

MEASURING MARKETING PRODUCTIVITY:

Linking marketing expenditure to sales

by

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University



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DECLARATION

I, the undersigned, hereby declare that the work contained in this dissertation is my own original work and that I have not previously in its entirety or in part, submitted it at any university for a degree.

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ABSTRACT

Over the past two decades company performance has become the mantra of corporate theory. It follows that marketers have recently become understandably preoccupied with measuring the performance of marketing activity. In fact, the pressure for financial accountability has led to widespread concern over the role of the marketing function within a company. Some go as far as contemplating the demise of marketing professionals unless marketers develop an understanding of the marketing-finance interface and are able to enter into a dialogue with top management regarding the value that marketing adds to the company.

Modern financial theory prescribes that the primary financial objective of any company should be shareholder value maximisation. Value based management (VBM) involves the appropriate allocation of scarce resources using prioritisation and cost-benefit analyses of different strategies to ensure that managers remain focused on shareholder value creation. The VBM philosophy embraces four fundamental driving forces impacting on the creation of value, the first of which is the profitable growth of sales. Since marketers are the custodians of brand sales the recognition of sales as a value driver places marketing at the centre of the value culture.

The role of the marketing function is to create customer value that will translate into marketing assets (brand equity) and by doing so serves to add value to a company. The brand value chain summarises the process through which marketers can create value by carefully investing in various marketing tactics (or expenditures). These expenditures are encapsulated by the marketing mix. Simply, the marketing mix can be described as the sum of all expenditures intended to build brand equity and can be classified into four components known as the 4Ps (product, price, place and promotion).

Concern has been raised that marketers focus too much attention on the stages in the brand value chain where marketing strategy is formulated and too little attention on the latter stages where the strategy is linked back to the value created through the implementation thereof. Despite the plethora of marketing metrics available the key to measuring the impact of marketing activity lies in maintaining a balance between non-financial, efficiency metrics and financial effectiveness metrics. To this end, there is a

need for the development of aggregate-level models that link marketing tactics (expenditures) to financial impact (e.g. sales) in order to communicate the value created by marketing.

As a first step toward the objective of developing such models, it is important to understand the nature of the relationship between marketing expenditures (in terms of the 4Ps) and sales). Therefore, the primary objective in this study was to establish whether there is a relationship between the expenditures of different marketing components (4Ps) and sales.

To this end, the proposition formulated elucidated that the variance in sales of a product is attributable to fluctuations in marketing expenditures. A meta analysis study was undertaken and two South African fast moving consumer goods brands' financial data were investigated for the period of July 2001 to the end of June 2005. The marketing expenditures incurred for each of the respective brands were dissected and allocated according to the 4Ps of marketing.

The method applied to investigate the relationship between marketing expenditures and sales originated through the adoption of multiple regression analysis between the independent variables (marketing expenditures) and the dependent variable (sales). However, due to the fact that the data were collected over time it was anticipated that the time-related characteristics in the data might have offended inherent assumptions on which multiple regression analysis is based. Therefore, a time series regression analysis was subsequently adopted to account for time-related characteristics such as trend or seasonality. Counteracting dummy variables were included in the regression analysis to better understand the effect of trend and seasonality.

In the case of Brand A, it was necessary to include dummy variables to counteract the effect of trend in the regression analysis., the results revealed that there is a statistically significant relationship between the expenditures of different marketing components (4Ps) and sales. Only distribution expenditures and price (along with trend) explained unique variance in sales.

In the case of Brand B, it was necessary to include dummy variables for both trend and seasonality before the model was suitable for analysis. Once again, the results revealed a statistically significant relationship between the expenditures of different marketing components (4Ps) and sales. However for

Brand B, only production expenditures (along with trend and seasonality) explained unique variance in sales.

Therefore, in conclusion of the results found there were important findings to note. Firstly, when investigating data collected over time it is imperative to understand the impact of time-related characteristics in the data and subsequently adopt the appropriate model to investigate relationships in the data. Secondly, despite a statistically significant relationship detected between marketing expenditures and sales the different components of the 4Ps have varying prominence for different brands and the appropriate allocation of resource will depend on the nature of the product and the strategy in mind.

OPSOMMING

Die prestasie van 'n maatskappy het oor die afgelope twee dekades die mantra van korporatiewe teorie geword. Dit volg dus dat bemarkers onlangs afgetrokke is met die meet van die prestasie van mark aktiwiteit. Die druk vir finansiële verantwoordbaarheid het in wye kommer oor die rol van die bemarkingsfunksie binne 'n maatskappy, uitgeloop. Daar word bespiegel oor die ondergang van professionele bemarkers tensy bemarkers 'n begrip van die bemarking-finansie skeidingsvlak ontwikkel en in staat is om 'n dialoog met topbestuur aan die gang te sit rakende die waarde wat bemarking tot 'n maatskappy voeg.

Moderne finansiële teorie stel voor dat die primêre finansiële doelwit van enige maatskappy die verhoging van belanghebbende waarde moet wees. Waarde-gebaseerde bestuur (WGB) sluit die gepaste toewysing van skaars hulpbronne, deur die gebruik van vooropstelling en koste-voordeel analise van verskeie strategieë, in, om te verseker dat bestuurders op die belanghebbende waarde skepping gefokus bly. Die WGB filosofie omarm vier grondliggende dryfsmagte wat op die skep van waarde, waarvan eerstens die winsgewende groei van verkope is, 'n impak het. Aangesien bemarkers die bewaarders van die handelsnaam verkope is, plaas die erkenning van verkope as 'n waarde drywer, bemarking in die middelpunt van die waarde kultuur.

Die rol van die bemarkingsfunksie is om kliënt waarde te skep wat omgesit sal word in bemarkingsbates (handelsmerk billikheid) en dien so om waarde tot 'n maatskappy by te dra. Die handelsmerk waarde ketting som die proses op waardeur bemarkers waarde kan skep deur versigtig in verskeie bemarkingstaktieke (of uitgawes) te belê. Hierdie uitgawes word saamgevat deur die bemarkingsmengsel. Die bemarkingsmengsel kan kortliks beskryf word as die som van alle uitgawes wat bedoel is om handelsmerk billikheid te bou en kan in vier komponente, wat as die 4Ps (produk, prys, plek en promosie) bekend staan, geklassifiseer word.

Daar is reeds kommer uitgespreek dat bemarkers te veel aandag aan die stadiums in die handelsmerk waarde ketting bestee waar bemarkings strategie geformuleer word en te min aandag word aan die latere stadiums geskenk waar die strategie teruggekakel word aan die waarde wat deur die implementering daarvan geskep word. Ten spyte van die menigte beskikbare bemarkings metrieke lê

die sleutel tot die meet van die impak van bemarkingsaktiwiteite in die onderhou van 'n balans tussen nie-finansiële, doeltreffende metrieke en finansiële effektiwiteit metrieke. Daar is dus 'n behoefte aan die ontwikkeling van gemiddelde-vlak modelle wat bemarkings taktieke (uitgawes) aan finansiële impak (bv. verkope) skakel om sodoende die waarde wat deur bemarking geskep word, te kommunikeer.

Dit is belangrik om, as 'n eerste treë na die doelwit om sulke modelle te ontwikkel, die aard van die verhouding tussen bemarkingsuitgawes (in terme van die 4Ps) en verkope te verstaan. Die hoofdoel in hierdie studie was dus om vas te stel of daar 'n verhouding tussen die uitgawes van verskillende bemarkingskomponente (4Ps) en verkope bestaan.

Die voorstel wat geformuleer is, het verklaar dat die verskeidenheid in verkope 'n produk is wat toegeskryf kan word aan fluktuering in bemarkings uitgawes. 'n Meta analise studie is onderneem en twee Suid-Afrikaanse vinnig-bewegende gebruikers goedere handelsmerke se finansiële data vir die tydperk van Julie 2001 tot einde van Junie 2005 is ondersoek. Die bemarkings uitgawes wat vir elk van die handelsmerke aangegaan is, is ontleed en toegeken volgens die 4Ps van bemarking.

Die metode wat toegepas is om die verhouding tussen bemarkings uitgawes en verkope te ondersoek het ontstaan deur die aanneem van meervoudige agteruitgang analise tussen die onafhanklike veranderlikes (bemarkings uitgawes) en die afhanklike veranderlikes (verkope). Daar is egter verwag, as gevolg van die feit dat die data oor tyd versamel is, dat die tyd-verwante kenmerke in die data inherente aannames mag beledig het, waarop meervoudige agteruitgang analise gebaseer is. 'n Tydsreek agteruitgang analise is gevolglik aangeneem om verantwoordbaar te wees vir tydsverwante kenmerke soos neiging of seisoenaliteit. Teenwerkende fop veranderlikes is by die agteruitgang analise ingesluit om die effek van neiging of seisoenaliteit beter te verstaan.

In die geval van Handelsmerk A, was dit nodig om fop veranderlikes in te sluit om die effek van neiging in die agteruitgang analise teen te werk. Die uitslae het gewys dat daar 'n statisties noemenswaardige verhouding tussen die uitgawes van verskillende bemarkingskomponente (4Ps) en verkope is. Slegs verspreiding uitgawes en prys (tesame met neiging) het unieke verskille in verkope verduidelik.

In die geval van Handelsmerk B was dit nodig om die fop veranderlikes in te sluit vir beide neiging en seisoenaliteit voordat die model gepas was vir analise. Die uitslae het weereens gewys dat daar 'n duidende verhouding tussen die uitgawes van verskillende bemarkingskomponente (4Ps) en verkope is. Slegs produksie uitgawes (tesame met neiging en seisoenaliteit) het egter unieke verskille in verkope vir Handelsmerk B verduidelik.

Daar was dus, in gevolgtrekking tot die uitslae wat gevind is, belangrike bevindings om van kennis te neem. Dit is eerstens van uiterste belang om die impak van tyd-verwante kenmerke in die data te verstaan en om vervolgens die gepaste model aan te neem om verhoudings in die data te ondersoek. Tweedens, ten spyte van 'n statistiese noemenswaardige verhouding wat bespeur is tussen bemarkings uitgawes en verkope, het die verskeie komponente van die 4Ps verskillende vernaamheid vir verskillende handelsmerke en die gepaste toekenning van bronne sal afhang van die aard van die produk en die strategie wat beoog word.

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TABLE OF CONTENTS

	Page
Declaration	i
Abstract	ii
Opsomming	v
Acknowledgments.....	viii
Table of Contents	ix
List of Figures	xiii
List of Tables.....	xiv

CHAPTER 1: INTRODUCTION

1.1 INTRODUCTION.....	1
1. 2 THE MARKETING FUNCTION	2
1.2.1 Marketing Metrics.....	6
1.2.3 Value Based Management	9
1. 3. RESEARCH OBJECTIVE	10
1. 4. RESEARCH METHOD	12
1.4.1 Data Processing	12
1. 5. CONTRIBUTION OF THIS STUDY	13
1. 6. ORIENTATION	14

CHAPTER 2: THE MARKETING FUNCTION

2.1 INTRODUCTION.....	16
2.2 BUSINESS MANAGEMENT	17
2.2 MARKETING’S ROLE	20
2.2.1 The Activity Perspective on Marketing.....	21
2.2.2 The Management Perspective on Marketing.....	22
2.2.3 The Value Perspective on Marketing	24
2.2.4 The Relationship Perspective on Marketing.....	28
2.2.5 The Marketing Function in a Market-Oriented Company	29
2.3 THE MARKETING MIX	32
2.4 SUMMARY.....	39

CHAPTER 3: VALUE BASED MARKETING

3.1 INTRODUCTION.....	41
3.2 VALUE BASED MANAGEMENT	42
3.2.1 Managerial Implications.....	43
3.2.2 Value based Measures.....	45
3.2.2.1 Discounted Cash Flow	47
3.2.3 A Value Culture.....	49
3.2.4 The Value of Intangible Assets.....	52
3.3 VALUE CREATING MARKETING	54
3.3.1 Effective Marketing.....	55
3.3.2 Marketing Assets.....	57
3.3.3 Marketing’s Contribution	60
3.3.4 Shareholder Value Analysis in Marketing.....	64
3.3.4.1 Limitations and Considerations	64
3.4 SUMMARY.....	65

CHAPTER 4: RESEARCH METHOD

4.1 INTRODUCTION.....	66
4.2 AN OVERVIEW OF MARKETING RESEARCH.....	66
4.4.2 The Research Process.....	68
4.3 PROBLEM STATEMENT AND RESEARCH OBJECTIVE	
4.3.1 Secondary Data.....	70
4.5 DATA PROCESSING	74
4.5.1 Components of Marketing Expenditure.....	75
4.5.2 Data Analysis	77
4.5.3 Multiple Regression Analysis	80
4.5.3 The Time Series Regression Model.....	83
4.6 SUMMARY	86

CHAPTER 5: RESULTS

5.1 INTRODUCTION.....	88
5.2 DESCRIPTIVE STATISTICS.....	88
5.3 MULTIPLE REGRESSION ANALYSIS.....	92
5.3.1 Normality	92
5.3.2 Homoscedasticity	93
5.3.3 Independence of Errors	95
5.4 TIME SERIES REGRESSION ANALYSIS	96
5.4.1 The Economic Landscape.....	96
5.4.2 Time-related Effects on the Brand Data	98
5.4.3 Time Series Regression Analysis: Brand A.....	100
5.4.4 Time Series Regression Analysis: Brand B.....	104

5.5 SUMMARY	108
--------------------------	------------

CHAPTER 6: RECOMMENDATIONS

6.1 INTRODUCTION.....	110
------------------------------	------------

6.2 CONCLUSIONS.....	111
-----------------------------	------------

6.2.1 Conclusions: Brand A	112
----------------------------------	-----

6.2.2 Conclusions: Brand B	114
----------------------------------	-----

6.3 RECOMMENDATIONS.....	116
---------------------------------	------------

6.4 LIMITATIONS AND FUTURE RESEARCH	118
--	------------

6.5 RECONCILIATION OF OBJECTIVES.....	120
--	------------

6.6 SUMMARY.....	120
-------------------------	------------

REFERENCES.....	122
------------------------	------------

APPENDIX i.....	127
------------------------	------------

List of Figures

Figure	Page
FIGURE 1.1 A Customer-driven Marketing Process.....	4
FIGURE 1.2 The Brand Value Chain	5
FIGURE 2.1 The Elements of Strategic Decision-making	18
FIGURE 2.2 The Value Creation and Delivery Process.....	25
FIGURE 2.3 Porter’s Generic Value Chain	27
FIGURE 2.3 Marketing’s role in a market-driven company.....	30
FIGURE 2.4 Marketing Mix Strategy.....	36
FIGURE 2.5 The 4P Components of the Marketing Mix	37
FIGURE 3.1 Factors influencing value	47
FIGURE 3.2 Value Drivers	51
FIGURE 3.3 The Marketing Chain of Effects.....	56
FIGURE 4.2.1 The Research Process.....	68
FIGURE 4.4.1 Components of Marketing Expenditure.....	75
FIGURE 4.5.2 Comparing the Mean and the Median in a Data Set.....	79
FIGURE 4.5.3 Flow Chart of Time Series Regression Analysis.....	83
FIGURE 5.2.1 Expenditure and Profit Breakdown Brand A.....	90
FIGURE 5.2.2 Expenditure and Profit Breakdown Brand B.....	91
FIGURE 5.3.1 Homoscedasticity Plot of Residuals: Brand A	94
FIGURE 5.3.2 Homoscedasticity Plot of Residuals: Brand B.....	94
FIGURE 5.4.1 GDP Growth South Africa (Jul 2001 to Jun 2005).....	97
FIGURE 5.4.2 Producer Price Index South Africa (Jul 2001 – Jun 2005)	97
FIGURE 5.4.3 Sales and Marketing Expenditures Over Time: Brand A	98
FIGURE 5.4.4 Sales and Marketing Expenditures Over Time: Brand B	99
FIGURE 5.4.5 Unstandardised Residual Brand A.....	101
FIGURE 5.4.6 Unstandardised Residual Brand B.....	105

List of Tables

Table	Page
TABLE 1.1 Popular Marketing Metrics	7
TABLE 2.1 Borden's Elements of the Marketing Mix (1964)	34
TABLE 2.2 From the 4Ps to the 4Cs	35
TABLE 2.3 Promotional Marketing Activities	38
TABLE 4.5.1 Classification of the available data per product	77
TABLE 4.5.3 Berenson and Levine's summary of factors influencing time-series data	84
TABLE 5.2.1 Descriptive Statistics for Brand A.....	89
TABLE 5.2.2 Descriptive Statistics for Brand B.....	90
TABLE 5.3.1 Skewness and Kurtosis Brand A.....	92
TABLE 5.3.2 Skewness and Kurtosis Brand B	93
TABLE 5.3.4 Durbin-Watson d Statistic Test for Autocorrelation Brand A.....	95
TABLE 5.3.5 Durbin-Watson d Statistic Test for Autocorrelation Brand B.....	96
TABLE 5.4.1 Time Series Regression Brand A.....	102
TABLE 5.4.2 Summary of Results Brand A.....	103
TABLE 5.4.3 Time Series Regression Results Brand B	106
TABLE 5.4.4 Summary of Results Brand B.....	107

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

In recent years, marketers have become understandably preoccupied with measuring the performance of marketing activity. The pressure for financial accountability has led to widespread concern over the role the marketing function has to play within the company (Doyle 2000a; Rust, Lemon & Zeithaml, 2004; Grønholdt & Martensen, 2006; Ambler, 2003). Correspondingly, various new areas of research have emerged in an attempt to provide evidence of how activities applied within marketing impact the bottom line. One of these, value based management, focuses on discounted cash flow forecasts to evaluate different marketing actions based on the ultimate shareholder value it should create.

Pioneering work has been done by, amongst others, Doyle (2000a) and Ambler (2003) in pursuit of obtaining reasonable and transparent measurement tools for marketers. Generally, a consensus has been reached that the problem should be approached from both the financial and non-financial angles. The right balance between financial and non-financial marketing metrics is the key that would lead not only to greater respect for marketers in boardrooms, but better learning within the marketing department and better allocation of resources (Ambler, 2003; Rust, Lemon & Zeithaml, 2004). Although there is extensive insight into non-financial measures such as customer satisfaction, the financial aspect of marketing measurement remains problematic for many marketers who fail to understand the importance of the bottom line within a bigger context.

The purpose of this study was to assess the relationship between marketing expenditures (based on actual recorded data) and sales. By tracking two brands' cash outflows (marketing expenditures) and inflows (sales) over a four-year period, inferences could be made about how much marketing contributes to sales generation.

To this end, marketing expenditures were allocated to various marketing expenditure components. The relationship between these components (cash outflow) and sales (cash inflow) was scrutinised in order to understand how much sales' variance is attributable to the different components. In turn, the variance in sales attributable to these components starts to inform the effect that marketing expenditures have on cash generation and ultimately on the bottom line. If the relationship between marketing expenditures and the bottom line can be explicitly drawn, it would advocate the importance of investing in the most effective marketing expenditures to marketers.

This chapter commences with a general discussion of the marketing function and marketing metrics. Successively the research question and objectives are stated and finally, the research method is briefly presented.

1. 2 THE MARKETING FUNCTION

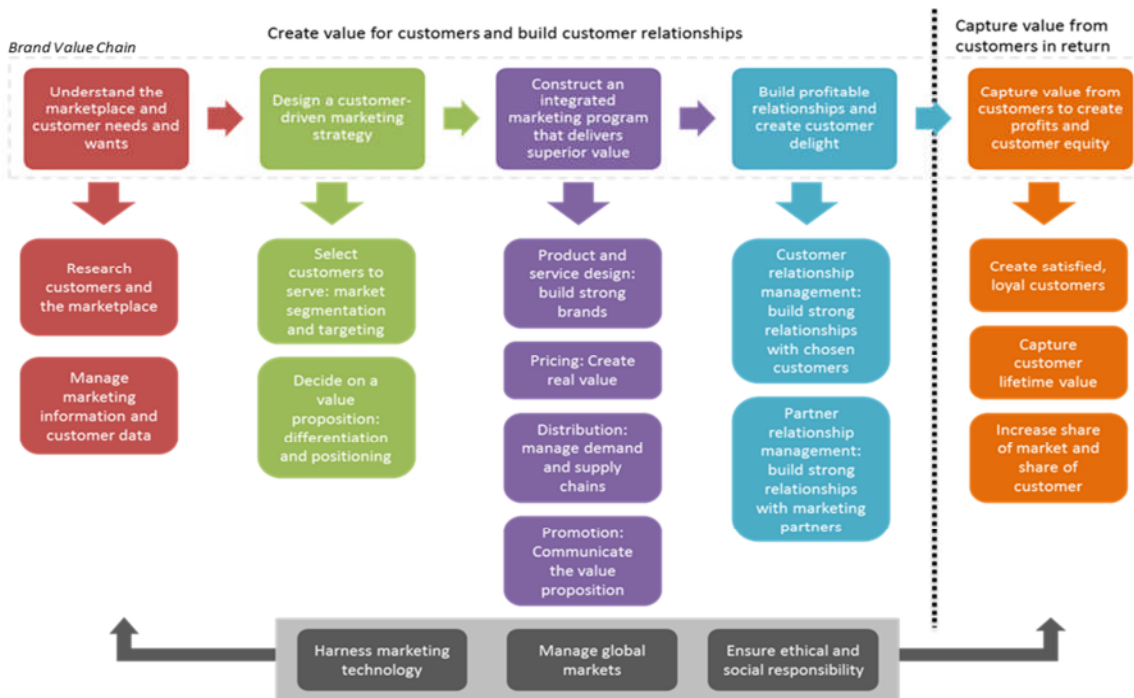
In its simplest form, the marketing function serves to manage profitable customer relationships (Kotler & Armstrong, 2008: 4). Kotler and Keller (2006: 4) stress the importance of the marketing function by stating that the financial success of companies often depends on the company's marketing ability and that the lack thereof could cause the downfall of formerly prosperous companies. A response to the indecision regarding the role of marketing in modern companies was constructed by Srivastava, Shervani and Fahey (1999). The authors argued that in an attempt to inspire a market perspective into companies, marketing should directly influence the business processes contributing to the generation and maintenance of customer value. Srivastava *et al.* (1999) continue to describe the organisational tasks required in order to accomplish customer value creation. These organisational tasks include:

- the development of new customer solutions and/or the reinvigoration of existing solutions;
- continual enhancement of the acquisitions of inputs and their transformation into desired customer outputs; and
- the creation and leveraging of linkages and relationships to external marketplace entities, especially channels and end users.

The efficiency with which these organisational tasks are performed will influence the aggregate level of marketing assets created (Rust *et al.*, 2004). Rust *et al.* (2004) define marketing assets as customer-focused measures of the value of the company (and its offerings) that may enhance the company's long-term value. Two approaches are popular in pursuit of measuring marketing assets: brand equity and customer equity. Brand equity is defined here as the added value endowed to products and services by the brand (Kotler & Keller, 2006: 276).

Recently, the shift in focus from brand equity to customer equity (Rust *et al.*, 2004, Kordupleski, Rust & Zahorix, 1993) orchestrated customer-driven marketing strategies similar to the process depicted in Figure 1.1. Customer equity is defined as the sum of the lifetime values (discounted profit stream) of a company's customer base (Rust *et al.*, 2004). Although Rust *et al.* (2004) depict brand equity as a function of customer equity, Keller (2008: 84-86) contends that the two concepts go "hand-in-hand":

"In practice, customer equity and brand equity are complementary notions in that they tend to emphasize different considerations. Brand equity tends to put more emphasis on the "front end" of marketing programs and intangible value potentially created by the marketing programs; customer equity tends to put more emphasis on the "back end" of marketing programs and the realized value of marketing activities in terms of revenue."

FIGURE 1.1 A Customer-driven Marketing Process

Adapted from: Kotler and Armstrong (2008:29)

Figure 1.1 depicts the exchange process in which value is created through building profitable relationships with customers. Building a profitable relationship firstly requires understanding of the market place and the needs and wants of the customer and secondly designing and integrating marketing strategy to deliver superior value. Finally, the profitable relationship established with customers will generate value for the company as satisfied and loyal consumers support and buy the brand over time. Keller (2008: 316-317) does admit that the inability of marketers to link brand building activity to sales necessitates new tools and procedures to clarify and justify the value of their expenditures. In response to the dilemma identified, he posits a brand equity measurement and management system called *The Brand Value Chain*.

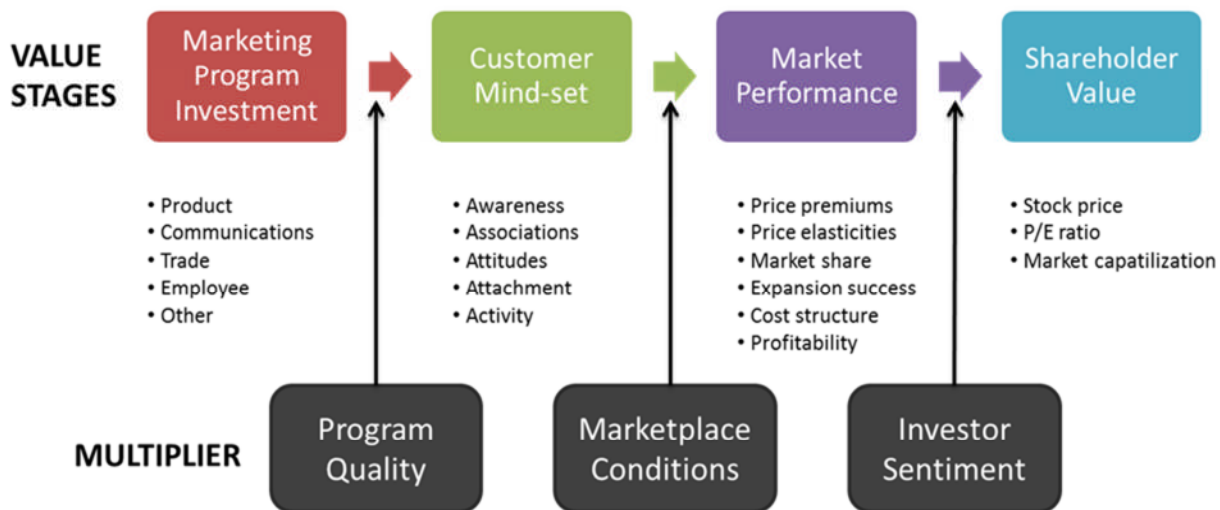
The brand value chain (as captured by the dashed box in Figure 1.1 and elaborated on in Figure 1.2) depicts the process through which marketing activities create value by assessing the sources and effects of brand equity. This model of brand value creation elucidates how marketers can create value by carefully investing in various marketing programs and expenditures (Keller, 2008: 316-324). Naturally, different stages of the brand value chain will have varying importance for different members of a company. Brand and marketing managers control the marketing program and therefore should be

held responsible for how well the marketing program impacts the remainder of the process. As Keller and Lehmann (2003) rightly state:

“... a well-integrated marketing program that has been carefully designed and implemented to be highly relevant and unique to customers is likely to achieve a greater return on investment from marketing program expenditures.”

Figure 1.2 summarises the marketing activities as well as a set of possible marketing metrics marketers can refer to when implementing a marketing strategy. According to Keller (2008: 316 – 324), marketers should implement marketing strategies and then take all action necessary to maximise the program, the customer and the market multipliers (as described in Figure 1.2) that translate the investment into bottom line financial returns (i.e. sales).

FIGURE 1.2 The Brand Value Chain



Adapted from: Keller (2008: 318)

Marketing activities create and leverage marketing assets, these activities are encapsulated as the marketing mix. Disregarding trade spending, the marketing mix is the sum of all expenditures intended to build brand equity (Ambler, 2003: 224). These expenditures can be classified into four components of activity, also known as the 4Ps: product, price, place (distribution) and promotion. The application of the marketing mix into a marketing strategy involves a series of tactical decisions. It is important to distinguish between the efficiency of these tactics and the resulting effectiveness of the marketing

strategy. The effectiveness of marketing tactics relates to how well the strategy is reaching its intended objectives within the extended business environment. As Ambler (2003: 222) asserted: "...efficiently doing the wrong things is more wasteful than inefficiently doing the right ones."

Still, referring back to Figure 1.2, the formulation of the marketing strategy using the marketing mix falls into the first and second stages of the brand value chain (in the context of a single brand). Keller (2007) raised his concern with companies focusing too little attention on the remainder of the value chain or explicitly on linking customer-based brand equity with financial-based brand equity. He noted that the general belief is that if companies get the initial stages of the value chain in order, the financial benefits will inevitably follow. In a review of prior research done, Ambler (2003: 29) concluded that performance, more often than not tends to equal what is planned and companies usually achieve what they measure. Therefore, he contends, the ineffective measurement of marketing lies in whether key corporate goals are translated through marketing strategies.

