Construction of homes
			50219	Construction of other buildings
		5022	50220	Construction of civil engineering structures
		5023	50230	Construction of other structures
		5024	50240	Construction by specialist trade contractors
	503			BUILDING INSTALLATION
		5031	50310	Plumbing
		5032	50320	Electrical contracting
		5033	50330	Shopfitting
		5039	50390	Other building installation n.e.c.
	504			BUILDING COMPLETION
		5041	50410	Painting and decorating
		5049	50490	Other building completion n.e.c.
	505	5050	50500	RENTING OF CONSTRUCTION OR DEMOLITION EQUIPMENT WITH OPERATORS

MAJOR DIVISION 6: WHOLESALE AND RETAIL TRADE; REPAIR OF MOTOR VEHICLES, MOTOR CYCLES AND PERSONAL AND HOUSEHOLD GOODS; HOTELS AND RESTAURANTS

Division	Major Group	Group	Sub Group	Title of Category
61				WHOLESALE AND COMMISSION TRADE, EXCEPT OF MOTOR VEHICLES AND MOTOR CYCLES
				WHOLESALE AND COMMISSION TRADE EXCEPT OF MOTOR VEHICLES AND MOTOR CYCLES (611, 612, 613, 614, 615 AND 616)
	612			WHOLESALE TRADE IN AGRICULTURAL RAW MATERIALS, LIVESTOCK, FOOD, BEVERAGES AND TOBACCO

Division	Major Group	Group	Sub Group	Title of Category
		6121	61210	Wholesale trade in agricultural raw materials and livestock
		6122		Wholesale trade in food, beverages and tobacco
			61221	Wholesale trade in foodstuffs
			61222	Wholesale trade in beverages
			61223	Wholesale trade in tobacco products
	613			WHOLESALE TRADE IN HOUSEHOLD GOODS
		6131	61310	Wholesale trade in textiles, clothing and footwear
		6139		Wholesale trade in other household goods
			61391	Wholesale trade in household furniture, requisites and appliances
			61392	Wholesale trade in books and stationery
			61393	Wholesale trade in precious tones, jewellery and silverware
			61394	Wholesale trade in pharmaceuticals and toiletries
			61399	Wholesale trade in other household goods n.e.c.
	614			WHOLESALE TRADE IN NON-AGRICULTU-RAL INTERMEDIATE PRODUCTS, WASTE AND SCRAP
		6141	61410	Wholesale trade in solid, liquid and gaseous fuels and related products
		6142	61420	Wholesale trade in metals and metal ores
		6143	61430	Wholesale trade in construction materials, hardware, plumbing and heating equipment and supplies
		6149	61490	Wholesale trade in other intermediate products, waste and scrap
	615	6150		WHOLESALE TRADE IN MACHINERY, EQUIPMENT AND SUPPLIES
			61501	Office machinery and equipment including computers
			61509	Other machinery
63				SALE MAINTENANCE AND REPAIR OF MOTOR VEHICLES AND MOTOR R CYCLES; RETAIL TRADE IN AUTOMOTIVE FUEL
				SALE, MAINTENANCE AND REPAIR OF MTOOR VEHICLES AND MOTOR CYCLES; RETAIL TRADE IN AUTOMOTIVE FUEL (631, 632, 633, 634 AND 635)
	631			SALE OF MOTOR VEHICLES
		6311	63110	Wholesale sale of motor vehicles
		6312		Retail sale of motor vehicles
			63121	Retail sale of new motor vehicles
			63122	Retail sale of used motor vehicles
	632	6320		MAINTENANCE AND REPAIR OF MOTOR VEHICLES
			63201	General repairs

