A study of the relationship between market share and profitability in listed South African retail companies

Magoro, Mutshinyani

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ABSTRACT

The relationship between market share and profitability has been the subject of academic research for so many years, yet it remains a generalisation which has been over-extended and accepted without acknowledgement of all its attributes. This research intended to contribute to the literature by aiding further understanding of the relationship between profitability and market share. Specifically, the aim of this research was to determine whether there is a relationship between market share and profitability within South African retail companies. The research aimed to establish if there was a strong relationship between market share (represented by the percentage that companies own in a market) and profitability (represented by return on asset, return on equity and return on capital employed). In addition, the study wanted to understand if companies that grow market share by acquiring other companies are ranked higher than companies that grow organically.

The quantitative study was conducted through the utilisation of hypotheses testing as a research mechanism. The key population considered for this research was listed organisations operating in a retail sectors that are or were listed on the Main Board of the Johannesburg Securities Exchange (JSE) during the 5 year period from 2004 to 2008. The sample size consisted of 8 companies. The research was conducted using secondary data.

The key results of the research show that there is no relationship between market share and profitability.

However, the results of this research can not be generalised due to small sample size.

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 further declare that I have obtained the necessary authorisation and consent to carry out this research.

…… ……

Mutshinyani Magoro Date

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I would like to thank the Lord for giving me the strength and perseverance to see this through to completion.

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1 Introduction to research problem

1.1 Research Title

A study of the relationship between market share and profitability in listed South African retail companies.

1.2 Research problem

Managers are faced with many different choices everyday. In today's competitive world there is growing pressure to make the right decisions quickly and one of the challenges facing managers is how to increase business profits. In order to do this, managers need to understand the factors that increase profitability. Several previous studies have linked market share with profitability Buzzel, Gale and Sultan (1975); Rumelt (1991) and McGahan and Porter (1997).

According to the BCG matrix by Boston Consulting Group businesses named Stars are those in rapidly growing markets with high market share. These businesses are provided with the best long-term opportunities while businesses with low market share and high growth need to increase their market share in order to become stars. Otherwise, the BCG matrix suggests divesting this business and repositioning this resource more effectively in the remainder of the business. Pearce and Robinson (2003)

Woo (1981) states that though the correlation between market share and profitability has been sustained over the years it remains a generalisation which has been over-extended and accepted without acknowledgement of all its attributes. The general question has always been whether establishing a high market share would ensure higher profits. Researchers who have investigated this question have not has not succeeded in resolving this dilemma and therefore the question remains.

In an effort to integrate the results of many factors affecting business performance, a meta-analysis of 320 empirical studies published between 1921

and 1987 were conducted by Capon, Farley and Hoening (1990). There it was observed that while having market share is helpful, the merits of trying to gain market share with things being equal is unclear.

Porter and Mc Gahan (1997) in the study on profitability and the importance of year, industry, corporate-parent and business specifics of U.S. public corporations, concluded that stable segment–specific effects accounted for nearly 32% of the variance in business segments.

Hergert (1984) used return on assets and regressed against market share on nearly 5,400 businesses and 76 industries. In examining individual firms he found a weak and somewhat nonlinear relationship between market share and profitability. He concluded that the higher the market share, the more profitable the company, however, he also conceded that those relationships occurs up to a point after which the relationship cease to exist.

As Woo (1981) noted, the close association between market share and profitability is, by now, strongly acknowledged by many managers and management scholars as a basic premise of business strategy. She also found that market share does not always translate into profitability, as evidenced by a sizable 41 market leaders all earning a pre-tax ROI of less than 10%.

From the above discussion it becomes clear that the relationship between market share and profitability is sufficiently vague to warrant caution against a market share strategy to enhance profitability. Given the high cost and high risk associated with share building, it is necessary that managers have clearer evidences of the benefits and chances of success for such commitments and this was the subject of this research within the SA context

1.3 Aim of the study

The aim of this research is to determine whether there is a relationship between market share and profitability in South African retail companies. The research evaluates whether being a market leader increases the company's ability to

earn greater profits. More specifically the research evaluates whether there is a strong relationship between market share represented by percentage that companies own in a market, and profitability represented by return on asset, return on equity and return on capital employed. The research further sought to establish whether the relationship was negative or positive.

A number of international research studies have been conducted on the same topic using a number of different profitability measures. Very little research has been conducted locally owing to a lack of market share information in the country. The research will assist in bridging the knowledge gap that exists on the subject locally and it is hoped that it will initiate further research into the topic.

This information will aid chief executive officers in carefully reviewing their strategies prior to adopting a market share penetration or niche strategy. It will assist them in this decision-making by using empirical evidence on whether or not a pursuit of market share in order to increase profits works or not.

Buzzel (1975) says that market share determines ROI and therefore an increase in market share will result in increase in profitability. Leverty (2001) suggests that market share and increases in market share growth will not be predictors of profitability in the model which takes into account the existence of "shock". It is expected that the findings will show that chasing after the market share does not necessarily lead to higher profits.

1.4 Relevance of this topic in SA

South Africa is a developing country with many opportunities for growth. However, it is imperative for organisations to understand how to deal with a growing market and remain competitive. The IMD's competitive yearbook ranks South Africa's competitive index at 48 out of 57 countries which indicates that there is room for South African companies to improve.

The study will benefit South African managers and companies' leaders in three ways. Firstly the study will identify the factors that senior mangers need to consider when they are designing their company's competitive strategy. It will aid in answering the fundamental relevant strategic question, "Should a business make the investments necessary to increase its market share?"

Secondly studies demonstrate the importance of market share and its impact on profitability. Marketing managers can justify their efforts in financial terms and can also use this study to establish where to spend money. Senior managers will also be able to understand what market increases mean to an organisation.

Finally, by discussing different growth strategies, the study will aid senior managers involved in mergers and acquisitions to see which growth strategies are likely to give profits.

2 Literature review

The section below will briefly state the key issues that have arisen from the literature. The section begins by defining the concept of market share and profitability. This culminates in a discussion of the relationship between market share and profitability as well as a discussion of the empirical studies that have been conducted in the past to demonstrate both the positive and negative relationship between the two. Thereafter, the concept of strategy and how businesses approach strategy will be discussed. Lastly the concept of acquisition in relation to market share is considered

2.1 Market Share

O'Regan (2002) defines market share as a company's sales in relation to total industry sales for a certain period. Pearce and Robinson (2003) also use the same definition that market share is sales relative to those of other competitors in the market. Market share is usually used to express competitive position. It is also generally accepted that increased market share can be equated with success whereas decreased market share is a manifestation of unfavourable actions by firm and usually equated with failure. (O'Regan 2002). Pearce (2003) however criticises this method showing it portrays the businesses as they exist at one point in time, rather than as they evolve over time.

High Market share has been associated with higher profits and the following reasons has been cited as the cause of this relationship

2.1.1 Distinct competency

- **Market power theory**

Market share and profitability can be explained as market power advantages. Market power is present when a firm is able to raise its prices or offer inferior products because its rivals are not able to offer customers a reasonable

alternative. Jacobson (1988).One can conclude that market power would enable a company to make higher profits as they are able to charge a premium for their products.

- **Product quality assessment theory**

Another explanation linking market share to profitability is that customers use market share as a signal of product quality. Therefore a high market share product provides a level of customer confidence in an environment of uncertainty and imperfect information about product performance. As a result, these products are able to command high prices and therefore receive higher returns Jacobson (1988). Ravenscraft (1983) in Jacobson (1988) agrees that a way market share is correlated with ROI is through their common association vwith product quality.

This was confirmed by Fraering after studying 1,245 corporations in the 63 industries who states that if a corporation attempts to force market leadership with a low mark-up, profitability will be diminished. Fraering & Minor (1994).

2.1.2 Efficiency theory

The rationale most commonly given to explain the association is that higher market share enables companies to utilise economies of scale to reduce costs and give companies market power. Jacobson (1988). Buzzel*, et al* (1975) also identified possible reasons why larger market share leads to higher profitability. Firms with large market share can exploit increasing economies of scale from different areas such as procurement, manufacturing, marketing and research and development (R&D).
Similarly the “experience curve” theory pronounces that companies who attain greater cost efficiency through experience gained from managing companies with greater market share. Gale and Branch (1982) concluded that it is in fact the role of market share in reducing costs, rather than in creating market power, that generates the association between share and profit.

2.1.3 Behavioural difference between high market share companies and low market share companies

Buzzel (1975) and O'Regan (2002) in their conclusion stated that arguably companies with increased market share behave very differently from companies with a perceived decrease in market share. Buzzel specifically noted the following behaviours.

1. As market share rises there, turnover on investment rises only somewhat but profits margins on sale increase sharply;
2. The biggest single difference in costs, as related to market share, is in the purchases-to-sales ratio;
3. As market share increases, there is some tendency for marketing costs, as a percentage of sales, to decline;
4. Market leaders develop unique competitive strategies and have higher prices for their higher-quality products than do smaller-share businesses market leader spend more on research and development than others;
5. A high volume, high market share strategy often requires heavy fixed investment in specialised processes which reduce the ability to respond to rapid product change and technological developments Woo (1981). High market share companies would also experience difficulty if they need to exit a market from a declining market as they have a high level of fixed assets and other resources.

In a market share analysis Kotler and Keller (2006) discuss the limitations of the market share concept:

- The assumption that outside forces affect all the companies in the same way is often not true;
- The assumption that a company's performance should be judged against the average performance of all companies is not always valid;
- Sometimes a market share decline is deliberately engineered to improve performance. For example dropping of unprofitable customers;
- If a new company enters the industry, then every existing firm's market share might fall.

2.2 Profitability measures

There are many profitability measures that can be used. Previous studies had widely used return on assets (ROA); return on equity (ROE) and return on invested capital (ROIC) also known as return on investment (ROI). Szymanski (1993) states that ROI and ROA can be viewed collectively

While these measures of profitability are widely accepted as reliable and strong measures of profitability they have certain shortfalls, most commonly that they are based on accounting information and thus account for neither time value of money nor the investment risks faced by the shareholders.

2.2.1 Return on Assets (ROA)

Rothschild (2006) states that perhaps the most critical financial goal of manufacturing firms is ROA. Investors rate the management performance of Chief Executive Officers (CEOs) and Chief Financial Officers (CFOs) of manufacturing firms largely by their ability to wring profits from the assets under their control. As such, ROA is perhaps the premier metric of quarterly and annual results. However, virtually no company is able to measure and report on ROA at transactional level to allow managers to know how ROA impacts on their day-to-day, deal-by-deal choices. The implications of this is that ROA is nothing more than high level after the effect report card on CFOs and CEOs reveal that there is no link between the day to day operations and the key financial goals of manufacturing firms

Rothschild (2006) shows the ROA equation as follows

ROA = *Margin* X *Velocity*

where Margin = $\frac{\text{Profit}}{\textit{Sales}}$ and Velocity = $\frac{\textit{Sales Revenue}}{\textit{Assets}}$

The equation suggests that maximising a company's ROA requires managers to understand in great detail the tradeoffs between margin and velocity product by product, order by order and customer by customer.

In agreement with Rothschild (2006) is Selling and Stickney (1989) who see ROA as a measure of a firm's success in using assets to generate profit e without looking at how the assets were financed.

Selling and Stickney (1989) show the ROA equation as follows

ROA = Profit Margin X Asset turnover

where profit margin = $\frac{\text{Net Income + (1 – Tax rate) (interest expense)}}{\text{Revenues}}$

And asset Turnover = $\frac{\text{Revenues}}{\text{Average Total Assets}}$

Selling and Stickney (1989) state that the behaviour of ROA is affected by both operating leverage and product life-cycle phenomena and that firms with a high proportion of fixed cost usually experience greater variability in their ROAs than firms with lower levels of leverage. Selling and Stickney (1989) conclude that as products move through their life cycles, their ROA's should move in a north-easterly direction.

The difference between firms' and industries' ROAs might be related to the economies and diseconomies of scale from operating leverage and to movement through product life cycles. Interestingly, Selling and Stickney found that firms highest ROA in their industries clearly followed a product differentiation or a cost leadership strategy.

Since product differentiation is a way of gaining market power and cost leadership strategy aims at becoming the lowest producer in order to charge

lower prices and sell at a greater volume, it is expected that firms with high market share will also achieve high ROA.

2.2.2 Return on Equity (ROE)

ROE is the best accounting ratio to measure shareholder performance (Ward and Price, 2006).

Ward and Price (2006) show the calculation as

$$ROE = \frac{\text{Net Profit after tax}}{\text{Equity}}$$

De Wet and du Toit et al (2006) comment that the fact that ROE represents the end results of structured financial ratios analysis, also known as Du Pont analysis, it contributes to its popularity among analysts, financial managers and shareholder.

In agreement with Ward (2006), de Wet and du Toit (2006) show that ROE calculation is comprised of the following components:

$$ROE = \frac{\text{Earnings}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Assets}} \times \frac{\text{Assets}}{\text{Equity}}$$

The components are profitability, asset turnover and financial leverage. From the equation it is clear that ROE can therefore be improved by improving profitability and, by using assets more efficiently as well as by increasing financial leverage. Over time it has become clear that improving the ROE may not necessarily improve shareholder value.