Thus, the assumption noted by Keller (2007) that marketers are not able to link customer-based brand equity with financial-based brand equity, has handicapped marketers attempting to prove their contribution to shareholder value - generally the principal corporate goal (Gitman, 2009:15). If marketers are to leverage intangible assets (brand equity) in an effort to enhance corporate performance, managers will have to move beyond traditional marketing analysis and incorporate a thorough understanding of the financial consequences of marketing decisions, which include their impact on sales (Rust, Ambler, Carpenter, Kumar & Srivastava, 2004).

1.2.1 Marketing Metrics

There is no shortage of recent outcries from various corners of the business domain for an increased accountability and transparency of marketing money spent (Davis, 2007; Ambler, 2003; Rust, Lemon & Zeithaml, 2004; Morgan, Clark & Gooner, 2002; Doyle, 2000a). Some has gone so far as to contemplate the demise of marketing professionals (Doyle, 2000a), a concern based in the continuous marginalisation of marketers at boardroom tables. Reinforcing the concern of Rust *et al.* (2004) regarding marketers' financial inaptitude, Lukas, Whitwell and Doyle (2005) contend that:

“...marketing’s lack of strategic influence within organisations will continue to happen until marketing has a better understanding of what shareholder value is and how it provides opportunities for the discipline to engage in a meaningful performance dialog with top management. The quality of, and motivation for, such a dialog depends on fully understanding the marketing–finance interface, which is centred on the interdependence between the marketing function and shareholder value.”

Marketers have a plethora of metrics available to them. There are output metrics as well as process metrics, and Table 1.1 provides a brief summary of what Grønholdt and Martensen (2006) found to be the most widely used marketing metrics.

TABLE 1.1 Popular Marketing Metrics

MENTAL CONSUMER RESULTS		MARKET RESULTS
Brand awareness ¹		Sales (volume and value) ¹
Relevance to consumer		Sales to new customers
Perceived differentiation		Sales trends ²
Perceived quality / esteem ¹		Market share (volume and value) ^{1,2}
Relative perceived quality ¹		Market trends ^{1,2}
Image / reputation		Number of customers ¹
Perceived value		Number of new customers
Preference		Number of new prospects (leads generated / inquiries)
Customer satisfaction ¹		Conversion (leads to sales)
Customer loyalty/retention (intention) ^{1,2}		Penetration
Likelihood to recommend		Distribution / availability ^{1,2}
		Price
		Relative price (SOM value / volume) ¹
		Price premium
		Price elasticity
BEHAVIOURAL RESULTS	CUSTOMER RESULTS	FINANCIAL RESULTS
Customer loyalty / retention ^{1,2}		Profit / profitability ¹
Churn rate		Gross margin ¹
Number of customer complaints ¹		Customer profitability
Number of transactions per customer		Customer gross margin
Share of wallet		Cash flow
		Shareholder value / EVA / ROI
		Customer lifetime value

Notes: ¹ One of the 15 most commonly used measures according Ambler and Puntoni (2003)

² One of the 10 most valuable measures according to Davidson (1999).

Adapted from Grønholdt & Martensen (2006)

However, as Ambler (2003) rightly observes, there is no “one-size-fits-all” answer to measuring marketing effectiveness; the combination of metrics used will depend on the objectives and circumstances of the marketing strategy. It is important to appreciate the process of marketing value creation and that profitability is the result of effective marketing expenditures (tactics). To this end, many echo the importance of balancing a number of useful marketing metrics when evaluating a marketing strategy. Farris, Bendle, Pheifer and Reibstein (2006: 3) recommend managers to use a metrics “dashboard”- a portfolio of marketing metrics appropriate for objective-specific measurement. The authors argue that by combining various metrics, marketing managers can obtain more accurate information about the effectiveness of the marketing decisions implemented.

It has been noted that unless marketers find a way to translate performance to top management in financial contexts, they will continue to be marginalised. Contrarily, Ambler (2003: 80 - 83) remarks that financial metrics (for example cash flow) provide useful internal discipline structures, but fail to provide any useful market information or how cash flow is generated. Ambler sums it up by stating:

“The basic issue in this section (the use of financial versus non-financial metrics) is balance. Non-financial metrics will give a better picture of the market than the financial, but the financial tools should be used in moderation to explore the likely impacts of alternative strategies and actions.”

The development of a holistic set of business performance metrics will enable (CIMA, 2007):

- the accurate communication of company objectives;
- direct concentration of managerial efforts on achieving those objectives; and
- feedback on progress.

The above listed aspects will in turn, facilitate valuable company-wide learning opportunities for both top management as well as marketers.

As is evident from Table 1.1, marketers have not given financial metrics the attention deemed necessary to develop a common language with top management in order to provide evidence of marketing productivity. Yet it is repeatedly argued (Ambler, 2003; Doyle, 2000a; Lukas *et al.*, 2005)

that if marketing is to become a central part of the general management process, marketers need to expand their skill base to include modern financial planning techniques.

In summary, Ambler (2003) raised the concern that marketers have not focused sufficient attention on developing marketing metrics that provide evidence of marketing productivity. Moreover, it has been argued that unless marketers develop an understanding of the interdependence between the marketing function and shareholder value they will continue to be marginalised by top management (Lukas, Whitwell & Doyle, 2005). Modern finance theory has embraced a management orientation known as Value Based Management; a management discipline where the primary objective of all activity and resource investment is to create shareholder value (Ryan & Trahan, 2007). Therefore, it is imperative for marketers to understand the implication of value based management and conform to the operating principles the discipline is based on.

1.2.3 Value Based Management

The primary financial objective of any company should be shareholder value maximisation (Gitman, 2009: 15). Concurrently, the phenomenon of Value Based Management (VBM) has captured the attention of corporate and investment communities alike (Ryan & Trahan, 2007). Management necessitates the appropriate allocation of scarce resources using prioritisation and cost-benefit analyses of different strategies and projects. VBM, through *corporate governance* ensures managers' focus on shareholder value creation by implementing rules and procedures that imply conformance to such an objective (Brigham & Daves, 2004: 334).

Although there are various approaches to the implementation of VBM, essentially value is created if companies can invest capital at returns exceeding the cost thereof (Koller, 1994). For that reason, managers should be evaluated according to their ability to make strategic investments that promise returns greater than their cost of capital (Day & Fahey, 1988). Indeed, as Doyle (2000b) observes, "Chasing profitless growth has been one of the most common sources of corporate failure."

VBM provides managers with metrics to assist decision-making in order to identify value creating opportunities and thereby ensuring sound managerial judgment. Discounted cash flow (DCF) methods, such as the Net present value (NPV) technique expresses value as expected future cash flows

discounted to the present time at the company's cost of capital (Ryan & Trahan, 2007). The merit of using cash flow analyses like the NPV lies in the technique's ability to integrate the time value of money, thus ensuring that capital expenditures are consistently maximising wealth (Gitman, 2009: 424). Estimating the NPV of a capital investment involves forecasting future incremental cash flows expected and discounting these cash flows at the investors' required rate of return, the sum of which results in the project's NPV (Brigham & Daves, 2004: 378). Investment opportunities are evaluated based on the estimated value created for shareholders by the undertaking.

Essentially, VBM recognises four fundamental driving forces impacting on value creation (Brigham & Daves, 2004: 346):

- growth in sales, if the growth can be achieved profitably;
- an increase in operating profitability;
- a decrease in capital requirements; and
- a decrease in the weighted average cost of capital.

As Brigham and Daves (2004: 346) note, the first fundamental driving force that impacts value creation is sales that are achieved profitably. Since marketers are the primary custodians of sales the notation places marketing in the centre of value creating business strategy. The shortfall is that marketers are not able to articulate the value created through marketing strategy (Kotler & Keller, 2006: 36) which undermines the transparency of marketing investment and return.

As early as 1988, marketing research anticipated the introduction of shareholder value maximisation as a means for measuring marketing performance (Day & Fahey, 1988). Yet the development of measures that assess the financial performance of marketing investments has evolved sporadically and remains a desperately unexplored domain (Morgan, Clark & Gooner, 2002; Rust, Lemon & Zeithaml, 2004; Srivastava *et al.*, 1999). Rust *et al.* (2004) conducted an audit of progress in the pursuit of market productivity measures and found new research directions across seven areas, the authors emphasised a common thread across all these areas namely the development of aggregate-level models that link tactics to financial impact (e.g. sales).

1. 3. RESEARCH OBJECTIVE

Commendable work has been done investigating the plausibility of the shareholder value framework (embracing the VBM concept) as a solution to linking marketing activity to the bottom line (Doyle, 2000a; Ambler, 2003; Srivastava *et al.*, 1999; Rust *et al.*, 2004). Using discounted cash flow techniques and value based management to govern decision-making could resolve the underinvestment bias derived from senior management regarding marketing money spent as expenditures instead of investment (Doyle, 2000b).

As a first step toward the goal of linking marketing to the bottom line it is key to understand the nature of the relationship between marketing expenditures in terms of the 4Ps components of marketing and sales. This study attempts to better understand the nature of the relationship between marketing expenditures and sales. It follows that if the variation in sales can be attributed to the different components of the 4Ps, future returns can be forecasted more accurately which will enable the adoption of discounted cash flow techniques to evaluate marketing investment, and in turn, demystify the contribution of marketing to the bottom line.

Therefore, the problem investigated in this study was to consider, through the understanding of the relationship between marketing expenditures (in terms of the 4Ps) and subsequent sales, the role marketing plays in generating sales. The 4Ps components of marketing represent the independent variables in the study for each product with sales being the dependent variable. In order to better understand resulting variance in sales as a subject of the independent variables (4Ps) the relationship between the different components of marketing expenditure and sales was investigated. Hence, the objective of this study was to:

Establish whether there is a relationship between the expenditures of different marketing components (4Ps) and sales.

The analysis is based on a regression analysis between the independent variables (marketing expenditures) and dependent variable (sales). Therefore, the proposition formulated is directed at

establishing whether variance in sales can be explained by the different constructed components of marketing expenditure (4Ps). To this end, the proposition to be scrutinised in this study follows:

P₁: The variation in marketing expenditures incurred by a brand in terms of the 4Ps (product, price, promotion, place) explain the variation in sales.

1. 4. RESEARCH METHOD

In order to investigate whether the variance in sales of a product is attributable to marketing expenditures, a meta-analysis on existing financial data was undertaken. Therefore, the nature of this study can be described as a secondary data study. Initially, the study commenced with exploratory research of the appropriate theory in order to define the research problem and objective more clearly. Subsequently, secondary financial data were investigated to better understand the relationship between marketing expenditures and sales. Two South African fast moving consumer goods (FMCG) brands' financial data for the period of July 2001 until the end of June 2005 constituted the test subjects. Expenses were dissected and allocated according to the 4Ps of marketing, in chapter two the marketing expenses are discussed in more detail (Table 2.1).

The analysis of the relationship between marketing expenditures for each brand commenced with a multiple regression analysis, including the 4Ps components of marketing expenditures as independent variables and sales as a dependent variable. Due to the fact that the data was collected over a time period of 48 months the researcher anticipated that the time-related characteristics of the data might violate inherent assumptions about the nature of the data that regression analysis is based on. If the assumptions of multiple regression analysis were violated a time series regression analysis was adopted where the time-related characteristics of the data are counteracted to increase the accuracy of the analysis.

1.4.1 Data Processing

Data analysis was conducted through standard editing and coding procedures using Microsoft Excel and SPSS Statistical Software Version 18. Descriptive statistics, skewness, kurtosis, multiple

regression analysis and finally time series regression modelling were used to assess the relationship between the variables.

Descriptive statistics were used to determine the nature of the data sets for each of the brands. Descriptive statistics consulted included the distribution and central tendency of the data. Due to the intention to use multiple regression analysis during analysis, further investigation was required to understand whether the data were normally distributed, homoscedasticity existed, and whether there was independence of errors. These three characteristics of the data are inherent assumptions that a multiple regression analysis is based on and when violated can cause inaccurate results and interpretation from such an analysis. The skewness and kurtosis of the data were scrutinised to understand if the data were normally distributed and the Durbin-Watson *d*-statistic was applied to test for the presence of autocorrelation.

As mentioned in the previous section, it was expected that the time-related characteristics in the data might violate the assumptions that a multiple regression analysis is based on. For this reason, time series regression analysis was adopted as a next step in the investigation. In a time series regression model, time-related effects such as secular trend or seasonality (see Chapter 4) were overcome through the introduction of counteracting dummy variables into the regression model. Finally, once the models displayed an acceptable level of accuracy, regression analysis was performed on each of the two data sets to investigate the relationship between the dependent and independent variables included in the study and the relationship between marketing expenditures and sales was explored.

1. 5. CONTRIBUTION OF THIS STUDY

As explained in Section 1.2, marketers are called upon to develop transparent measurement tools in order to provide financial accountability for the strategies they implement. In an era where creating shareholder value has been widely adopted as the panacea in business objective setting (Gitman, 2009: 15) it is imperative for marketers to be able to articulate the impact of marketing strategy on value creation. As a first step towards transparency of marketing initiatives marketers should understand the impact of their expenditures on subsequent sales generation. As such, this study explored the link between marketing expenditures and resulting cash profit.

The understanding of the relationship between marketing strategy (marketing expenditures) and sales is imperative for marketers to articulate the contribution they make to the bottom line. The value of a company is driven by profitable sales and this study takes a step towards the development of aggregate-level models that link tactics to financial impact (e.g. sales).

1. 6. ORIENTATION

This dissertation encompasses the following six chapters.

CHAPTER 1: Introduction

This chapter contains a broad overview of the study. It provides background information to the chapters that follow. In this chapter the research problem is first formulated and the objective of the research is stated. It concludes with a short overview of the method applied in order to test the proposition.

CHAPTER 2: The marketing function

In Chapter 2, marketing theory as it applies to the context of this study is discussed in detail. An overview of the marketing function within a company is presented and the marketing mix (4Ps of marketing) is introduced as a marketers' primary toolbox for marketing strategy creation.

CHAPTER 3: Value based marketing

The focus in Chapter 3 is to tie marketing theory and financial management theory together to provide a context for the reader in which to assess the importance of marketing accountability within the scope of a modern company.

CHAPTER 4: Research method

This chapter deals with the research design in terms of the research process, practices, and statistical methods applied in this study to test the proposition.

CHAPTER 5: Results

The findings of the empirical research are presented in Chapter 5. Such findings entail the nature of the relationship between marketing expenditures and sales for the FMCG brands scrutinised.

CHAPTER 6: Recommendations

In the final chapter, conclusions from the research are drawn. Subsequently, the conclusions enable certain recommendations to be made regarding the implications of the results. The chapter culminates in depicting the limitations of the study and suggestions on further research needed.

CHAPTER 2

THE MARKETING FUNCTION

2.1 INTRODUCTION

In recent years the role of marketing within an organisational context has been altered significantly by the company-wide adoption of the *marketing concept* and the acceleration of environmental change such as technology advances and globalisation (Moorman & Rust, 1999; Day & Montgomery, 1999). Increasingly, companies realise that only by placing the customer at the centre of all decision-making and strategy formulation can they remain competitive, in other words, to reiterate Drucker's (1954) enlightened insight, "There is only one valid definition of business purpose: to create a customer." To this end, more and more companies are embracing the marketing concept as a business philosophy, directing all planning and coordination activities toward the primary goal of satisfying customers' needs in order to build and sustain a competitive advantage (Mullins, Walker & Boyd, 2008: 36).

Within such a market-orientated company, marketers are responsible for attracting and retaining customers through the facilitation of mutually beneficial exchanges, or simply, offering them desirable products (Doyle, 1994: 39). Traditionally, marketing activities can be depicted by the *marketing mix*, defined as the set of marketing tools the company employs in pursuit of its objectives (Kotler & Keller, 2006: 19). Therefore, Doyle (1994: 39) defines marketing management as:

"...the process of identifying target markets, researching the needs of customers in these markets and then developing the product, price, promotion and distribution to create exchanges that satisfy the objectives of the organisation's stakeholders."

This chapter provides an overview of business management and marketing's role within a company. Furthermore the value contribution of marketing is scrutinised with regard to how the marketing function has changed resulting in the current operating logic. Finally, the marketing mix is described as a conceptualisation of tools available to marketers when formulating marketing strategy.

2.2 BUSINESS MANAGEMENT

Under the premise of operating in a free-market economy, business management is a science which concerns itself with discovering the best way of establishing and managing an enterprise (Marx, Van Rooyen, Bosch & Reynders, 2004: 8). Business management is a science that has developed from microeconomics and is ultimately the pursuit of the optimal allocation of scarce resources. In its simplest form, management can be described as "... the activity that converts disorganised human and physical resources into useful and effective results" (Terry & Franklin, 1982: 4). More specifically, Terry and Franklin (1982: 4) describe management as a distinct process involving the planning, organising, initiation, and monitoring of activity to accomplish stated objectives with the use of resources. But any organised sense of planning needs a reference point for decision-making. Drucker (in Hulbert, Capon & Piercy, 2005: 8) alleged that:

"If we want to know what a business is we have to start with its purpose. There is only one valid definition of business purpose: to create a customer. It is the customer who determines what a business is. For it is the customer, and he alone, who through being willing to pay for a good or service, converts economic resources into wealth, things into goods."

Therefore, in business management the emphasis should be on how the needs and wants of consumers can best be satisfied considering the different ways in which scarce resources of production can be employed. Consequently, management is the responsibility of achieving the company's vision, mission and objectives amidst a rapidly changing environment, in other words, in the face of risk and uncertainty (Marx *et al.*, 2004: 9). The activities those entrusted with the responsibility of management undertakes in this endeavour is known as business functions. Marx *et al.* (2004: 9) distinguishes the following business functions:

- general and strategic management;
- the purchasing of raw materials and other necessities;
- production and operational activities;
- marketing of the product or service;

- financial management;
- human resource management; and
- information management.

The manner in which these different business functions are integrated and coordinated to serve a common purpose will determine the extent of managerial success. The term *strategy* can be defined as a fundamental pattern of present and planned objectives, resource deployments, and interactions of a company with markets, competitors, and other environmental factors (Mullins, Walker & Boyd, 2008: 40). The competitive strategy provides the “conceptual glue” that integrates all separate functional activities and programs; it specifies how a company intends to compete in the markets it chooses to serve (Day, 1990: 5). Thus, the formulation of the competitive strategy involves a series of strategic decisions. Figure 2.1 depicts a summary model of the elements of strategic decision-making.

FIGURE 2.1 The Elements of Strategic Decision-making



Adapted from: Johnson and Sholes (1988: 16 in Wilson & Gilligan, 2005:12)

Ultimately this problem-solving process consists of three aspects, namely strategic analysis, strategic choice and strategic implementation (Wilson & Gilligan, 2005: 11):

- A *Strategic analysis* of the company's position by answering questions such as:
 - What changes are taking place in the environment?
 - How will these changes affect the company and its activities?
 - What resources does the company have to deal with these changes?
 - What do those groups associated with the company wish to achieve?
- The *Strategic choice* resulting from the following process:
 - The generation of viable strategic options
 - Strategically evaluating each of these options
 - The selection of preferred strategies
- Finally, the *strategic implementation* is concerned with translating the decision into action considering:
 - The allocation of resources to new courses of action
 - Possible adaptation of the organisational structure to handle new activities
 - Training personnel and devising appropriate systems to perform necessary tasks.

Day (1990: 5-7) commends simplicity in strategy-formulation by stating “effective strategies are straightforward in their intent and direction”, he stresses that companies require a clear sense of growth direction that will best capitalise on the competencies of the business. Hofer and Schendel (1978: 27 in Wilson & Gilligan, 2005: 12) identify three distinct levels of strategy formulation in a commercial context:

- *the corporate strategy* - deals with the allocation of resources among the various divisions or businesses;
- *business strategy* - formulated at the level of the individual division or business, dealing primarily with the question of competitive advantage; and
- *functional level strategy* - limited to the actions of specific functions within specific businesses.

Ultimately, Marx *et al.* (2004: 23) encapsulate the purpose of strategy formulation as devising a business plan that will ensure the greatest economic return (income) with the lowest possible use of means of production (costs). In other words, the objective should be profitability, also known as the bottom line. But, as Mullins *et al.* (2008: 5) points out, there cannot be a positive bottom line if a

company cannot build and sustain a healthy top line in the form of sales revenue. It is for this reason that management experts remark that everything a company does internally are cost centres, the only profit centre is a “customer whose check does not bounce” (Drucker, 1954 in Mullins *et al.*, 2008: 5). As marketing departments are typically responsible for customer management, top management has come to realise and accept the importance of marketing within the company; although many argue that the role of marketing however, still remains ambiguous (Moorman & Rust, 1999).

2.2 MARKETING’S ROLE

In the closing remarks of the previous section the importance of customers became apparent. In recognition of the need for customer-management many companies embrace a business philosophy called the *marketing concept*. According to Hunt and Morgan (1995, in Hunt 2000) the marketing concept maintains that:

- all areas of the company should be customer-orientated;
- all marketing activities should be integrated; and
- profits, not just sales, should be objective.

Hunt (2000) posits that the marketing concept’s customer-orientation serves as its conventional principle - in other words, knowing one’s customers and developing products to satisfy their needs, wants, and desires. Mullins *et al.* (2005: 36) speculate that the marketing concept is the most effective means to building competitive advantage over time, through the planning and coordination of all company activities around satisfying the customer. Therefore, the marketing concept can be regarded as a business culture that can guide the formulation and implementation of business strategy (Hunt, 2000).

Over the years the role marketing has adopted in business management has changed continually and there are various opinions as to how the term *marketing* should be interpreted within the scope of business activity or who the responsibility should be entrusted to (Baker, 2000: 19 – 24; Hulbert *et al.*, 2005: 8 – 11; Kotler & Keller, 2006: 15 – 23; Wilson & Gilligan, 2005: 3 – 5; Jones, 1947; Lewis & Erickson, 1969; Brady & Davis, 1993). Subsequently, there are various perspectives on how the role of marketing could be approached within a company (Marx *et al.*, 2004: 515 – 521), namely the activity

perspective, the management perspective, the value perspective, and the relationship perspective. These viewpoints will now be discussed in detail.

2.2.1 The Activity Perspective on Marketing

Webster (2002) remarks that marketing management as a distinct activity within a business is only about 50 years old. Prior to this, he notes, marketing was essentially defined as a socioeconomic process, "... focused on transactions and exchange, taking place within markets, not within the company." In the activity perspective on marketing, the focus is placed on the various activities necessary in order to transfer goods and services from the producer to the consumer. These activities can generally be divided into three categories:

- *The primary activity of marketing.* In this perspective, even though form and task utility is deemed the responsibility of production, the primary marketing activities refer to the place, time and possession utility created by marketing.
- *The auxiliary activities of marketing.* The secondary activities marketing is involved with include:
 - collecting and providing information;
 - standardisation and grading;
 - breaking bulk;
 - storage;
 - financing (during the transfer of ownership from the manufacturer to consumer); and
 - risk acceptance.
- *Exchange activities of marketing.* Inherently, there are two exchange activities included in marketing:
 - selling, consisting of prospecting, sales presentation, negotiation and the contractual sales agreement; and
 - buying, the mirror image of the selling activity.

2.2.2 The Management Perspective on Marketing

The management perspective on marketing embraces the previously mentioned *marketing concept* to the extent that the management philosophy is marketing orientated. Thus, the entire company is focused on the consumer and all resources and skills are aligned to understand and meet the needs and wants of consumers. The management perspective is based on the frequently cited presumption made by Drucker (1954) that,

“... marketing is the distinguishing, the unique function of the business... It (marketing) is the whole business seen from the point of view of the final result that is from the customer’s point of view. Concern and responsibility for marketing must therefore permeate all areas of the enterprise.”

Therefore, the management perspective on marketing assigns the marketing responsibility to everybody in the company, because every business activity holds marketing implications. According to Webster (1992) this managerial perspective contributed relevance and realism to the study of marketing, emphasising problem solving, planning, implementation, and control in competitive marketplaces. The marketing concept infiltrated the business environment in the 1960’s, and customers were scrutinised in an effort to manipulate demand to increase sales volume (Day, 1990: 19; Baker, 2000: 21). Baker (2000: 21) notes that despite the understanding of the marketing concept, during this period the implementation of the concept through the marketing function diverged widely from it.

Webster (2002) speculates that the confusion regarding the philosophy of the marketing concept and how it was implemented contributed to the inability of marketing management to define a clear role within a company. He states that there are two reasons why marketing did not find “...a home in the management pantheon:”

- *the relationship between marketing and selling has never been resolved.* Webster (2002) argues that managers confuse marketing with selling and sales management which creates a problem through the fundamental conflict between short-term, tactical initiatives and long-term, strategic goals. This dilemma, he feels, “still haunts marketers to this day;” and

- *the marketing concept had limited practical implications in its pure form as a mandate for customer-orientation.* As a result, a plethora of management specialities developed, most notably strategic management, quality management, communications management (or public relations) and consumer behaviour. These specialised disciplines served as “... a response to the unfinished business of the marketing concept.”

The dissection of management decisions into increasingly small pieces caused managers to lose sight of the bigger picture and promoted isolated management hampering business performance (Wind, 2005). Day (1990: 19) describes how the marketing concept and companies' commitment to a customer-orientation waned during the 1970s as strategic management gained favour with top management. Strategic directions were focused on top-down financial imperatives and industry analysis as guidelines to action instead of customers.

Webster (2002) states that strategic planning emerged as an attempt to translate the marketing concept into action. As strategic planning evolved into the broader field of strategic management concerned with planning and implementation, marketing concerned itself with trying to manage the selling functions (Webster, 2002). The unfortunate side-effect of the strategic thrust was a deflection away from the customer as a source of long-run competitive advantage and profitability (Day, 1990: 19).

Decades later, several authors declared marketing to be in a “state of crises” (Brady & Davis, 1993; Webster, 1992; 2002; Hunt, 1994; 2000). As strategic management evolved, it adopted fundamental marketing concepts and frameworks (such as segmentation, positioning and diffusion processes) and advanced strategy theory whilst marginalising marketing (Hunt, 1994). Before the mid 1980's, although marketing was supposedly based on the premise of the marketing concept, marketing had little relation to business strategy (Hunt, 2000; Day and Wensley, 1983). Marketers focused on micro-goals such as the development of the marketing mix (Hunt, 2000). Day and Wensley (1983) proposed that marketing management should have adopted a more strategic orientation, finding ways to emphasise marketing's role in the development of sustainable competitive advantage.

2.2.3 The Value Perspective on Marketing

By the 1990's it became apparent that misconceptions and applications of the marketing management model resulted in physical and psychological separation between producer and customer. Marketers became preoccupied with how they can use marketing tactics to shape consumer demand rather than letting this demand shape their production decisions (Baker, 2000: 22). In short, marketing was tactical, not strategic in nature (Hunt, 2000).

At the same time, accelerating globalisation initiated intense competition as infiltrating Japanese companies offered better quality products at lower prices (Day, 1990: 19). Baker (2000: 22) states how this intensifying global competition forced companies to return to the first principles, "... to listen to the voice of the market and shape production to the needs of consumers." Day and Montgomery (1999) posit that marketing can contribute significantly in the competition arena because of the tendency to approach issues "from the market back", instead of focusing on the supply-side perspective strategists often foster.

In the value perspective on marketing the emphasis moves away from the product or service and is placed on values or benefits. The value perspective recognises that when people buy products or services they are really buying the benefits they believe the products or services provide (Mullins *et al.*, 2008: 10). The value consumers perceive is captured in the unique combination of benefits received compared to the cost of obtaining such benefits. Thus, the value is reflected in the ability of the offering to satisfy consumer expectations.

The need for value-focused strategies designed to create customer satisfaction is resonated by Day (1990: 18 – 19) in his overview of the evolving role of the marketing function. He describes how the emphasis on customer value resurged since the eighties through several manifestations such as product quality enhancement, leaner and more flexible companies that are closer to their markets, a search for innovative strategies and finally the recognition that marketing (or value creation) is everyone's responsibility.

Kotler and Keller (2006: 36 – 44) emphasise the importance of the value perspective by stating that the task of the company is to deliver customer value at a profit. They feel that in a hyper-competitive

economy, a company can only win by fine-tuning the value delivery process and choosing, providing and communicating superior value. However, value is a subjective concept; as Mullins *et al.* (2008: 11) note, the value attached to a product or service depends on the customer's estimation of the perceived benefits and the product or service's ability to satisfy specific wants and needs. Thus, *value* is a function of intrinsic product attributes and it means different things to different customers (Mullins *et al.*, 2008: 11).