Division	Major Group	Group	Sub Group	Title of Category
			63202	Electrical repairs
			63203	Radiator repairs
			63204	Body repairs
			63209	Other maintenance and repairs n.e.c.
	633			SALE OF MOTOR VEHICLE PARTS AND ACCESSORIES
		6331		Sale of new parts and accessories
			63311	Sale of tyres
			63319	Sale of other new parts and accessories
		6332	63320	Sale of used parts and accessories
	634	6340	63400	SALE, MAINTENANCE AND REPAIR OF MOTOR CYCLES AND RELATED PARTS AND ACCESSORIES
	635	6350	63500	RETAIL SALE OF AUTOMOTIVE FUEL

MAJOR DIVISION 7: TRANSPORT, STORAGE AND COMMUNICATION

Division	Major Group	Group	Sub Group	Title of Category
71				LAND TRANSPORT; TRANSPORT VIA PIPELINES
				LAND TRANSPORT; TRANSPORT VIA PIPELINES (711, 712 AND 713)
	711	7111		RAILWAY TRANSPORT
			71111	Inter-urban railway transport
			71112	Railway commuter services
	712			OTHER LAND TRANSPORT
		7121		Other scheduled passenger land transport
			71211	Urban, suburban and inter-urban bus and coach passenger lines
			71212	School buses
		7122		Other non-scheduled passenger land transport
			71221	Taxis
			71222	Safaris and sightseeing bus tours
			71229	Other passenger transport, including the renting of motor cars with drivers
		7123		Freight transport by road
			71231	Transport of furniture
			71239	Other freight transport by road
	713	7130	71300	TRANSPORT VIA PIPELINES
73				AIR TRANSPORT
	730	7300	73000	***AIR TRANSPORT***

Division	Major Group	Group	Sub Group	Title of Category
74	741			SUPPORTING AND AUXILIARY TRANSPORT ACTIVITIES; ACTIVITIES OF TRAVEL AGENCIES
		7411	74110	Cargo handling
		7412	74120	Storage and warehousing
		7413		Other supporting transport activities
			74131	Parking garages and parking lots
			74132	Salvaging of distressed vessels and cargoes
			74133	Maintenance and operation of harbour works, lighthouses, etc., pilotage
			74134	Operation of airports, flying fields and air navigation facilities
			74135	Operation of roads and toll roads
			74139	Other supporting transport activities n.e.c.
		7414	74140	Travel agency and related activities
		7419	74190	Activities of other transport agencies
75				POST AND TELECOMMUNICATION
				POST AND TELECOMMUNICATION (751 AND 752)
	751			POSTAL AND RELATED COURIER ACTIVITIES
		7511	75110	National postal activities
		7512	75120	Courier activities other than national postal activities
	752	7520	75200	TELECOMMUNICATION

MAJOR DIVISION 8: FINANCIAL INTERMEDIATION INSURANCE, REAL ESTATE AND BUSINESS SERVICES

Division	Major Group	Group	Sub Group	Title of Category
81				FINANCIAL INTERMEDIATION, EXCEPT INSURANCE AND PENSION FUNDING
				FINANCIAL INTERMEDIATION, EXCEPT INSURANCE AND PENSION FUNDING (811 AND 819)
	811	8111		MONETARY INTERMEDIATION
			81110	Central banking
		8112		Other monetary intermediation
			81121	Discount houses and commercial and other banking
			81122	Building society activities
	819			OTHER FINANCIAL INTERMEDIATION N.E.C.
		8191	81910	Lease financing
		8192	81920	Other credit granting
		8199	81990	Other financial intermediation n.e.c.
82				INSURANCE AND PENSION FUNDING, EXCEPT COMPULSORY SOCIAL SECURITY
	821			***INSURANCE AND PENSION FUNDING, EXCEPT***