According to de Wet (2006) some of the limitations of ROE include:

- ROE does not consider the timing of cash flows and thus may overstate returns;

- Asset turnover may be affected by inflation;
- Earnings can be manipulated legally within the framework of Generally Accepted Accounting Practice (GAAP). Thus earnings may not truly represent true earnings;
- ROE is calculated after the cost of debt before taking into account the cost of own capital, which is not a free resource. This may lead to some companies reporting profits while not creating any value or even destroying value.

2.2.3 Return on Investment (ROI)

ROI is sometimes referred to as return of invested capital (ROIC)

"Return on assets or return on investment is a measure of profit per rand of assets invested in the firm" (Firer, Ross, Westerfield and Jordan, 2008: p.65). It can thus be classified as an indicator of operating performance.

Stead (1995) comments that return on capital which is the return on the assets less the general credit received by the company, is the essential prerequisite for profitability. Unless this is a healthy rate of return, the return on the equity investment cannot really be satisfactory whatever degree of debt gearing the company has.

Ross (2008) uses the following equation:

$$\text{ROA} = \frac{\text{Profit margin}}{\text{Total Assets}}$$

Jacobson in his study used the following equation:

$$\text{ROI} = \frac{\text{Profit}}{\text{Investment}}$$

While de Wet and du Toit have used:

$$\text{ROIC} = \frac{\text{Earning before Interest and Tax x (1- Corporate Tax Rate)}}{\text{Assets}}$$

Jacobson (1985) observed that higher ROI is earned by companies that are able to charge higher prices (most likely because of successfully differentiating their products) and the firms that operate at cost advantage.

While this measure is widely accepted, there are a number of objections. These are mainly based on the following views:

- Assets in the balance sheet might not be inclusive depending on the accounting policy of the specific company;
- Fisher and Mc Gowan (1983) in Jacobson (1993) argued that ROI does not properly relate the stream of profits to the investment that produced it.
- Stead (1995) argues that although calculating the rate of return of operating profit on the operating assets is fine, if the capital invested in brand names, goodwill and the like are not counted in, the operating assets the calculation return is unrealistic.

2.3 Profitability measures selected for the purpose of this study

For the purpose of this study all of the profitability measures reviewed will be used. The decision was motivated by the fact that different measures were used in previous studies. The table below illustrates the different measures and measures used in previous studies

Table 1: Profitability measures selected for the purpose of the study

Profitability Measure	Equation	Previous Study
ROI	$ROI = \frac{Profit}{Total\ Capital}$	Buzzel , Gale and Sultan (1975)
ROE	$ROE = \frac{Net\ Profit\ after\ tax}{Equity}$	Not widely used
ROA	$ROE = \frac{Earnings}{Sales} \times \frac{Sales}{Assets} \times \frac{Assets}{Equity}$	Makino, Isobe and Chan (2004), Khanna and Rivkin (2001)

2.4 Market share and profitability

Earlier studies found that the largest portion of variances in the business unit performance was explained by business unit effects, followed by industry effects and then corporate effects Rumelt, (1991) and McGahan and Porter, (1997).

There are many competing views about the relationship between market share and profitability, most of which have never been reconciled. Of the studies available the author has chosen to concentrate on three studies as well as three contradictory studies.

Table 2: Previous research on the same topic

Reported Positive results	Reported Negative Results
Buzzel , Gale and Sultan (1975)	Woo (1981)
Venkatraman & Prescott (1990)	Jacobson (1988)
Leverty (2001)	Hagigi (1999)

The study of the relationship between market share and profitability can be traced back to Buzzel, Gale and Sultan (1975) who reported a positive relationship between the two. They found that higher market share leads to greater profits, because of market power and lower cost resulting to economies of scale effects and also the learning effects. Since then there has been many competing ideas about the relationship between market share and profitability. There are a number of reasons why some authors believe that market profitability could be positively related to market share.

Newton (1983) states that if we ignore the possibility of coincidence, the correlation between market share and profitability can be interpreted as follows

- Market share determines profitability;
- Profitability determines market share;
- Or some other variables determine both market share and profitability which can be interpreted as well managed and successful firms enjoy high profitability and natural growth.

Venkatraman & Prescott (1990) also found that there was a positive and significant relationship between market share and profitability and that the positive relationship is not the same across different environmental contexts. However he insists that the correlation between market share and profitability is meaningless unless related to an environmental context, the strategies pursued as well as particular macroeconomic conditions. This is in agreement with

Shankil (1989) who also concluded that there is a strong link between market share and profitability but also warned against blindly following a market penetration strategy as a company's market share strategy needs to flow from corporate objectives.

On the one hand, there are those authors who are not convinced by the preceding arguments. Jacobson (1988) found no relationship between market share and profitability; he concluded that previous findings of positive relationship were due to lack of control of extraneous variance. He argued that the dominant explanation of market share and profitability relationship ignores factors such as management skills, company culture, access to scarce resources and luck. Jacobson (1988b) also argued that "strategic intentions" such as investing to expand market share cannot results in abnormal profits under equilibrium because companies will continue to invest until the return premium diminishes.

O'Regan (2002) stated that although it is not possible to accept or reject the contention that market is a driver of performance, it was clear that the market share is an important consideration and one of the main strategic objectives of many companies.

Hergert (1984) reported a nonlinear relationship between market share and profitability: the higher the market share, the more profitable the company, up to a point. Firms with a market share of more than 58% were actually less profitable than those with lower market shares. When analysis was conducted at the industry level, Hergert (1984) found that although the relationship between return on assets and market share was positive in about a third of the industries studied, it was not significant. For almost another third of the industries the relationship was negative. He concluded that the alleged association between market share and profitability is not strong enough to warrant strategic marketing and management decisions to press for market leadership.

Hagigie et al (1999) suggest that "it is a long standing view that market share and profitability cannot be pursued in tandem". This will seem true because an increase in market share mostly requires more investment which might diminish the profitability in the short term. However this seems to suggest that for a company to pursuit market share they will have to forgo some profits. This literature therefore suggests an inverse relationship in the initial phase.

Fraering and Minor (1994) summarised previous studies on the topic and the results reflect the fact that there is no agreement on whether a relationship exists between market share and profitability.

Study	Year	MS/Profitability relationship
Buzzell, Gale and Sultan	1975	Strongly positive
MacMillan, Hambrick and Day	1982	Strongly positive
Newton	1983	Weakly positive
Hergert	1984	Positive but insignificant
Smirlock	1985	Strongly positive
Wernerfelt	1986	Positive only in introduction/growth stages
Bourantas and Mandes	1987	Spurious relationship
Markell, Neeley and Strickland	1988	Significant only in plastics sector
Jacobson	1988	No relationship
Shanklin	1988	Weakly positive
Schwalbach	1991	No relationship

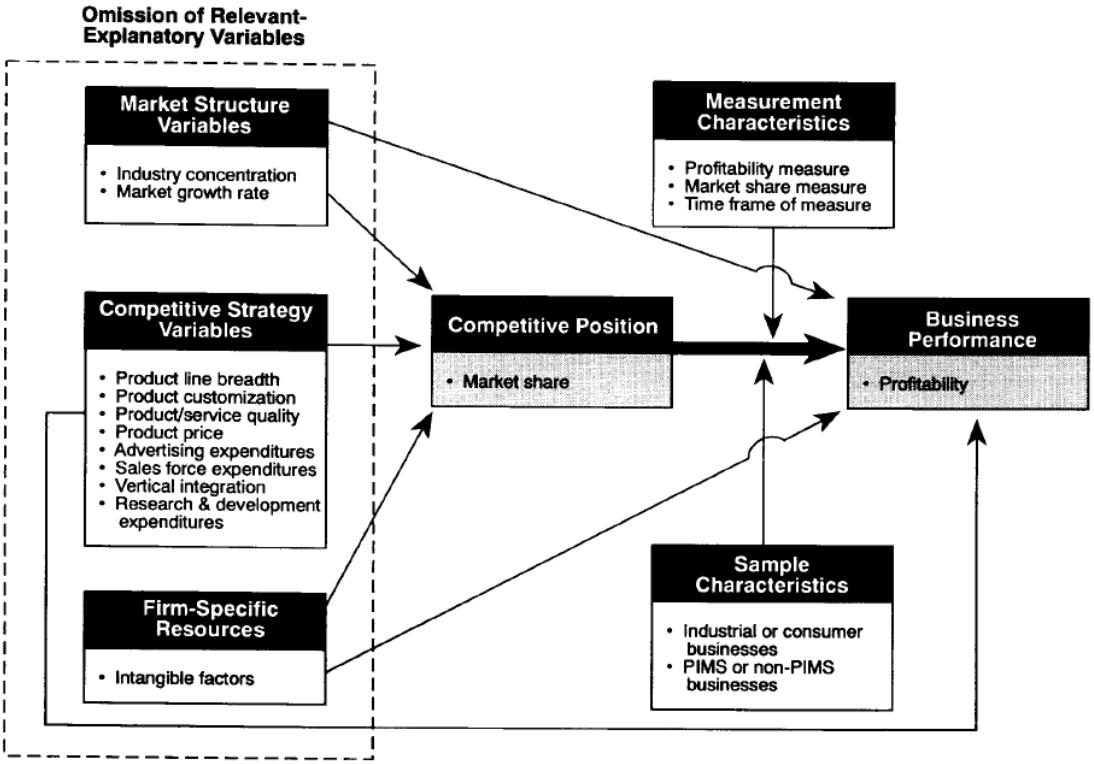
Table VI.
Prior Studies on the Market Share – Profitability Relationship

Source: Fraering et al (1994)

In an effort to reconcile the two views Szymanski, Bharadwaj and Varadarajan (1993) argued that on average, market share has a positive effect on business profitability; however, the magnitude of the market share profitability relationship is diluted by model specification error, sample characteristics, and measurement characteristics. This dilution is caused by including company-specific intangibles factors in profitability measures and analysis of non PIMS (Profit Impact of Market Strategy).

Szymanski (1993) further explains that the dilution effects of the relationship between market share and profitability can be framed in terms of effect of market structure, competitive strategy and firm specific resources on profitability. (See figure 2)

Figure 1: Conceptual framework for Meta-Analysis



Source: Szymanski (1993)

Laverty (2001) has attributed these different views to the fact that each study has reviewed and tested different relationships and none of them has ever tried to replicate the finding of the other. His findings were that there is a correlation between market share and profitability and that market share should be treated as an indicator of performance. He also states that the success of market share requires more fundamental focus.

On the same note, Cool in Leverty (2001) states that the option to build market share is available for more than one company and that non-price competition is likely to reduce profits associated with market share.

Newton (1983) suggests that other models can be used to explain this relationship, while he states that this relationship is over-simplistic of the

situation and need to be enhanced by introducing several other subjective measures, such as quality of management and quality of market. However he admits that it is difficult to quantify such subjective measures.

The literature points to two viewpoints on market share profitability relationship the viewpoints are as follows:

2.4.1 Direct effects viewpoint

As stated above Buzzel, Gale and Sultan (1975) argued that higher market share leads to greater profits, because of market power and lower cost resulting to economies of scale effects

O' Regan (2002) states that profitability stems from pursuing opportunities in growing markets rather than in competing in mature markets and thus firms should seek to align their product offering with market type. Profitability will thus be enhanced.

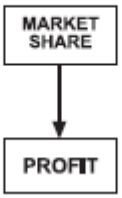
In their study examining the nature of the relationship among strategic resource deployment, market share positioning and profitability across two time periods, Venkatraman and Prescott (1990) confirmed direct effects.

2.4.2 Spurious effects viewpoint

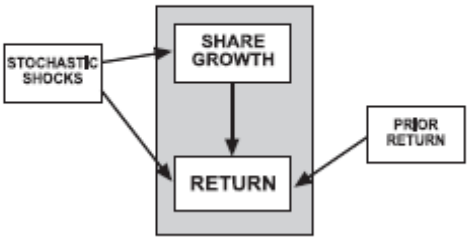
Rumelt and Wensley (1981) hypothesised that random "shock" e.g. luck, will increase both market share and profit, and that change in market share is not a significant predictor of change in return. They conclude that market share is not in itself a valid strategic goal. It is a measure of success otherwise created, but business plans and strategies that have no entrepreneurial content other than share-gain tactics are empty.

Figure 2: Market Share and Profitability viewpoints of the relationship

(a) direct effects

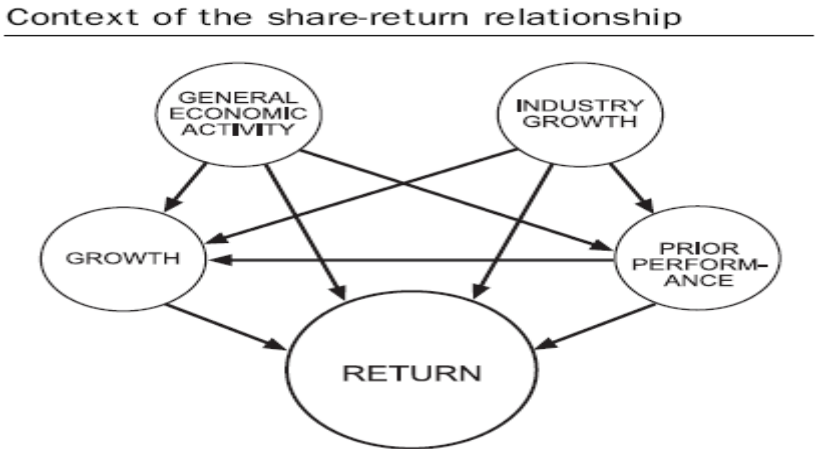


(b) spurious effects
Source: Rumelt & Wensley (1981)



Leverty (2001) Figure 2 finds that the return is influenced by two independent factors, general economic activity and industry growth, which affect return this factors also influence two other factors namely prior firm performance and short term firm growth; prior performance also influence short term growth.