Due to the subjective interpretation of value, Kotler and Keller (2006: 36 – 44) describe companies as part of a value delivery process which places marketing at the beginning of planning. Thus, shrewd management will involve designing and delivering value offerings to well-defined target markets with relatively homogeneous value conceptions. Figure 2.2 depicts the value delivery process as conceptualised by Lanning and Michaels (1988 in Kotler & Keller, 2006: 36). The figure illustrates the value creation and delivery sequence, a process consisting of three components.

FIGURE 2.2 The Value Creation and Delivery Process



Adapted from: Lanning and Michaels (1988 in Kotler & Keller, 2006: 36)

Since the call in the mid-1980's for marketers to increase the strategic orientation of marketing, Hunt (2000) noted that marketing scholars have made substantial progress. The process of creating, offering and communicating value requires numerous marketing activities, throughout this process, strategic planning is vital. As depicted in figure 2.2, the value creation and delivery process flows through three phases (Kotler & Keller, 2006: 37):

- ***Choosing the value***

Successful marketing management decisions generally depend on an objective, detailed, and evidence-based understanding of the market and environmental context (Mullins *et al.*, 2008: 15).

Analysis of the customers, the competitors, and the company's internal strengths and weaknesses precede any marketing program decisions. The marketing department then continues by segmenting the market, they identify the appropriate target market(s) and finally develop the offering's value positioning.

The set of benefits or values a company promises consumers as a means to satisfy their needs and wants is known as the *value proposition* (Kotler & Armstrong, 2008: 9). The process of segmenting, targeting and positioning (STP) in the development of a value proposition is the inherent emphasis of strategic marketing. Value propositions serve as a means to differentiate one product, service or brand from another and it provides a basis for competitive advantage (Kotler & Armstrong, 2008: 9).

- ***Providing the value***

Once the value offering has been decided upon, the second phase proceeds by the determination of the specific product features, prices, and distribution. These decisions serve to create a differential advantage by which a distinct competitive position relative to competitors can be established. Such a differential advantage might be achieved (and sustained) through the manipulation of the *marketing mix* (Wilson & Gilligan, 2005: 6). The marketing mix can be defined as the mixture of elements useful in pursuing a certain market response (Van Waterschoot & Van den Bulte, 1992; Kotler & Armstrong, 2008: 12).

- ***Communicating the value***

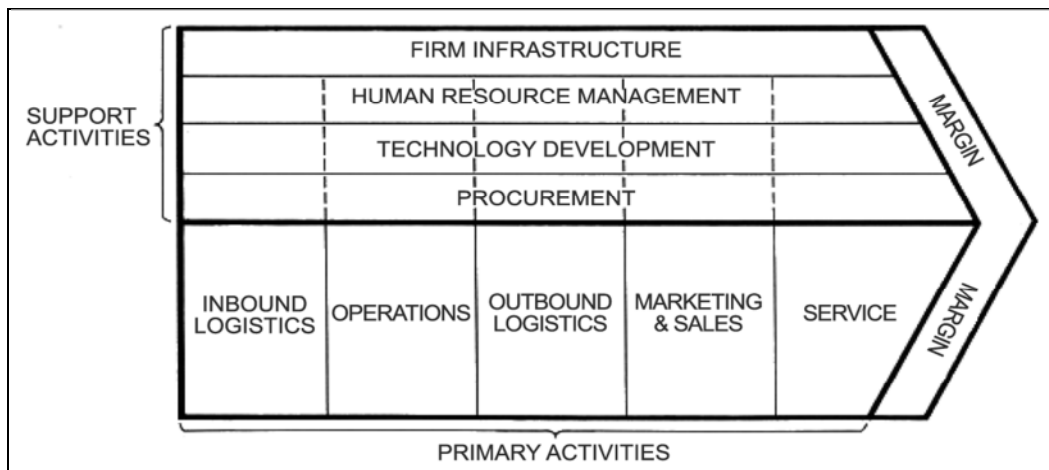
Finally, the value created is communicated to potential customers through employing the sales force, advertising and other communication tools. The activities involved with utilising the marketing mix to both create and communicate the value offering using the marketing mix will be discussed in detail in a later section.

This shared responsibility for value creation in a company inspired Porter (1985 in Kotler & Keller, 2006: 38 – 39) to propose the *generic value chain* (Figure 2.3) as a tool management can use to recognise ways to create more customer value. The value chain describes how the

activities of the company contribute to the process of product development (Doyle, 1994: 78). Subsequently, the chain identifies nine strategically relevant areas in the value creation process, consisting of five primary activities and four support activities (Kotler & Keller, 2006: 38 – 39):

- The primary activities involve the progression of bringing materials into the business (inbound logistics, production (operations), distribution (outbound logistics), marketing and finally, servicing them.
- The support activities are handled in specialised departments, although tasks may generalise across different departments.

FIGURE 2.3 Porter's Generic Value Chain



Source: Porter (1985 in Kotler & Keller, 2006: 39)

Management's responsibility entails examining each of these value-creating activities' costs and performance and identifying ways to improve the efficiency of operations. In a marketing orientated company the marketing function will play a key role in each of the primary activities depicted in the value chain; Kotler and Keller (2006: 38) emphasise that a company's success hinges simultaneously on the efficiency with which each activity is performed as well as the effective coordination of the various departmental activities to conduct the following *core business processes*:

- the market sensing process, in other words information management;
- the new offering realisation process;

- the customer acquisition process;
- the customer relationships management process; and
- the fulfilment management process, relating to the logistics and distribution processes.

According to Kotler and Keller (2006: 38), the strength of a company depends on superior capability in managing and coordinating these core business processes. In recent years the internal value perspective has proven inadequate to deal with rapidly changing economic environments as competition intensifies due to technological advancements and globalisation (Mullins *et al.*, 2008: 12).

As a result companies are attempting to expand competitive advantage beyond the scope of their own operations by building strategic relationships with key allies in the form of both customers and suppliers (Day, 1990: 66). Although these relationships have a variety of names, they are all characterised by flexibility, specialisation and an emphasis on relationship management, as opposed to merely market transactions (Webster, 1992).

2.2.4 The Relationship Perspective on Marketing

Traditionally, companies focused on the individual transaction with a customer as the realisation of the marketing effort (Baker, 2000: 21; Webster, 1992). However, the environmental changes mentioned in the previous section have caused the market to evolve (Brady & Davis, 1993). Companies embracing the relationship marketing philosophy believe that by building relationships with customers they can better understand customers, thus enabling them to better meet their changing needs and expectations (Zeithaml, Bitner & Gremler, 2006: 177). The objective of building relationships in the increasingly complex business environment is to cooperate for a mutual benefit (Marx *et al.*, 2004: 519). It is the focus on mutual benefit that inspires Baker (2000: 21) to conclude that relationship marketing represents the marketing concept much better.

Kotler and Armstrong (2008: 13) go as far as to say customer relationship management (CRM) is “perhaps the most important concept of modern marketing.” Essentially, relationship marketing represents a paradigm shift in marketing; away from an acquisition or transaction focus to a retention or relationship focus (Zeithaml *et al.*, 2006: 177). The shift has come about as companies realise that even though building relationships could be more costly, they can produce large dividends in terms of long-

term revenue streams and market share and, more specifically, the discovery that it costs more to attract a new customer than to retain an existing one (Mullins *et al.*, 2008: 12).

Therefore, with a relationship perspective the emphasis falls on the development, maintenance and strengthening of long-term profitable relationships (Marx *et al.*, 2004: 519). The perspective assumes that customers prefer to establish ongoing relationships with one company rather than to switch continually in search of value (Zeithaml *et al.*, 2006: 177 – 178). For this reason, Hulbert *et al.* (2005: 5) state that the company's value-creating potential is captured in the ability to secure and retain customers over the long run, and this is the central responsibility of management.

However, the relationship perspective is not without criticism. Concerns about inflated expectations of consumers based on delight previously experienced from efforts aimed at building relationships have been raised as it is often not profitable for companies to pursue such strategies (Rust & Oliver, 2000; Szymanski & Henard, 2001). Companies should take caution when selecting their target markets and developing the value propositions intended to stimulate satisfaction (Hulbert *et al.*, 2005: 6). By conservatively selecting only profitable targets through a process known as customer profitability analysis, companies can nurture beneficial relationships through carefully tailored value propositions (Kotler & Armstrong, 2008: 17).

2.2.5 The Marketing Function in a Market-Oriented Company

As marketing becomes an increasingly prominent orientation that everyone in a company shares and a discipline that all functions participate in, Moorman and Rust (1999) note that a critical issue arises regarding the role of the marketing function. The argument is founded in the assertion that if marketing is everybody's business it should not be preserved to a formal marketing department (Baker, 2000: 21). Webster (2002) goes as far as to prophesise that "Marketing management as a distinct function may become obsolete." Indeed, the value of marketing as a business function has been challenged repeatedly (Day & Montgomery, 1999; Webster, 1999; 2002; Wind, 2004; Brady & Davis, 1993).

Wind (2005) argues that despite the ongoing debate regarding marketing being described as a discipline or a function, there is still a clear need to apply marketing insights more broadly, especially as growth opportunities through acquisitions and increasing efficiency becomes depleted. He notes that marketing

has been left out of company decisions where its perspectives were crucial and could have significantly contributed to the success of ventures. Webster (1999) concluded that in order to consider the new role marketing (as a department or function) has to play within a company, it is imperative to recognise that marketing operates at three levels, reflective of the three levels of strategy discussed earlier. In addition to three levels of strategy, Webster (1999) identifies three distinct dimensions of marketing (illustrated in figure 2.3):

- marketing as a culture;
- marketing as a strategy; and
- marketing as tactics.

FIGURE 2.3 Marketing's role in a market-driven company



Webster (1992) attributes much of the confusion regarding the definition of marketing and the marketing concept over the years to a failure of distinguishing between these levels and processes of marketing. He elucidates:

“Though each marketing dimension is found at each level of strategy, the emphasis accorded to separate dimensions of marketing varies with the level of strategy and the level within the hierarchy of the organisation. Marketing as a culture, a basic set of

values and beliefs about the central importance of the customer that guide the company is the primary responsibility of the corporate and business level managers. Marketing as strategy is the emphasis of the business level, where the focus is on market segmentation, targeting, and positioning in defining how the company is to compete in its chosen businesses. At the operating level, marketing managers must focus on marketing tactics and the elements of the marketing mix. Each level of strategy, and each dimension of marketing, must be developed in the context of the preceding level. As we move down the levels of strategy, we move from strategy formulation to strategy implementation.”

Day and Montgomery (1999) draws from Webster’s (1992) work to summarise the roles marketing can and should play:

- an organisational orientation, based on an externally orientated culture that continually acts on the belief that all decisions start with the market and the anticipated opportunities for advantage;
- a general management responsibility for choosing market segments, developing a value proposition and competitive positioning; and matching consumer needs with company capabilities; and
- a functional activity that deals with the implementation of pricing, promotion, product management and channels of distribution decisions in support of the overall business or brand strategy.

Finally, Moorman and Rust (1999) successfully argue that there is value in a marketing function beyond a company-wide market-orientation; suggesting that the co-existence strengthens the effectiveness of the market orientation in the presence of a strong marketing function. Therefore, for the purposes of this study, a market-orientation implies a company’s acceptance of the marketing concept held by all parties within the company. The marketing function on the other hand is focused on value creation through professional practice and management (Baker, 2000: 21). In this study, Kotler and Keller’s (2006: 31) conception of the marketing management process will be embraced; “... marketing management is the art and science of choosing target markets and getting, keeping, and growing customers through creating, delivering, and communicating superior customer value” and doing so profitably.

2.3 THE MARKETING MIX

As evident from the previous section, the term *marketing* can adopt two distinct meanings (Doyle, 1994: 59): in the first instance it can be described as the company-wide business philosophy of meeting customers' needs. On the other hand, *marketing* can refer to a distinct set of activities that constitute marketing planning and decision-making. Doyle (1994: 59) centres these activities on four processes:

- *market segmentation*. researching the needs of customers in the market(s) the company operates in, in order to understand their buying behaviour and creating market clusters with similar characteristics;
- *selecting target markets*. the company needs to decide on the segments identified which promise the greatest profit and growth;
- *market positioning*. once the company has a thorough understanding of the targeted customers' buying behaviour the marketing department has to build a differential advantage so that customers would prefer the company's offering to that of competitors. Once the positioning strategy is devised, the marketing mix needed to implement the strategy decided upon;
- *marketing planning*. finally the company needs to develop a plan to implement the positioning strategy and build the company's strength in order to capture the opportunity presented by the market.

The idea of using the marketing mix as a way of describing the activities those responsible for executing the marketing plan undertakes was first conceptualised by Borden in 1964. A colleague of his, James Cullington (1948 in Borden, 1964) described the business executive as:

“...a mixer of ingredients, who follows a recipe prepared by others, sometimes prepares his own recipe as he goes along, sometimes adapts a recipe to the ingredients immediately available, and sometimes experiments with or invents ingredients no one else has tried.”

When designing the optimal marketing strategy, Borden (1964) realised the importance of asking two essential questions:

- What overall marketing strategy has been or might be utilised to bring about a profitable operation considering the circumstances faced by management?
- What combination of marketing procedures and policies has been or might be adopted to bring about the desired behaviour (or satisfy the needs) of trade and customers at costs that will permit a profit?

Based on these two questions, Borden (1964) devised a list of elements he believed to cover the principal areas of marketing activities. The list of elements encompassing marketing activities are summarised in Table 2.1.

TABLE 2.1 Borden's Elements of the Marketing Mix (1964)

1. Product Planning	<ul style="list-style-type: none"> • Product lines to be offered – qualities, design, etc. • Markets to sell: whom, where, when, and in what quantity • New product policy – the research and development program
2. Pricing	<ul style="list-style-type: none"> • Price level to adopt • Specific price-strategies to adopt • Pricing policies
3. Branding	<ul style="list-style-type: none"> • Selection of trade marks • Brand policy – individualised or family brand • Sale under private label or unbranded
4. Channels of Distribution	<ul style="list-style-type: none"> • Channels to use between plant and customer • Degree of selectivity among wholesalers and retailers • Efforts to gain cooperation of the trade
5. Personal Selling	<ul style="list-style-type: none"> • Burden to be placed on personal selling and the methods to be employed in: <ul style="list-style-type: none"> ○ Manufacturer's company ○ Wholesale segment of the trade ○ Retail segment of the trade
6. Advertising	<ul style="list-style-type: none"> • Amount to spend • Copy platform to adopt: <ul style="list-style-type: none"> ○ Product image desired ○ Corporate image desired • Mix of advertising: to the trade, through the trade, to consumers
7. Promotions	<ul style="list-style-type: none"> • Burden to place on special selling plans or devices directed at or through promotions
8. Packaging	<ul style="list-style-type: none"> • Formulation of package and label
9. Display	<ul style="list-style-type: none"> • Burden to be put on display to help affect sale • Methods to adopt to secure display
10. Servicing	<ul style="list-style-type: none"> • Providing the services needed
11. Physical Handling	<ul style="list-style-type: none"> • Warehousing • Transportation • Inventories
12. Fact Finding and Analysis	<ul style="list-style-type: none"> • Securing, analysis, and use of facts in marketing operations

Finally, Borden (1964) asserted that in order for the marketing manager to build a program suitable to the needs of the company, the manager has to develop the marketing mix embracing customer behaviour while keeping in mind the resources available. Also in 1964, McCarthy (in Constantinides, 2006) reduced Borden's factors to a four-element framework known as the 4Ps: Product, Price, Promotion and Place. Since then, the 4Ps have become almost synonymous with what Borden termed the marketing mix (Harvey, Lusch and Cavarkapa, 1996; Shapiro, 1985; Von Waterschoot & Van den Bulte 1992).

During the 1990's, as marketing undertook the before-mentioned paradigm shift from being transaction-orientated to relationship-orientated, the marketing mix became the target of extensive criticism and heated debate (Grönroos, 1994; Von Waterschoot & Van den Bulte 1992; Harvey, Lusch and Cavarkapa, 1996; Hunt, 1992; Webster, 1992). Critics argue that the 4Ps supposedly omit important marketing activities arising from the need to be customer-oriented, such as the element of people, services or interactivity (Grönroos, 1994; Von Waterschoot & Van den Bulte 1992; Baker, 2000: 320 – 322).

Kotler and Armstrong (2008: 51) dismiss these concerns arguing that although certain activities might appear to be omitted from the mix, they are subsumed under the 4Ps (for instance services would typically be included under Product for it is seen as part of the value proposition). According to Kotler and Keller (2006: 19 – 20) the only valid concern brought to light by critics of the 4Ps concept entails that the 4Ps adopt the seller's point of view of the market, instead of the buyer's. To address this discrepancy, Lauterborn (1990) suggests companies reorient themselves to adopt a customer's view (as described in Table 2.2) when considering the marketing mix by adjusting the 4Ps to the 4Cs:

TABLE 2.2 From the 4Ps to the 4Cs

4Ps	4Cs
Product	Customer Solution
Price	Customer Cost
Place	Convenience
Promotion	Communication

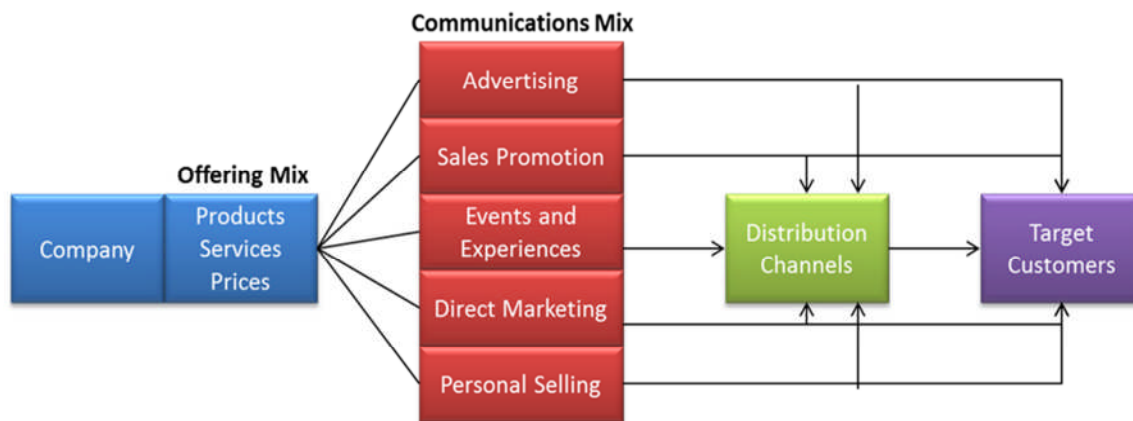
Kotler and Armstrong (2008: 51) describe the transformation of the 4Ps to the 4Cs by stating the following:

“While marketers see themselves as selling product, customers see themselves as buying value or solutions to their problems. And customers are interested in more than just the price; they are interested in the total cost of obtaining, using, and disposing of a product. Customers want the product and service to be as conveniently available as possible. Finally, they want two-way communication. Marketers would do well to think through the 4Cs first and then build the four 4Ps on that platform.”

Beyond the need to address the lack of a customer-orientation found in the traditional 4Ps the debate regarding the relevancy or adequacy of the marketing mix is not within the scope of this study. Ultimately, there is bound to be considerable variation amongst marketers on what the elements of the mix should be, as well as from industry to industry, company to company or even during the product life-cycle (Baker, 2000: 316). Yet the 4Ps remain a useful conceptualisation, aiding thinking about marketing activity. For this reason, it is adopted as a diagnostic framework to isolate respective marketing actions in this study. After all, as Borden (1964) pointed out, “... if one were to make a list of all the forces which managers weigh at one time or another when formulating their marketing mixes, it would be very long indeed...”

Figure 2.4 depicts a marketing-mix strategy adapted from Kotler and Keller (2006: 19). The ‘offering mix’ comprises the company’s value proposition intended to satisfy customer needs at a certain price. The ‘communications mix’ represents the different mediums the company utilises to communicate with trade channels and customers, informing them of the offering. And finally the appropriate distribution channels are chosen and the offering is dispensed to its intended destinations.

FIGURE 2.4 Marketing Mix Strategy



Adapted from: Kotler and Keller (2006: 19)

The company needs to tailor its tactics to different levels of strategy and its subsequent objectives whilst considering the competitive, social, political, legal, technological and economic environments (Wilson & Gilligan, 2005: 497). In any instance the company’s goal should be to find a profitable mix,

to this end, the various elements have to be combined in a logically integrated programme conforming to market forces impacting on the strategy (Baker, 2000: 317).

When Borden (1964) first initiated the conceptualisation of a marketing mix he conceded that the list of elements describing the marketing mix considered would be a function of how detailed the classification and sub-classification of marketing activities is intended to be. Over the years the original list as summarised by Borden (1964) has evolved into more cohesive constructs. Kotler and Keller (2006: 19) adapted Borden’s original list of marketing activities as depicted in Figure 2.5. For the purposes of this study the 4Ps components of the marketing mix, as summarised in Figure 2.5 are adopted.

FIGURE 2.5 The 4P Components of the Marketing Mix



Adapted from: Kotler and Keller (2006: 19)

Van Waterschoot and Van den Bulte (1992) suggested that the sales promotion element encapsulated in the promotion P troubles the classification of marketing activities due to the diverse meanings

attributed to *promotion* in various situations. According to the authors, “sales promotion” can refer to (i) the entire marketing mix, (ii) marketing communications, and (iii) it can be used as general term for all communication instruments that do not fit advertising, personal selling, or publicity sub-categories. Once again, for the purposes of this study the description of the different categories encompassing the promotion element of the 4Ps will be based on Kotler and Keller’s (2006: 537) depiction thereof, as described in Table 2.3 the promotion element is sub-classified into six sub-divisions namely, advertising, sales promotion, events and experiences, public relations, personal selling and direct marketing.

TABLE 2.3 Promotional Marketing Activities

Advertising	Sales Promotion	Events / Experiences	Public Relations	Personal Selling	Direct Marketing
Print and broadcast ads	Contests, games	Sports	Press kits	Sales presentations	Catalogues
Packaging – outer	Premiums and gifts	Entertainment	Speeches	Sales meetings	Mailings
Packaging inserts	Sampling	Festivals	Seminars	Incentive programs	Telemarketing
Product Placement	Fairs and trade shows	Arts	Annual reports	Samples	Electronic shopping
Brochures and booklets	Exhibits	Factory tours	Charitable donations	Fairs and trade shows	TV shopping
Posters and leaflets	Demonstrations	Company museums	Publications		Fax mail
Directories	Coupons	Street activities	Community relations		E-mail
Reprints of ads	Rebates		Lobbying		Social networks
Billboards	Low-interest financing		Identity media		Voice mail
Display Signs	Entertainment		Company magazine		
POP Displays	Trade-in				
Audiovisual	Allowances				
Material	Continuity				
Symbols and Logos	programs				
Videotapes	Tie-ins				

Adapted from Kotler and Keller (2006: 537)

Therefore, for the purposes of this study, the 4Ps of marketing as depicted in Figure 2.5 were adopted and the promotional component was sub-classified according to Table 2.3. Baker (2000: 3) feels that the manipulation of these mix elements allows a company tactical responses to prevailing market conditions. He emphasises the importance of keeping in mind that tactical manoeuvres are often only sufficient to cope with short-term environments.

As Baker (2000:3) points out, on a larger scale and over a longer term the mix elements are only effective if they are coordinated and integrated within a more broadly defined strategic framework. Yet, approaching the complex role of marketing within a company from such a classified perspective as the 4Ps makes it simpler to handle and organise. Returning to Borden's (1964) original work, the mix chart "provides an ever ready checklist as to areas into which to guide thinking when considering marketing questions or dealing with marketing problems."

In this study the 4Ps description was adopted as a guideline for the classification of marketing activities. In turn, the relationship between the marketing expenditures incurred to perform these activities and sales was investigated in response to the call of Rust *et al.* (2004) for the development of aggregate-level models that link marketing tactics to financial impact.

2.4 SUMMARY

As Harvey, Lusch and Cavarkapa (1996) elucidates, since the 1950s 'marketing' has been analysed from a variety of perspectives. Each of these perspectives has the same principle objective: "...to foster an understanding of how transactions or exchanges developed and how they were consummated". Currently, the relationship management paradigm has become the fundamental premise of marketing (Kotler & Armstrong, 2008: 13).

Although some have speculated on the function of marketing in a marketing orientated company (Webster 1992; 2002; Wind, 2004; Brady & Davis, 1993), Moorman and Rust (1999) provide evidence of the usefulness of the marketing function beyond the adoption of a market-orientation. Doyle (1994: 391) maintains that the principles of marketing (adopting a customer-orientation, effective segmentation and careful planning) will remain fundamental to the success of companies. Moreover, he feels that the accelerating pace of change will only test the skills of marketers even more. Thus, although the marketing function has undergone some shifts since the dawn of the new millennium, it is "alive and well" and capable of providing top management with valuable service (Baker, 2000: 11).

To this end, marketers continue to rely on the *marketing mix* as their 'toolbox' for designing a marketing program aligning customer needs, the company's strengths, and the external environment

(Harvey, Lusch & Cavarkapa, 1996). Subsequently, Kotler and Keller (2006: 19) describes the marketer's task as devising marketing activities and the assembly of fully integrated marketing programs to create, communicate, and deliver value for customers.

CHAPTER 3

VALUE BASED MARKETING

3.1 INTRODUCTION

Marketing has been repeatedly challenged to provide accountability for expenditures (Doyle, 2000a; Rust, Lemon & Zeithaml, 2004; Grønholdt & Martensen, 2006; Ambler, 2003). Some have proposed the use of shareholder value analysis as a solution to the dilemma of demonstrating the added value marketing contributes to a company (Srivastava, *et al.* 1998; Day & Fahey, 1988). Shareholder value analysis is a discounted cash flow technique that is founded on the principle of value-based management. Value based management stipulates that managerial conduct should serve the principal objective of creating shareholder value (Copeland, Koller & Murrin, 1994: 3).

Accordingly, investments and strategies are evaluated based on their ability to enhance value. Marketing investment analysis is not exempt from this custom and the inability of marketers to abide the laws of shareholder value maximising is undermining the strategic influence of marketing managers in companies (Doyle, 2000a). Unless marketers expand their skills to incorporate the financial analysis of their strategies, top management is likely to maintain the status quo and marginalise marketers and their proposed investment strategies. Ambler (2008) argues that although financial analysis is necessary to evaluate different strategy alternatives, it cannot be used in isolation of non-financial metrics. Therefore, it is necessary to assess the relationship between non-financial efficiency metrics and financial effectiveness metrics in order to consider the success of marketing initiatives.

In this chapter the foundations of value as a management principle is investigated. The chapter is divided into two sections. In the first section, value based management will be explored as a management culture. The rationale behind value maximisation as well as the techniques and tools needed to apply and enforce value based management will be scrutinised. Finally, the deficiencies of discounted cash flow and financial metrics to value intangible assets will be considered. The second section of the chapter explores how value based management can be applied to marketing. The need for

financial accountability in marketing will be reflected upon. Finally, the feasibility of using financial metrics such as shareholder value analysis to value and measure intangible market-based assets will be scrutinised.

3.2 VALUE BASED MANAGEMENT

During the 1990's, company performance became the mantra of corporate theory (Neely, 2002; Slater & Olson, 1996). Companies claim to be operating for performance, managers seek to measure their performance, improve their performance and often are compensated according to performance. All too often however, there is a lack of clarity regarding the objectives and means of reaching those objectives (Donovan, Tully, & Wortman, 1998: 1). As a result, *performance* becomes vague and managers' remuneration subjective. Koller (1994) remarks how the predominant cause of failing performance measures is that the measures are not aligned with the ultimate goal of creating value.

The analysis of shareholder value is based on a well-substantiated body of financial theory which states that the value of a company is increased when managers make decisions that increase the discounted value of all forecasted future cash flows (Copeland *et al.*, 1994; Martin & Petty, 2000). The rationale is simple; shareholders are the owners of a company, the board of directors is their representative and elected by them, therefore the objective function of a company is to maximise shareholder value (Copeland *et al.*, 1994: 3).

Monks and Minow (2004: 42) reiterates the principle objective by stating that long-term value creation as an objective establishes a framework for defining the rights and responsibilities of shareholders and directors and therefore for determining how they should be organised, motivated and evaluated. Thus, value based management (VBM) adopts value as a doctrine, a precise and unambiguous metric from which the entire company can be operated (Koller, 1994). Value based management as a policy will have several managerial implications which will be further explored in the following section.