Division	Major Group	Group	Sub Group	Title of Category
				COMPULSORY SOCIAL SECURITY
		8211	82110	Life insurance
		8212	82120	Pension funding
		8213	82130	Medical aid funding
		8219	82190	Other insurance n.e.c.
85				RENTING OF MACHINERY AND EQUIPMENT, WITHOUT OPERATOR AND OF PERSONAL AND HOUSEHOLD GOODS
				RENTING OF MACHINERY AND EQUIPMENT, WITHOUT OPERATOR AND OF PERSONAL AND HOUSEHOLD GOODS (851, 852 AND 853)
	851			RENTING OF TRANSPORT EQUIPMENT
		8511	85110	Renting of land transport equipment
		8512	85120	Renting of water transport equipment
		8513	85130	Renting of air transport equipment
	852			RENTING OF OTHER MACHINERY AND EQUIPMENT
		8521	85210	Renting of agricultural machinery and equipment
		8522	85220	Renting of construction and civil engineering machinery and equipment
		8523	85230	Renting of office machinery and equipment (including computers)
		8529	85290	Renting of other machinery and equipment n.e.c.
	853			RENTING OF PERSONAL AND HOUSEHOLD GOODS N.E.C.
		8530	85300	Renting of personal and household goods n.e.c.
86				COMPUTER AND RELATED ACTIVITIES
				COMPUTER AND RELATED ACTIVITIES (861, 862, 863, 864, 865 AND 866)
	861	8610	86100	HARDWARE CONSULTANCY
	862	8620	86200	SOFTWARE CONSULTANCY AND SUPPLY
	863	8630	86300	DATA PROCESSING
	864	8640	86400	DATA BASE PROCESSING
	865	8650	86500	MAINTENANCE AND REPAIR OF OFFICE, ACCOUNTING AND COMPUTING MACHINERY
	869	8690	86900	OTHER COMPUTER RELATED ACTIVITIES
88				OTHER BUSINESS ACTIVITIES
				OTHER BUSINESS ACTIVITIES (881, 882, 883 AND 884)
	881			LEGAL, ACCOUNTING, BOOKKEEPING AND AUDITING ACTIVITIES; TAX CONSULTANCY; MARKET RESEARCH AND PUBLIC OPINION RESEARCH; BUSINESS AND MANAGEMENT CONSULTANCY
		8811		Legal activities
			88111	Activities of attorneys, notaries and conveyancers
			88112	Activities of advocates

Division	Major Group	Group	Sub Group	Title of Category
		8812		Accounting, bookkeeping and auditing activities; tax consultancy
			88121	Activities of accountants and auditors registered in terms of the Public Accountants and Auditors Act
			88122	Activities of cost and management accountants
			88123	Bookkeeping activities, including relevant data processing and tabulating activities
		8813	88130	Marketing research and public opinion polling
		8814	88140	Business and management consultancy activities
	882			ARCHITECTURAL, ENGINEERING AND OTHER TECHNICAL ACTIVITIES
		8821		Architectural and engineering activities and related technical consultancy
			88211	Consulting engineering activities
			88212	Architectural activities
			88213	Activities of quantity surveyors
			88214	Activities of land surveyors
			88215	Geological and prospecting activities on a fee or contract basis
			88216	Activities of non-registered architects, eg. Tracers and draughtsmen of plans for dwellings
		8822		Technical testing and analysis
			88220	Other activities - engineering and other commercial research, developing and testing - eg SABS
	889			BUSINESS ACTIVITIES N.E.C.
		8891		Labour recruitment and provision of staff
			88911	Activities of employment agencies and recruiting organisations
			88912	Hiring out of workers (labour broking activities)
		8892	88920	Investigation and security activities
		8893	88930	Building and industrial plant cleaning activities
		8894	88940	Photographic activities
		8895	88950	Packaging activities
		8899		Other business activities n.e.c.
			88991	Credit rating agency activities
			88992	Debt collecting agency activities
			88993	Stenographic, duplicating, addressing, mailing list and similar activities
			88999	Other business activities n.e.c.