Figure 3: Context of the share-return relationship



Prescott and Venkantraman (1886) summarise the two major assertions and three contradictions in the table below

Table 1. A summary of assertions and contradictions derived from previous research

Assertions and contradictions	Key supporting literature
Assertion 1 There is a positive association between market share and business profitability.	Buzzell, Gale and Sultan, 1975 Gale, 1972 Schoeffler, Buzzell and Heany, 1974 Shepherd, 1972
Assertion 2 The nature of the association (i.e. direct or spurious) between market share and business profitability is context-specific.	Bass, Cattin and Wittink, 1978 Hatten and Schendel, 1977 Schendel and Patton, 1978 Woo, 1981 Woo and Cooper, 1981, 1982a, b Phillips, Chang and Buzzell, 1983
Contradiction 1 Is market share a 'valid', predictor of business profitability?	Rumelt and Wensley, 1981 Woo, 1981 Woo and Cooper, 1981; 1982a
Contradiction 2 The relative role of 'managerial choices' versus 'luck' in explaining business profitability.	*Managerial choice:* Woo, 1981; Woo and Cooper, 1982a *Luck:* Rumelt and Wensley, 1980, 1981
Contradiction 3 Is there a 'direct effect' or 'little evidence of' direct effect?	*Direct effect:* Buzzell, Gale and Sultan, 1975; Phillips, Chang and Buzzell, 1983 *Little evidence:* Rumelt and Wensley, 1980, 1981

2.5 Corporate Strategy

Andrews (1987) defines corporate strategy as the pattern of decisions in a company that determines and reveals its objectives, purpose, or goals. He furthers describes the difference between corporate strategy and business strategy, in that corporate strategy applies to the whole enterprise, while business strategy defines the choice products or services and market individual businesses within a firm.

In the absence of explicit strategy statements it is possible to deduce from decisions observed what the pattern is and what the company's goals and policies are.

Farjourn (2002) describes strategy in short, as a co-aligning or adaptive coordination. This definition establishes three interrelated points: strategy emphasises the firm's behaviour over time and includes major goals and actions; it includes coordination in space and time, of which planned

coordination is just one special case; and it deals with adaptation, which includes both responding to and influencing the environment.

Andrews (1987) suggest that there are two generic strategies that can be used by a firm in growing the firms

2.5.1 Low Growth Strategies

According to Andrews (1987), this is more attractive than it was in the old days of "more is better". The advantage of this strategy is that the company can make profits by doing better what a company already know how to do. Its advantage is the possibility of being overtaken or displaced by new development.

2.5.2 Forced Growth Strategies

Andrews (1987) describes that forced-growth strategies can be done in fours ways as described in the table

Table 3: Summary of different strategies

Forced strategy	Description
1. Acquisition of Competitors	Acquisitions of small competitors in the same business to expand its market. This can be done by a company with successful strategy and proven track record.
2. Vertical Integration	This is a conservative growth strategy keeping a company close to its core competence and experience in its industry, consists of moving backward via acquisition or internal development to source of supply and forward towards the ultimate customer.

3. Geographical Expansion	Enlargement of territory that can be accomplished by building new plants and enlarging marketing organisation or by acquiring competitors.
4. Diversification	Diversification can range from minor additions to product line to acquisition of unrelated businesses. This avenue to growth presents the most difficult strategic choices.

Source: Andrews (1987)

2.6 Acquisition and market share

Ghosh (2004) comments that despite claims that market share is an important long-term business strategy, there are many studies that have focused on the role of market share in acquisition. The link between market share and acquisition is the theory of market power. The market power hypothesis suggests that an increase in industry concentration through acquisition facilitates intra-industry collusion or dominant firm pricing, leading to large industry-wide monopoly rents. Eckbo (1985) in Ghosh (2004)

Ghosh's (2004) study documents a large increase in market share following acquisition. On the other hand, market concentration increases by a small amount, Ghosh (2004) in his study used 2000 U.S. acquisition completed during the 1980's and 1990's. He concludes that acquisitions tend to have a greater impact on market share of merging companies than industry concentration. The conclusion suggests that merging companies are unlikely to benefit from increased market power. The same study also indicates that market share increases are not limited to horizontal mergers as there are similar increases in non-related mergers.

Ghosh (2004, p 215) argues that "…if mergers are motivated to benefit from greater market power, then the ultimate objective is to increase market concentration." He concludes that while changes in market concentration denotes a change in market power, changes in market share represent potential efficiency benefits for merging companies as a result of the merger.

The conclusion can be summarised a follows

Acquisition ⇨ Market concentration ⇨ Market power

Acquisation ⇨ Market share ⇨ Potential efficiency benefits

It can be concluded from previous literature that with all these factors present an acquisition will ultimately lead to increase in profitability.

3 Hypothesis - Research questions

The research examines the three measures of profitability discussed in the literature review, namely ROI, ROE and ROA to determine if there is a significant relationship between market share and profitability.

Hypothesis 1:

Null Hypothesis- Ho

The null hypothesis states that there is no relationship between market share and profitability.

$H_{0:}$ p = 0

p being the population correlation coefficient

Alternative Hypothesis H1

The alternative hypothesis states that companies with high market share earn high profits.

$H_{1:}$ p ≠ 0

p being the population correlation coefficient

Hypothesis 2*:*

The null hypothesis is that companies that grow market share by acquiring other companies have the same rankings as companies than grow organically.

H_o: Σ (ranks $CARG_A$) = Σ (ranks $CARG_o$)

The alternative hypotheses is that companies that grow market share by acquiring other companies are ranked higher than companies than grow organically.

$H_{1:}$ Σ (ranks $CARG_A$) >Σ (ranks $CARG_o$)

4 Proposed Research methodology

4.1 Introduction

This section details the research methodology used to gather data and to analyse data for this study.

4.2 Type of study

The study is quantitative in nature and utilises hypotheses testing. The objective of the research is determine if there is a relationship between market share and profitability, and also to understand if companies that grow market share by acquiring other companies are ranked higher than companies that grow organically. The study does not attempt to prove causality between the variables. Zikmund (2003) argues that a causal relationship is difficult to prove and therefore this study does not attempt to do that. This conforms to previous studies where causality was not established in the correlation between market share and profitability (Gale, 1972)

The variables under considerations are market share percentages and profitability. ROI, ROE and ROA were used to determine and market share adoption to represent strategy intention of the companies.

4.3 Research approach and design

Zikmund (2003) states that the design of the research is determined by the four key constraints

- Objective of the research
- The availability of data sources
- The urgency of the decision
- Cost of obtaining the data

All these factors were taken into account when this study was designed.

The work of Leverty (2001), which takes into account the prior research of Rumelt and Wensley (1981), was chosen as a starting point. The reason for this choice is that the study takes into account the existence and importance of strategy in the market share–profitability relationship. The purpose of Leverty's study was to answer the most fundamental question: Is the pursuit of market share an appropriate strategy? This study seeks to find out if a company's market share with higher/larger market share is associated with a higher profitability.

Unlike Leverty's study which covered a four year period, this study will be done over a five year period. This was because of the sample size being small and because market share info can only be found for those years. Because the dataset covers a five –year period, the results will reflect several phases of the business cycles.

Like Schmalensee's (1985) and Rumelt's (1991) studies, this research will only focus on one sector - the retail sector. The reason for this is to eliminate the industry effects on the results. The retail sector was also chosen as market share data was available for the retail sector unlike other sectors where it is very difficult to obtain the data.

The study differs from previous studies in that it does not look directly at the relationship between market share and profitability, but also focuses on acquisition as one of the vehicles for gaining market share and profitability.

4.4 Unit of Analysis

Zikmund describes a unit of analysis as level of investigation that the study will focus on. The unit of analysis are market share and profitability measure of organisations listed operating in a retail sectors that are or were listed on the Main Board of the Johannesburg security exchange during the 5 year period from 2004 to 2008. The organisations selected were obtained from McGregor's

Bureau of financial Analysis (BFANet) database. The profitability measures ROI, ROE and ROA were calculated using raw secondary data from McGregor's BFANet database according to the ratios discussed in the literature review.

4.5 Sample size and sampling method

The nature of available data determined the sampling method. The sampling method selected was the non-probability, purposive sample. A non probability sample is defined as a sample "in which units of the sample are selected on the basis of personal judgment or convenience" (Zikmund 2003, p 380). Zikmund (2003) also explained that in non-probability sampling, the probability of selecting a particular member of the population is unknown. Purposive or judgmental sampling is defined as one in which the researcher selects a sample to serve a specific purpose even if this make sample less than fully representative.

The advantage of using such sampling methods is that is fairly cheap and can be useful for a specific objective while the major disadvantage includes the fact that the data cannot projected beyond the sample.

The sample units were selected according to the following criteria

- Must be publicly held companies, listed on the Johannesburg stock Exchange. This was to allow easy access to financial data.
- All the companies must belong to the same selected level one sic code. This was to reduce industry effects in the data.
- Must be able to competition with each other.
- Market share data must be available or easy to deduce.

Electrical and natural gas utilities are regulated monopolies, and hence do not compete, rendering them inapplicable to this discussion. As mentioned earlier there are no appropriate statistical techniques for measuring random sampling

error from a non probability sample so projecting the data beyond the sample is inappropriate.

Zikmund (2003) states that there are three of factors in determining sample size for questions involving means. The factors required are

- Variance, or heterogeneity of the population (Only a small sample is required if population is homogenous
- Magnitude of acceptable error, which indicates how precise the estimate must be.
- And lastly the confidence level, which indicates the probability of true population parameters being incorrectly estimated.

A sample size of 30 units is recommended as it is understood to be statistically different. Every attempt was made to ensure a sample size over 30, however due to the unavailability of market share data and the fact that most companies belonged to more than one sic code rendered it impossible to analyse, the sample size was reduced to 8 companies.

4.6 Characteristics of the sample

Food Retail in South Africa DATAMONITOR (2009)

- Industry has displayed healthy growth in revenues , for the period 2004-2008 there was a compound annual growth of 6.5%
- The absence of switching costs for consumers ensures a competitive climate within the industry
- With established super markets and hyper markets favoured by economies of scale potential new entrants may struggle to compete. Head to head is extremely difficult for new retailers.
- Loyalty towards a specific retailer is common at a small, local scale.
- Large-scale, established retailers hold a natural advantage in operating in businesses that benefit significantly from economies of scale, allowing aggressive pricing scheme that is not viable of smaller firm.

Apparel Retail in South Africa DATAMONITOR (2009)

- Industry has displayed healthy growth in revenues , for the period 2004-2008 there was a compound annual growth of 8.3%
- The apparel retail industry is fragmented and there is room for small players.
- Where brand loyalty exits it is more likely to be the designer than the retailer
- The South African apparel industry has grown only modestly in value in recent year, which limit its attractiveness to new entrants. Overall there is a strong likelihood of significant new entrant to this industry.

4.7 Details of data collection

Four types of data were gathered for this research. The first was the collection of data to determine companies to be researched; the second was the collection of data to assist with the allocation of sectors; the third was the collection market share data of companies; and the fourth was the collection of data to determine growth strategy .Lastly profitability data was collected

4.7.1 Data to determine companies to be researched

Companies were selected for this study by using the McGregor BFANet database. All companies listed on the Johannesburg Security exchange main board were selected and thereafter all companies in the retail sector were chosen. The financial ratios for each selected company for the period of 2004 to 2008 were downloaded into an Excel spreadsheet to facilitate analysis of the data. Companies who have not been listed for less than two of the five years were deleted as the information was rendered insufficient to use them for the study. All companies were analysed at a business level and not at corporate level.

4.7.2 Data to determine Sector

SIC Codes, or Standard Industrial Classification codes, are an internationally accepted set of codes for the standard classification of all economic activities. www.cipro.gov.za. The sic coding aids in reducing variability for the as much as possible as only companies belonging to same sector are compared.

For all the companies selected the sic code was available on McGregor's

Appendix A: Full STATS SA SIC code listing

According to the sic coding methodology the following are the explanation of the divisions of sic code

First digit = Major Division

Second digit = Division

Third Digit = Major group

Fourth Digit = Group

Fifth digit = Sub-group

4.7.3 Collection of market share data

Market share data was collected using two sources: Datamonitor and Euromonitor. Datamonitor was used to be gathered to justify that the companies selected were all players in the same industry and competing with each other. Euromonitor gave a detailed breakdown of market share per company. In an instance where market share data was not available per company the following formula was used to determine market share data.

- Company's sales / Industry sales

4.7.4 Data to determine the growth strategies of the companies

Annual reports of the companies selected where analysed to determine if any acquisition has been made during the years that the study is based on (that is 2004-2008). After which companies were categorised as either growth by acquisition or growing organically. Those companies which had acquired one or

more companies were then grouped together; and those which had no acquisition during the study years where also grouped together.