3.2.1 Managerial Implications

As VBM recognises shareholder value creation as the fundamental assumption underlying financial theory, management consequently has one basic, prevailing goal: to create value for shareholders (Brigham & Daves, 2004: 5). It has been argued that such an assumption will prioritise the creation of shareholder value to the detriment of other stakeholders such as employees or customers (Ryan & Trahan, 2007; Young & O'Byrne, 2001: 13). However, such criticism overlooks the fact that shareholders are last in line to receive monies from a company and also that shareholders have no legal claim on the profits of the company (Young & O'Byrne, 2001: 18).

Young and O'Byrne (2001: 13) cites evidence suggesting that only when companies create value for all stakeholders will such value be translated to shareholder value in the long-run. The authors note that in both Europe and North America companies that tend to outperform stock market averages also foster good reputations for:

- product and service quality;
- the ability to attract, develop, and retain talented people; and
- community and environmental responsibility.

Copeland *et al.* (1994: 18 - 40) elucidate how, even though the exploitation of a group of stakeholders could result in short-run profits, it will eventually lead to a loss of shareholder value and could even result in financial failure. As a result, the authors conclude that maximising shareholder value does not impair other stakeholder groups. Contrarily, the focus on shareholder value appears to generate greater value for all stakeholders (Pike & Neale, 1999: 16). Ultimately, it is widely recognised that the objective of a publicly traded company's management should be to maximise shareholder value (Gitman, 2009: 15).

The pace of VBM adoption has accelerated significantly since the late 1990's. Young and O'Byrne (2001: 5) contribute the acceleration to a confluence of circumstances the authors feel have caused companies to reconsider traditional roles. Accordingly, the growing predominance of shareholder value creation as a business culture can be attributed to:

- the globalisation and deregulation of capital markets;
- the end of capital and exchange controls;
- advances in information technology;
- more liquid securities markets;
- improvements in capital market regulation;
- generational changes in attitudes toward savings and investment; and
- the expansion of institutional investment.

As a result of these developments, capital has attained a degree of mobility that will allocate funds where it is most appreciated; in other words, unrewarded shareholders will withdraw their capital to be more productively employed elsewhere (Young & O'Byrne, 2001: 6). Finally, the authors note that although most managers understand the need for operational competitiveness, survival now also requires competitive capital costs (i.e. maximum reward for capital employed), a reality not fully appreciated by many managers.

According to the *agency issue* different incentives result in conflicts between shareholders and managers of public companies, ultimately causing a loss of company value (Ryan & Trahan, 2007). This conflict is attributed to the self-serving nature of managers who are not shareholders of the company. Often managers' primary interest is to maximise the size of the company as a bigger company could provide job security, personal power or status, and even higher salaries and bonuses (Brigham & Daves, 2004: 8). Therefore, a system is required to manage and direct managers' personal goals and objectives to serve in the best interest of the company.

Gitman (2009: 16) defines *corporate governance* as the system used to direct and control a company. Corporate governance defines the responsibilities and decision-making procedures of key company participants. Thus, managers can be encouraged to act in the best interest of shareholders through a set of incentives, constraints and punishments. All these initiatives will result in costs known as *agency costs* undermining the value created (Brigham & Daves, 2004: 8).

However, if the relationship between managerial actions (or financial performance) and value creation can be clarified measures can be employed compensating managers accordingly and aligning, to a certain extent, the incentives of managers and shareholders. Therefore, VBM provides an integrated

management strategy and financial control system designed to mitigate these agency conflicts and increase shareholder value (Ryan & Trahan, 2007).

3.2.2 Value based Measures

The adoption of VBM implies systematically maximising company value using discounted cash flow valuation techniques to evaluate management decisions (Brigham & Daves, 2004: 361). Accordingly, the value of a company is determined by the present value of estimated future cash flows. If VBM is properly executed, it is a managerial approach that aligns a company's overall aspirations, analytical techniques, and management processes to focus decision-making on the key drivers of value (Koller, 1994). If managers invest in projects where the return exceeds the cost of capital, value is created and vice versa. Thus, the value of the company is dependent on the success of the company's strategies and decisions (Pike & Neale, 1999: 21).

Ronte (1998) posits that the power of VBM is captured in the link it creates between capital markets and product markets. Ryan and Trahan (1999) concludes that VBM is all-encompassing and includes corporate strategy, management compensation, and detailed internal reward systems; all of which are designed to link employee performance to shareholder value. In order for managers to evaluate the success of their actions, they need to assess the development of the strategy at finite intervals over the specified time frame. Typically, metrics used to measure periodic performance is based on historical accounting information such as earnings, or profit margins and ROI. Martin and Petty (2000: 8) declare that such measures are almost always single-period accounting-based measures of performance that suffers from two important limitations:

- since these performance measures are based solely on one historical period of operations, there is no reason to believe that they are indicative of the life-time value of the initiative;
- accounting information systems do not incorporate the opportunity cost of capital.

Copeland *et al.* (1994: 55) assert that debate regarding appropriate metrics has “come unstuck” from the real purpose for them, namely to assist management in decision-making. Yet the authors concede that indeed some metrics are better than others and suggest the superiority of economic measures (such

as economic profit) to accounting measures (such as earnings per share). Martin and Petty (2000: 36 – 40) present five specific problems that is suggested to undermine the ability of accounting earnings to relate managerial performance to shareholder value:

- *accounting earnings do not equal cash flow.* According to Copeland *et al.* (1994: 55) it is cash flow, not accounting earnings, that drives share price performance. Cash flow analysis takes a long term, future-oriented perspective whereas accounting earnings are based on single-period historical performance. As valuation is based on shareholder expectations of the future, cash flow measures are more appropriate;
- *accounting numbers do not reflect risk.* Reported accounting earnings do not reflect the risk element involved in the strategies that instigated those earnings. The riskiness of a company's operations is immensely important to the value of the company's equity, thus such an omission is critical;
- *accounting numbers do not include the opportunity cost of capital.* Traditional earnings measures do not incorporate the opportunity cost associated with the shareholders' investment in the company. Yet the shareholders could earn some rate of return on the capital if employed elsewhere which means that reported earnings overstate the value created for shareholders during the period;
- *accounting principles vary from company to company.* Considerable variation exists in accounting policies of companies. Typical examples include the way the company accounts for inventories or how the company accounts for R&D expenditures, these practices affect the company's reported earnings; and
- *accounting numbers do not reflect the time value of money.* The intrinsic value of a company is calculated using projected future cash flows that are discounted at rate appropriately encapsulating the risk element involved in projections. Accounting earnings do provide for either risk or the time element of investments and therefore do not provide reliable signals to a manager seeking to maximise shareholder value;

For these reasons, maximising earnings and earnings growth does not necessarily maximise shareholder value. Yet shareholder value as represented by the stock market needs to be tied to some measure of intrinsic value. VBM models seek to redress such discrepancy by adopting performance metrics that are based on discounted cash flow (Copeland *et al.*, 1994: 56). In a sequence of related

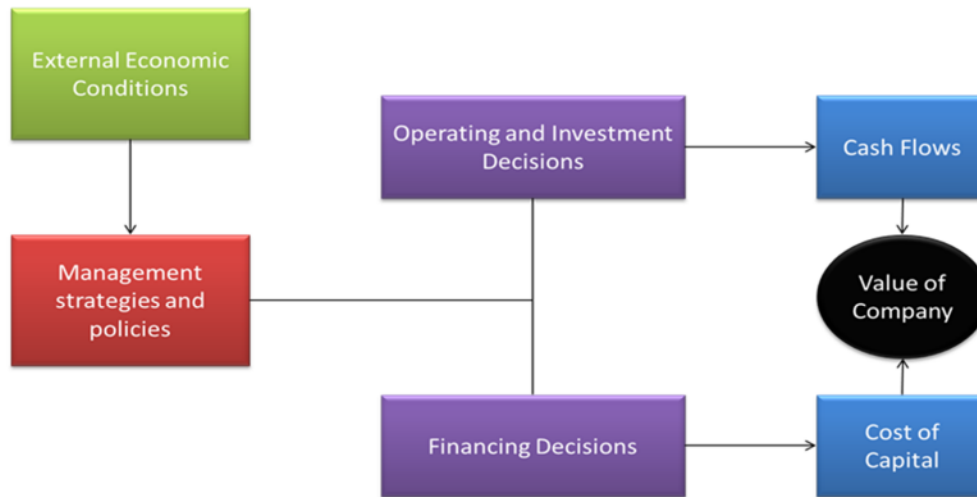
articles Ryan and Trahan (1999; 2007) identified a variety of management systems used by public companies all based on VBM metrics. The authors identify four variations of VBM metrics that can be summarised as follows (Ryan & Trahan, 2007):

- *Discounted Cash Flow (DCF)*. DCF methods (such as shareholder value analysis) express value as the expected future cash flows discounted to the present time at the appropriate cost of capital. DCF will be discussed in detail in the next section;
- *Cash Flow Return on Investment (CFROI)*. CFROI expresses an estimate of a company's single-period inflation-adjusted cash flow as a percentage of total investment;
- *Return on Invested Capital (ROIC)*. ROIC is defined as the ratio of net operating profits less adjusted taxes (NOPLAT) to invested capital;
- *Residual Income (RI)*. RI measures the excess earnings over a capital charge based on investment opportunities of similar risk. Stern Stewart & Co. popularised RI under the market name of Economic Value Added®.

The purpose behind the use of value based metrics is to improve upon the traditional performance measures. Each of the metrics described above provides unique advantages over the traditional metrics such as earnings per share and return on equity (Obrycki and Resendes, 2000: 177). Fabozzi and Grant (2000: 11) illustrate the relatedness amongst the above-mentioned value based measures. All measures attempt to assess the shareholder value added by a business unit or initiative by discounting the forecasted cash flows by a risk-adjusted cost of capital (Day & Fahey, 1988) and therefore they are all consistent with discounted cash flow valuation (Ryan & Trahan, 2007).

3.2.2.1 Discounted Cash Flow

All methods of VBM share a common theoretical heritage and are unwaveringly built on the premise that the value of any company, or its individual strategies or investments, is equal to the present value of projected future free cash flows that the entity is expected to generate (Martin & Petty, 2000: 49). Free cash flow can be defined as the excess cash generated by operations and investments, distributable to shareholders after all other expenses and obligations have been met (Gitman, 2009: 352). Figure 3.1 presents a framework for depicting the main factors influencing the free cash flow available and subsequently, the value created.

FIGURE 3.1 Factors influencing value

Source: Pike and Neale (1999: 21)

Figure 3.1 illustrates how the company can create value by developing strategies to address opportunities presented in the economy and to create a competitive advantage. Decisions affect the operating cash inflows as well as the financing cash outflows. Ultimately the value created by management is dependent on the success of the strategies they undertake or put differently, the amount of free cash flow they generate (Pike & Neale, 1999: 21). *Capital budgeting* refers to the decision process managers use to identify those projects or strategies that could enhance company value; for this reason Brigham and Daves (2004: 375) declared it to be perhaps the most important task faced by management.

The net result of the discounted cash inflows and accompanying costs are known as the net present value (NPV) of the investment. The NPV of alternative investment are determined based on only the incremental cash flows expected to come about from the investment. Typically, the cash flow patterns of any project has three components; the initial investment, the operational cash flows during the economic life of the project and the terminal or continuing value of the project which represents a value the investment is projected to create after the planning horizon involved in the analysis (Gitman, 2009: 384).

Determining the terminal value of a strategy has been notably difficult due to the increased uncertainty involved further into the future. Pike and Neale (1999: 113) remark that when strategies are compared,

the terminal value is of lesser importance as the objective is simply to find the superior value-creating strategy over the planning horizon.

Estimating the NPV of a capital investment involves forecasting future incremental cash flows expected and discounting these cash flows at the investors' required rate of return, the sum of which results in the project's NPV (Brigham & Daves, 2004: 378). The rate of return required by investors should represent the element of return they expect accompanied by the respective risk involved.

Shareholder value is maximised by accepting all projects or strategies that offer positive net present values when discounted at the required rate of return (Pike & Neale, 1999: 76). However, realistically companies do not have infinite resources and operate under capital rationing. Accordingly, if mutually exclusive projects present positive values, the alternative with highest value should be accepted (Gitman, 2009: 382).

3.2.3 A Value Culture

Koller (1994) accentuates that VBM provides decision-makers at all levels of management with accurate information and incentives to make value-creating decisions. He describes VBM as a marriage between a value creation mindset and the management processes and systems that are necessary to translate that mindset into action. Doyle (2000a) conceptualises the interaction as three elements, namely beliefs, principles and processes:

- *beliefs* are the wholehearted acceptance by management that maximising shareholder value is the governing objective of the company and that such an objective can be planned for in a certain way;
- *principles* are the strategic foundations upon which value is determined. Planning, target setting, performance measurement, and incentive systems are working effectively when the communication that surrounds them is tightly linked to value creation; and
- *processes* are the activities necessary to implement the beliefs and principles. The principles concern how strategies should be developed, resources allocated and performance evaluated.

Copeland *et al.* (1994: 96) suggest that the “right” organisation of the company is critical to ensuring value creation as it ensures that the aspirations and strategy are translated into disciplined execution.

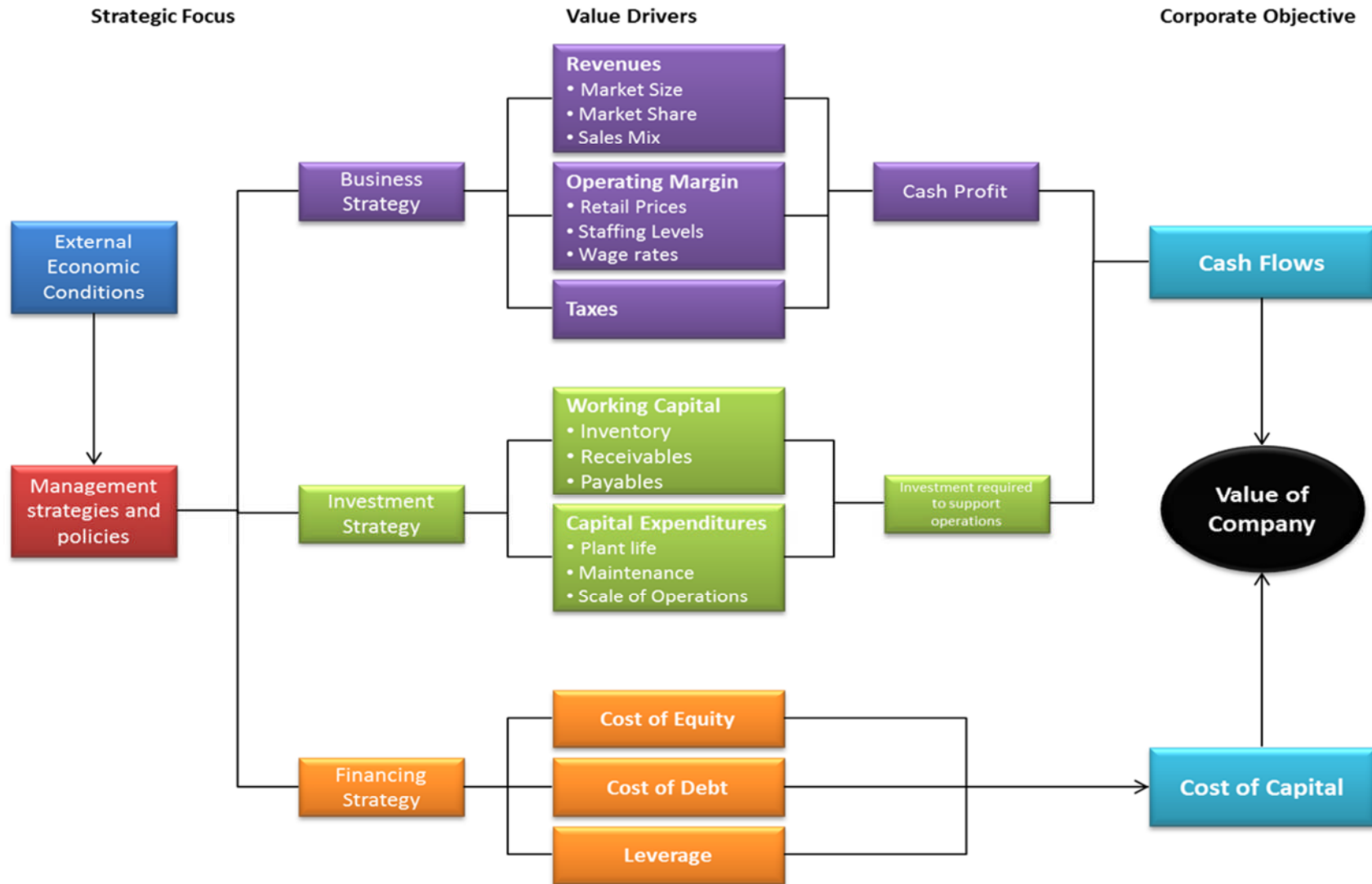
The authors remark that there is no right approach to organisation, only that the chosen structure should enable performance accountability of clearly defined units. VBM has been described as the marriage between strategic thinking and modern financial theory (Day, 1990: 333).

Accordingly, top management has to understand which elements in operations and which investment decisions drive value creation (Copeland *et al.*, 1994: 96). The critical factors that affect a company's value are called *value drivers*. Martin and Petty (2000: 68) stress the importance of value drivers, claiming that management's understanding of the significance of value drivers is of paramount importance in the endeavour to create shareholder value.

There is little debate that shareholder value analysis assists management in connecting decisions and strategies to value creation (Pike & Neale, 1999: 112). Figure 3.2 is an adapted version of Figure 3.1 to expand managerial decision-making to include value drivers. The figure depicts the process through which managers can associate different layers of decision-making to value creation. As indicated in the figure the value drivers are sets of performance measures impacting on the success of managerial decisions (Copeland *et al.*, 1994: 97). Typically, the value of a company's operations becomes a function of four fundamental value drivers (Brigham & Daves, 2004: 346):

- growth in sales or revenues, if the growth can be achieved profitably;
- an increase in operating profitability, by amplifying the relative margin received from business units;
- a decrease in capital requirements; and
- a decrease in the weighted average cost of capital due to a decrease in risk or an increased expected return.

FIGURE 3.2 Value Drivers



Adapted from: Pike and Neale (1999: 21; 112) and Martin and Petty (2000; 69)

Martin and Petty (2000: 70) commend such a framework (Figure 3.1) by stating that it provides management with an approach to managing for value. The variables depicted in the framework are concrete and directly manageable, which in turn enables strategic planning for VBM (Kim, 2004). But only if management can clarify the central relations between decisions made and the consequential value created, can value truly be managed for. In a competitive market where companies compete for available investment opportunities, economics assume that there should be no value-enhancing projects (Peterson, 2000: 68). Therefore, Peterson (2000: 68) assumes that the true source of value-enhancing projects is a company's competitive advantage.

Ultimately, no method of resource allocation can distract managers from the fact that value is created by actions that develop competitive advantage in the markets the company elects to serve (Day and Fahey, 1988). A study by Gale and Swire (1988, in Pike & Neale, 1999: 20) tracked the impact of business strategies on financial performance of over 600 business units. It concluded that market share, quality, capacity utilisation and capital investment strategies had the greatest impact on shareholder value. Therefore, financial indicators should be used to set targets and track performance, but financial indicators needs to be supplemented with strategic and operating value drivers that provide insights about performance (Copeland *et al.*, 1994: 71).

As noted in Chapter 1, marketers challenge lies in articulating the impact of marketing strategy on shareholder value created (Doyle, 2000b; Ambler, 2003). To this end, in this study the relationship between marketing expenditures and sales was explored in order to better understand the impact of marketing investment as a value driver. Finally, the study serves as a first step toward the development of aggregate-level models that link marketing tactics to financial impact.

3.2.4 The Value of Intangible Assets

Sustainability is fundamental to competitive advantage (Ward, 2004: 17). Therefore, any sustainable competitive advantage should act as an effective entry barrier to competing companies attempting to enter a market the company is operative in.

According to Ambler (2002), modern companies are increasingly relying on intangible assets as a source for competitive advantage. Brands, intellectual property, systems and data, human capital and market relationships are becoming ever more important value drivers. For this reason, it is imperative that management devote considerable attention to the development of these assets,

furthermore, the inherent potential of intangible assets needs to be communicated to financiers to assure proper investment in them.

Scholich, Mackenstedt and Greinert (2004: 492) note that the valuation of intangible assets has been regarded with scepticism for two reasons. Firstly, intangible assets are frequently so intimately entangled with each other and tangible assets that it is difficult to isolate the asset in order to value it. Secondly, intangible assets are regarded as comparatively uncertain assets. Although the problems and complications have been recognised the appropriate valuation technique for intangible assets remains uncertain. However, Scholich *et al.* (2004: 496) describes three approaches to value intangible assets, namely:

- ***The Market Approach***

The value of an intangible asset is derived from comparable market prices of similar assets. The value of the subject asset is estimated by making adjustments to the comparable prices in order to provide for individual facts and circumstance. Yet, however plausible such an approach sounds in theory in practice two complications arise. Firstly, comparability and secondly, the availability of transaction information.

- ***The Cost Approach***

The value of the intangible assets represents the potential cost of reproducing or replacing the asset. Due to the subjectivity and uncertainty characteristic to intangible assets, the cost approach is of little relevance in practice. For instance, the value of a brand is not likely to be equal to the cost of an advertising campaign.

- ***The Income Approach***

The income approach is becoming increasingly important when attempting to value an intangible asset. According to the income approach, the value of an intangible asset is estimated by calculating the present value of the expected future benefit to be derived from the asset. Thus, the income approach resembles the discounted cash flow procedure discussed earlier to evaluate investments. Accordingly, the manager needs to perform two main tasks:

- identify and project the future expected cash inflows attributable to the asset over its estimated remaining useful life; and
- determine an appropriate discount rate.

As a result, the principal shortcoming of the income approach is the identification of the profit contributions attributable to the intangible asset in question. Cash flow forecasts are subjective and the outcome of the estimate is only as good as the input assumptions (Day & Fahey, 1988).

No broad measure of agreement has yet been reached regarding the valuation of intangible assets (Pike & Neale, 1999: 99). Yet in light of the significance of intangible assets when valuing a company, the importance of measuring and managing such assets are undisputed (Scholich *et al.*, 2004: 492). Srivastava *et al.* (1998) claim that the need to value intangible assets and the difficulty of doing so is clearly reflected by the plethora of proposed approaches in recent years.

Brady and Davis (1993) observe that companies have improved efficiency and “trimmed organisational fat” in all major areas and yet have been unable to enforce the effective management of intangible assets. As the essence of VBM is that managers should be evaluated on their ability to make strategic investments promising to add value (Day & Fahey, 1988), the inability to measure the value of intangible assets undermines the ability to manage intangible assets for value creation.

3.3 VALUE CREATING MARKETING

“The search for shareholder value is changing the way marketing decisions are made.”

Day and Fahey (1988)

In 1988 Day and Fahey recognised the impact shareholder value analysis would have on marketing decision-making. Yet recent marketing literature repeatedly cry out for financial accountability as marketers are unable to answer to the fiduciary duty of maximising shareholders’ value (Rao & Bharadwaj, 2008; Lukas, Whitwell & Doyle, 2005; Davis, 2007; Ambler, 2003; Rust *et al.*, 2004; Morgan, *et al.*, 2002; Doyle, 2000a). Some have raised serious concerns about the strategic role of marketing within a company, going as far as to propose marketing is experiencing a “crises” (Webster, 2002; Lukas *et al.*, 2005). Rust *et al.* (2004) argue that over the past two decades, the lack of accountability has undermined marketers’ credibility and threatened the position or even existence of the marketing function.

Doyle (2000a) condemns marketing's lack of influence to the inability of demonstrating how activities influence shareholder value - an incapacity he feels is largely attributable to lack of a clear objective. The author notes that marketers generally do not know how to support their initiatives in financial terms or make the mistake of believing that market share or customer satisfaction are ends in themselves. Even though these metrics provide meaningful outcomes, marketing accountability occurs only if these outcomes also ultimately serve to create shareholder value (Rao & Bharadwaj, 2008). Thus the failure to understand the contribution of marketing activities to shareholder value continues to undermine the role of marketing thought in corporate strategy (Srivastava *et al.*, 1998).

3.3.1 Effective Marketing

Webster (1992) posits that the role of marketing in a company is becoming focused on the strategy implementation evaluating how expenditures influence marketplace performance. Research indicated that marketing performance tends to meet objectives (Ambler, 2003: 29). Accordingly, a number of marketers have recognised the need for more effective feedback systems (Wilson & Gilligan, 2005: 33). Bonoma and Clark (1988: 3) note that marketing literature focuses almost exclusively on the *efficiency* of marketing initiatives with curiously little work concerning the *effectiveness* of such strategies. Crudely, the essential difference between the two concepts is captured by the notion that “efficiency is doing things right, effectiveness is doing the right things” (Ward, 2008: 7).

The distinction arose in an effort to distinguish means-related efforts from ends-related efforts (Bonoma & Clark, 1988: 3); the necessity obvious from the previous notion that marketers believe non-financial metrics are sufficient ends in themselves. Mistakenly, some assume marketers' preoccupation with efficiency metrics (market share or customer satisfaction) suggests that such intermediate metrics are “self-evident” measures of effectiveness (Wilson & Gilligan, 2005: 554). According to Wilson & Gilligan (2005: 554), the intensive coverage of efficiency metrics implies the effectiveness thereof.

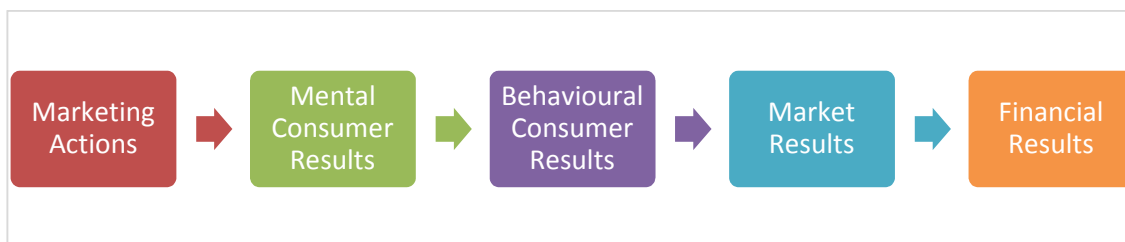
Doyle (2000a) asserts that the notion of *maximising* customer satisfaction is “absurd”. Lowering prices and increasing service levels can always increase customer satisfaction further, but is not necessarily a profitable endeavour. An overemphasis on market share is also nonsensical as the lowering of prices could increase market share but damage business profitability and therefore is not a sustainable strategy over the long term (Webster, 2002).

These shortcomings have led many to adopt performance management systems, also known as dashboards or scorecards to monitor a variety of important metrics managers have identified in pursuit of their objectives (Ambler, 2003: 57; Farris, *et al.*, 2006: 3; Clark, Abela & Ambler, 2006; Ambler & Roberts, 2008). These systems or collective metrics efforts attempt to address three complications Rust *et al.* (2004) identify in pursuit of measuring marketing productivity:

- relating marketing to long-term effects;
- separating individual marketing activities from other activities; and
- the use of purely financial metrics has proved inadequate for justifying marketing investments, nonfinancial metrics are also needed.

The systems are typically construed to trace the ability of marketing to create shareholder value through a chain of effects. Several frameworks have been proposed to this end (Keller, 2008: 318; Rust *et al.* 2004; Grønholdt & Martensen, 2006) which all adopt the following logical order:

FIGURE 3.3 The Marketing Chain of Effects



Adapted from: Keller, 2008: 318; Rust *et al.* 2004; Grønholdt & Martensen, 2006

Therefore, the marketing chain of effects is based on a holistic, integrated approach that illustrates how marketing actions create shareholder value. In chapter one Keller's (2007) notation of the erroneous assumption displayed by marketers (Wilson & Gilligan, 2005: 554) was cited. Marketers believe that if they achieve success in the initial stages of a marketing process, such as the one depicted in Figure 3.3, the financial benefits (latter stages) will flow automatically.

Yet Ambler (2003: 29) found that more often than not, performance is a function of what is planned and measured. For this reason, Ambler and Kokkinaki (2002: 225) contend that successful marketing requires monitoring the effectiveness of marketing activities and that better measurement will result in better marketing. Hence, if the financial impact of how market results convey to shareholder value-added is not measured, it is likely to be arbitrary and as a result top management will continue to undermine marketing efforts (Moorman & Rust, 1999). Finally, marketing actions

should aim to create measurable marketing assets which in turn, should contribute to shareholder value.