MAJOR DIVISION 9: COMMUNITY, SOCIAL AND PERSONAL SERVICES

Division	Major Group	Group	Sub Group	Title of Category
92				EDUCATION
	920	9200		***EDUCATIONAL SERVICES***
			92001	Pre-primary education and activities of after-school centres
			92002	Primary and secondary education
			92003	Special education and training of mentally retarded children
			92004	Education by technical colleges and technical institutions
			92005	Education by technikons
			92006	Education by teachers' training colleges and colleges of education for further training
			92007	Education by universities
			82008	Education by correspondence and private vocational colleges
			92009	Other educational services - own account teachers, motor vehicle driving schools/tutors and music, dancing and other art schools, etc.

MAJOR DIVISION 0: PRIVATE HOUSEHOLDS, EXTERRITORIAL ORGANISATIONS, REPRESENTATIVES OF FOREIGN GOVERNMENTS AND OTHER ACTIVITIES NOT ADEQUATELY DEFINED

Source: South African Companies and Intellectual Property Registration Office (CIPRO)

http://www.cipro.co.za/info_library/sic_codes.asp

Appendix 3: Focused Organisations (2001-09)

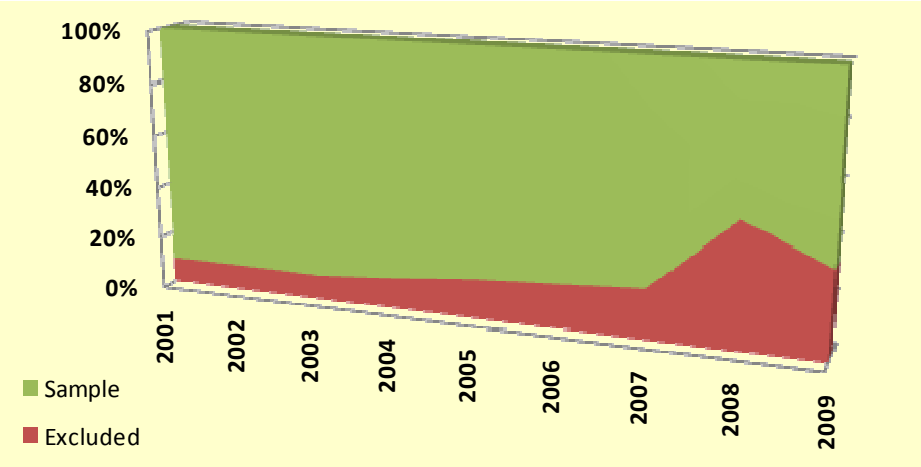
#	Company Name	JSE Code	Activity	Avg %	Avg SR	Sic Code	Sic Description
1	ADCORP HOLDINGS LIMITED	ADR	BPO	5%	**95%**	881	Business and management consultancy activities
	ADCORP HOLDINGS LIMITED	ADR	Staffing	95%		889	Activities of employment agencies and recruiting organisations
2	AVENG LTD	AEG	Aministration	0%	**100%**	502	Construction of other structures
	AVENG LTD	AEG	Construction and Engineering	67%		502	Construction of other buildings
	AVENG LTD	AEG	Manufacturing and Processing	23%		502	Construction of other buildings
	AVENG LTD	AEG	Opencast Mining	9%		502	Construction of other buildings
3	AG INDUSTRIES LIMITED	AGI	Glass	12%	**100%**	341	MANUFACTURE OF GLASS AND GLASS PRO-DUCTS
	AG INDUSTRIES LIMITED	AGI	Glass SA	88%		341	MANUFACTURE OF GLASS AND GLASS PRO-DUCTS
4	ASTRAPAK LIMITED	APK	Films	41%	**100%**	338	MANUFACTURE OF PLASTIC PRO-DUCTS
	ASTRAPAK LIMITED	APK	Flexibles	21%		338	MANUFACTURE OF PLASTIC PRO-DUCTS
	ASTRAPAK LIMITED	APK	Rigids	38%		338	MANUFACTURE OF PLASTIC PRO-DUCTS
5	BASIL READ HOLDINGS LIMITED	BSR	Construction	87%	**100%**	502	Construction of homes