4.7.5 Data to determine profitability measures

Within the selected companies, the balance sheet, income statement and cash flow statements were downloaded from McGregor BFAnet for the period 1997 to 2007. The following method was used to determine the respective profitability ratio:

- **Return on invested capital (ROI)**

The return was calculated in excel utilising the following formula:

$$ROI = \frac{NOPAT - Dividend}{Total\ Capital}$$

- **Return on Equity**

The return was calculated in excel utilising the following formula:

$$ROE = \frac{Net\ Income}{Equity}$$

- **Return on Assets**

$$ROA = \frac{Profit\ margin}{Total\ Assets}$$

4.8 Data analysis approach

In testing the hypotheses, statistical inferences can be made for all hypotheses. In this case the statistical inference cannot be made because of the sample size. Descriptive statistics will be calculated for each variable. Elements calculated included, mean, medium, minimum, maximum and standard deviation.

4.8.1 Data analysis for hypothesis 1

Scatterplots and correlation were used to understand the relationship between market share and profitability. As stated by Albright (2006), correlations have the attractive property that they are completely unaffected by the units of measurements. He also states that although correlation can very useful, its limitation is that it only measures the strength of linear relationships.

In this exercise each of the market share and the profitability measures were obtained and analysed for trends and abnormalities. Thereafter, simple descriptive statistics was calculated for each variable. Then a more detailed analysis was conducted using a statistical package called STATISTICA. A correlation matrix was used to present the data. The results are presented in the matrix.

The correlation coefficient provides an objective and simple way to measure the strength and the direction of the relationship. Underhill (1985) indicates that the correlation coefficient *r* always lies between 1 and -1. If *r* is positive, then the regression line has a positive slope and if *r* is negative then the regression line has a negative slope. A correlation which equals to zero or near zero indicates practically no relationship between the variable and data cannot be used to predict y from x. In order to determine how big *r* must be to show a significant correlation, a degree of freedom and also choose a significant level. Which will then determine that for significance *r* must be equals to certain value in order to reject the null hypothesis.

It is necessary to highlight the reason for using regression and correlation analysis:

- A correlation coefficient (r) is a number that gives a numeric indication of the strength of the relationship between two variables. It summarises the information in the scatter plots

- A correlation matrix is the standard form of reporting correlation results. Zikmund (2003), as well as Albright (200X) state that correlation has an attractive property that is completely unaffected by their units of measure.

The method has the following limitations

- As stated in Underhill (1985) The correlation does not prove a cause-effect relationship, it only measures how the variables vary in relation to each other for an example a high correlation between market share and ROA does not prove the market share reduces or improves ROA. It might be that the relationship between the two variables is explained by the third variable.
- The correlation coefficient, *r*, is not designed only to measure the degree of a straight line or linear trend. If the data lies along some curved line, the correlation coefficient may be small, indicating no significant relationship even though there is a strong relation.

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A process was followed as outlined by Zikmund (2003):

- Stating the null and the alternative hypothesis;
- Choosing a significance level (α);
- Calculation of ρ-value (ρ);
- And comparison of ρ-value to significance level.

Statistical software called STATISTICA was used for this purpose.

4.8.2 Data analysis for hypothesis 2

Because of non normality due to small sample size a non parametric test will be done.

The Mann-Whitney U test was chosen for this test as an assumption cannot be made that the population is equally distributed and that their variances are equal.

The Mann-Whitney U test is the non parametric equivalent of the parametric t test for comparing the means of two unrelated populations. In the case of small sample sizes, as in this study, it is more appropriate to use the Mann-Whitney U test as it uses the ranks of the values, rather than the actual values, to compare companies that acquire other companies versus companies than grow organically. The rankings are preferred to the raw values with small samples, as a single extreme score or score that is markedly different from the other scores in the sample can skew the sample mean unduly, rendering it unrepresentative of the underlying population mean. However, calculations based on the ranks of the scores are not influenced to the same extent.

The test has the following limitation:

- Perhaps the greatest restriction is if data does not come from a random sample of the population, the significance levels might be incorrect.

4.9 Limitations of the study

The main limitation of this research is that the sample size is too small leading to inability to generalise the results . A bigger sample might reported different results.
Other limitation include :

- Integrity of market share data
- Integrity of profitability data
- Profitability measurement can be easily be distorted by irrelevant financial activities.
- Only one industry was included leading to homogenous

5 Presentation of results

5.1 Introduction

This chapter is aimed at presenting the research findings from the analysis conducted in Chapter 4 that either supports or contradicts the research hypotheses. The results are presented with each hypothesis being used as a sub-heading. A conclusion is drawn at the end of the chapter as to whether the evidence supports the null or the alternative hypothesis.

5.2 Discussion of secondary data

As mentioned earlier in the research, secondary data was used for this research. The sample included all companies listed on the Johannesburg Security Exchange. Certain industries were excluded from the sample such as electrical and natural gas utilities as they are regulated monopolies, rendering them obsolete to this discussion.

Retail companies were chosen for this study as it was easy to obtain market share information for retail companies than service or manufacturing companies. All the companies selected belonged to only two sic codes and therefore can be easily classified as competing with each other.

Table 4 below contains a list of all companies as well as summary statistics for the sample. The respective retail companies, their market share and profitability for 2004 - 2008 are listed in the appendix.

Table 4: Research Sample

Company	Company Code	Sic code	**Mean Ms**	**Mean ROA**	**Mean ROE**	**Mean ROI**
Shoprite Holdings Ltd	SH	61	25.3	14.1	29.0	23.7
Pick 'n Pay Stores Ltd	P&P	61	23.8	17.6	61.6	35.2
Spar	Sp	61	26.5	19.4	50.6	46.1
Massmart Holding Ltd	MM	61	6.5	16.8	41.2	28.7
Mr Price Group Ltd	MrP	62	3.5	24.9	31.7	25.9
Foschini Ltd	Fch	62	7.0	27.5	31.7	23.9
Truworths Group Pty Ltd	Tru	62	4.1	44.9	40.5	38.7
Edgars	Ed	62	20.6	18.9	29.1	32.9
n=8						
Mean			14.7	23.0	39.4	31.8
Median			13.8	19.8	37.4	31.2
Mode			3.7			25.8
Minimum			3.2	4.1	21.2	15.7
Maximum			28.1	50.4	82.8	61.3

Many other companies were considered but were not analysed further such as those involved in electrical appliances, IT equipment, IT services, automobiles and fast moving consumer goods (FMCG). This was due to them not being listed on the JSE. The same goes for all other retail companies who were excluded due the fact that they belong to different sic codes, therefore market share could not be determined per sic code. All the analysis was done on a business unit level and not on a corporate or group level.

Regression and correlation analysis was used to determine the strength and the direction of the relationship. An analysis was also conducted between different years to determine if there are any lagged effects in the relationship between market share and profitability.

5.3 Hypothesis 1

The null hypothesis states that there is no relationship between market share and profitability. The alternative hypothesis states that there is a relationship between market share and profitability. A parametric test and a non-parametric test were done because the sample was too little. All the results were conducted per year and also per profitability measure:

$H_{0:}$ P = 0
$H_{1:}$ P ≠ 0

5.3.1 Correlation

The figure 4 and 8 below represent the market share versus ROA scatter plot for the 8 companies analysed. The corresponding statistical calculations are also stated. The graphs are Pearson's parametric tests.

A correlation within one company would result in a higher correlation because of auto correlation leading to an erroneous association between variables. Another reason for not calculating the correlation is that the sample size did not allow correlation within one company as correlation assumes independent observation. The correlation between the variables could be removed by subtracting each year from the previous year which would result in four independent variables, which is insufficient for calculation of even a non-parametric correlation.