3.3.2 Marketing Assets

As noted earlier, in order for a company to create shareholder value it is necessary to develop a sustainable competitive advantage. The principal marketing objective is attempting to achieve a sustainable competitive advantage via the marketing concept (Day & Fahey, 1988). Ward (2004: 18) notes that intangible marketing assets create entry barriers that serve as important sources of shareholder value and should therefore be managed as key business assets. Yet in order to leverage intangible assets to enhance corporate performance marketing managers are required to move beyond the traditional inputs and outputs of marketing analysis and incorporate an understanding of the financial consequences of marketing decisions, including their impact on cash flow (Rust *et al.*, 2004).

Srivastava *et al.* (1998) posit that marketers need to develop a framework from which they can manage the relationship between marketing and finance systematically. The authors note:

“...marketers are adopting the perspective that customers and channels are not simply the objects of marketing’s actions; they are assets that must be cultivated and leveraged. These assets can be conceptualised as *market-based assets*, or assets that arise from the commingling of the company with entities in its external environment.”

If marketing initiatives are to be treated as assets, marketing managers need to justify their initiatives in the same way that financial managers make capital appropriation requests (Rao & Bharadwaj, 2008). Doyle (2000a) declares that the significance of shareholder value analysis is that it provides a highly effective vehicle for demonstrating the contribution of marketing to the company’s financial performance. Accordingly he derives a new definition of marketing:

“Marketing is the management process that seeks to maximise returns to shareholders by developing relationships with valued customers and creating a competitive advantage.”

Marketing assets are the link between marketing activity and value creation. Doyle (2000b) identifies four types of marketing assets:

- *Marketing knowledge*. Superior marketing knowledge provides a core competency consisting of skills, systems and information that conveys a competitive advantage to the company in terms of identifying market opportunities and developing strategies;
- *brands*. Successful brand names convey powerful images to customers that make them more desirable than competitive products. Owners of strong brands possess assets that attract customers, often earn premium prices and can be enduring generators of cash;
- *customer loyalty*. If a company has built a satisfied loyal customer base it will be more profitable and should grow faster than other companies. Loyal customers buy more of the company's products, are cheaper to serve, are less sensitive to price and bring in new customers; and
- *strategic relationships*. A company's network of relationships with channel partners can provide incremental sales, access to new markets and allow the company to leverage its competencies in additional areas.

Therefore, marketing assets can be described as customer-focused measures of value of the company and its offerings that may enhance the company's long-term value (Rust *et al.*, 2004). Srivastava *et al.* (1998) propose that market-based assets are more likely to serve as a basis of long-term, sustained customer value. In turn, the effectiveness of the marketing function will influence the aggregate level of marketing assets created. Ultimately, market based intangible assets provide security for future profits (Ambler, 2003: 19). Rust *et al.* (2004) identify two manifestations of marketing assets assessment that have received considerable attention in marketing literature: *brand equity* and *customer equity*.

Brand equity can be defined as the added value endowed to products and services by the brand (Kotler & Keller, 2006: 276). The variation in perceptions of what brand equity is has hampered the understanding of how it affects company value (Yoo & Donthu, 2001). Ultimately, the marketing function serves to manage profitable customer relationships (Kotler & Armstrong, 2008: 4). Thus, brand equity is a function of the effectiveness with which the marketing function successfully added value to the product or service.

Customer equity is defined as the sum of the lifetime values (discounted profit stream) of a company's customer base (Rust *et al.*, 2004). According to this school of thought, market value is created through understanding the customer and creating profitable relationships through carefully crafting the product or service offering. In other words, if the eventual cash inflow does not exceed the outflow necessary to stimulate customer relationships marketing managers have failed to create value.

The superfluous debate regarding the appropriate approach to measure the marketing asset is not within the scope of this study. Keller (2008: 84-86) contends that the two concepts go "hand-in-hand":

"In practice, customer equity and brand equity are complementary notions in that they tend to emphasize different considerations. Brand equity tends to put more emphasis on the "front end" of marketing programs and intangible value potentially created by the marketing programs; customer equity tends to put more emphasis on the "back end" of marketing programs and the realised value of marketing activities in terms of revenue."

For the purposes of this study, Ambler's (2003: 40 – 45) contention will be adopted. Resonating Keller's view the author depicts brand equity as an all-encompassing term of the added value to a product or service that promises future cash inflows. He notes that the term 'brand equity' is by far the most frequently used to describe market-based assets; therefore, it is used in that respect for the remainder of the study.

3.3.3 Marketing's Contribution

It has been repeatedly contended that marketing activity (i.e. actions aimed at developing the strategic marketing asset) should be financially evaluated and controlled as strategic investment decisions (Srivastava *et al.*, 1998; Rust *et al.*, 2004). Capital budgeting can be defined as the process of evaluating and selecting long-term investments that are consistent with the company's goal of maximising shareholder value (Gitman, 2009: 380). As described in Section 3.3.2 these investments are compared based on the present value of expected future cash flows discounted at an appropriate rate. The financial accounting standard of expensing all marketing expenditure in the

year it is incurred is perhaps why many finance managers still refrain from considering marketing expenditure as an investment.

Doyle (2000a) argues that because marketing activity is treated as costs rather than investments that are depreciated, it results in insufficient spending on developing brands, retaining customers and creating channel partnerships. Srivastava *et al.* (1999) assert that marketing assets can be utilised in the same manner as tangible balance-sheet assets. Therefore, the present value of a brand's future cash flow is a function of four factors: the level of its cash flow, the speed at which it comes in, the duration it lasts, and the riskiness of the expected future returns (Doyle, 2001). But the creation of any valuable long-term asset requires the investment of substantial financial support during their developing periods. For this reason, Ward (2004: 20 – 21) differentiates between two types of marketing expenditures: *development* expenditure and *maintenance* marketing expenditure:

- *development expenditure* creates the attributes of the asset, such as brand awareness, distribution access or customer loyalty, which is expected to generate brand equity and in turn, positive cash inflows in the future; and
- *maintenance expenditure* on the other hand refers to costs incurred when the asset has been developed to its full potential and needs to be maintained in order for the value created not to deteriorate. For instance, even established brands will suffer a loss of equity if awareness levels are not maintained.

In summary, development expenditure is designed to increase the long-term value of the marketing asset by improving attributes, while maintenance expenditure intends to preserve the attributes created at their existing level. The distinction is based on the notion that the timing of returns from each of the types of expenditure is very different (Ward, 2004: 21). Ambler (2008) reiterates this outlook by the notion that marketing activity stimulates value both by the immediate cash inflow incurred as well as the added value to brand equity. Ambler (2003: 46) contends that past marketing efforts create a momentum of effects into the future.

Figure 3.3 depicts the marketing chain of effects. Ambler (2006) describes marketing as a two-stage process: building brand equity, and then using brand equity to drive cash flow. As a result, if performance is to be benchmarked and monitored, both stages need to be measured. The value of a company is largely dependent on the growth prospects and perceived sustainability of profits. Rust

et al. (2004) state that in order to monitor the contribution of marketing it is required to track off-balance-sheet metrics and relate such metrics to current and expected performance.

Although such a two stage model is theoretically sound, marketers' continual inability to formally trace the effects of a marketing action to company value undermines the latter stage and in turn, marketing (Rao & Bharadwaj, 2008; Moorman & Rust, 1999). For that reason, this study will focus exclusively on examining the relationship between marketing expenditures and sales. For the purposes of this study, brand sales are assumed to encompass cash inflow whereas marketing expenditure items are assumed to equate cash outflow.

3.3.4 Shareholder Value Analysis in Marketing

Lukas *et al.* (2005) contend that marketing's lack of strategic influence will persist until marketing managers develop a better understanding of value based management as a foundation for meaningful performance dialogue with top management. Many have turned to shareholder value analysis as a resort for communicating the value marketing is able to contribute (Srivastava, *et al.*, 1998; Doyle, 2000a; 2000b; 2001; Lukas, *et al.* 2005; Day & Fahey, 1988). Specifically, Doyle (2000a) posits that;

“Shareholder value analysis allows marketing professionals to communicate the expected results of their marketing strategies in terms of that make sense for top management. In particular, it allows them to quantify how investments in marketing assets may affect the share price. Measures such as sales, market share or consumer attitudes have little value as criteria for judging marketing strategies since they have no necessary correlation with how investors value the business.”

Therefore, not only will the adoption of shareholder value analysis increase the credibility of marketing initiatives, it will provide clarity in goal setting and performance management and provide marketing managers with bargaining power in budget debates. Most importantly, shareholder value adopts a long term perspective on performance thus alleviating pressure on marketing managers for quarterly results (Ward, 2004: 23).

In fact, Doyle (2000b) declares that marketing can be at the centre of value based management due to the customer-focused outlook of strategy formulation. Allegedly marketing can enhance the value drivers in a company in the following ways (Srivastava *et al.*, 1998; Doyle, 2001):

- ***An increase in the level of cash flow***

Cash flow is the most important determinant of shareholder value. Four factors determine a brand's cash flow: its price, growth, costs, and investment. Brand equity, in the form of premiums can have a major impact on its value. Successful brands should also grow faster and have longer life cycles, again increasing both the level and speed of cash inflow. Leading brands develop scale economies and in turn, increase operating efficiency which increases the level of cash flow. Finally, strong brands develop leverage possibilities as marketing efficiency increases, enhancing operating efficiency.

- ***Accelerating cash flow***

An acceleration of cash flow reduces the time and risk involved with the investment for investors, thus their cost of capital will decrease resulting in a larger margin for profitability. There is evidence that consumers respond more quickly to marketing campaigns and new product introductions when they are familiar with the brand name and have positive attitudes towards it.

- ***A reduction of risk associated with cash flows***

Strong brands should offer a lowered perceived risk as they enjoy customer loyalty and reduced vulnerability to competition. Eliminating the vulnerability and volatility of expected future cash flows will decrease investors' risk perception, and in turn, their cost of capital.

As a result, Doyle (2000a) declares that shareholder value creation becomes "tautological" without a creative marketing strategy. Marketing managers identify and develop the strategic value drivers that accelerate growth, increase profit margins and lever investments. He concludes that without marketing, shareholder value analysis is "just another accounting tool that sacrifices long-term growth for short-term profits". Therefore, the role of the marketing function within a VBM company should be to connect the customer with firstly, the product or service delivery and secondly, financial accountability (Moorman & Rust, 1999).

3.3.4.1 Limitations and Considerations

As mentioned earlier, Ambler (2008) calls for multi-dimensional measures to evaluate the multiple dimensions of marketing. After all, the numbers-analysis is only as good as the underlying assumptions about the risks and rewards of the strategy (Day, 1990: 349). Ambler (2008) shares the following insights regarding the use of discounted cash flow techniques to evaluate strategy. He commends DCF as a useful tool to resource allocation. Using DCF, different strategies can be compared based on their potential to increase shareholder value, contextual and managerial factors can be standardised and thus eliminated to a certain extent. On the other hand, he notes five difficulties with using DCF techniques to evaluate marketing performance:

- the lack of independence between the forecasters and the managers whose performance is being judged;
- the lack of certainty that forecasts are correct;
- confounding forecasting error with performance variance;
- reconciling multiple forecasts; and
- taking credit today for marketing activities in the future.

Ambler (2003: 80) clarifies that shareholder value analysis is a valuable technique for identifying the assets and costs that can be improved upon. Accordingly, it is a useful internal discipline; however, even though it incorporates market data, it does not explain market phenomena or the sources of cash flow and how they can be increased. According to Day (1990: 349) the solution is to ensure the forecasts of cash flow realistically reflect the performance of the strategy alternative. He claims that the only way to do this is to involve knowledgeable people in the process (Day, 1990: 363).

Doyle (2000a) insists that the era of financial accountability is a reality facing marketers; if they do not adopt financial analysis to evaluate their strategies, they will continue to be undermined. Therefore, marketers would greatly benefit from developing the skills needed to incorporate financial analysis and as a result, still maintain a level of control and insight to how marketing performance should be evaluated. Finally, although shareholder value analysis is no panacea, it will increase the credibility of marketing strategies in boardrooms (Doyle, 2000a; Day & Fahey, 1988).

Rappaport (1986 in Terblanche, Gerber & Erasmus, 2008) notes the importance of establishing the link between marketing actions and cash flows because cash flows that are shared by and divided

amongst investors ultimately determine the value created for shareholders. Yet Terblanche *et al.* (2008) explain that the missing link appears to be a means by which the effects of a marketing tactic impacts value created for the company. Day and Lehmann (1997) argue that marketing enhances a company's value when it succeeds to link customers to products, service delivery and financial results. Drucker (1954) reiterates this observation by stating "There is only one valid definition of business purpose: to create a customer."

As a first step toward the goal of linking marketing to the bottom line it is key to understand the nature of the relationship between marketing expenditures in terms of the 4Ps components of marketing and sales, as sales are ultimately the medium through which marketing drives company value.

3.4 SUMMARY

Value based management is a management culture that places shareholder value creation at the centre of business strategy. By serving the principal purpose of maximizing shareholder value a company is indirectly obligated to serve other stakeholders optimally over the long run. VBM principles are based on discounted cash flow techniques to evaluate different strategies and make decisions accordingly. Therefore, DCF techniques - such as shareholder value analysis - assist managers in making value creating decisions, ensuring that strategies are aligned with the prevailing objective of maximising shareholder value.

The inability of marketing managers to provide financial accountability has been criticised extensively. Marketers need to adopt value based techniques to demonstrate the contribution of marketing activity to shareholders. Shareholder value analysis provides marketers with the opportunity to do so. The value orientation can benefit marketers by clarifying and aligning their objectives with corporate performance, enhancing the credibility of their strategic decisions and providing them the freedom to adopt long-term performance outlooks.

Finally, value based management is a fundamental principle, assisting decision-making and resource allocation. It does not replace strategic thinking and sound judgment; management should not be distracted from the fact that the ultimate driver of shareholder value is a sustainable competitive advantage. However, the issue is that VBM targets and performance measures should be supplemented with strategic and operating performance indicators. Currently, marketers fail to

provide the link between traditional measures and financial accountability. For this reason, the purpose of this study is to investigate how marketing activities relate to the bottom line. The relationship between marketing expenditures (cash outflow) and sales (cash inflow) will take the first step in understanding the financial impact that marketing activities make in a company.

CHAPTER 4

RESEARCH METHOD

4.1 INTRODUCTION

In the preceding chapters the importance of financial accountability for marketing initiatives was discussed. The objective of this study was to establish whether there is a relationship between the expenditures of different marketing components (4Ps) and sales. The examination of the variance in sales explained through marketing expenditures, in turn could assist with the verification of the role that marketing plays in shareholder value creation through its contribution to the bottom line. This chapter provides a description of the research method applied to investigate the nature of the relationship between various marketing expenditures and sales (cash inflow).

The chapter is divided into two broad sections; it commences by providing an overview of marketing research and establishing the context for the rest of the chapter which deals with the method as applied in this study. Finally, the chapter concludes with a summary on the research method implemented.

4.2 AN OVERVIEW OF MARKETING RESEARCH

Zikmund (1990: 4) defines marketing research as the systematic and objective process of generating information to aid in making marketing decisions. The task of marketing research is to help specify and supply accurate information to reduce the uncertainty in decision making. To this end, basic research expands the boundaries of knowledge itself. Basic research describes research undertaken to verify the acceptability of a given theory.

Basic research is performed via the application of scientific method. Scientific method can be broadly defined as the techniques and procedures used to recognise and understand marketing phenomena (Zikmund, 1990: 6). In scientific method, empirical evidence is analysed and interpreted to confirm or disprove prior conceptions. In basic research, testing these prior

conceptions or hypotheses and then making inferences and conclusions about the phenomena lead to the establishment of general laws about the phenomena.

The managerial value of marketing research comes from its ability to reduce uncertainty. It generates information that facilitates decision making about marketing strategies and tactics. In this study basic marketing research is conducted in order to understand the relationship between variables that will reduce uncertainty around the impact marketing has on the bottom line. Marketing research can be classified on the basis of either technique or purpose. Classifying research by its purpose shows how the nature of a decision situation influences the research method. Zikmund and Babin (2007: 51) describe three types of marketing research:

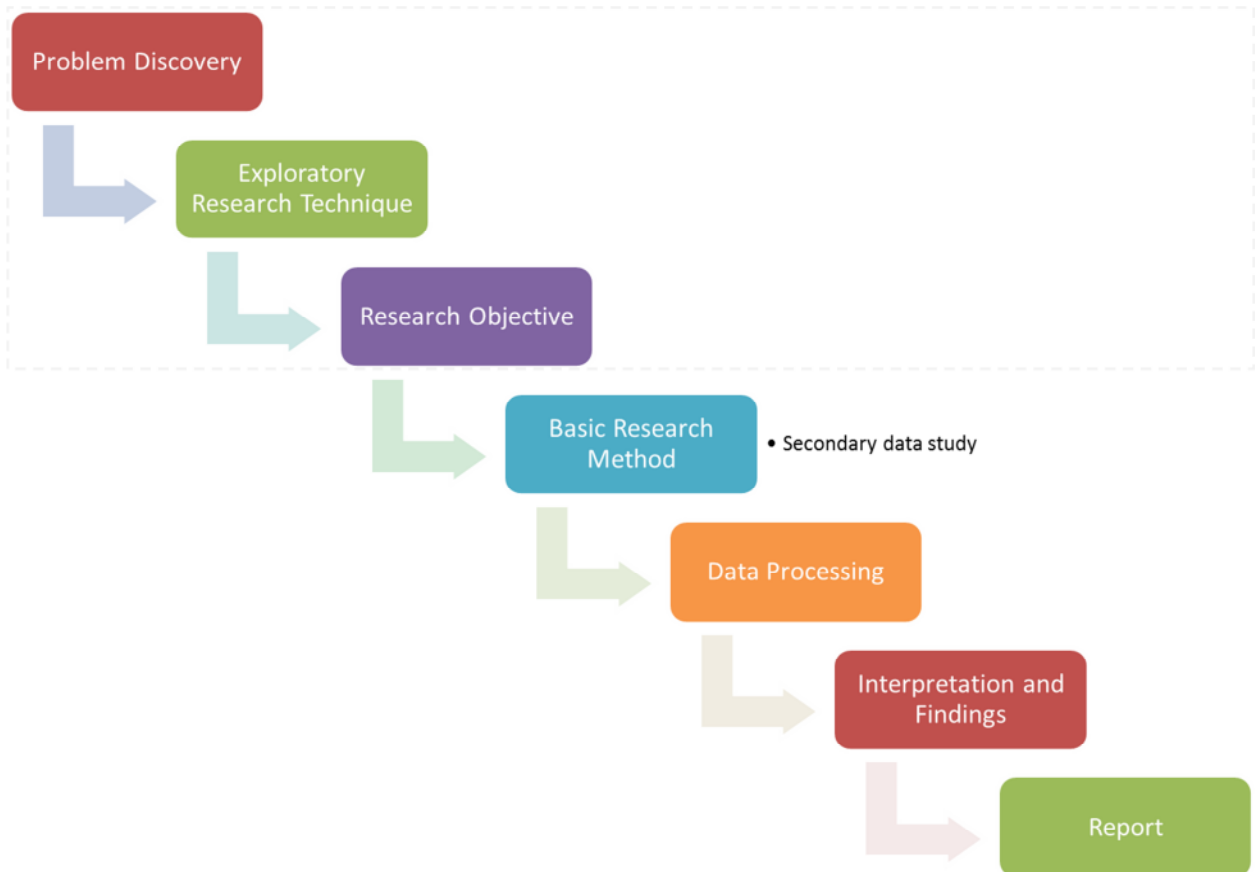
- *Exploratory research* is conducted to clarify ambiguous situations or discover ideas that may be potential business opportunities. Exploratory research is not intended to provide conclusive evidence from which to determine a particular course of action.
- *Descriptive research*, the major purpose of descriptive research is to describe the characteristics of matter, whether it be objects, data, people, groups, organisations, or environments. In essence, descriptive research addresses the ‘*who, what, when, where and how*’ questions. Contrary to exploratory research, descriptive research is generally conducted with a considerable understanding of the subject matter.
- *Causal Research* seeks to identify cause-and-effect relationships. This type of research allows for causal inferences to be made and the researcher typically has a good understanding of the phenomena being investigated.

In this study, a descriptive research approach was executed in order to better understand the characteristics of sales variance and the impact of marketing expenditures on sales over time. An understanding of the relationship between marketing expenditures and sales serves as a first step towards verifying the role marketing plays in shareholder value creation.

4.4.2 The Research Process

The marketing research process is characterised by a series of highly interrelated activities. Figure 4.2.1 describes the nature of the research process as implemented in this study.

FIGURE 4.2.1 The Research Process



Adapted from Zikmund (1990: 46)

The diagram depicts the research process as adopted in the context of this study. The first three steps in the process (encircled by the dashed-line box) describe the problem definition phase. Initially, the study commenced with exploratory research of the appropriate theory in order to define the research problem and objective more clearly. The application of the research process for the purposes of this study will be discussed in the ensuing sections.

4.3 PROBLEM STATEMENT AND RESEARCH OBJECTIVE

In Chapter 2 and 3, an overview is provided of the commendable work that has been done investigating the plausibility of the shareholder value framework (embracing the VBM concept) as a solution to linking marketing activity to the bottom line (Doyle, 2000a, 2004; Ambler, 2003; Srivastava *et al.*, 1999; Rust *et al.*, 2004). It was stated that using discounted cash flow techniques and value based management to govern decision-making could resolve the under-investment bias derived from senior management regarding marketing money spent as expenditures instead of investment (Doyle, 2000).

As a first step toward the goal of linking marketing to the bottom- line it is key to understand the nature of the relationship between marketing expenditures in terms of the 4Ps components of marketing and sales. For as Drucker (1954) notes, “There is only one valid definition of business purpose: to create a customer.” As such, sales could be described as the primary objective of business (and therefore marketing) activity.

Therefore, if the variation in sales can be attributed to the different components of the 4Ps, future returns can be forecasted more accurately, which will enable the adoption of discounted cash flow techniques to evaluate marketing investment and in turn, demystify the contribution of marketing to the bottom line.

To this end, the problem investigated in this study was to consider, through the understanding of the relationship between marketing expenditures (in terms of the 4Ps) and subsequent sales, the role marketing plays in generating sales. Initially the marketing expenditures included in this study were broken down to the 4Ps framework (see Chapter 2) to represent product, promotion, price and place (distribution) as components of marketing expenditure for each of the two products.

The 4Ps components of marketing represent the independent variables in the study for each product with sales being the dependent variable. In order to better understand resulting variance in sales as a subject of the independent variables (4Ps) the relationship between the different components of marketing expenditure and sales was investigated. Hence, the objective of this study was to:

Establish whether there is a relationship between the expenditures of different marketing components (4Ps) and sales.

The analysis was based on a regression analysis between the independent variables (marketing expenditures) and dependent variable (sales). Therefore, the proposition formulated was directed at establishing whether variance in sales can be explained by the different constructed components of marketing expenditure (4Ps). To this end, the proposition scrutinised in this study was described as:

P₁: The variation in marketing expenditures incurred by a brand in terms of the 4Ps (product, price, promotion, place) explain the variation in sales.

4.3.1 Secondary Data

Typically, a research question can be addressed by analysing either primary data collected specifically for the purposes at hand, or secondary data that has been previously assembled but can be applied in order to investigate the current problem (Zikmund & Babin, 2007: 60). In this study, secondary financial data would be best suited to the nature of the investigation and for this reason no further primary data collection was necessary. Therefore, as a further step in the research process, the secondary data obtained was scrutinised in order to determine how appropriate the data isare in order to address the research objective.

The nature of this study can be described as a secondary data study. The study can be referred to as a meta-analysis where existing financial data is used to explore the relationship between marketing expenditures and sales (Justin, Lightelm, Martins, Van Wyk, 2005). In order to better understand the relationship between marketing expenditures and sales, the research necessitated the use of authentic financial data collected over time. Financial data served as an accurate source of data as it provides a reflection of the interaction between sales and marketing expenditures over time. For this reason the financial data of two South African FMCG products over a period of four years were utilised.

As a starting point the data were inspected to ascertain whether it can be adopted for the research. Backward linkage describes a situation where later steps in the research process influence earlier stages in that same process (Zikmund & Babin, 2007: 58). Since the nature of this study

necessitated the use of real financial data collected over an extended period of time, the data were scrutinised for such characteristics.

In this study an FMCG company operating within South Africa provided the researcher with monthly accounting data for two products collected over a period of four years. Due to the sensitivity and confidentiality of the data, the specific industry or type of products were not revealed to the researcher. The only known product intrinsic was the fact that the products were in a liquid format. Although the mystery around the products in question limits the interpretation of the findings to an extent, it was not deemed necessary to identify the brand names or products for the purposes of this study since the examination of the variance in the sales data does not depend on such identification.

Instead, emphasis was placed on the accuracy of the data and appropriateness of the time frame in question. The data encapsulated the period of July 2001 until the end of June 2005, a relatively stable economic period in the South African economy (South Africa: Economic Overview, 2011). Economic stability was important as it secured a more accurate reflection of the relationship between sales and marketing expenditures as opposed to sales being the subject of economic variability. Such economic variables serve as extraneous variables that could undermine the result of the analysis between marketing expenditures and sales (Zikmund & Babin, 2007: 264).

The data provided represented the monthly financial income statement for each respective brand over the included time period. Therefore, the sales units (in litres) and sales in Rand represent the 'sales-out-of-company' to resale vendors such as self-service convenience or wholesale stores. There are three important advantages to using 'sales-out-of-company' data instead of final consumer purchase data such as Nielsen data (Losper, 2011):

- Nielsen Research (or similar data providers) covers only a selected sample of vendors and these vendors are typically skewed toward off-trade consumption outlets where they can obtain reliable scanner data. In other words, the outlets included in the Nielsen sample tend to include only stores where one would purchase household goods to consume at home. In some of the South African FMCG sectors, a large proportion of FMCG sales are dependent on on-trade purchases where one would purchase goods to consume at the same location. This inability to account for on-trade purchases is inherently overcome when considering the sales-out-of-company, as all goods sold from the producer are accounted for.

- The South African economy is also characterised by a large informal business sector. Although these vendors and informal distributors of goods are not included in a typical Nielsen sample, they do account for a percentage of sales to final consumers who would be either affected or non-affected by marketing promotional materials. Again, the sales-out-of-company figures will encapsulate all such sales as they originated from the producer.
- Finally, major vendors work closely with FMCG demand-planning teams to forecast anticipated demand of products (Levy & Weitz, 2007; 327). Due to these forecasts and demand-planning schedules, the sales into such vendors are more timeously coordinated to the time of promotional activity. Promotional activities typically have a lead time before it reaches consumers and gain momentum in terms of effectively inducing consumer purchase. Therefore, the coordination between sales-out-of-company to promotional activity is more appropriate as the sales are based on forecasted demand thereby overcoming, to an extent, the lag effect promotional material might have.

The two products selected for analysis in this study were in a liquid format and bottled in 750ml pack sizes. However, the average sales price for Brand A over the four year period was R11.42 whereas the average sales price for Brand B over the same time period was R34.21. Therefore, since both these brands operate in the same industry, Brand B appears to be the more expensive of the two and therefore the more premium product. These differences between the two products provided welcome distinction to further enable the researcher to extrapolate common findings between them.

Due to the secondary data analysis approach to the research, classic research design elements such as measurement and sampling do not apply in the context of this study (Zikmund & Babin, 2007: 60). The nature of the study dictated that the population, time frame and units of measurement were dependent on the data available (see Section 4.5). The nature of the data was inherently reliable as it covered the subject matter in sufficient detail and was consistent with the problem definition (see Section 4.3). For these reasons, the secondary data adopted in the study were considered appropriate for the purposes at hand.

Subsequently, the secondary data were utilised to conduct empirical descriptive research. The data were scrutinised and interpreted based on inherent characteristics thereof and finally, a regression analysis concluded the verification of possible relationships between the dependent (sales) and independent variables (marketing expenditures) as per the objective of the study.

The secondary data collected extended over a 48-month period from June 2001 to July 2005. When analysing time series data there are several unique components that have to be taken into account while conducting a regression analysis. In the FMCG industry, seasonal fluctuation of product sales often occur when certain products are prone to higher sales in certain months of the year (Levy & Weitz, 2007: 327). For instance, in the alcoholic beverage industry the sales of beer tends to be higher in summer months when it is hot and consumers seek a cold beverage to cool down. Contrarily, in winter months the sales of red wine (that is most often consumed at room temperature) becomes prevalent since consumers try to avoid cool beverages during this time.

Similarly, in time series data, economic indicators impact on the sales and growth of a brand in as far as economic growth (which leads to increased consumer spending), population growth and inflation all impact the sales of a brand. As such, the category growth might fluctuate with economic conditions and what appears to be brand sales growth, or decline might be attributed instead to such economic activity in which case the brand sales and representative share of the market have in reality remained constant.