	BASIL READ HOLDINGS LIMITED	BSR	Developments	1%		502	Construction of homes
	BASIL READ HOLDINGS LIMITED	BSR	Inter-segment elimination	-6%		502	Construction of homes
	BASIL READ HOLDINGS LIMITED	BSR	Mining	17%		502	Construction of homes
6	CARGO CARRIERS LIMITED	CRG	Agricultural	27%	**99%**	712	Other freight transport by road
	CARGO CARRIERS LIMITED	CRG	Aviation	2%		712	Other freight transport by road
	CARGO CARRIERS LIMITED	CRG	Consumer	2%		712	Other freight transport by road
	CARGO CARRIERS LIMITED	CRG	Industrial	61%		712	Other freight transport by road
	CARGO CARRIERS LIMITED	CRG	Property	1%		741	Storage and warehousing
	CARGO CARRIERS LIMITED	CRG	Supply Chain Sevices	7%		712	Other freight transport by road
7	CERAMIC INDUSTRIES LIMITED	CRM	Sanitaryware South Africa	15%	**100%**	342	Manufacture of refractory ceramic products
	CERAMIC INDUSTRIES LIMITED	CRM	Tiles	16%		342	Manufacture of refractory ceramic products
	CERAMIC INDUSTRIES LIMITED	CRM	Tiles South Africa	69%		342	Manufacture of refractory ceramic products
8	DISTRIBUTION AND WAREHOUSING NETWORK LTD	DAW	Head office and other consolidation, unallocated	-24%	**100%**	741	Storage and warehousing
	DISTRIBUTION AND WAREHOUSING NETWORK LTD	DAW	Manufacturing Division	44%		741	Storage and warehousing
	DISTRIBUTION AND WAREHOUSING NETWORK LTD	DAW	Support Services Division	5%		741	Storage and warehousing
	DISTRIBUTION AND WAREHOUSING NETWORK LTD	DAW	Trading Division	76%		741	Storage and warehousing
9	ELB GROUP LIMITED	ELR	ELB Engineering	100%	**100%**	819	OTHER FINANCIAL INTERMEDIATION N.E.C.
10	MASONITE (AFRICA) LIMITED	MAS	Forestry	17%	**100%**	322	MANUFACTURE OF PRODUCTS OF WOOD, CORK, STRAW AND PLAI-TING MATERIALS
	MASONITE (AFRICA) LIMITED	MAS	Hardboard	71%		322	MANUFACTURE OF PRODUCTS OF WOOD, CORK, STRAW AND PLAI-TING MATERIALS
	MASONITE (AFRICA) LIMITED	MAS	Intersegments	-3%		322	MANUFACTURE OF PRODUCTS OF WOOD, CORK, STRAW AND PLAI-TING MATERIALS
	MASONITE (AFRICA) LIMITED	MAS	Other products	15%		322	MANUFACTURE OF PRODUCTS OF WOOD, CORK, STRAW AND PLAI-TING MATERIALS
	MASONITE (AFRICA) LIMITED	MAS	Unallocated	0%		322	MANUFACTURE OF PRODUCTS OF WOOD, CORK, STRAW AND PLAI-TING MATERIALS
11	MARSHALL MONTEAGLE HOLDINGS SOCIETE ANONYME	MTE	Import and Distribution	97%	**97%**	230	MINING OF GOLD AND URANIUM ORE