Figure 4: Scatter plot of ROA 2004 against Market Share 2004

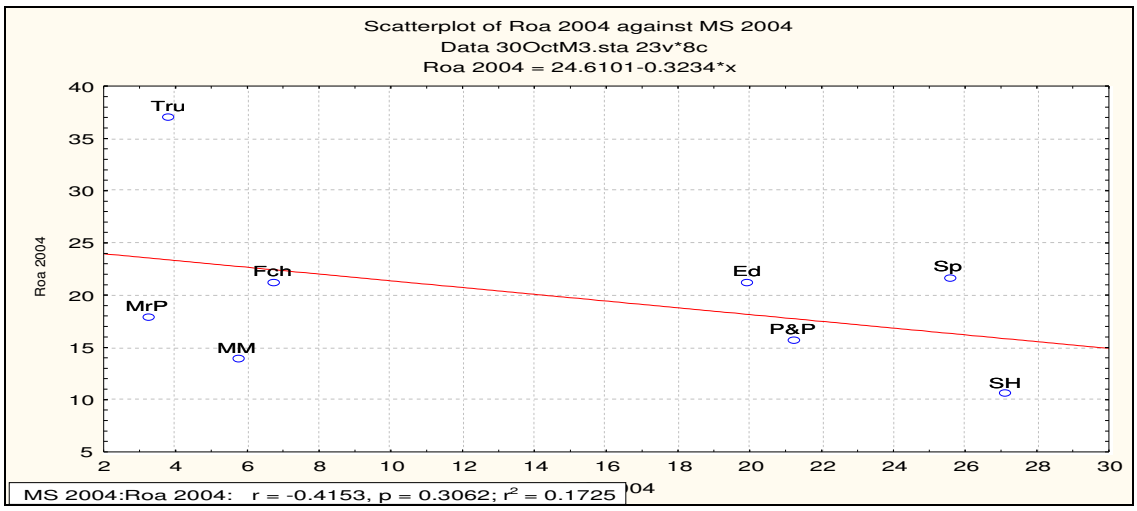


Figure 5: Scatter plot of ROA 2005 against Market Share 2005

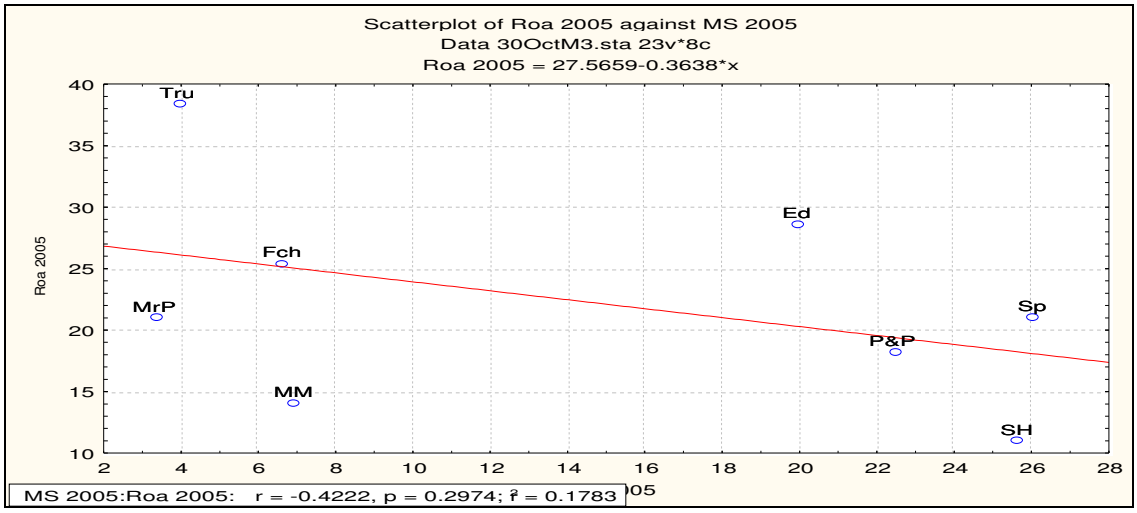


Figure 6: Scatter plot of ROA 2006 against Market Share 2006

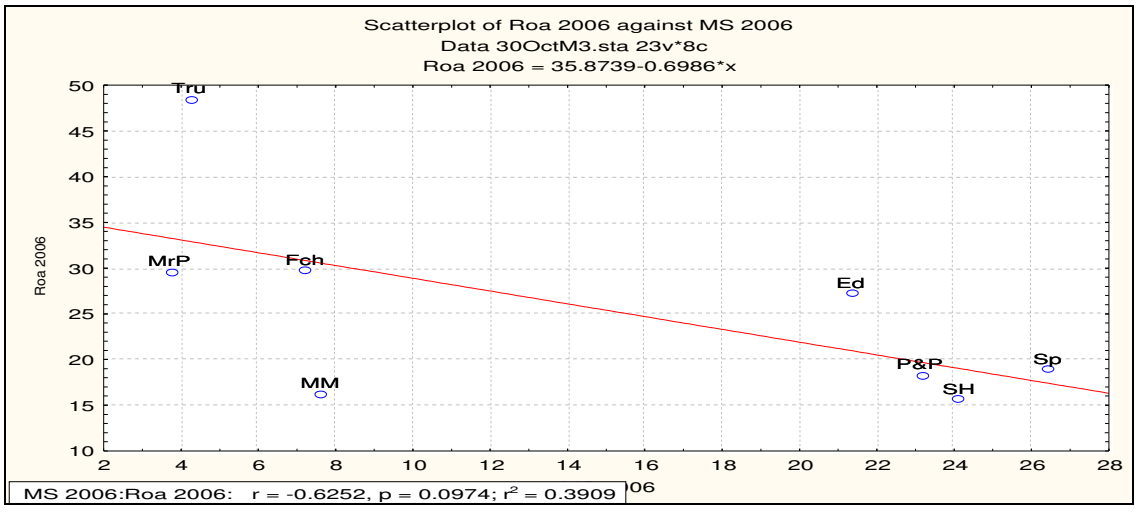


Figure 7: Scatter plot of ROA 2007 against Market Share 2007

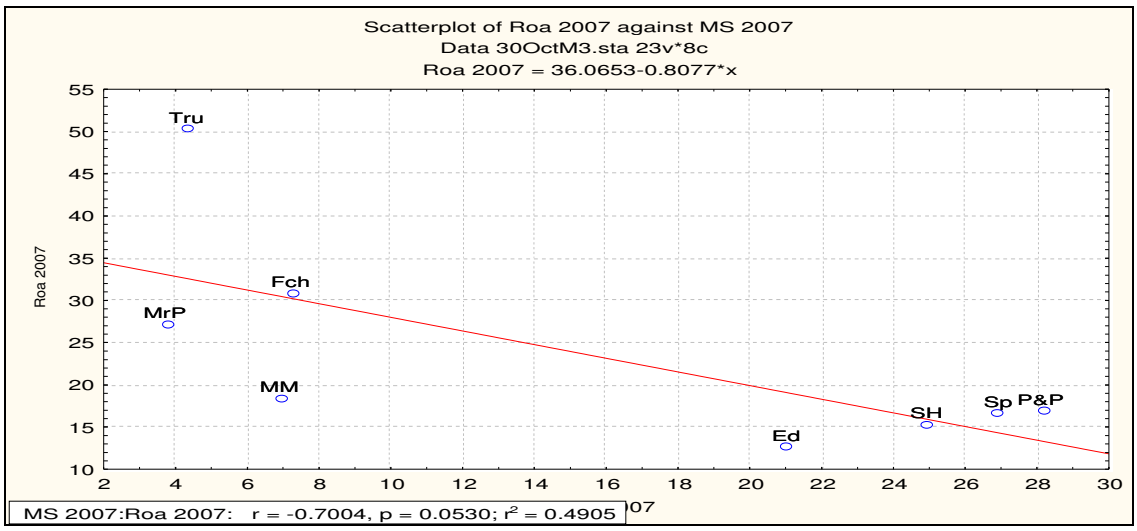
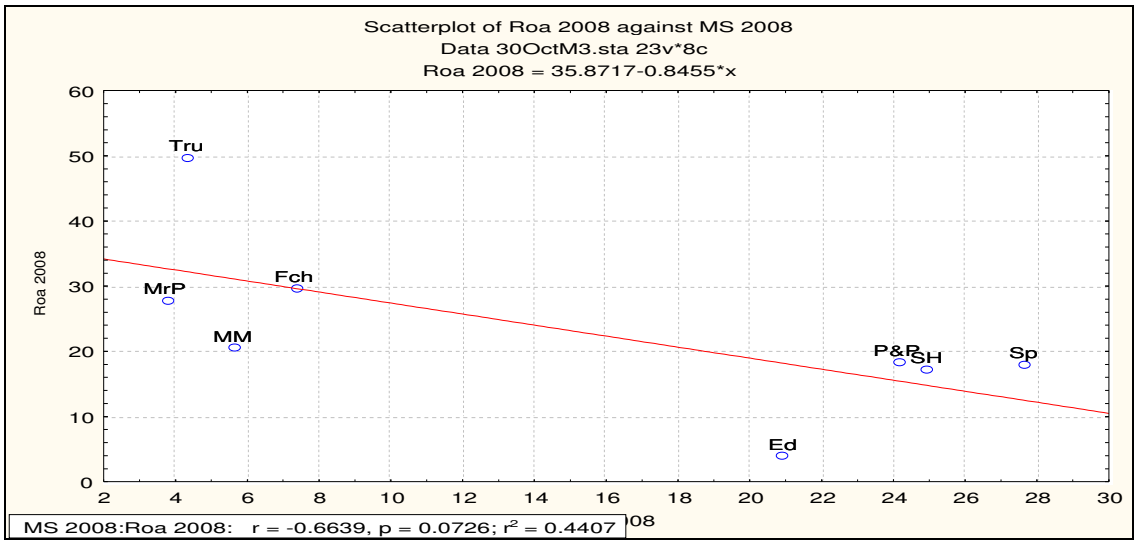


Figure 8: Scatter plot of ROA 2008 against Market Share 2008



For all the years the scatter plots indicate a negative relationship between market share and ROA.

Figure 9: Scatter plot of ROE 2004 against Market Share 2004

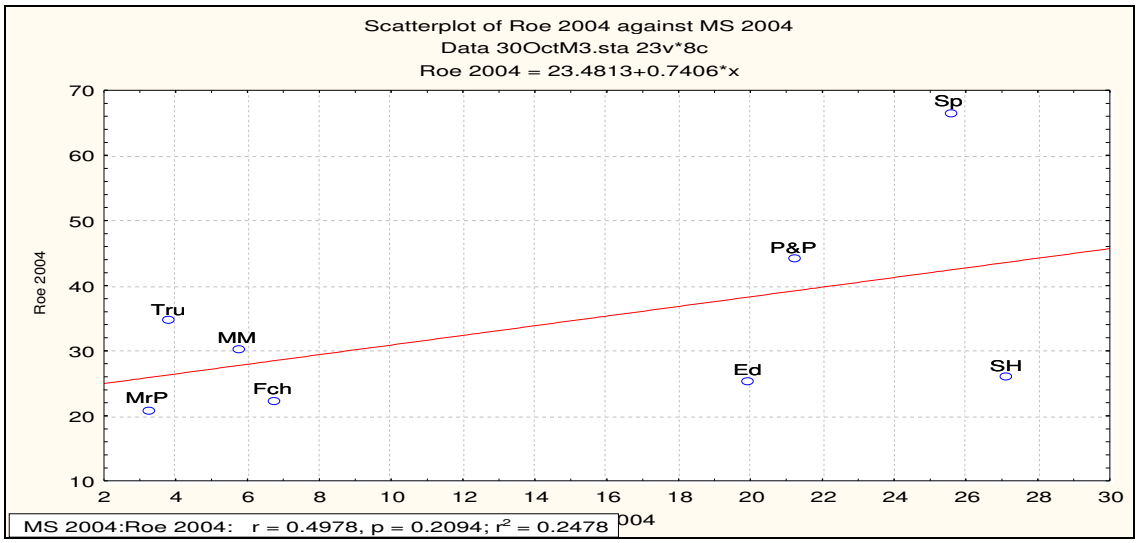


Figure 10: Scatter plot of ROE 2005 against Market Share 2005

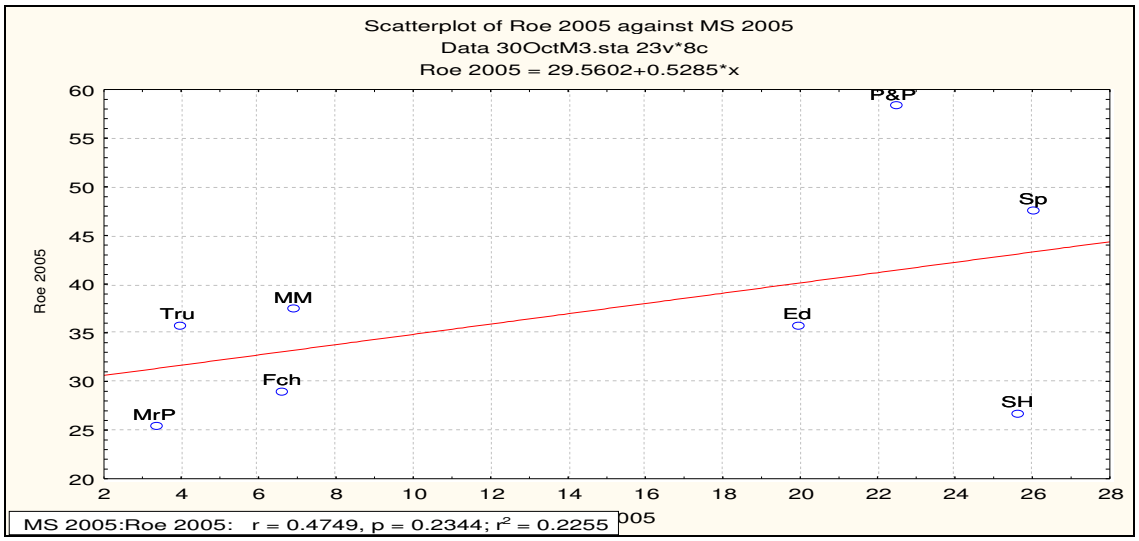


Figure 11: Scatter plot of ROE 2006 against Market Share 2006

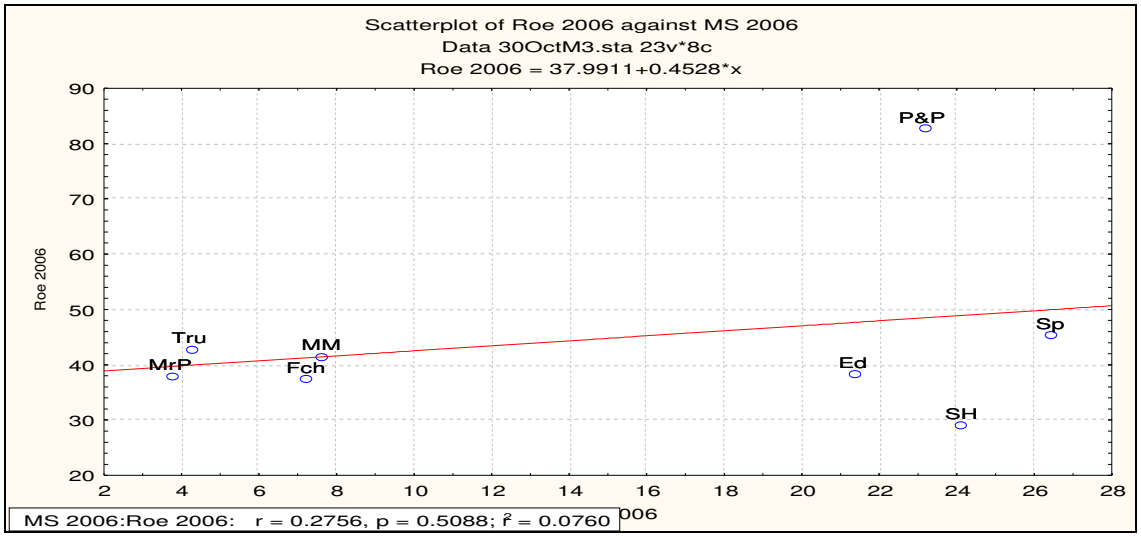


Figure 12: Scatter plot of ROE 2007 against Market Share 2007

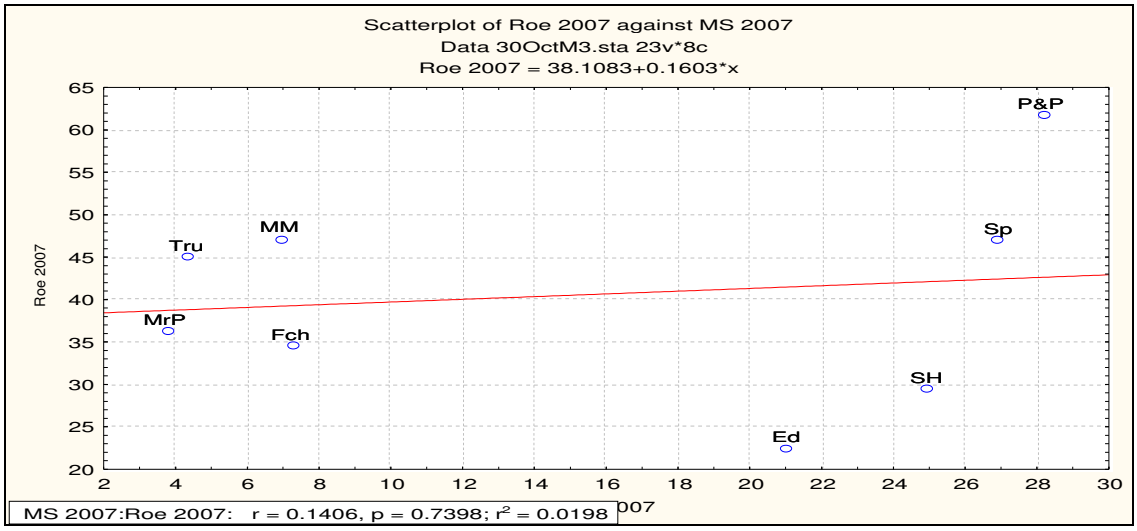
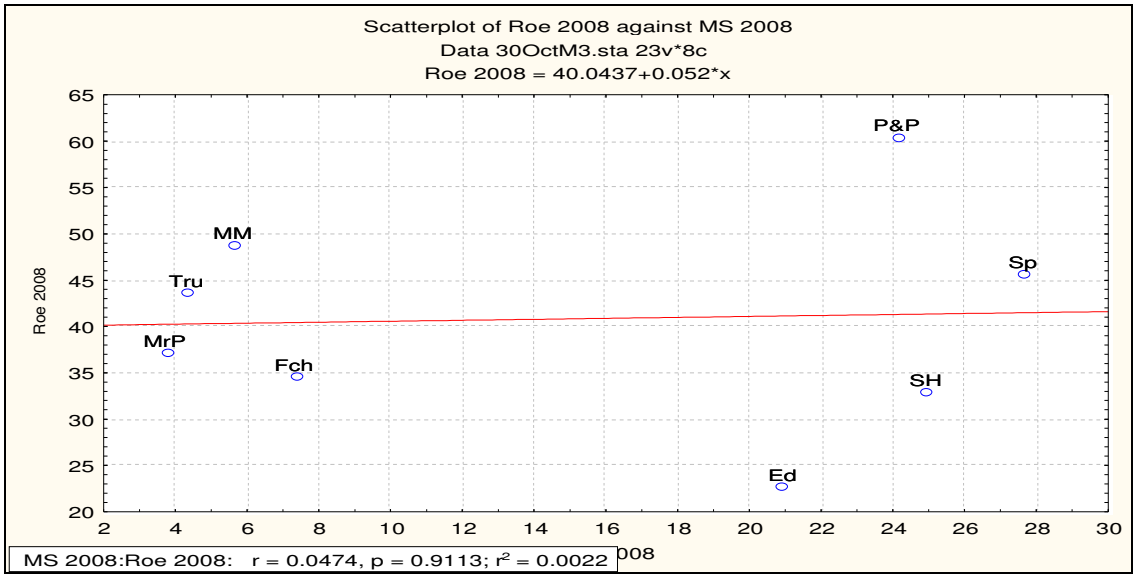


Figure 13: Scatter plot of ROE 2008 against Market Share 2008



Figures 9 to 13 above represents the Market Share versus ROE scatter for all the 8 companies analysed with the corresponding statistical calculations.