In a multiple regression analysis between the independent and dependent variables (as described above) these unique characteristics of time series data are not taken into account (Makridakis, Wheelwright, & Hyndman 1998: 263). Due to the time series nature of the data used in this study and the expected trend and seasonality within the data, the regression analysis initiated scrutiny of the appropriateness of multiple regression analysis when investigating the relationship between the variables in question.

Based on the assumption that there may be trend, seasonality and autocorrelation in the data, the researcher anticipated the necessity to apply time series regression analysis instead of multiple regression analysis. Therefore the relationship between marketing expenditures and sales was further evaluated using time series regression analysis. In a time series regression analysis, provision is made for trend and seasonality through the use of dummy variables (see next section). The empirical assessment of the relationship between marketing expenditures and sales variance will in turn serve the purpose of investigating how marketing can be linked to the bottom line.

4.5 DATA PROCESSING

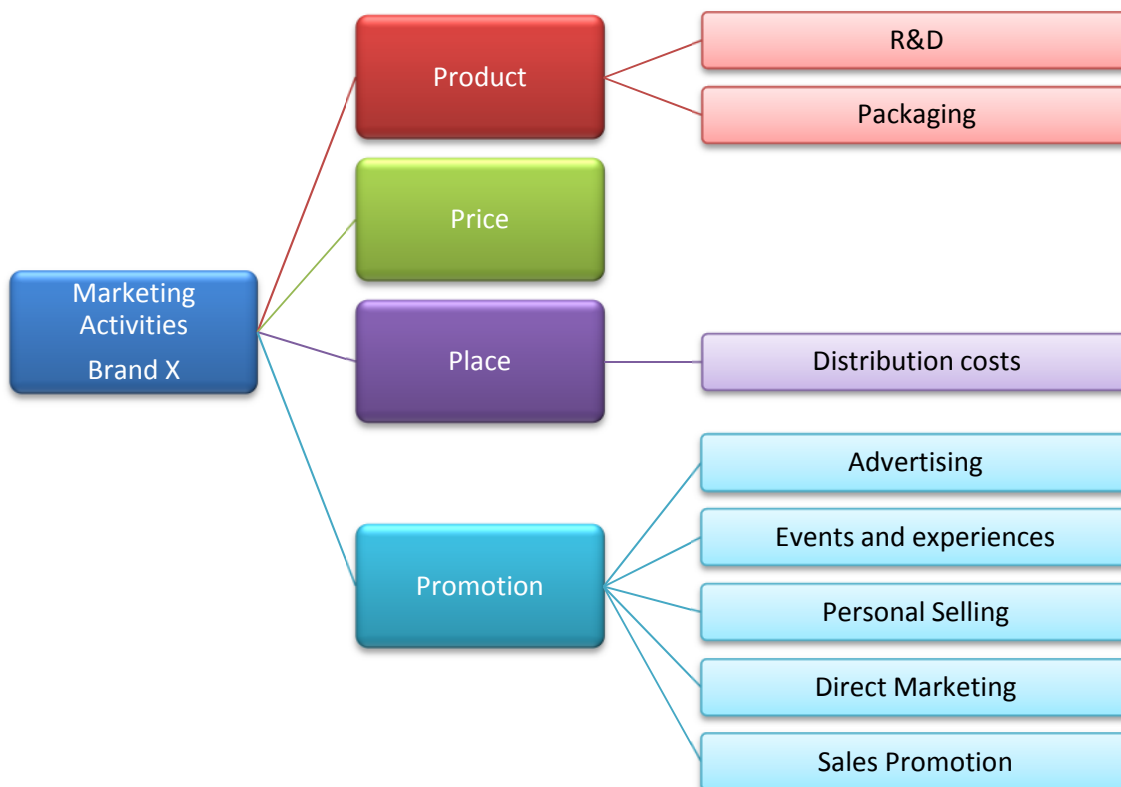
In this study, secondary data were analysed in order to investigate the relationship between marketing expenditures and sales. Ultimately, the purpose of the secondary data analysis was to determine the relationship between the variables included in the data set for each brand respectively. The objective of this study necessitated the use of authentic financial data to ensure the validity of inferences made. To this end, the analysis involved a series of steps in which the data provided by the producer were examined. This series of steps can be broadly divided into three distinct sections as adopted in the context of this study:

- A review of the literature in order to develop a thorough understanding of shareholder value creation and the role of marketing in that context. The literature review also addressed an issue raised by Rust *et al.* (2004) that the inability of marketers to separate individual marketing activities from other actions impedes the successful measurement thereof. To this end, marketing expenditures were identified and classified into predetermined components according to the 4Ps for the purposes of this study. These different components of the 4Ps were organised to represent the independent variables contrasting sales as the dependent variable included in this study.
- Once the data for each brand were categorised according to the appropriate variables and an organised time series of data for each variable was created, the empirical analysis commenced. Initially a series of standard statistical descriptors were consulted to better understand the nature of the data for each brand. In addition to these statistical descriptors, the time series data were scrutinised for the presence of trend, seasonality and autocorrelation in the data. The economic landscape in South Africa for the time period in question was also explored to account for the impact thereof on the sales of either product.
- Finally, after the extended list elements that could impact the sales of either brand included in this study were taken into consideration, the regression analyses were performed. The appropriate regression analyses were performed in order to determine the relationship between the categorised marketing expenditures (in terms of the 4Ps) and sales for each respective brand.

4.5.1 Components of Marketing Expenditure

In Chapter 2, an overview of marketing and components of the 4Ps were introduced. In short, marketing expenditures can be grouped into four components namely product, price, promotion and place (distribution). To analyse the secondary financial data in this study the marketing expenditures provided were allocated to the 4Ps as per the framework depicted in Figure 4.4.1. As illustrated in the figure, the marketing expenditures that constituted product, promotion and place were clustered into three groups with price encompassing the fourth component.

FIGURE 4.4.1 Components of Marketing Expenditure



Adapted from: Kotler and Armstrong (2008: 29)

As per the secondary data adopted, not all of the activities depicted in Figure 4.4.1 were included in this study. For instance, there are research and development costs included in product and instead the data includes only production costs. The following scenarios describe the allocation of expenditures across the four components in this study (see Table 4.5.1):

- Independent variable 1: Product

The manufacturing costs of a product form a key part of marketing expenses (Kotler & Armstrong, 2008: 819). Therefore, the product manufacturing cost was constructed by dissecting income statement items relating to product development costs as it applied to the specific brand in question.

- Material refers to the product (liquid) and any packaging materials such as bottles, cartons or crates, closures and labels that can be directly attributed to the product in question.
- Excise is included as part of the product costs as per standard accounting principles (Gitman, 2009: 47). The reason for excise being included as a product cost is due to the fact that the cost incurred in producing the product before it is rendered as excise is balanced against the profitability of the product and therefore classified as a product related marketing expense.
- Production overheads include items such as bottling costs and blending costs. These cost items are proportionally ascribed to the product in question based on the production volumes (Correia *et al.*, 1993: 85).
- The direct variable cost refers to cost items that vary to the same degree as the production of the product (Correia *et al.*, 1993: 85).

For each month in the relevant time period, these income statement items pertaining to the production costs of each product were respectively added together as depicted in Table 4.5.1 to calculate the product variable used in this study.

- Independent variable 2: Place (distribution)

Place includes any distribution or transport costs allocated to the specific brand in question. These costs refer to the expense incurred in order to bring the product to the market or point of sale (Kotler & Armstrong, 2008: 819). Distribution costs are included as a marketing expense since the expertise utilised in deciding on different outlets and distribution channels can have a significant impact on the sales of a product. In this study the line item allocated to transportation will be directly adopted from the income statement per brand.

- Independent variable 3: Price

The price of the product, in the context of this study, encapsulates the average monthly sales-out-of-company price per unit. Price-related expenditures included price cuts, special sales

terms or any other activity where the short term profit margin of the product in question is reduced in order to increase the sales of that product. In the data for this study the monthly selling price for each product was included and as such, any special terms or deals were inherently incorporated in the selling price.

- Independent variable 4: Promotion

In this study the income statement line item ‘Advertising’ includes all directly relatable promotional spend to the brand. These costs typically include above-the-line items such TV, radio, print, outdoor or cinema advertising. Using the advertising line item cost as reflected in the income statement reflects the actual advertising spend incurred by the company per brand.

Table 4.5.1 depicts the final classification of marketing expenses included in this study across the 4Ps. Each independent variable was then constructed by summing the costs allocated to the particular marketing ‘P’ so that eventually the following variables were extracted from the data set: product expenditures, distribution costs, promotion expenditures, price, and net sales.

TABLE 4.5.1 Classification of the available data per product

<i>Product x</i>			PRODUCT					PLACE	PROMOTION	PRICE	
YEAR	MONTH	Units	MATERIAL	EXCISE	PRODUCT OVERVERHEADS	DIRECT VARIABLE COST	TOTAL PRODUCT	TRANSPORT	ADVERTISING	R / Unit	NETSALES
2001	7	9002352	R 9,619,281	R 3,696,356	R 1,094,536	R 1,016,725	R 15,426,899	R 490,858	R 441,596	R34.95	R 23,044,914
2001	8	10038912	R 10,712,902	R 4,123,029	R 1,229,330	R 1,171,734	R 17,236,994	R 573,055	R 887,433	R34.95	R 25,699,441
...

During the analysis of each brand, each of the three components of marketing investment, along with price as a fourth variable were correlated with sales generation over the same time period. The data were scrutinised to find the model that best fit the data and will most accurately explain the variation in sales. Initially a thorough examination of the descriptive statistics was necessary to better understand the basic features of the data in the study.

4.5.2 Data Analysis

In order to better understand the main features of the data, the distribution, central tendency and skewness and kurtosis of the data were scrutinised.

- *The distribution*

A large collection of data can be grouped into a set of class intervals. Each value in the data collection is placed into one, and only one, of the intervals to summarise the distribution of data (Berenson, Lavine & Krehbiel, 2004: 44). Subsequently, a count is made of the number of data points allocated to each interval. The result is a frequency distribution which can be defined as any device such as a graph or table that displays the values which a variable can assume along with the frequency of occurrence of these values (Daniel & Terrell, 1975:10). A frequency distribution has a maximum data value and a minimum data value, the range of the data is the numerical difference between the largest value and the smallest value (Berenson, Lavine & Krehbiel, 2004: 44). The mode is the value in the data that appears most frequently.

- *Central tendency*

Once data is organised into a frequency distribution, the central tendency of the data can be described as the inclination of the data to cluster, or centre, about certain numerical values. The most popular and best understood measure of central tendency is the arithmetic mean of a data set. McClave, Benson and Sincich (1998:53) describe the arithmetic mean of a quantitative data set as the sum of the data values divided by the number of values contained in the data set. The variability of the data describes the spread of the data points around the mean and can affect the accuracy of statistical analysis. All other factors remaining constant, the more variable the data, the less accurate the estimate one can draw from it (Berenson, Lavine & Krehbiel, 2004: 94).

Finally, the median of the data set reflects the middle value when the data values are arranged in ascending or descending order. In a normal distribution, the mean, median and mode are all equal (Berenson, Lavine & Krehbiel, 2004: 94). In certain situations the median may be a better measure of central tendency than the mean. The median is less sensitive to extremely large or extremely small values that could affect the mean to be misleading. Therefore, if an extremely large value is included in a data set the mean could be much higher than the median since these values are used explicitly in the calculation of the mean. In such a situation, the data set would be skewed to the right indicating that more extreme measurements fall into the right tail of the distribution than in the left.

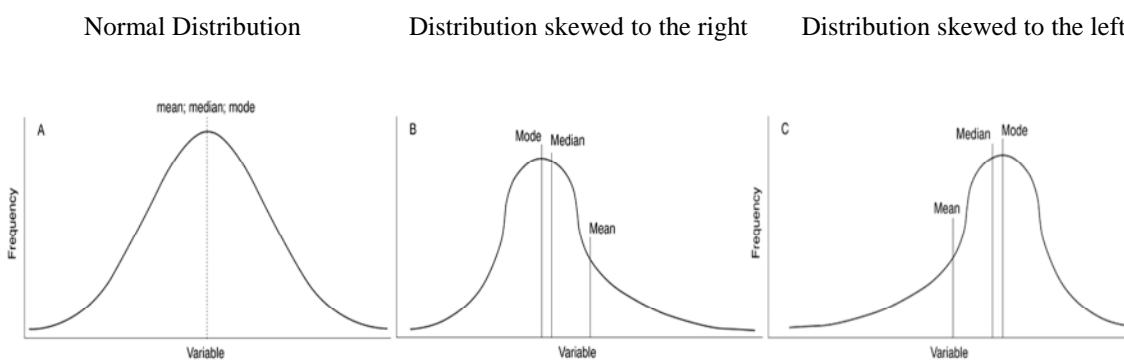
- *Skewness and Kurtosis*

In order to examine a situation in which a normal distribution is skewed, skewness and kurtosis can be scrutinised (Berenson, Lavine & Krehbiel, 2004: 95). *Skewness* is a measure reflecting the degree to which a distribution is symmetrical, resulting in two reflecting images around the median. If a distribution is asymmetrical, a disproportionate number of scores fall either to the left or the right side of the distribution. Figure 4.5.2 depicts distributions that are alternatively positively skewed (when the majority of values fall in the left side of the distribution) or negatively skewed (when the majority of values fall in the right side of the distribution).

A perfectly symmetrical distribution will have a skewness value of zero. Positively skewed distributions will have positive skewness and contrarily negatively skewed distributions will have negative skewness values. Skewness cannot be interpreted in isolation without taking the Kurtosis of the distribution into account.

Kurtosis is the degree of peakedness in the distribution. Once again, a perfect normal distribution has a kurtosis value of zero. If a distribution is less peaked than zero the distribution can be described as ‘flat’, on the other hand if the Kurtosis value is more than zero the distribution will appear overly ‘peaked’.

FIGURE 4.5.2 Comparing the Mean and the Median in a Data Set



Adapted from: (Berenson, Levine & Krehbiel, 2004: 101)

4.5.3 Multiple Regression Analysis

In order to explore the existence of significant relationships between the expenditures of marketing components and sales, multiple regression using the ordinary least-squares method was applied. Multiple regression analysis is an extension of the simple linear regression analysis. Simple linear regression is concerned with the relationship between the independent variable (X) and the dependent variable (Y). Two variables, X and Y are linearly related if their relationship can be expressed by the following simple linear model (Daniel & Terrell, 1975: 231):

$$Y_i = \beta_0 + \beta_i x_i + e_i \quad (4.5.2)$$

Where:

β_0 = true Y intercept for the population

β_i = true slope for the population

e_i = random error in Y for observation i

The Pearson coefficient of correlation, r , is a measure of the strength of the linear relationship between the two variables (McClave, Benson and Sincich: 1998:461). In a regression analysis involving one independent and one dependent variable the individual values are plotted on a two-dimensional graph called a scatter diagram (Berenson & Levine, 1992: 607). Each resulting value in Equation 4.5.2 is plotted at its particular X and Y coordinates. The nature of the relationship between the two variables as depicted in a scatter diagram provides guidance to the most appropriate regression analysis. Due to the anticipated positive linear relationship between the variables under scrutiny, the method of ordinary least-squares regression model was preferred in this study. The ordinary least-squares method determines the value of b_0 and b_1 that best fit the observed data.

Therefore, to test the proposition the following equation was utilised during the analysis:

$$\hat{Y}_i = b_0 + b_1 X_i \quad (4.5.2a)$$

Where:

\hat{Y}_i – the predicted value of Y for observation i

X_i – the value of X for observation i

In this study, several independent variables were present (product, place, promotion, price). When several independent variables are included in the regression analysis, the simple linear regression analysis model can be extended by assuming a linear relationship between each independent variable and the dependent variable (Berenson, Lavine & Krehbiel, 2004: 542). For example, with k independent variables, the multiple regression model is expressed as:

$$Y_i = \beta_0 + \beta_1 X_{producti} + \beta_2 X_{pricei} + \beta_3 X_{placei} + \beta_4 X_{promotioni} \quad (4.5.3)$$

Where:

β_0 = true Y intercept for the population

β_1 = slope of Y with variable $X_{product}$ holding variables X_{price} , X_{place} , $X_{promotion}$ constant

β_2 = slope of Y with variable X_{price} holding variables $X_{product}$, X_{place} , $X_{promotion}$ constant

β_3 = slope of Y with variable X_{place} holding variables $X_{product}$, X_{price} , $X_{promotion}$ constant

β_4 = slope of Y with variable $X_{promotion}$ holding variables $X_{product}$, X_{price} , X_{place} constant

e_i = random error in Y for observation i

However, there are three inherent assumptions of regression that could potentially undermine the validity of results obtained namely normality, homoscedasticity, and the independence of errors (Berenson *et al.*, 2004: 499):

- *Normality*

The assumption of normality requires that the error (e_i) around the line of regression be normally distributed at each value of X_i . The skewness and kurtosis of the data for each brand will be evaluated for normality.

- *Homoscedasticity*

The second assumption, homoscedasticity, requires that the variation around the line of regression be constant for all values of X . Essentially, this means that the errors vary the same amount when X is a low value as when X is a high value. Homoscedasticity is relatively easy to identify through scatter plots of the residuals.

- *Independence of Errors*

The assumption that errors around a regression line be independent for each value of X is particularly important when the data are collected over time. In such situations, the errors for a specific time period are often correlated with those of the previous time period (Berenson *et al.*, 2004: 499). If there is correlation between adjacent points in time the residual at any point in time may tend to be similar; such a pattern in the residuals is called **autocorrelation**. Autocorrelation can cause serious errors when performing tests of statistical significance based upon the assumed regression model (Anderson, Sweeney & Williams, 2003: 729).

The **Durbin-Watson d statistic** is used to test for the presence of autocorrelation; McClave, Benson and Sincich (1998: 780) explain the interpretation of the statistic as follows:

$$d = \frac{\sum_{t=2}^n (e_t - e_{t-1})^2}{\sum_{t=1}^n e_t^2} \quad (4.5.2b)$$

Range of d : $0 \leq d \leq 4$

Where:

e_i = residual at the time period i

If the residuals are uncorrelated, then $d \approx 2$.

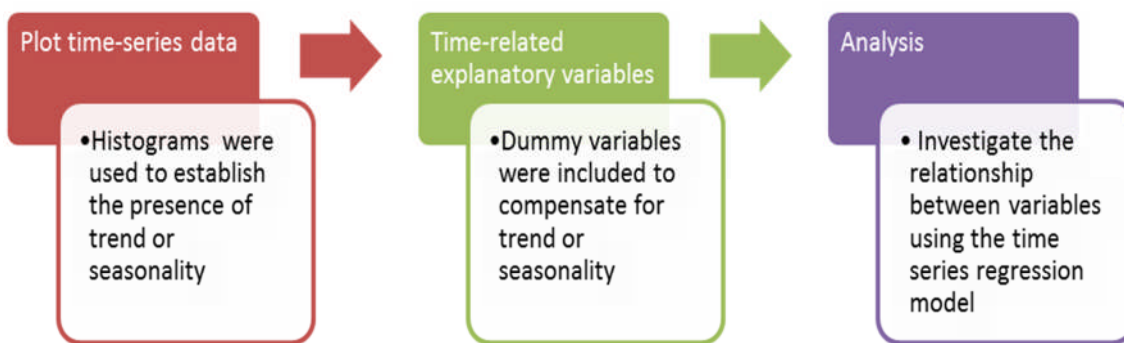
1. If the residuals are positively autocorrelated, then $d < 2$, and if the autocorrelation is very strong, $d \approx 0$.
2. If the residuals are negatively autocorrelated, then $d > 2$, and if the autocorrelation is very strong, $d \approx 4$.

Due to the time series nature of the data, it can be anticipated that autocorrelation could in fact be present between the data points for each brand. If autocorrelation is present in the data a standard multiple regression analysis is not an appropriate analysis tool to investigate the nature of the relationships between the different variables. In data where there are signs of autocorrelation, a time series analysis that accounts for the autocorrelation of the random errors is needed. McClave, Benson and Sincich (1998: 782) suggest that a useful model for such purposes would be the time series regression analysis.

4.5.3 The Time Series Regression Model

A time series is a sequence of values of some variable, or composite of variables, taken at successive time periods (Daniel & Terrell, 1975: 333). The variables of interest in this study are the respective monthly sales data, the product development expenditures, price, the distribution costs and the promotional expenditures of the two products investigated over a period of four years. Time series data is analysed to better understand the nature of past and present data to ultimately forecast the future. Figure 4.5.3 depicts the process of the time series regression analysis as adopted in this study.

FIGURE 4.5.3 Flow Chart of Time Series Regression Analysis



When investigating time series data there are some unique characteristics that have to be taken into account. Makridakis, Wheelwright and Hyndman (1998:263) highlight that the possible lack of independence in the residuals need to be examined and that time-related effects such as trend or seasonality need to be accounted for. The classical approach to time series analysis is based on the premise that a typical time series is composed of several components (Daniel & Terrell, 1975: 334). Berenson and Levine (1992) summarises these components in Table 4.5.3.

TABLE 4.5.3 Berenson and Levine’s summary of factors influencing time-series data

Component	Classification of Component	Definition
Secular Trend	Systematic	Overall or persistent, long-term upward or downward pattern of movement
Seasonal	Systematic	Fairly regular periodic fluctuations that occur within each 12-month period year after year
Cyclical	Systematic	Repeating up-and-down swings or movements through four phases: from peak to contraction to trough to expansion
Irregular	Unsystematic	The erratic or “residual” fluctuations in a time series that exist after taking into account the systematic effects – trend, seasonal, and cyclical

Adapted from: (Berenson & Levine, 1992: 101)

- *Independence of errors*

In Section 4.5.3 the danger of autocorrelation in conducting a regression analysis on time series data was introduced. The assumption of independence of errors is often violated because a residual at any one point in time may tend to be similar to residuals at adjacent points in time (Berenson *et al.*, 2004: 503). The observed errors between the proposed time series and the regression model for the secular trend and seasonal component (if present) are called time series residuals (McClave *et al.*, 1998:779).

In order to detect whether a cyclical component is present in the data the time series residuals are plotted against time in scatter plots. If the data tends to group alternatively into positive and negative clusters this could be a sign of autocorrelation in the data. In this study, the Durbin-Watson (DW) d statistic was applied to the time series data available to test for autocorrelation amongst residuals.

The apparent autocorrelation of neighbouring residuals are called first-order autocorrelation, amongst alternating residuals is called second-order autocorrelation and so forth until d^{th} -order autocorrelation. Accordingly, in a time series regression model the dependent variable is

regressed against one or more lagged values of itself. Shwesar (2007:125) depicts an example for a first-order time series regression model as:

$$x_t = b_0 + b_1x_{t-1} + \varepsilon_t \quad (4.5.3)$$

Using this equation, the correlations between the models' residuals are calculated. If the time series regression model is functioning correctly, the residual terms will not exhibit serial correlations that violate the acceptable range for the DW statistic.

- *Trend or Seasonality*

As per Table 4.5.3, when data are collected over time, a persistent, long-term upward or downward pattern may exist in the data; such a pattern is described as trend. The trend component could result in a misrepresentation of the relationship between two variables to the extent that variation in the dependent variable that is explained by the trend is confused with one or more of the independent variables.

Furthermore, in monthly data, the seasonal component (seasonality) is the component of variation in a time series which is dependent on the time of year. It describes any regular fluctuations with a period of less than one year. Seasonal fluctuations can confuse the interpretation of interaction between dependent and independent variables. In this study, new explanatory variables or dummy variables that allow for trend and seasonality in the data were introduced in the time series regression analysis to observe the effects of these components.

When investigating trend in a time series, a regression analysis is conducted where x_t serves as the dependent variable and X_i , T_1 , T_2 , ... , and T_{48} serves as the independent variables. T_1 , T_2 , ... , and T_{48} are dummy variables needed to represent the 48 observations in the time series.

Similarly, when investigating seasonality in monthly data, a regression analysis is conducted where x_t serves as the dependent variable and X_i , M_1 , M_2 , ... , and M_{11} serves as the independent variables. M_1 , M_2 , ... , and M_{11} are 11 dummy variables needed to represent the 12 months in a monthly time series. Month 12 serves as the base period and has a coded value of 0 for all the dummy variables. When fitting the time series regression model for any one

time period, the values of all, or all but one of the dummy variables in the model are set equal to 0. For example:

$$\text{For Year 2001, Month 1: } x_t = b_0 + b_1X_1 + b_2M_1 + b_2T_2 \quad (4.4.3.b)$$

The coefficients associated with these variables reflect the average difference in the forecast variable between the omitted month and the others. In other words, when observing the seasonal effect for instance, the coefficient associated with M_1 is a measure of the effect of January on the dependent variable compared to December.

Thus, when investigating data collected over time, it is often necessary to create new explanatory variables in order to allow for the time-related features of the data. Extraneous factors such as economic conditions should be considered for possible adverse effects on the interpretation of the relationship between variables. In this study, these time-related factors and the economic effect was introduced to the data where necessary, starting with trend. If the error terms of the residuals for the analysis were still problematic, dummy variables for seasonality were added to the analysis and finally, if the addition of either of those elements could not ensure sound regression modelling, economic variables were introduced.

4.6 SUMMARY

This chapter focused on the concepts and method involved in the construction of the study, testing the relationship between marketing expenditures and product sales. The proposition posed elucidates that the variance in sales of a product is attributable to fluctuations in marketing expenditures.

Subsequently, a secondary data analysis was undertaken. Secondary financial data were investigated by means of multiple regression analysis and time series regression analysis to better understand the cause-effect relationship between marketing expenditures and sales. Two South African Fast Moving Consumer Goods (FMCG) brands' financial data for the period of July 2001 until the end of June 2005 constituted the test subjects. Expenses were dissected and allocated according to the 4Ps of marketing. The use of authentic data enabled a realistic investigation of the aforementioned linkage contributing to external validity.

Multiple regression analysis served as a starting point for scrutinising the relationships in question but due to the anticipated autocorrelation amongst residuals in the data, a further step was taken in doing time series regression analysis. Therefore, a time series regression model was created in order to establish the relationship between the various components of marketing expenditure and sales over time for the two brands included in this study.

CHAPTER 5

RESULTS

5.1 INTRODUCTION

In the previous chapter the research method of the study was presented and discussed in detail. This chapter provides the findings of the meta-analysis conducted to obtain the relevant objectives and address the problem statement. The chapter starts with an overview of the descriptive nature of the data after which further analyses will follow to explore the relationship between marketing expenses and sales. The chapter concludes with an interpretation of the results based on the proposition tested.

5.2 DESCRIPTIVE STATISTICS

In Chapter 4 the respective marketing expenditures included in the study were grouped into four components based on the 4Ps framework of marketing incorporating price, place, promotion and product. In order to understand the basic features in the data, an initial step was the exploration of the data for each of the two brands under consideration.

Due to the fact that the brands included in the study are unbeknownst to the researcher, no speculation can be made on the stage in the product life cycles each of the brands occupies. The stage of the product life cycle currently occupied by the brand would explain the promotional dependency of the brand since brands generally invest in promotion heavily in the initial stages of its life in order to create awareness.

However because this information is not available, the purpose of mapping expenditures as a percentage of sales is purely to gauge the level of investment for the time period under revision. The depiction creates perspective about the size (in terms of Rand spent) and priority (the relative percentage allocation to the particular expenditure) of the respective brands.

The data for each brand consisted of 48 monthly observations starting from July 2001 to June 2005, a relatively stable period for the South African economy. As can be expected from financial data, there are high levels of variance resulting in substantial standard deviations. At a later stage, the nature of the variance was further investigated by means of a multiple regression analysis for each brand. Tables 5.2.1 and 2 respectively depict the descriptive statistics of each of the brands investigated in this study.