	MARSHALL MONTEAGLE HOLDINGS SOCIETE ANONYME	MTE	Other	1%		819	OTHER FINANCIAL INTERMEDIATION N.E.C.
	MARSHALL MONTEAGLE HOLDINGS SOCIETE ANONYME	MTE	Property	3%		831	Activities auxiliary to financial intermediation n.e.c.
12	MURRAY AND ROBERTS HOLDINGS LIMITED	MUR	Construction & engineering	74%	**94%**	502	Construction of homes
	MURRAY AND ROBERTS HOLDINGS LIMITED	MUR	Construction materials & services	19%		502	Construction of homes
	MURRAY AND ROBERTS HOLDINGS LIMITED	MUR	Corporate & properties	0%		502	Construction of homes
	MURRAY AND ROBERTS HOLDINGS LIMITED	MUR	Fabrication & manufacturing	6%		503	Other building installation n.e.c.
13	NAMPAK LIMITED	NPK	Group Services	2%	**100%**	323	Manufacture of pulp, paper and paperboard
	NAMPAK LIMITED	NPK	Metals & Glass	31%		323	Manufacture of pulp, paper and paperboard
	NAMPAK LIMITED	NPK	Paper	45%		323	Manufacture of pulp, paper and paperboard
	NAMPAK LIMITED	NPK	Plastics	24%		323	Manufacture of pulp, paper and paperboard
14	PRIMESERV GROUP LIMITED	PMV	Human Capital Development	9%	**100%**	920	Education by technikons
	PRIMESERV GROUP LIMITED	PMV	Human Capital Outsourcing	91%		920	Education by technikons
15	PRETORIA PORTLAND CEMENT COMPANY LD	PPC	Aggregates	4%	**90%**	335	Manufacture of adhesives, glues, sizes and cements
	PRETORIA PORTLAND CEMENT COMPANY LD	PPC	Cement	90%		342	Manufacture of cement, lime and plaster
	PRETORIA PORTLAND CEMENT COMPANY LD	PPC	Lime	6%		251	Limestone and limeworks
16	TRANSPACO LIMITED	TPC	Paper and Board Products	25%	**100%**	323	Other paper products
	TRANSPACO LIMITED	TPC	Plastic Products	75%		323	Other paper products
17	TRENCOR LIMITED	TRE	Containers - finance (incl exchange differences)	100%	**100%**	741	Cargo handling
18	VALUE GROUP LIMITED	VLE	General Distribution	79%	**100%**	741	Other supporting transport activities n.e.c.
	VALUE GROUP LIMITED	VLE	Head Office	0%		741	Activities of other transport agencies
	VALUE GROUP LIMITED	VLE	Truck Rental & Other	21%		741	Activities of other transport agencies
19	WILSON BAYLY HOLMES-OVCON LIMITED	WBO	Civil and building	69%	**100%**	502	Construction of homes
	WILSON BAYLY HOLMES-OVCON LIMITED	WBO	Property and concessions	0%		502	Construction of homes
	WILSON BAYLY HOLMES-OVCON LIMITED	WBO	Roads and earthworks	30%		502	Construction of homes