The scatter plots indicate a weak positive relationship in 2004-2006, from 2007 the scatter plots indicate no relationship between market share and ROE.

Figure 14: Scatter plot of ROI 2004 against Market Share 2004

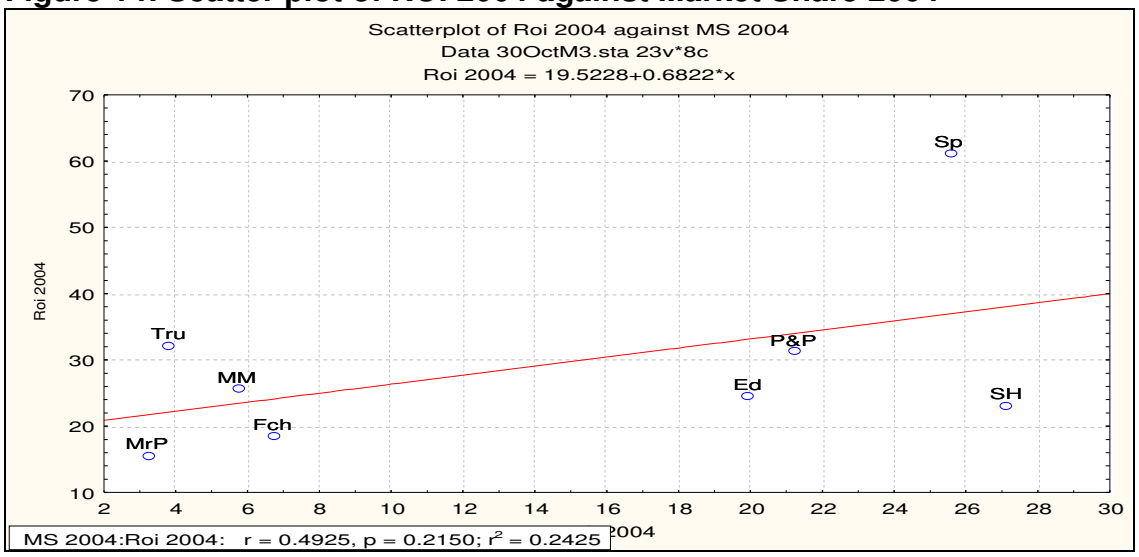


Figure 15: Scatter plot of ROI 2005 against Market Share 2005

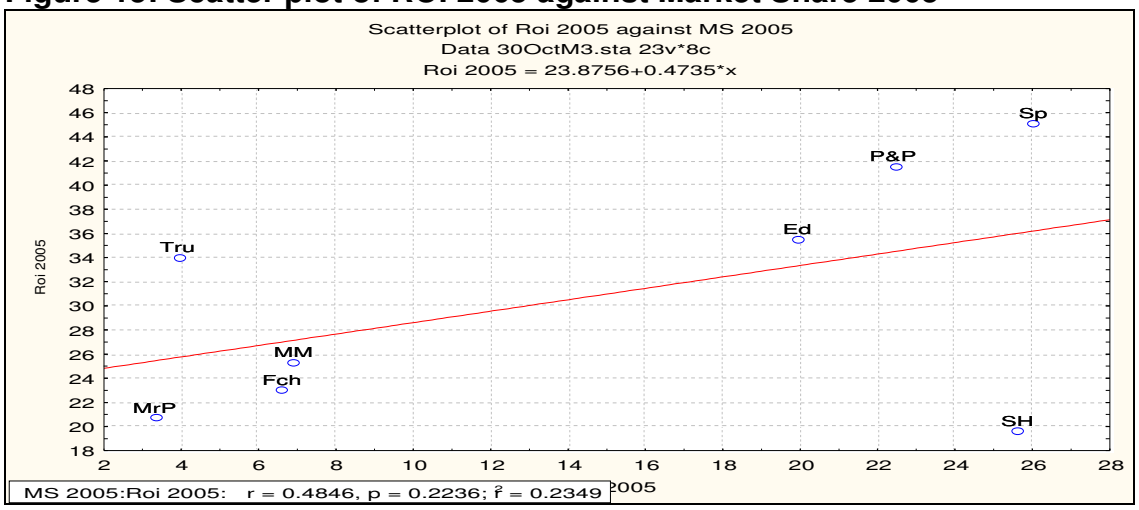


Figure 16: Scatter plot of ROI 2006 against Market Share 2006

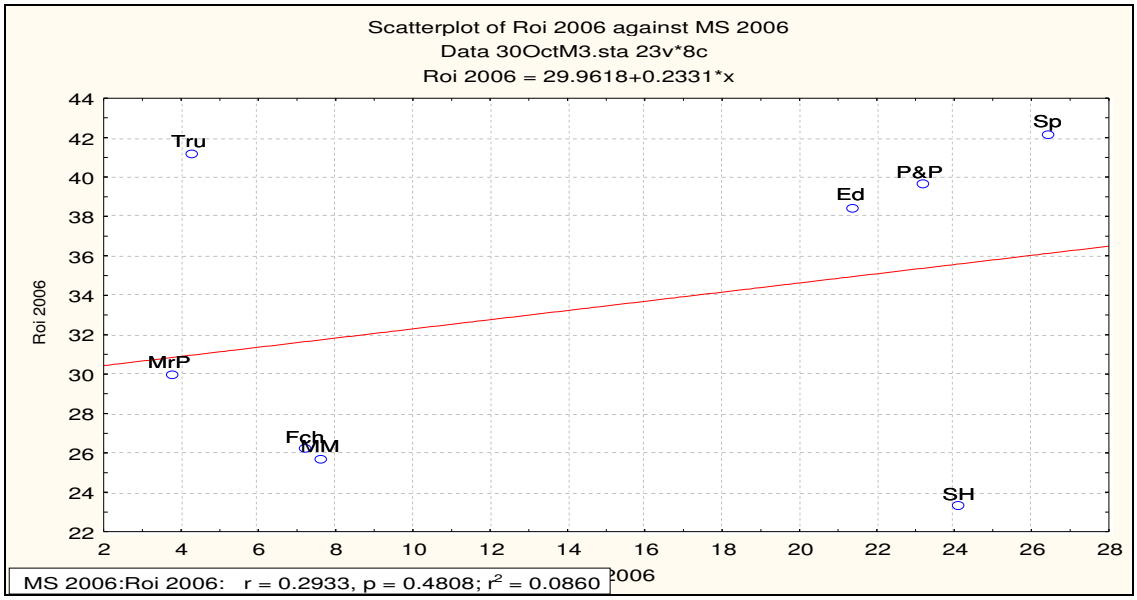


Figure 17: Scatter plot of ROI 2007 against Market Share 2007

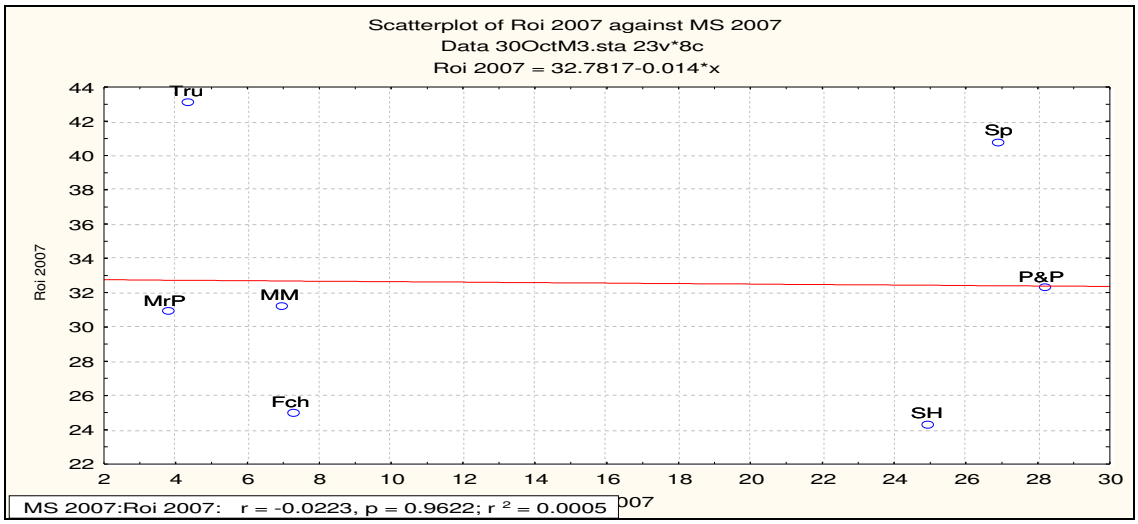
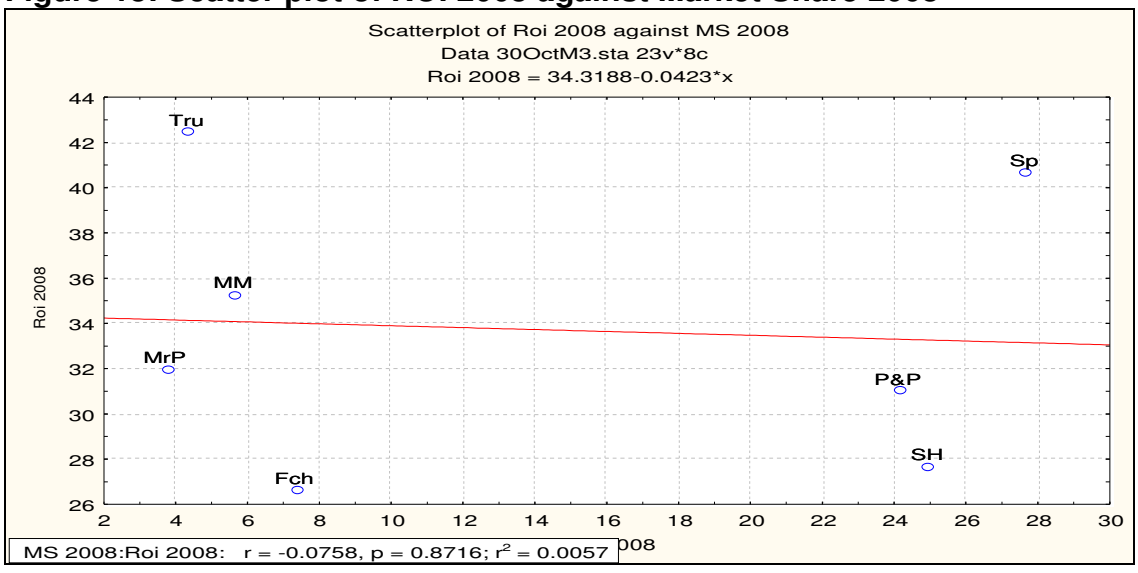


Figure 18: Scatter plot of ROI 2008 against Market Share 2008



Figures 14 to 18 above represents the market share versus ROI scatter for all the 8 companies analysed with the corresponding statistical calculations
The scatter plots indicate a weak positive relationship in 2004-2006, from 2007 the scatter plots indicate no relationship between market share and ROI.

Both parametric statistics and non parametric statics were used due sample size. Parametric statics was based on the assumption that data is drawn from the population with normal distribution, however when an assumption cannot be made about the normality of the population, a non parametric statistical procedure must be made (Zikmund 2003). The main difference between the two statistical procedures is that while parametric statistics uses actual value whereas the non-parametric statistics uses ranking in that one value is only one (1) better than the last value.

The two tables below represent the results of a parametric (Pearson test) and non parametric (Spearman test) correlation matrix indicating the relationship between the two variables. Both test where done at 95% and 90% level of confidence, respectively.