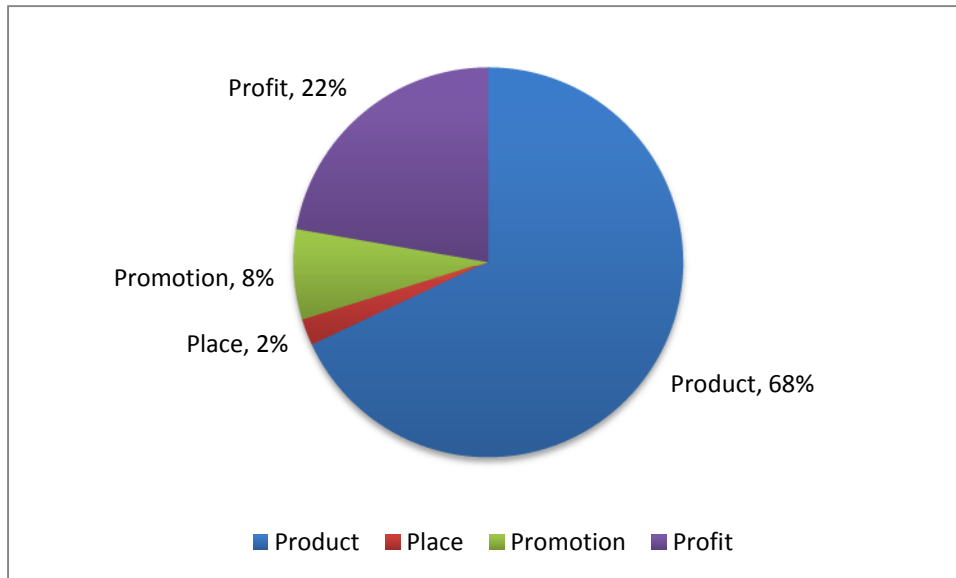
TABLE 5.2.1 Descriptive Statistics for Brand A

		n*	Minimum	Maximum	Mean	Std. Deviation
Independent	Product	48	R 764 166.00	R 3 018 445.00	R 1 780 848.25	R 534 690.76
	Place	48	R 28 910.00	R 100 374.00	R 57 185.96	R 16 454.13
	Promotion	48	R 43 544.00	R 432 136.00	R 197 415.73	R 108 177.19
	Price	48	R9.89	R13.81	R11.42	R1.15
Dependent	Sales	48	R 1 218 612.00	R 4 204 641.00	R 2 618 565.69	R 754 012.94

*n = 48 months: Jul 2001 to Jun 2005.

Table 5.2.1 indicates that the component with the highest standard deviation (relative to the mean value) is promotional expenditures ($R108\ 177.19 / R197\ 415.73 = 54\%$). Therefore, the promotional expenditures component displays high volatility in monthly values over the period investigated. As depicted by the minimum and maximum figures in the table, the highest sales month was December 2002 contrasting the lowest sales month in January 2005. Using the mean value (calculated by dividing the sum of all observations by the number of observations) of each of the variables, Figure 5.2.1 depicts the average profitability of Brand A.

FIGURE 5.2.1 Expenditure and Profit Breakdown Brand A



The chart depicts the average dimensions of marketing expenditure relative to the sales for Brand A over the period investigated. Essentially, the rudimentary depiction of expenditures and profit attempts to provide an overview of these facets and what the landscape of expenditure allocation looks like for every brand. Of the two brands included in the study, Brand A relies more heavily on promotion (8%) and this percentage erodes profits directly since product and place expenditures remain relatively consistent when considered as percentages of sales respectively.

TABLE 5.2.2 Descriptive Statistics for Brand B

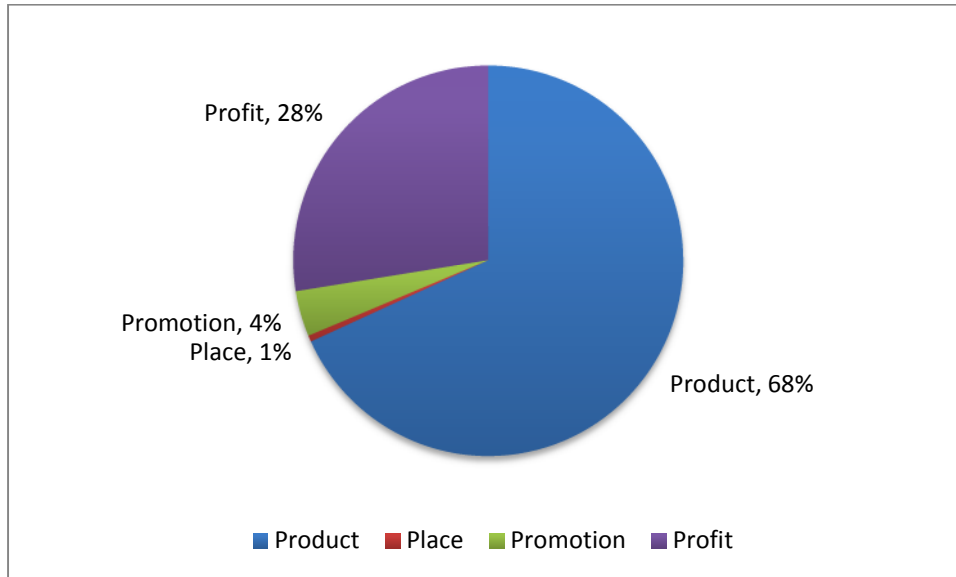
		n*	Minimum	Maximum	Mean	Std. Deviation
Independent	Product	48	R 4 056 054.00	R 17 995 866.00	R 9 365 086.23	R 3 362 686.35
	Place	48	R 24 434.00	R 145 939.00	R 70 600.35	R 26 530.20
	Promotion	48	R 56 820.00	R 1 350 238.00	R 516 529.31	R 331 675.37
	Price	48	R28.84	R42.19	R34.21	R4.04
Dependent	Sales	48	R 6 018 405.00	R 27 338 294.00	R 13 735 501.60	R 5 009 349.52

*n = 48 months: Jul 2001 to Jun 2005.

In terms of turnover, Brand B appears to be the larger brand under investigation in the study with an average monthly brand sales for the 48 month period of R13 735 501.60. Similar to Brand A, promotional expenditures have the highest volatility relative to the mean value (R331 675.37 / R516 529 = 64%). The highest sales month for this brand was December 2004 and the lowest sales month was March 2002. The high sales of Brand B in the summer of 2004 contrast that of Brand A

which experienced its lowest sales month that same summer. Similar to Brand A, using the mean value of each of the variables, Figure 5.2.2 depicts the average profitability of Brand B.

FIGURE 5.2.2 Expenditure and Profit Breakdown Brand B



Brand B appears to be a more profitable brand than Brand A since on average, a larger percentage of sales results in profit (28%) than in the case of Brand A (22%). The brand does not spend as much on distribution cost (Place). The Promotional expenditures for Brand B are also smaller than that of Brand A as a percentage of sales. The distribution and promotional expenditures for Brand B are roughly half of that of Brand A (distribution Brand A: 2% versus Brand B: 1% and promotion Brand A: 8% versus Brand B: 4%).

It is important to note that promotion and distribution expenditures may not be variable costs and despite lower investment in these components in percentage terms, the Rand value of expenditures for the two brands are more comparable. Therefore, due to the fact that Brand B has a much larger sales value, the expenditure on promotion and distribution is relatively smaller than that of Brand A.

The products are in a liquid format and bottled in 750ml pack sizes. The average sales price for Brand A over the four year period was R11.42 whereas the average sales price for Brand B over the same time period was R34.21. Therefore, since both these brands operate in the same industry, one can assume that Brand B might be the more premium brand of the two. Brand A relies more heavily on promotion and place than Brand B whereas Brand B appears to be more profitable.

5.3 MULTIPLE REGRESSION ANALYSIS

The objective of this study was to establish whether there is a relationship between the expenditures of different marketing components (4Ps) and sales. To this end, the following proposition was posed to be verified in this study (see Section 4.3):

- P₁: The variation in marketing expenditures incurred by a brand in terms of the 4Ps (product, price, promotion, place) explain the variation in sales.

In Chapter 4, the time-related effects of time series data were discussed. Elements unique to data collected over time such as trends that might exist in the data or seasonality have to be considered when analysing time series data. Due to the fact that the data were collected over a period of 48 months, it was anticipated that the observations might violate the assumptions inherent to multiple regression analysis. For this reason, before the proposition was tested, the data were scrutinised for suitability. In particular, the data were examined based on three inherent assumptions of regression that could potentially undermine the validity of results obtained. As described in Chapter 4, these assumptions are normality, homoscedasticity and the independence of errors.

5.3.1 Normality

The assumption of normality requires that the error (e_i) around the line of regression be normally distributed at each value of X_i . As a rule of thumb, if skewness and kurtosis values vary between (-1 and 1) the distribution is considered normal (Berenson, Levine & Krehbiel, 2004: 101). The skewness and kurtosis of the two data sets were evaluated for normality; the results are reported in Tables 5.3.1 and 2 respectively.

TABLE 5.3.1 Skewness and Kurtosis Brand A

		Skewness		Kurtosis	
		Statistic	Std. Error	Statistic	Std. Error
Independent	Product	0.47	0.34	-0.38	0.67
	Place	0.76	0.34	-0.01	0.67
	Promotion	0.58	0.34	-0.44	0.67
	Price	0.46	0.34	-0.54	0.67
Dependent	Sales	0.64	0.34	-0.15	0.67

Table 5.3.1 indicates that the distribution of Brand A falls in an acceptable range to assume normality of the data. It is important for the data to be normally distributed as normality is an underlying assumption for regression analysis. In this case, the variables included for Brand A were considered normally distributed and did not offend this assumption.

TABLE 5.3.2 Skewness and Kurtosis Brand B

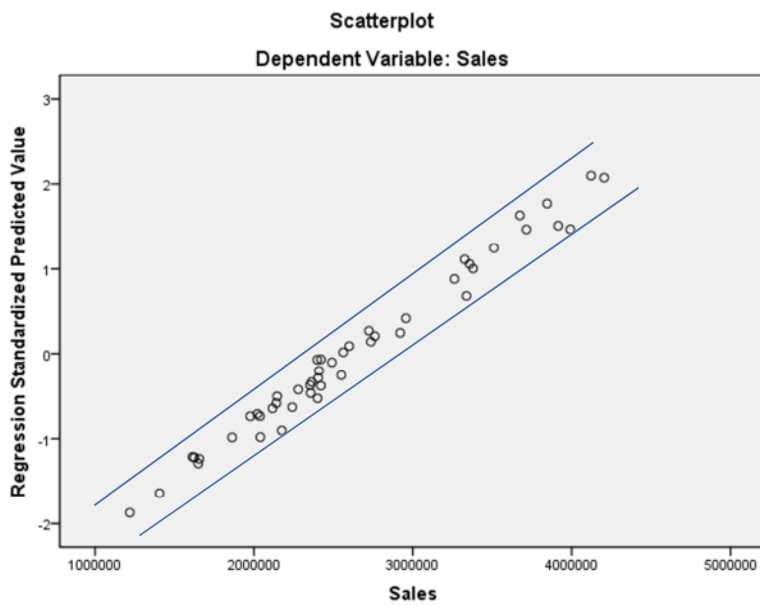
		Skewness		Kurtosis	
		Statistic	Std. Error	Statistic	Std. Error
Independent	Product	0.71	0.34	0.36	0.67
	Place	0.56	0.34	0.50	0.67
	Promotion	0.50	0.34	-0.27	0.67
	Price	0.80	0.34	0.60	0.67
Dependent	Sales	0.54	0.34	-0.02	0.67

Resembling Brand A, Table 5.3.2 shows that the distribution of Brand B falls in an acceptable range to assume normality of the data. As mentioned before, normality is an important feature in the data since regression analysis is based on the assumption that data is normally distributed. Again, the variables included for Brand B were considered normally distributed and did not offend this assumption.

5.3.2 Homoscedasticity

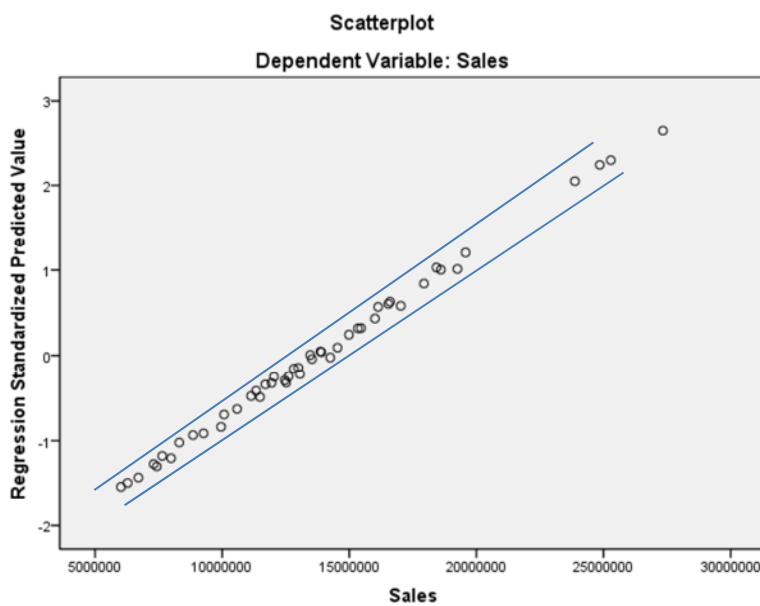
The second assumption, homoscedasticity, requires that the variation around the line of regression be constant for all values of X . Essentially, this means that the errors vary the same amount when X is a low value as when X is a high value. Homoscedasticity is relatively easy to identify through scatter plots of the residuals. Figure 5.3.1 depicts the scatter plots of the predicted value and the dependent variable sales for Brand A.

FIGURE 5.3.1 Homoscedasticity Plot of Residuals: Brand A



In Figure 5.3.1, the plot shows that in the case of Brand A there are slight signs of heteroscedasticity. However, the slight appearance of the phenomenon of heteroscedasticity in the data for Brand A does not offend the assumption of homoscedasticity to the extent that it will distort the Pearson coefficient in such a way that the analysis would be deceptive. The level of heteroscedasticity in the data for Brand A does not appear to be problematic.

FIGURE 5.3.2 Homoscedasticity Plot of Residuals: Brand B



The scatter plot for Brand B reveals relatively homoscedastic data. In other words, the variance of sales around the line of regression is fairly consistent. There is no violation to the assumption of homoscedasticity in the data for Brand B.

It appears as though brands A and B do not offend the assumption of homoscedasticity in the data. If a regression analysis is performed while heteroscedasticity is present in the data, the Pearson coefficient could be underemphasised and the results of the analysis should be interpreted with that in mind. However, the levels of heteroscedasticity for both Brand A and Brand B are not problematic to the extent that the Pearson coefficient will become too misleading.

5.3.3 Independence of Errors

The assumption that errors around a regression line be independent for each value of X is particularly important when the data are collected over time. As discussed in Chapter 4, autocorrelation can cause serious errors when performing tests of statistical significance based upon the assumed regression model (Anderson, Sweeney & Williams, 2003: 729). In this study the *Durbin-Watson d statistic* was used to test for the presence of autocorrelation (see section 4.5.3 iii). As depicted by Table 5.3.4, Brand A exhibits a relatively strong positive autocorrelation between residuals ($d < 2$).

TABLE 5.3.4 Durbin-Watson d Statistic Test for Autocorrelation Brand A

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson (d – statistic)
0.98	0.96	0.96	28076.41	1.07

Table 5.3.4 demonstrates how autocorrelation can confuse the results of regression analysis. The table indicates that when a regression analysis is executed, a very strong correlation is detected between the dependent and independent variables. In reality, it is unlikely that these variables alone will constitute such a degree of variance in the dependent variable since, as discussed in Chapter 4 (see Section 4.5.3), exogenous factors like the season and the economic trend will likely also influence the sales of a product. It is for this reason that it is recommended to investigate the presence of autocorrelation before running a linear regression analysis on time series data.

TABLE 5.3.5 Durbin-Watson d Statistic Test for Autocorrelation Brand B

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson (<i>d</i> – statistic)
0.98	0.95	0.95	15917.68	0.78

Brand B displays the strongest positive autocorrelation amongst the two brands. Like before, the unlikelihood of such a strong relationship existing between these variables emphasises the importance of an appropriate analysis that is able to overcome the impact of autocorrelation in data.

The results confirmed that there was strong evidence of autocorrelation present in both data sets. For this reason the researcher concluded that multiple regression modelling was not suitable to analyse the relationship between the different components of marketing and sales for either of the products included in the study.

Due to the presence of autocorrelation, a regression model that accounts for the autocorrelation of the random errors was needed. Based on the suggestion of McClave, Benson and Sincich (1998: 782) the time series regression model was subsequently adopted for the purpose of investigating the nature of the relationship between marketing expenditures and sales.

5.4 TIME SERIES REGRESSION ANALYSIS

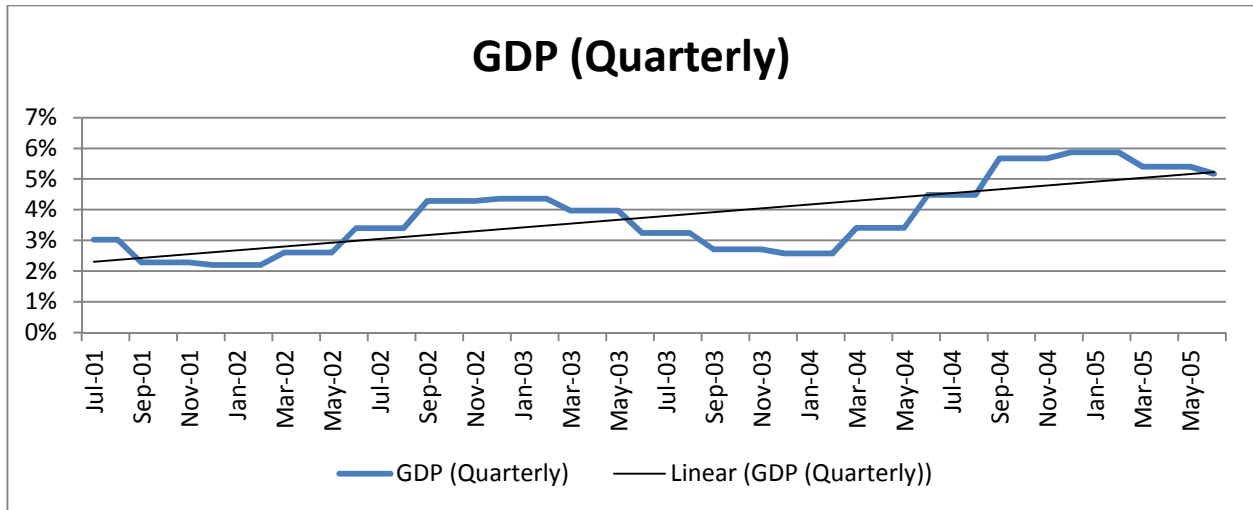
In a time series regression analysis, additional variables are introduced to counteract the effects of trend or seasonality that hamper the accuracy of multiple regression analysis. At the outset, in order to understand the presence of trend in either of the data sets, the economic landscape of South Africa during the period under investigation needs to be depicted.

5.4.1 The Economic Landscape

Figure 5.4.1 and 5.4.2 illustrate the economic growth as measured by growth in gross domestic product (GDP) and inflation, as measured by the producer price index (PPI) data as released by the South African Reserve Bank for July 2001 to June 2005 (Quarterly Economic Review, 2005). Economic growth provides an indication of how much the South African economy expanded or declined during the period. As can be seen in Figure 5.4.1, the South African economy was

characterised by steady growth during this time although a slight decline in the growth rate is evident towards the end of 2003 and the start of 2004.

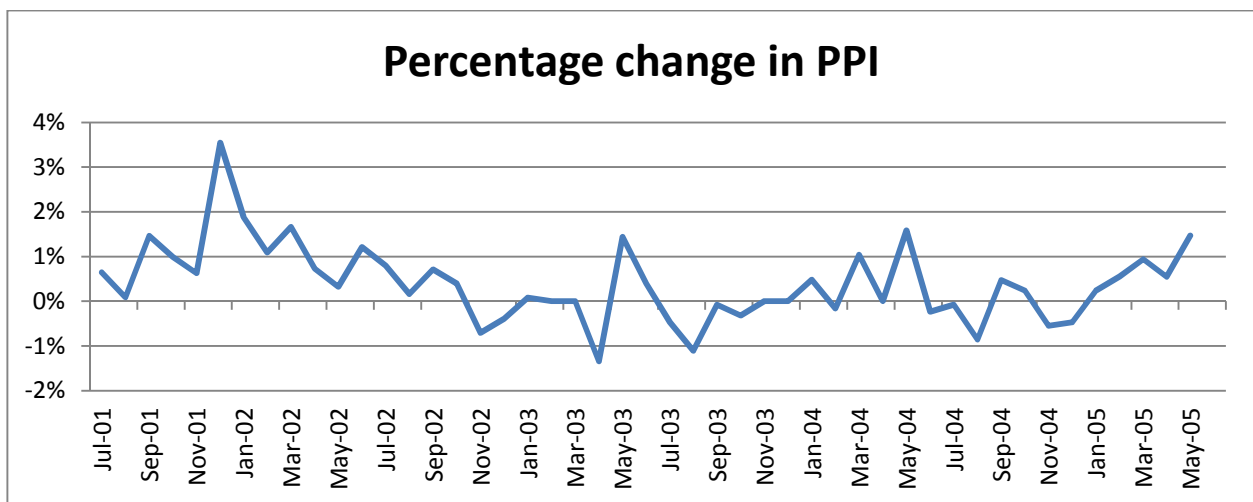
FIGURE 5.4.1 GDP Growth South Africa (Jul 2001 to Jun 2005)



Adapted from: South African Reserve Quarterly Bulletin (June 2001 to June 2005)

The producer price index (PPI) is a relative measure of the average change in price of a basket of representative goods and services sold by producers in a market (Pindyck & Rubinfeld, 2005: 12). Figure 5.4.2 illustrates the month on month percentage change in the PPI over the 48 month period. The figure indicates that despite the slight economic growth fluctuation, the PPI during this time remained relatively stable. It is often used as an indicator of the rate of inflation and therefore provides an indication of the rate to which consumers' spending potential changes.

FIGURE 5.4.2 Producer Price Index South Africa (Jul 2001 – Jun 2005)



Adapted from: South African Reserve Quarterly Bulletin (June 2001 to June 2005)

In this study the fact that the PPI remained relatively stable during the period of investigation suggested that inflation would not radically distort the sales values of the products. Furthermore, due to the fact that inflation affects both the cost of marketing expenditures and the subsequent sales, the effect of inflation is counteracted. If both the independent and dependent variables are affected, the factor of inflation is cancelled between them. Nevertheless, the presence of long term trend in the data was considered through the addition of dummy variables where necessary, to counteract the possible effects of economic fluctuations on the data.

5.4.2 Time-related Effects on the Brand Data

Further to understanding the economic landscape during the included time period, the time series of data for each brand was examined to further investigate the presence of trend, seasonality and autocorrelation. Scrutiny of sequence plots of each of the variables against time revealed clear indication that there were seasonal variation and autocorrelation present in the data.

FIGURE 5.4.3 Sales and Marketing Expenditures Over Time: Brand A

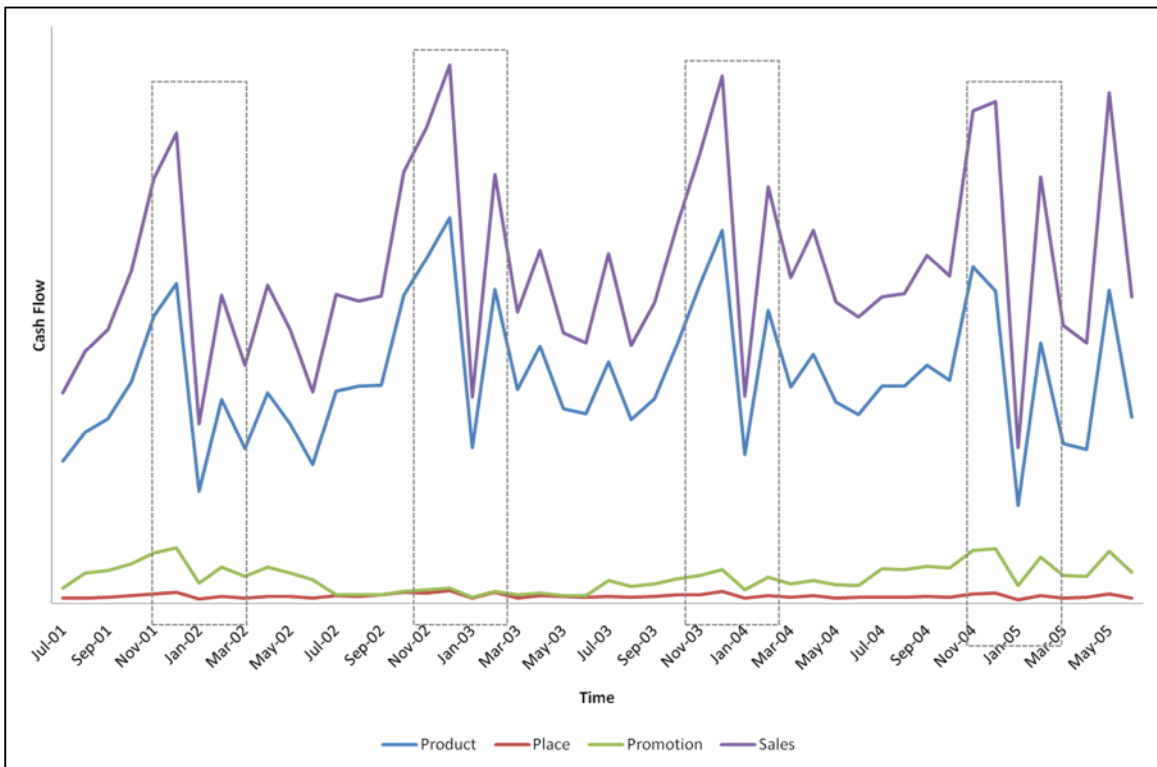
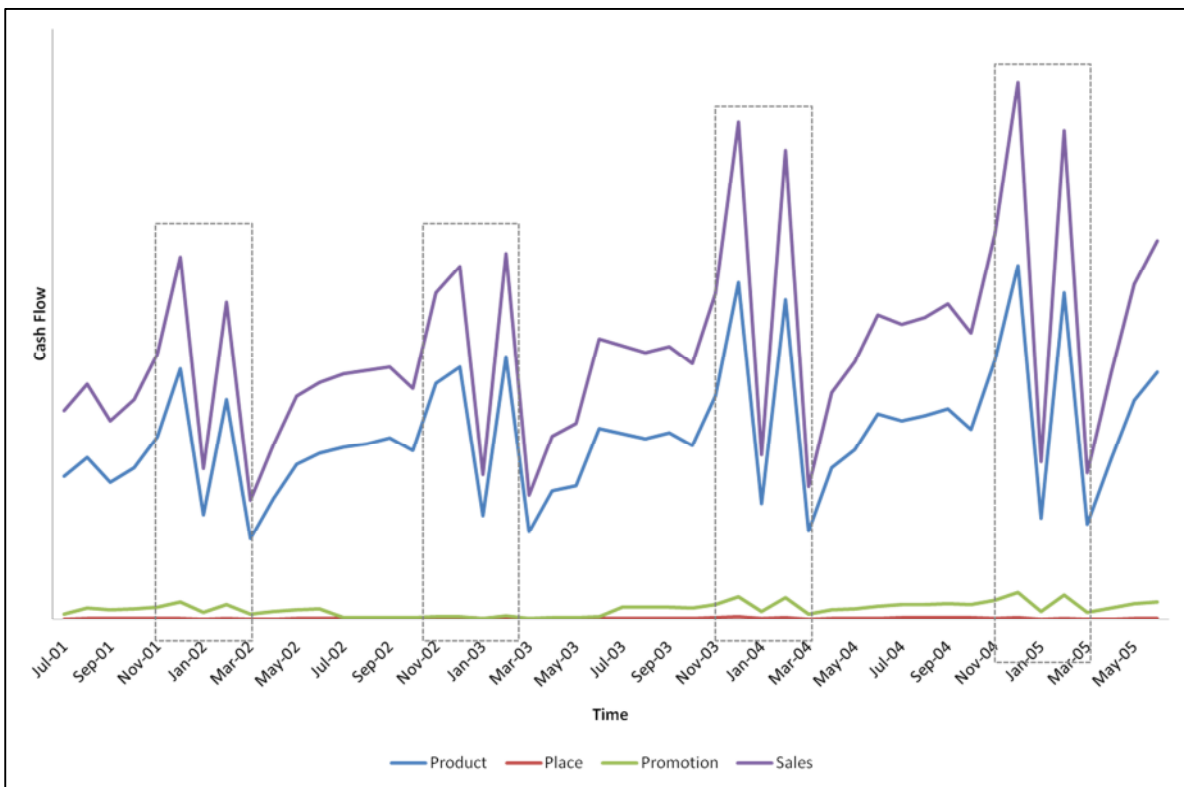


Figure 5.4.3 displays that the months of November and December are characterised by high peaks in marketing expenditures coinciding with high sales. Every year in January the opposite effect is evident where sales and expenditures are much lower than other months. Albeit to a much smaller scale, promotion and distribution costs appear to follow a similar pattern. In July 2002 and July 2003 the promotional expenses for Brand A were decreased to the same level as that of distribution costs. Notably, sales reached its highest point during this period, but appeared to slowly decrease marginally over time since then. Therefore, there could be some interaction between Brand A and the slowdown in the economic growth rate (as discussed in section 5.4.1) since the brand experienced slightly declining sales (year-on-year) since 2003.