Appendix 4: Conglomerate Organisations (2001-09)

#	Company Name	JSE Code	Activity	Avg %	Avg SR	Sic Code	Sic Description
1	ALLIED ELECTRONICS CORPORATION LTD	ATN	Altech Group	41%	**41%**	366	MANUFACTURE OF OTHER ELECTRICAL EQUIPMENT N.E.C.
	ALLIED ELECTRONICS CORPORATION LTD	ATN	Bytes Group	27%		752	TELECOMMUNICATION
	ALLIED ELECTRONICS CORPORATION LTD	ATN	Powertech Group	32%		869	OTHER COMPUTER RELATED ACTIVITIES
2	BARLOWORLD LIMITED	BAW	Automotive Trading	31%	**36%**	631	Wholesale sale of motor vehicles
	BARLOWORLD LIMITED	BAW	Automotive: Car rental	3%		631	Wholesale sale of motor vehicles
	BARLOWORLD LIMITED	BAW	Automotive: Leasing	2%		631	Wholesale sale of motor vehicles
	BARLOWORLD LIMITED	BAW	Corporate & Other	1%		615	Office machinery and equipment including computers
	BARLOWORLD LIMITED	BAW	Elliminations	-3%		615	Other machinery
	BARLOWORLD LIMITED	BAW	Equipment	44%		615	Other machinery
	BARLOWORLD LIMITED	BAW	Handling: Trading	13%		351	Steel pipe and tube mills
	BARLOWORLD LIMITED	BAW	Logistics	8%		342	Manufacture of cement, lime and plaster
3	THE BIDVEST GROUP LIMITED	BVT	Bid Auto	15%	**43%**	819	Other financial intermediation n.e.c.
	THE BIDVEST GROUP LIMITED	BVT	Bid Industrial and Commercial Products	8%		819	OTHER FINANCIAL INTERMEDIATION N.E.C.
	THE BIDVEST GROUP LIMITED	BVT	Bidfood	4%		642	Other catering services n.e.c.
	THE BIDVEST GROUP LIMITED	BVT	Bidfreight	17%		721	Ocean shipping
	THE BIDVEST GROUP LIMITED	BVT	Bidpaper plus	2%		325	Printing
	THE BIDVEST GROUP LIMITED	BVT	Bidserv	6%		642	Other catering services n.e.c.
	THE BIDVEST GROUP LIMITED	BVT	Bidvest Asia Pacific	15%		741	Travel agency and related activities
	THE BIDVEST GROUP LIMITED	BVT	Bidvest Australia	8%		741	Travel agency and related activities
	THE BIDVEST GROUP LIMITED	BVT	Bidvest Europe	33%		741	Travel agency and related activities
	THE BIDVEST GROUP LIMITED	BVT	Bidvest Namibia	1%		741	Travel agency and related activities
	THE BIDVEST GROUP LIMITED	BVT	Corporate Services	1%		819	OTHER FINANCIAL INTERMEDIATION N.E.C.
	THE BIDVEST GROUP LIMITED	BVT	Inter-group eliminations	-2%		819	OTHER FINANCIAL INTERMEDIATION N.E.C.
4	DIGICORE HOLDINGS LIMITED	DGC	Elimination	-29%	**64%**	741	Other supporting transport activities n.e.c.
	DIGICORE HOLDINGS LIMITED	DGC	Product development & manufacturing	30%		741	Other supporting transport activities n.e.c.
	DIGICORE HOLDINGS LIMITED	DGC	Group services	4%		752	TELECOMMUNICATION
	DIGICORE HOLDINGS LIMITED	DGC	SA distribution	64%		865	MAINTENANCE AND REPAIR OF OFFICE,
5	EXCELLERATE HOLDINGS LIMITED	EXL	Corporate	1%	**50%**	642	Other catering services n.e.c.
	EXCELLERATE HOLDINGS LIMITED	EXL	Services	49%		642	Other catering services n.e.c.
	EXCELLERATE HOLDINGS LIMITED	EXL	Trading and Distribution	50%		612	Wholesale trade in foodstuffs
6	HUDACO INDUSTRIES LIMITED	HDC	Bearings and Power Transmission Products	66%	**66%**	374	Manufacture of industrial process control equipment
	HUDACO INDUSTRIES LIMITED	HDC	Powered products	23%		357	Manufacture of machine tools
	HUDACO INDUSTRIES LIMITED	HDC	Security Equipment	11%		357	Manufacture of machine tools
7	HOWDEN AFRICA HOLDINGS LIMITED	HWN	Environmental Control	38%	**62%**	356	Manufacture of pumps, compressors, taps and valves