Table 5: Pearson–Parametric Test

At $\alpha = 0.05$

	MS 2004	MS 2005	MS 2006	MS 2007	MS 2008
ROA	-0.42	-0.42	-0.63	-0.70	-0.66
ROE	0.50	0.47	0.28	0.14	0.05
ROI	0.49	0.48	0.29	-0.02	-0.08

At 95% level of confidence there is no significant relationship between market share and any of the profitability measures. ROA indicate a negative correlation that is growing from 2004 to 2007 declining again in 2008. ROE indicates a weak positive relationship that is diminishing from 2004 r= 0.50 to 2008 r= 0.05 while ROI indicates a weak positive relationship in the beginning that diminishes over time and in the last 2 years reporting negative correlation.

Table 6: Pearson– Parametric Test

At $\alpha = 0.10$

	MS 2004	MS 2005	MS 2006	MS 2007	MS 2008
ROA	-0.42	-0.42	**-0.63**	**-0.70**	**-0.66**
ROE	0.50	0.47	0.28	0.14	0.05
ROI	0.49	0.48	0.29	-0.02	-0.08

At 90% level of confidence the results indicates a negative correlation between ROE and market share that is growing from 2004 to 2007 and declining again in 2008.The values for 2006 to 2008 are statistically significant. The correlation between ROE and market share indicates a weak positive relationship that is diminishing from 2004 r= 0.50 to 2008 r= 0.05 while the correlation between market share and ROI indicates a weak positive relationship in the beginning that diminishes over time and in the reporting for the last 2 years negatively correlation.

In summary parametric test which assumes a normal distribution indicates a high negative correlation between market share and ROA for the years 2006, 2007 and 2008 indicating a negative relationship between the two variables. The results also indicate a slight and insignificant positive relationship exist between market share and ROE as well as between market share and ROI.

Table 7: Spearman / No-Parametric Test

At $\alpha = 0.05$

	MS 2004	MS 2005	MS 2006	MS 2007	MS 2008
Roa	-0.26	-0.38	-0.69	-0.64	**-0.71**
Roe	0.45	0.48	0.24	0.19	0.00
Roi	0.29	0.43	0.12	0.04	-0.21

At 95% level of confidence there is only one significant relationship between market share and ROA in 2008. The correlation between market share and ROA indicates a negative correlation that is growing from 2004 to 2008 having a taken a deep in 2007 but recovered again in 2008. The correlation between market share and ROE indicates a weak positive relationship that is diminishing from 2004 r= 0.45 to 2008 r= 0. In 2008 ROE and market share are not

correlated at all. The correlation between market share and ROI indicates a weak positive relationship in the beginning that diminishes over time and in the last year reporting negative correlation.

Table 8: Spearman – Non Parametric Test
At $\alpha = 0.10$

	MS 2004	MS 2005	MS 2006	MS 2007	MS 2008
Roa	-0.26	-0.38	**-0.69**	**-0.64**	**-0.71**
Roe	0.45	0.48	0.24	0.19	0.00
Roi	0.29	0.43	0.12	0.04	-0.21

At 90% level of confidence the relationship between ROA and Market share is significant for 3 years 2006, 2007 and 2008. This indicates a negative correlation that is growing from 2004 to 2008 having a taken a deep in 2007 but recovered again in 2008. The correlation between market share and ROE indicates a weak positive relationship that is diminishing from 2004 r= 0.45 to 2008 r= 0. In 2008 ROE and market share are not correlated at all. The correlation between market share and ROI indicates a weak positive relationship in the beginning that diminishes over time and in the last year reporting negative correlation in the end.

In summary non parametric test which does not assumes a normal distribution indicates a high negative correlation between market share and ROA for the years 2006, 2007and 2008; indicating a negative relationship between the two variable. The results also indicate a slight and insignificant positive relationship exist between market share and ROE as well as between market share and ROI.

5.3.2 Conclusion

The results indicate a trend of negative correlation between market share and ROA in the last years of the data sample while indicating very weak relationship between market share and ROE and ROI. Of all the profit measures ROA reports the highest correlation with market share indicating a negative relationship between the two variables.

The correlation between market share and ROE indicate a weak positive relationship with market share while the correlation between market share and ROI indicates very weak relationship with market share. It is interesting to note that the relationship between market share and ROI starts out as positive and thru the year it changes to be negative.

It is also interesting to note that as the correlation between Market share and ROA strengthens over the years, while the correlation between market share and ROE and ROI weakens.

In Summary the results indicate

- ROA and market share negatively related – Null hypothesis rejected
- There is no relationship between market share and ROE – Null hypothesis cannot be rejected
- There is no relationship between market share and ROI - Null hypothesis cannot be rejected

5.4 Hypothesis 2 results

The null hypothesis is that companies that grow market share by acquiring other companies have the same rankings as companies than grow organically.

$$H_o: \Sigma \text{ (ranks CAGR }_A) = \Sigma \text{ (ranks CAGR}_o)$$

The alternative hypotheses is that companies that grow market share by acquiring other companies are ranked higher than companies than grow organically.

$$H_{1:} \Sigma \text{ (ranks CAGR}_A) > \Sigma \text{ (ranks CAGR }_o)$$

5.4.1 Ranking

The Mann-Whitney U test is the non parametric equivalent of the parametric t test for comparing the means of two unrelated populations. In the case of small sample sizes, as in this study, it is more appropriate to use the Mann-Whitney U test as it uses the ranks of the values, rather than the actual values, to compare companies that acquire other companies versus companies than grow organically. The rankings are preferred to the raw values with small samples, as a single extreme score or score that is markedly different from the other scores in the sample, can skew the sample mean unduly, rendering it unrepresentative of the underlying population mean. However, calculations based on the ranks of the scores are not influenced to the same extent.

The results below indicate results of a Mann Whitney conducted in STATISTICA. The results do not indicate any difference in the two groups of companies. A difference in the group will be shown by p value that is less than 0.05.

Table 9: Mann Whitney results

	Rank Sum	Rank Sum	U	Z	**p-value**	Z	**p-value**	Valid N	Valid N	2*1sided
MS 2004	25.000	11.000	5.000	0.596	**0.551**	0.596	**0.551**	5	3	0.571
MS 2005	26.000	10.000	4.000	0.894	**0.371**	0.894	**0.371**	5	3	0.393
MS 2006	26.000	10.000	4.000	0.894	**0.371**	0.894	**0.371**	5	3	0.393
MS 2007	23.000	13.000	7.000	0.000	**1.000**	0.000	**1.000**	5	3	1.000
MS 2008	25.000	11.000	5.000	0.596	**0.551**	0.596	**0.551**	5	3	0.571
Roa 2004	24.000	12.000	6.000	0.298	**0.766**	0.298	**0.766**	5	3	0.786
Roa 2005	23.000	13.000	7.000	0.000	**1.000**	0.000	**1.000**	5	3	1.000
Roa 2006	20.000	16.000	5.000	-0.596	**0.551**	-0.596	**0.551**	5	3	0.571
Roa 2007	19.000	17.000	4.000	-0.894	**0.371**	-0.894	**0.371**	5	3	0.393
Roa 2008	19.000	17.000	4.000	-0.894	**0.371**	-0.894	**0.371**	5	3	0.393
Roe 2004	26.000	10.000	4.000	0.894	**0.371**	0.894	**0.371**	5	3	0.393
Roe 2005	24.000	12.000	6.000	0.298	**0.766**	0.298	**0.766**	5	3	0.786
Roe 2006	23.000	13.000	7.000	0.000	**1.000**	0.000	**1.000**	5	3	1.000
Roe 2007	21.000	15.000	6.000	-0.298	**0.766**	-0.298	**0.766**	5	3	0.786
Roe 2008	21.000	15.000	6.000	-0.298	**0.766**	-0.298	**0.766**	5	3	0.786
Roi 2004	27.000	9.000	3.000	1.193	**0.233**	1.193	**0.233**	5	3	0.250
Roi 2005	24.000	12.000	6.000	0.298	**0.766**	0.298	**0.766**	5	3	0.786
Roi 2006	23.000	13.000	7.000	0.000	**1.000**	0.000	**1.000**	5	3	1.000

Roi 2007	18.000	10.000	4.000	0.530	**0.596**	0.530	**0.596**	4	3	0.629
Roi 2008	20.000	8.000	2.000	1.237	**0.216**	1.237	**0.216**	4	3	0.229
CAGR ROA	21.000	15.000	6.000	-0.298	**0.766**	-0.298	**0.766**	5	3	0.786
CAGR ROE	17.000	19.000	2.000	-1.491	**0.136**	-1.491	**0.136**	5	3	0.143
CAGR ROI	21.000	15.000	6.000	-0.298	**0.766**	-0.298	**0.766**	5	3	0.786

NCSS test was also run for the same test (Mann –Witney U) and the sample of results are presented below the variable tested is Compound annual growth rate CAGR for ROA. The test where done for $\alpha = 0.05$ and $\alpha = 0.1$

At $\alpha = 0.05$

Two-Sample Test Report
Median Statistics

Variable	Count	Median	95.0% LCL of Median	95.0% UCL of Median
C1=1	5	0.077		
C1=2	3	0.088		

Mann-Whitney U or Wilcoxon Rank-Sum Test for Difference in Medians

Variable	Mann Whitney U	W Sum Ranks	Mean of W	Std Dev of W
C1=1	6	21	22.5	3.354102
C1=2	9	15	13.5	3.354102

Number Sets of Ties = 0, Multiplicity Factor = 0

	Exact Probability		Approximation Without Correction			Approximation With Correc	
Alternative Hypothesis	Prob Level	Reject H0 at .050	Z-Value	Prob Level	Reject H0 at .050	Z-Value	Prob Level	Reject H at .050
Diff<>0	0.785714	No	0.4472	0.654721	No	0.2981	0.765594	No
Diff<0	0.392857	No	0.4472	0.327360	No	0.2981	0.382797	No
Diff>0	0.607143	No	0.4472	0.672640	No	0.5963	0.724508	No

Kolmogorov-Smirnov Test For Different Distributions

Alternative Hypothesis	Dmn Criterion Value	Reject H0 if Greater Than	Test Alpha Level	Reject H0 (Test Alpha)	Prob Level
D(1)<>D(2)	0.400000	0.8317	.050	No	0.8571
D(1)<D(2)	0.400000	0.8317	.025	No	
D(1)>D(2)	0.200000	0.8317	.025	No	

At $\alpha = 0.10$

Two-Sample Test Report
Median Statistics

Variable	Count	Median	90.0% LCL of Median	90.0% UCL of Median
C1=1	5	0.077	-0.338	0.129
C1=2	3	0.088		

Mann-Whitney U or Wilcoxon Rank-Sum Test for Difference in Medians

Variable	Mann Whitney U	W Sum Ranks	Mean of W	Std Dev of W
C1=1	6	21	22.5	3.354102
C1=2	9	15	13.5	3.354102

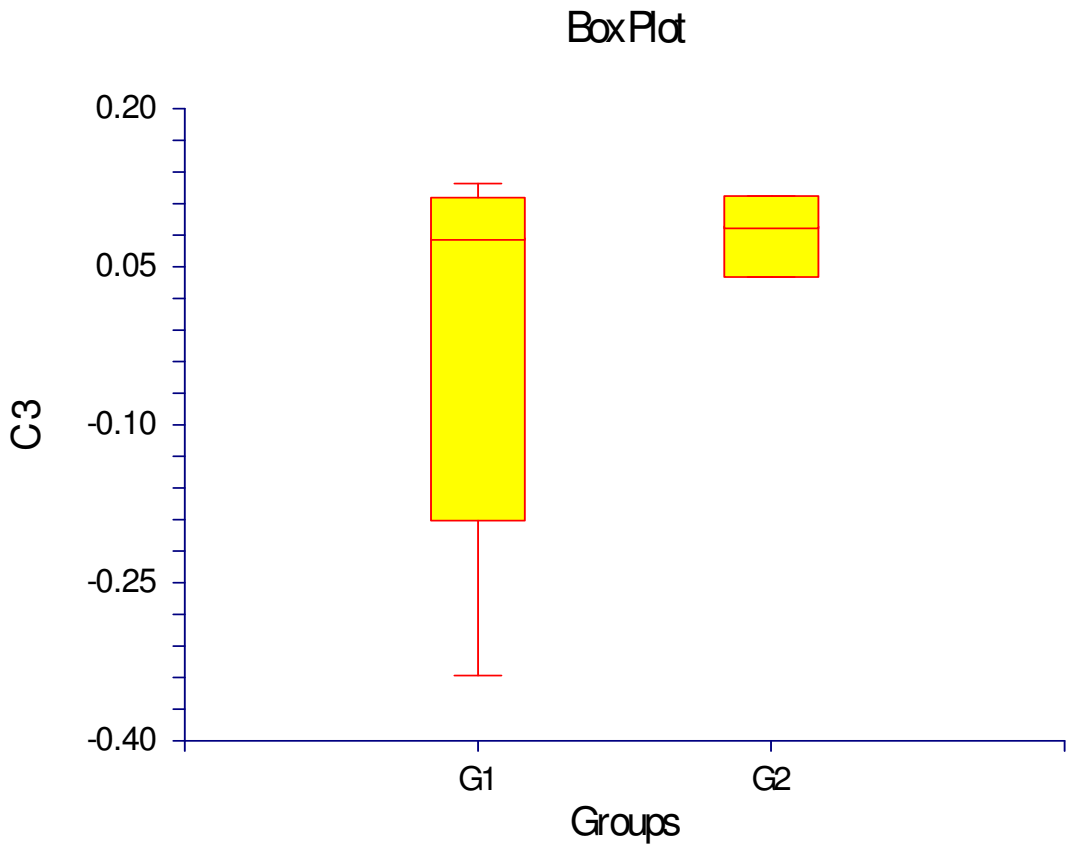
Number Sets of Ties = 0, Multiplicity Factor = 0

	Exact Probability		Approximation Without Correction			Approximation With Correc		
Alternative Hypothesis	Prob Level	Reject H0 at .100	Z-Value	Prob Level	Reject H0 at .100	Z-Value	Prob Level	Reject H at .100
Diff<>0	0.785714	No	0.4472	0.654721	No	0.2981	0.765594	No
Diff<0	0.392857	No	0.4472	0.327360	No	0.2981	0.382797	No
Diff>0	0.607143	No	0.4472	0.672640	No	0.5963	0.724508	No

5.4.2 Conclusion

The results indicate that the null hypothesis that that companies that grow market share by acquiring other companies have the same rankings as companies that grow organically cannot be rejected at both 95% and 90% significant level. Therefore there is no significant difference between the means of these two groups.