	HOWDEN AFRICA HOLDINGS LIMITED	HWN	Fans and Heat Exchangers	62%		357	Manufacture of other special purpose machinery
8	ILIAD AFRICA LIMITED	ILA	General Building Materials	69%	**69%**	342	Manufacture of refractory ceramic products
	ILIAD AFRICA LIMITED	ILA	Specialised Materials	31%		614	Wholesale trade in construction materials, hardware, plumbing and heating equipment and supplies
9	IMPERIAL HOLDINGS LIMITED	IPL	Car rental & tourism	5%	**55%**	631	Retail sale of new motor vehicles
	IMPERIAL HOLDINGS LIMITED	IPL	Distributorship	25%		631	Retail sale of new motor vehicles
	IMPERIAL HOLDINGS LIMITED	IPL	Head Office and Elliminations	0%		741	Other supporting transport activities n.e.c.
	IMPERIAL HOLDINGS LIMITED	IPL	Insurance	5%		821	Life insurance
	IMPERIAL HOLDINGS LIMITED	IPL	Motor vehicle dealership	31%		631	Retail sale of new motor vehicles
10	INVICTA HOLDINGS LIMITED	IVT	Capital Equipment and Spares	44%		356	Manufacture of bearings, gears, gearing and driving elements
	INVICTA HOLDINGS LIMITED	IVT	Engineering Consumables	51%	**51%**	357	Manufacture of agricultural and forestry machinery
	INVICTA HOLDINGS LIMITED	IVT	Group Financing and other operations	5%		357	Manufacture of agricultural and forestry machinery
11	JASCO ELECTRONICS HOLDINGS LIMITED	JSC	Domestic Products	19%	**54%**	869	OTHER COMPUTER RELATED ACTIVITIES
	JASCO ELECTRONICS HOLDINGS LIMITED	JSC	Other non-operation divisions	2%		752	TELECOMMUNICATION
	JASCO ELECTRONICS HOLDINGS LIMITED	JSC	Security	27%		869	OTHER COMPUTER RELATED ACTIVITIES
	JASCO ELECTRONICS HOLDINGS LIMITED	JSC	Telecommunications	53%		752	TELECOMMUNICATION
12	MICROMEGA HOLDINGS LIMITED	MMG	Automotive Component	43%	**55%**	819	Other financial intermediation n.e.c.
	MICROMEGA HOLDINGS LIMITED	MMG	Consolidated Adjustments	-3%		819	Other financial intermediation n.e.c.
	MICROMEGA HOLDINGS LIMITED	MMG	Financial services	5%		819	OTHER FINANCIAL INTERMEDIATION N.E.C.
	MICROMEGA HOLDINGS LIMITED	MMG	Information technology	12%		831	Activities auxiliary to financial intermediation n.e.c.
	MICROMEGA HOLDINGS LIMITED	MMG	Support services	43%		831	Activities auxiliary to financial intermediation n.e.c.
13	SUPER GROUP LIMITED	SPG	Automotive - Dealerships	23%	**45%**	633	Sale of other new parts and accessories
	SUPER GROUP LIMITED	SPG	Automotive - SGIP	8%		633	Sale of other new parts and accessories
	SUPER GROUP LIMITED	SPG	Fleet Solutions	15%		712	Other freight transport by road
	SUPER GROUP LIMITED	SPG	Retail Supply Chain	23%		712	Other freight transport by road
	SUPER GROUP LIMITED	SPG	Services	0%		819	OTHER FINANCIAL INTERMEDIATION N.E.C.
	SUPER GROUP LIMITED	SPG	Services - Emerald Insurance	6%		819	OTHER FINANCIAL INTERMEDIATION N.E.C.
	SUPER GROUP LIMITED	SPG	Supply Chain	39%		889	Investigation and security activities
14	WINHOLD LIMITED	WNH	Flexible Plastics	50%	**66%**	889	Other business activities n.e.c.
	WINHOLD LIMITED	WNH	Industrial Consumables	15%		889	Other business activities n.e.c.
	WINHOLD LIMITED	WNH	Mining	34%		841	Property owning and letting
	WINHOLD LIMITED	WNH	Property and other	0%		841	Property owning and letting

Appendix 5: Exclusion Reasons

Appendix 6: Detailed Market Capitalisation Analysis



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