The box plot (below) also indicates that there is no significant difference between the two groups.


Box Plot
0.20
0.05
-0.10
-0.25
-0.40
C3
G1
G2
Groups

6 Interpretations of Results

6.1 Introduction

This section interprets the research findings in chapter 5 in conjunction with the literature review in chapter 2. Each discussion consists of results evidence, a statement of whether or not a null hypothesis should be rejected; and thereafter a conclusion will be drawn. Lastly, the conclusion also discusses whether the research objectives mentioned in chapter 1 have been met.

6.2 General comments on retail industry

The food retail industry (sic 61) is relatively a labour intensive industry with huge initial capital infrastructure. This indicates a low fixed cost structure. The industry does not have high differentiated products and can benefit from economies of scale.

6.3 General comments on profitability returns in South Africa

South Africa's cost of capital is relatively high as compared to other developed countries, therefore it is expected that profitability results would be higher than those of other countries. It is expected that most of the profitability results are higher that 10%. Morgan (2006)

6.4 Hypothesis 1

The result will be interpreted using non-parametric test due to the sample size. Table 8 indicates the correlation between market share and different measures of profitability. The result appears to support the null hypothesis; that is there is no relationship between market share and profitability. A negative correlation was found to be present in 3 out 15 (20%) observed cases. On a theoretical level this would support the assertion by Hergert (1984) that market share and profitability can not be pursed in tandem. Although Hergert's theory is only applicable in the initial stage of building market share, the sample in this study

cannot be classified as those that are at the initial stages of building market share. Perhaps the theory that could be used to understand this relationship is that of Jacobson (1988b) who argued that "strategic intentions" such as investing to expand market share cannot results in abnormal profits under equilibrium because companies will continue to invest until the return premium diminishes. The different profitability ratios will be discussed individually.

- **Market Share and ROA**

Table 8 indicates the correlation between market share and ROA suggesting a moderate to strong relationship with 3/5 (60%) at 90% level of confidence. Hence, the null hypothesis can be rejected. The results for ROA potentially create a link between market share and profitability. This would indicate that companies with high market share achieve fewer profits as measured by return on assets.
This finding contradicts the findings with Selling (1989) who found that companies with highest ROA followed either a product differentiation or cost leadership strategy. Since product differentiation is a way of gaining market power and cost leadership strategy aims at becoming the lowest producer in order to charge lower prices and sells more volume, it is expected that firms with high market share will also achieve high ROA.

What is interesting to note is that apparel retail companies indicate a low market share with high ROA. This is because they are fragmented and have low capital structure. Woo (1981) demonstrated that some low market share businesses have high profitability. Specifically, it was established that high-performing low share business were located within environments characterized by stable, high value products and a large number of competitors.

Food retail companies have high market share with low return on assets. This indicates that food retail companies are not taking advantages of their high market share status to increase efficiencies as stated by Gale (1982). Companies with large market share can exploit increasing economies of scale from different areas for example procurement, marketing and Research and

Development (R&D). Similarly the "experience curve" theory pronounces that companies can attain greater cost efficiency through experience gained from managing companies with greater market share.

Another study that supports the results is that of Fraering (1994) who by correlating market share with ROA found that lower-market share companies are more profitable and that market share and profitability are negatively related. The reasons he gave for this was that "If a corporation attempts to force market share leadership with a low margin, profitability will be diminished" (Fraering 1994, p 35). Fraering (1994) further states that to a minor extent low market share companies have a profitability advantage over those with high market share.

It is important for managers of retail companies to understand if investments that are made within their companies allow improvement in operating efficiencies and hence improve profitability.

- **Market share and ROE**

From the observation in Table 8 it is cleat that there is a weak relationship between market share and ROE. The correlation between market share and ROE is not significant both at 95% and 90% level of confidence. In fact the relationship seems to diminish over time, starting of at 0.45 in 2004 and ending at 0.00 in 2008 indicating no relationship at all between market share and profitability. The null hypothesis cannot be rejected in this instance.

Looking at the scatter plot graph indicating the relationship between ROE and market share there are two companies that seem to be outliers, one reporting high ROE with high market share and another reporting high market share but lower ROE.

It is important to mention again ROE measures, as discussed in the literature review in chapter 2. ROE calculation is comprised of three components measuring margins, asset turnover and financial leverage, which include other

performance measures not directly linked to profitability. The results appear to suggest a very weak positive to no relationship. There is no literature that could be found that used the same profitability measures for comparison.

- **Market share and ROI**

Table 8 also indicates the correlation between market share and ROI with mixed results, starting with a very weak positive relationship to a very weak negative relationship. This is due the fact that Edgars, which had a healthy ROI and high market share in the first three years, was not part of the sample in 2007 and 2008. This is because the researcher was not able to calculate its measures with reliability for the two years. Therefore, it is safe to conclude that if Edgars had been part of the study the results would have followed the same trend.

Because no significant correlations were reported there is not enough evidence to reject the null hypothesis. Schawlbach (1991) noted that vey low ROI are experienced by business units with market share of about 35% in retail and wholesale distribution industry. He further illustrates that beyond 40% market share an exponential increase in ROI can be observed, but only continues to about 50%. Beyond that, the ROI remains constant. He called this situation “stuck in the middle“.

- **Conclusion**

The correlation and regression analysis looked at the relationship between market share and profitability over a five-year-period. Therefore results above reflect a longer term trend rather than a short-term trend.

Taking into consideration that the results where obtained from a very small observations, these results are not significant enough and therefore can not be generalised.

Combining the results of the current finding it is safe to conclude that for the companies that were analysed profitability is not predicted by market share position alone. Requirements for effective and profitable performance go beyond the share position of the business.

6.5 Hypothesis 2

The null hypotheses states that companies that grow market share by acquiring other companies have the same rankings as companies than grow organically. The alternative hypotheses is that companies that grow market share by acquiring other companies are ranked higher than companies that grow organically. The basis for this hypothesis was the market power theory argued by Ghosh in chapter 2..The market power hypothesis suggest that an increases in industry concentration through acquisition facilitates intra-industry collusion or dominant firm pricing which leads to large industry-wide monopoly rents (Eckbo (1985) in Gosh (2003)). The aim of this test was to determine whether companies that grow market share by acquiring other companies do in fact earn higher profits as compared to companies that grow organically.

The results indicate that there was no difference in the group of companies for any of the profitability measures. The findings support the null hypothesis, i.e. companies that grow market share by acquiring other companies have the same rankings as companies than grow organically.

It was presumed and also supported by the literature that when companies acquire other companies they immediately increase their market share as well as increasing their profitability. In a survey conducted by KPMG Transaction Service Survey (2001) it was found that market share is the single most important reason for undertaking mergers and acquisition. The repost concluded that although market share could have been gained by these transactions there is no evidence that suggest that there was an abnormal increase in the profitability of these companies as measured by ROA, ROE and ROI. The finding is consistent with that of Ghosh (2001), namely that mergers and acquisition, on average, are zero net present value.

6.6 Other observations from the research

There were other notable observations in the data used for the analysis. It is interesting to note the lack of awareness of market share and the size of the market. Companies do not seem to know their share of the market as well as the market in total. Other companies quoted on the websites had different values as compared to the data that was used for this research from Euromonitor. This would seem to support that view that many companies follow / adopt a market share strategy without understanding its merits.

Another observation from the sample is that market share once gained did not decline. Only one company in the sample lost market share by more than one point during the years of the study. This appear to suggest that once market is it gained for South African retail companies, it is fairly easy maintain at the same level. One explanation for this might be lack of retail competition in SA.

6.7 Conclusion

There is a growing pressure for companies to increase profits and remain competitive. The main reason for this research was to seek to understand if a market share adoption strategy is a valid strategy that can yield long term profits. It was hoped that this study will initiate further research into the topic. The specific research objective as listed in Chapter 1 were

- To evaluate whether there is a strong a relationship between market share and profitability
- If there was a relationship the research sought to establish whether the relationship was positive or negative.
- To understand if companies that grow market share by acquiring other companies are able to grow profit faster than companies that grow organically

The link between market share and profitability was only established in one instance. It was also established that the relationship was a negative one.

Overall the study has been able to achieve the following

- Document the theory on market share and why it is associated with profitability of a company
- Highlight different measures of profitability, their advantages and their limitations
- Evaluate the various study conducted else where in the world
- Identify factors that senior managers need to consider when designing company competitive strategy
- Conclude that there is no significant positive relationship between market share and profitability in the retail companies in SA.

7 Recommendation and future studies

7.1 Introduction

The objective of this chapter is to summarise the findings of the research and to discuss the implementation of the conclusion to the relevant stakeholders. Recommendations about future research studies arising from the study's limitation as well as management action will be made.

7.2 Summary and conclusion

Using the three profitability measures, ROA, ROE and ROI, it has been found that for the period of 2004 to 2008 there was statistical significant correlation between market share and ROA. ROE and ROI, on the other hand, indicate a very weak relationship with market share.

The negative relationship between ROA and market share indicates that low-share companies are able earn higher profits while high share companies earn lower profits. It was found that those companies that operate in stable market have high value products and a large number of competitions are able to earn more profits with low market share.

As only one profitability measure showed negative relationship with market share it is not possible to conclude that market share and profitability are negatively related. The overall results indicate that market share and profitability are not related and that market share does not determine profitability. It is not possible to comment on other factors determining profitability as that they were not specifically studied.

The enforcement of this finding is important in a South African context in that given the country's developmental state, it will be useful for the companies to understand methods and practices related to increasing profits. It is also important for South African companies to understand the environment in which

they operate and also to understand international methods that can be applied and those that cannot be applied to local conditions.

7.3 Recommendation for future research

Based on the outcomes of this study the following recommendations are made to gain a deeper understanding of the relationship that exit between market share and profitability

- A more quantitative study need to be conducted across other industries that are not covered in this study. e.g. banking, manufacturing and mobile phone industry in order to thoroughly understand whether the reasons for existence or non existence of correlation between market share and profitability
- Research should also be conducted to determine the strategic intention of South African CEOs around market share to establish if CEOs intention has an impact on profitability of the company.
- More abstract category such as effect of management on profitability. Difficulty with this kind of study will be that data needed to ascertain the effect of management on profitability will be extremely hard to study as this is based on subjective issues.
- A study can done on how successful companies stay successful and how unsuccessful companies can become successful as this will shed more light on the factors that determine profitability.

It is also recommended that South Africa develops a database to hold wide range organisational information in order to assist academics and managers in the study of factors that may affect companies' profitability.

7.4 Recommendation to management

The literature review as well as the research findings suggests that management can do the following in order to make their companies more profitable.

- Organisations need to understand their market share position, what their strength and weakness are and what drives profitability in their respective industries
- Before adoption of market share strategy managers need to understand the context of their environment to establish if this is an appropriate strategy to be successful in their industries
- Retail organisation need to understand the benefits of mergers and acquisition before entering those deals. Organic growth may also lead to the same results.

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Appendices

Appendix A: Correlation Matrix - Pearson Test

Appendix B: Correlation Matrix - Spearman Test

Appendix C: Descriptive Statistics

	Means	Std.Dev.
MS 2004	14.14	10.23
MS 2005	14.33	10.03
MS 2006	14.70	9.84
MS 2007	15.38	10.79
MS 2008	14.80	10.45
Roa 2004	20.04	7.97
Roa 2005	22.36	8.64
Roa 2006	25.61	10.99
Roa 2007	23.65	12.44
Roa 2008	23.36	13.30
Roe 2004	33.95	15.23
Roe 2005	37.13	11.17
Roe 2006	44.65	16.16
Roe 2007	40.57	12.30
Roe 2008	40.81	11.48
Roi 2004	29.17	14.18
Roi 2005	30.66	9.80
Roi 2006	33.39	7.82
Roi 2007	32.58	7.19
Roi 2008	33.73	6.11

Appendix D: Market Share and Profitability

Appendix E: Graphs with Lagging effects