FIGURE 5.4.4 Sales and Marketing Expenditures Over Time: Brand B



Similar to Brand A, the promotional expenditures for Brand B were decreased between July 2002 and July 2003. Contrary to Brand A, sales for Brand B remained relatively constant during this period even though the peak in sales for March 2003 was higher than the same time the previous year. From July 2003, when promotional expenditures were once again increased the brand did display growth for the remainder of the period under scrutiny. Therefore, contrary to Brand A, Brand B appeared relatively unaffected by GDP growth during this period but instead showed a unique growth trend over the relevant period.

Figures 5.4.3 and 5.4.4 show that both brands experience peaks in sales around November and December of every year followed by a sharp decline in January. Thus there appeared to be indications of both trend and seasonality in the data, and these effects needed to be counteracted before the regression analysis could be performed accurately.

In Chapter 4 it was discussed that the classical approach to time series analysis is based on the premise that a typical time series is composed of several components, namely secular, seasonal, cyclical and irregular variations (Daniel & Terrell, 1975: 334). Accordingly, the process of deconstruction involved isolating and reconciling the distorting impact of each of these components to the extent that an accurate regression analysis was completed. The effect of trend and seasonality is mediated by creating counteracting variables that is included in the time series analysis.

The first component scrutinized was trend. The effect of trend was counteracted by including a dummy variable with a value ranging from 1 - 48 for each of the 48 months representing each of the data points (see Section 4.5.3.b, dummy variables are depicted in Appendix i). The regression analysis was repeated including the trend independent variable to examine the unstandardised residuals of the analysis. If the residuals still violated the acceptable bounds the next step entailed including further dummy variables to account for seasonality.

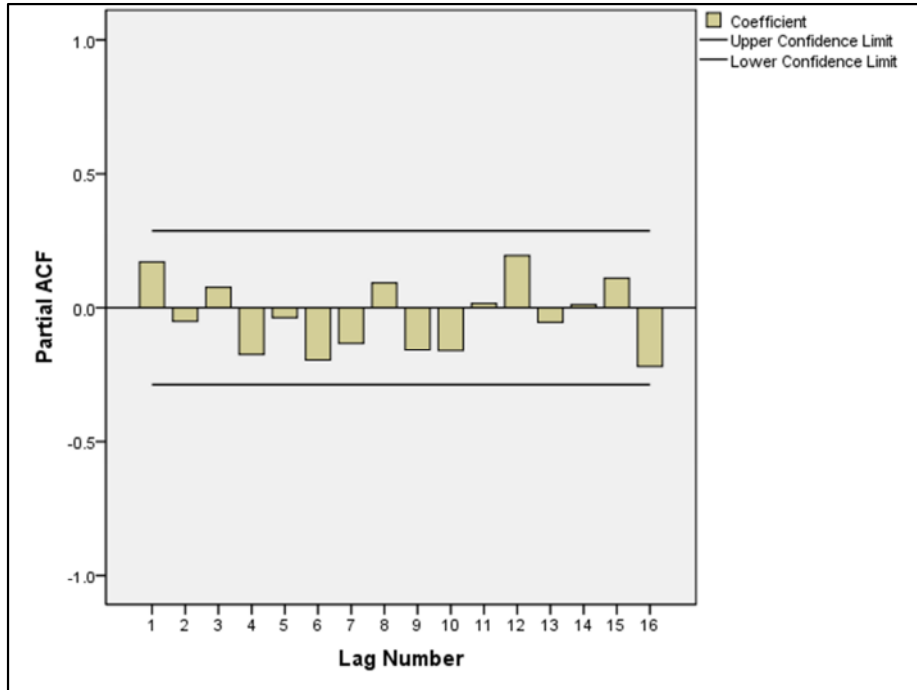
In order to counteract the effect of seasonality, a matrix of monthly dummy variables were used. As noted in Chapter 4, a dummy variable is a numerical variable used in regression analysis to represent subgroups of the sample (see Section 5.4.3.b). In this study each of the months included were assigned a variable of either one or zero alternatively to account for seasonality (see Appendix i). In the following section the results for each step in the process are presented for the respective brands.

5.4.3 Time Series Regression Analysis: Brand A

Brand A had volatile sales and was characterised by high variance in sales during the period investigated. During the process of validating the time series regression analysis the unstandardised residuals fell within the acceptable range after adding a counteracting trend dummy variable and therefore no further accommodation of seasonality was needed.

Thus, the trend component of the time series impacted the dependent variable (sales) in a way that distorted the accuracy of the regression analysis. Figure 5.4.1 depicts the unstandardised residual plot for Brand A. If the coefficients stay within the confidence limit depicted by the horizontal lines, the model could be used to perform a regression analysis.

FIGURE 5.4.5 Unstandardised Residual Brand A



Since none of the coefficients in the model exceed the acceptable range the model is ready to be used to test the proposition. Thus, a time series regression analysis was conducted where the product, price, promotion, place and trend were included as independent variables and sales served as the dependent variable. Table 5.4.1 shows the results of the regression coefficients for Brand A.

TABLE 5.4.1 Time Series Regression Brand A

Predictor	Model Summary		Anova	Coefficients			
	R	R ²	Durbin-Watson	F (df)	B	t	P-Value
Dependent Variable: Sales							
	0.99	0.98	1.59	692.53* (5)			
Product					0.03	1.5	0.14
Price					0.05	3.73	0.00*
Place					1.03	4.03	0.00*
Promotion					0.01	0.53	0.60
Trend					-1279.87	-11.37	0.00*

* Significant at the 95% confidence level.

For Brand A, when a time series regression analysis is performed on the different components of marketing the results indicate that the 4Ps do have a significant relationship with sales. As depicted in Table 5.4.1, the total sales variance explained by the model as a whole was 98% ($F(5) = 692.53$, $p < 0.05$). With the introduction of trend in the analysis, the Durbin-Watson statistic is also closer to 2 (changed from 1.07 to 1.59) which means that autocorrelation is no longer a significant factor in the analysis. Therefore, the next step was to understand the interaction between the independent variables included and sales.

When a time series regression analysis is performed on the different components of marketing and sales for Brand A, the results indicate that the 4Ps do have a significant relationship with sales. If broken down into the individual components it becomes evident that respectively, place and price significantly describe unique variance in sales ($p < 0.05$). At a 95% level of confidence, neither promotion nor product appears to account for unique variance in sales. As anticipated, Brand A exposes a statistically significant relationship with trend ($p < 0.05$).

Table 5.4.3 shows the summary of the significant relationships that exist between the different components of marketing expenditures as well as trend and sales in the case of Brand A.

TABLE 5.4.2 Summary of Results Brand A

Variable(s)	Outcome
All independent variables	The variation in marketing expenditures incurred by a brand in terms of the 4Ps (product, price, promotion, place) explain the variation in sales
Product	Product development expenditures <i>do not</i> significantly explain unique variance in sales
Place	Distribution expenditures significantly explain unique variance in sales
Promotion	Promotional expenditures <i>do not</i> significantly explain unique variance in sales
Price	Price significantly explains unique variance in sales
Trend	Trend significantly explains unique variance in sales

The nature of the significant relationship between distribution costs and sales is positive, in other words, assuming all things remain unchanged, if the company invest more resource behind increasing the distribution range of Brand A, the sales for the brand could also increase.

There is also a significantly positive relationship between price and sales. Price elasticity is a commonly used measure of price sensitivity and describes the percentage change in quantity sold divided by the percentage change in price (Levi & Weitz, 2007: 403 – 404). Levi and Weitz (2007) explain that consumers of a product are viewed to be price insensitive (inelastic) when a one percent decrease in price results in less than one percent increase in quantity sold. Alternatively, consumers of a product are viewed as price sensitive (elastic) when a one percent decrease in price produces more than a one percent increase in quantity sold. Therefore, it appears as if the consumers of Brand A are price insensitive since an increase in price does not negatively impact sales.

Contrarily, a significantly negative relationship exists between trend and sales. In other words, even though the overarching trend is negative, sales for Brand A are increasing in the short run. Without knowledge of the product and brand identity it is difficult to interpret the phenomenon of a negative relationship between trend and sales. Different categories of products have different variations of life cycles. Levy and Weitz (2007:328) describe three such variations as fad, fashion, and staple products. The authors note that the distinguishing characteristic between these variations are the number of seasons sales are sustained. If Brand A could be characterised as belonging to one of the

three before mentioned categories of products, a conclusion could be drawn between the position of the product's stage in its own life cycle and the impact thereof on the overarching trend.

Furthermore, as noted in Section 5.2, even though both Brand A and Brand B operate in the same industry, the average selling price of Brand A over the 48 month period is R11.42 compared to that of Brand B averaging R34.21. Therefore, the assumption is made that Brand B is the more premium of the two products. Since the trend incorporates exogenous factors such as economic growth it is possible that if economic growth declines and consumer budgets become more stretched they trade down to cheaper alternatives such as Brand A. Therefore, a negative relationship between trend and sales for the particular brand could be detected.

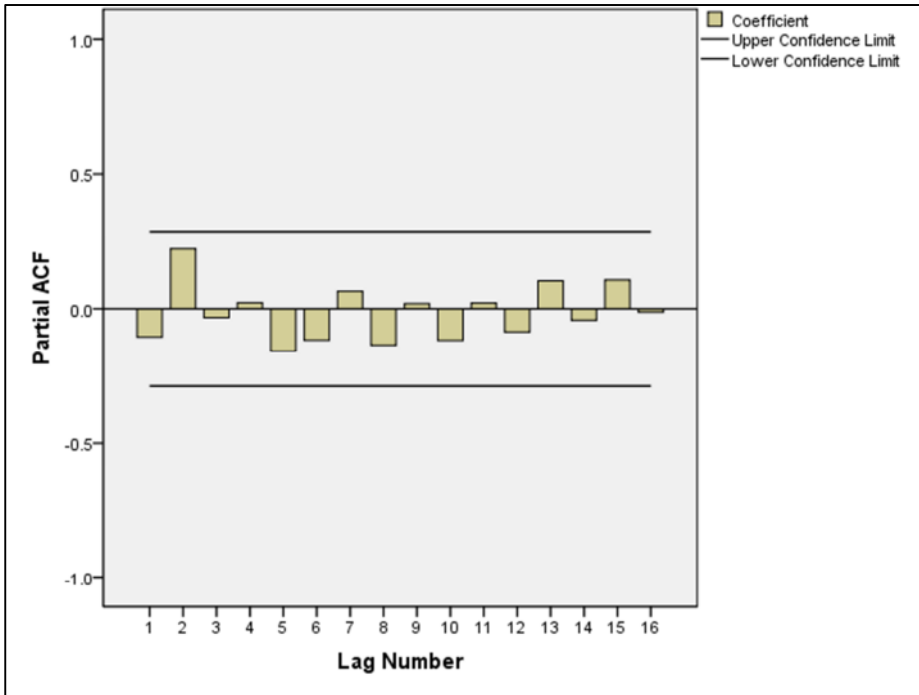
Ultimately, the results indicate that a high proportion of sales variance is explained by the 4Ps (specifically place and price) and the trend in the data. Overall, the proposition that sales variance can be explained by the 4Ps is accepted with the caveat that trend also impacts sales variance to a significant extent.

5.4.4 Time Series Regression Analysis: Brand B

Brand B is characterised by relatively low variance in sales but high autocorrelation between sales months. As depicted in Figure 5.4.2 Brand B appears to be very sensitive to seasonality with high peaks in the summer of every year. As a first step in the regression analysis process the trend dummy variables were included in the time series analysis to counteract the effect of secular trend. However, the inclusion of trend did not sufficiently account for error residuals and therefore further inclusion of dummy variables that accounted for the seasonal component was needed.

Therefore, in the case of Brand B it was necessary to include dummy variables for both the trend component and seasonal component of the time series. A dummy variable for each of the months included were assigned a variable of either one or zero alternatively to account for seasonality. Figure 5.4.6 depicts the unstandardised residual plot for Brand B once the dummy variables for trend and seasonality had been included. As noted before, if the coefficients stay within the confidence limit depicted by the horizontal lines, the model could be used to perform a regression analysis.

FIGURE 5.4.6 Unstandardised Residual Brand B



Since none of the coefficients in the model exceed the acceptable range the model is ready to be used to test the proposition. Thus, a time series regression analysis was conducted where the product, price, promotion, place, trend and monthly dummy variables were included as independent variables and sales served as the dependent variable. Table 5.4.3 shows the results of the regression coefficients for Brand B.

TABLE 5.4.3 Time Series Regression Results Brand B

Predictor	Model Summary		Anova		Coefficients		
	R	R ²	Durbin-Watson	F (df)	B	t	P-Value
Dependent Variable: Sales							
	0.99	0.99	2.2	427.00 (16)			
Product					0.03	2.00	0.05*
Price					0.00	-0.04	0.97
Place					0.04	0.28	0.78
Promotion					0.01	0.86	0.40
Trend					-1814.72	-7.26	0.00*
Month 1					-109172.56	-4.96	0.00*
Month 2					-10244.14	-1.15	0.26
Month 3					-132781.79	-5.49	0.00*
Month 4					-111338.27	-5.78	0.00*
Month 5					-94040.86	-5.60	0.00*
Month 6					-78768.27	-5.61	0.00*
Month 7					-80822.49	-5.49	0.00*
Month 8					-76604.14	-5.39	0.00*
Month 9					-79671.06	-5.51	0.00*
Month 10					-81448.02	-5.33	0.00*
Month 11					-47687.35	-4.13	0.00*

* Significant at the 95% confidence level.

For Brand B, when a time series regression analysis is performed on the different components of marketing, the results indicate that collectively the 4Ps do have a significant relationship with sales. The regression indicates that 99% of sales variance is explained by the independent variables included ($F(16) = 427.00, p < 0.05$). The introduction of trend and seasonality in the analysis brings the Durbin-Watson statistic closer to 2 (changed from 0.07 to 2.2) which means that autocorrelation is no longer a significant factor in the analysis. Therefore, the next step was to understand the interaction between the independent variables included and sales.

In the case of Brand B it appears as if only product of the 4Ps significantly explains unique variance in sales ($p < 0.05$). At a 95% level of confidence, not one of the promotion, place or price

components display a significant impact on sales. In this case, both trend and seasonality show significant relationships with sales.

Table 5.4.4 shows the summary of the significant relationships that exist for Brand B between the different components of marketing expenditures, trend and seasonality on the one hand, and sales on the other hand.

TABLE 5.4.4 Summary of Results Brand B

Variable(s)	Outcome
All independent variables	The variation in marketing expenditures incurred by a brand in terms of the 4Ps (product, price, promotion, place) explains the variation in sales
Product	Product development expenditures significantly explain unique variance in sales
Place	Distribution expenditures <i>does not</i> significantly explain unique variance in sales
Promotion	Promotional expenditures <i>does not</i> significantly explain unique variance in sales
Price	Price <i>does not</i> significantly explain unique variance in sales
Trend	Trend significantly explains unique variance in sales
Seasonality	Seasonality significantly explains unique variance in sales

At a 95% level of confidence there is evidence of a significantly positive relationship between the production expenditures of the brand and corresponding sales. It appears as though the product is in high demand and as more of the product is produced more of the product is sold.

Similar to Brand A, there is a significant negative relationship that exists between the trend component and sales. Once again the interpretation of the negative relationship between sales and trend is limited by the unknown identity of the brand in question (see Section 5.4.3). There is also a significantly negative relationship (relative to December) detected between each month of the year except for February. As depicted in Figure 5.4.2. February is the only other month in the year when sales peak as high as in December. For this reason, the relative difference between sales in February compared to sales in December is not as significant as in other months when sales differ more severely.

Ultimately, in the case of Brand B, the unique variance in sales is explained rather by the trend and seasonality than it is explained by the 4Ps (with the exception of product). Even though a high percentage of variance in sales is explained by the independent variables, the detail indicates that in fact the variance is explained by trend and seasonality. If the analysis was performed by simply adopting a multiple regression analysis, such detail around the impact of trend and seasonality would have been lost and a misinterpretation of the results would have followed. Instead, the conclusion in the case of Brand B is that only product expenditures have a significant relationship with sales and further variance in sales is attributed to the seasonal and secular components of the time series.

5.5 SUMMARY

In this chapter the relationship between marketing expenditures and sales was explored for two FMCG products in South Africa, over a four year period. At first, descriptive statistics were explored to better understand the nature of the data. Initially, the assumptions which multiple regression analysis is based on were tested to ascertain whether the model is appropriate to investigate data that is collected over time.

The Durbin-Watson statistic for both brands indicated high levels of autocorrelation in the data suggesting that in fact, the results of a multiple regression analysis could be misleading. As such, a tool was needed that account for the time-related features in the data. Subsequently a time series regression analysis was undertaken to investigate the relationship between marketing expenditures and sales over time.

In the case of Brand A, it was necessary to include dummy variables to accommodate trend before the model was ready to be used for analysis. The results indicated that distribution costs, price and trend have a significant relationship with sales. Overall, the 4Ps components of marketing expenses (along with trend) accounted for a significant proportion of the variance in sales.

In the case of Brand B, it was not only necessary to include trend as an independent variable but also to include seasonal dummy variables in order for the model to perform suitably. For Brand B

however, only production expenses (of the 4Ps) exhibited a significant relationship with sales along with trend and all months in the year except for February.

In the next chapter, conclusions are reported and recommendations are made based on the results presented in this chapter.

CHAPTER 6

RECOMMENDATIONS

6.1 INTRODUCTION

Over the last few decades, substantial attention has been focused on the accountability of marketing actions (see section 2.1). Marketers have become absorbed with measuring the performance of marketing activity. To this end, many new research areas arose attempting to quantify the effect that marketing has on the bottom line. The primary objective of this study was to establish whether there is a relationship between the expenditures of different marketing components (4Ps) and sales. An understanding of the relationship between sales and marketing expenditures will in turn serve as a first step towards quantifying the impact of marketing investment on the bottom line. For this purpose, the sales variance of two South African FMCG products was examined for a period of 48 months.

The secondary data were scrutinised and marketing expenditures were allocated to the four components of marketing expenditure (i.e. product, price, place, promotion) as described in Chapter 2. As a first step, a multiple regression analysis was undertaken in an attempt to ascertain the relationships between various components of marketing expenditure and sales. However, due to the time series nature of the data, the inherent characteristics of the data offended inherent assumptions that hampered the accuracy to which multiple regression analysis could be performed. Therefore a time series regression analysis approach was adopted that accounted for the time series characteristics in the data.

In this final chapter, the results of the time series regression analysis (as depicted in Chapter 5) are discussed and recommendations are drawn from such findings. In the chapter that follows, the researcher scrutinises the various relationships between marketing expenditures in terms of the 4Ps and sales. Furthermore, recommendations are drawn from the conclusions apparent in the results. Finally the limitations inherent to the study are stipulated and possibilities for future research are posited.

6.2 CONCLUSIONS

The primary objective of this study was to establish whether there is a relationship between the expenditures of different marketing components (4Ps) and sales. In order to investigate the relationship between marketing expenditures and sales, a meta-analysis of secondary financial data was undertaken (see Section 4.3.1). Financial data are appropriate for such an investigation since it reflects the realistic interaction between cash in- and outflows in a company over time. To this end, two South African FMCG products were examined for a period of 48 months.

The data obtained from monthly income statements for each brand were dissected and allocated according to the 4Ps components of marketing expenditure. Within the 4Ps framework, most resources were invested in production expenditures, whereas distribution constituted the smallest share of investment.

Investigating the nature of the data revealed that both brands showed high levels of variance across variables over time. Brand A presented a relatively higher percentage of investment in distribution and promotional expenditures compared to Brand B. Despite operating in the same industry as FMCG goods in a liquid format, Brand B was roughly three times more expensive than Brand A. Brand B also appeared to be the more profitable brand of the two included in the study, with higher sales levels.

As a first step to test the relationship between marketing expenditures and sales, multiple regression analysis was explored. The independent variables encompassed production expenditures, distribution expenditures, promotional expenditures and price. However, there were several concerns around the accuracy with which a multiple regression analysis could be performed on data collected over time. Multiple regression analysis is based on three inherent assumptions namely normality, homoscedasticity and the independence of errors.

The data for both brands were sufficiently normally distributed to not offend the first of the three assumptions that multiple regression analysis is based on. Despite slight indications of heteroscedasticity the brands also did not offend the second assumption to the extent that it would jeopardise the accuracy of the results of the analysis. However, both brands displayed signs of

autocorrelation and as discussed in Chapter 4, autocorrelation can cause serious errors when performing tests of statistical significance based on a multiple regression analysis model.

Autocorrelation describes a situation where there is correlation between adjacent points in time causing a pattern in the residuals of the analysis. Autocorrelation is especially prevalent when investigating data collected over time since the behaviour of a variable in one point in time is likely to influence the change in that variable in the subsequent point in time. It undermines the accuracy of results because the nature of the relationship between the dependent and independent variable becomes confused with the effect of autocorrelation.

Since the nature of the data violated the inherent assumption of independence of errors, it was concluded that multiple regression analysis could not be used to establish whether the expenditures of different marketing components (4Ps) have an effect on sales. Instead, a model that provided for the time-related characteristics of the data had to be adopted for further analysis.

In a time series regression analysis, provision is made for time-related data characteristics such as trend or seasonality. Dummy variables that counteract the distorting influence of these variables are introduced in order to better analyse the relationship between marketing expenditures and sales. In this study, the effect of seasonality did not impede the residuals of Brand A to a significant extent and once a dummy variable that accounted for secular trend was introduced the model was sufficient to test the relationship.

6.2.1 Conclusions: Brand A

The results of the time series regression analysis for Brand A indicated that the 4Ps of marketing, along with trend showed a significant relationship with sales. However, when investigating the individual components it was found that only place and price (of the 4Ps components of marketing) significantly explained unique variance in sales. Both these components reflected a significantly positive relationship with sales. It appears as if Brand A is in high demand and if the company invests more resource to distribution and makes the product accessible in more places, it would enhance sales. Brand A is the more inexpensive brand of the two included in this study, and non-premium goods often rely on a saturated distribution network and being widely available at a competitive price to drive sales.

Since price also reflected a positive relationship with sales the researcher concluded that the brand in question exhibits price insensitivity since an increase in price does not negatively impact sales. An alternative conclusion could be that the price for the brand is not optimal and that an increase in price positively influences consumers' perception of quality which translates to heightened desire for the brand resulting in higher sales. Since the identity of the brand is unknown, it is difficult to infer which of the possible conclusions is better suited to the product at hand.

Finally, a statistically significant negative relationship between the secular trend component in the data and sales was detected. Once again, there are possible conclusions that can be drawn from such a negative relationship. The product could belong to a category that is predisposed to being either a fad in which case the product will have a short life cycle where sales peak once and then the product becomes obsolete (Levy & Weitz, 2007: 328).

The trended sales data over time indicate that Brand A's sales peak every year around November or December which means that it would not appear that Brand A can be described as a fad. Alternatively the brand could belong to a category that is a fashion product, where the category continually reintroduces new variations of a product to stimulate sales even though each variant has a short life cycle. Once again, since the study focuses on only one brand this could not be the case.

Therefore, a possible conclusion is that Brand A belongs to a staple category. In a staple category the product moves through its life cycle at a relatively slow pace and sales remain fairly consistent year-on-year until the product reaches the decline phase of its life. If Brand A belongs to a staple category (since there are several repeated sales peaks) one can conclude that the product could be in the maturity phase of its life cycle and possibly nearing its decline. Therefore, even though sales peaks exist the overarching trend for Brand A is negative.

The product development expenditures and promotional expenditures did not significantly explain unique sales variance. It appears as if the demand for Brand A is stable and whether or not the company produces more or less of the product does not affect sales directly. Unless the company expands distribution coverage (positive relationship between place and sales) to create demand in new regions sales are likely to stagnate in the market currently served. Again, saturated demand levels further promotes the conclusion that Brand A is currently in a mature phase of the brand's life cycle.

Promotion does not reflect a significant relationship with sales, however if one considers the lagged effect that sales reward from promotion is victim to, Figure 5.4.1 does show the sales of Brand A declining in subsequent months to a decrease in promotional spend. Therefore, the conclusion is drawn that even though evidence suggests that promotion has a lagged effect on the sales of Brand A, such an effect does not significantly explain unique sales variance in the short term.

In summary of the results for Brand A, one can conclude that the 4Ps of marketing, as well as trend do have an effect on sales. Brand A presents itself as a non-premium product that relies on price and distribution to drive sales instead of quality, exclusivity and break-through promotion.

6.2.2 Conclusions: Brand B

In the case of Brand B, the model residuals still violated the acceptable limits once a dummy variable for secular trend was introduced. As such, it was necessary to further account for the time-related characteristics by introducing a matrix of dummy variables that counteracted the effect of seasonality in the data. Once dummy variables for both trend and seasonality were introduced the model was sufficient to test the relationship between the 4Ps of marketing and sales.

The results of the time series regression analysis for Brand B indicated that the 4Ps of marketing, along with trend and seasonality showed a significant relationship with sales. When investigating the results for Brand B, it became apparent that contrary to Brand A, the only component of the 4Ps that reflected a significant relationship with sales was the product expenditures. Both trend and seasonality significantly explained unique sales variance. None of the price, place or promotion components significantly explained unique sales variance.

Since the product expenditures component reveals a significantly positive relationship with sales, it can be concluded that if more units of Brand B is produced more units will be sold; the demand for the brand exceeds the current supply. Furthermore, as noted in Chapter 5, even though the two brands included in this study are comparable in terms of industry and format, Brand B is roughly three times more expensive than Brand A. As such, one can conclude that Brand B is a fairly premium product in the category. The costs of producing the product could pertain to the quality and perceived superiority of the product.

Therefore, instead of producing more units of product B, increasing production expenditures could entail further selectivity of the premium (more expensive) materials used in order to produce the product. This means that the perception of Brand B as being a high quality, premium product can be further capitalised and could positively drive brand sales.

Once again there is a significantly negative relationship between the secular trend and sales. It would appear that like Brand A, the long and short term sales trends are at odds with each other. However, contrary to Brand A, Brand B displays year-on-year growth. During the period under investigation the South African economy experienced a sustained growth period. Due to the premium perception of the brand, Brand B would benefit from a growing economy as consumers are more willing and able to pay the premium price the brand obliges. Therefore, the conclusion can be drawn that despite the initial short term slight decline in the rate of sales growth, the overarching long term trend for sales is positive.

Furthermore, there is also a significantly negative relationship between each of the months (relative to December) and sales. Only February did not display a significant relationship with sales. As depicted in Figure 5.4.2., February is the only other month in the year when sales peak as high as in December. For this reason, the relative difference between sales in February compared to sales in December is not as significant as in other months when sales differ more severely.

Not one of the distribution, price or promotion components of marketing displayed a significant relationship with sales. Due to the fact that Brand B is assumed to be a premium product, distribution and price will not have the same level of importance in driving sales as it does for Brand A. Whereas mainstream or convenience products differentiate the offering based on being readily available at a competitive price, premium products are sought after and bought at the price the product warrants. For this reason, these components do not play as important a role in driving sales of the brand. However, as depicted in Figure 5.4.2 (percentage change in PPI South Africa, July 2001 to June 2005) it is once again evident that the brand appeared to benefit from increased promotional expenditure from July 2003, but the impact of promotion is not significant over the short term.

In summary of the results for Brand B one can conclude that the 4Ps of marketing, as well as trend and seasonality do have a relationship with sales. However, notably, the production expenditure

component constitute the only significant relationship with sales amongst the 4Ps. Brand B presents itself as a premium product that relies on investment in the product to drive sales for the brand.

Therefore, in conclusion, the relationship between marketing expenditures and sales appears to vary between products. The focus that a brand attributes to the different components appears to be dependent on the nature of the product (i.e. whether it is a premium product or not) which dictates the level of investment into a particular component. In the case of Brand A, it was apparent that the brand was a budget offering and as such the sales growth was driven by expanding distribution and maintaining the optimal price. In the case of Brand B, the brand appeared to be a more premium offering and contrarily the sales growth was driven by investment in the product.

However both brands were significantly affected by time-related characteristics (trend or seasonality). Therefore, a further conclusion can be made that if data is assembled over time, it is imperative to account for time-related characteristics in the data and conducting a multiple regression analysis might not be suitable for the purpose of investigating marketing phenomena. In cases where data is collected over time, a time series regression analysis that accounts for time-related characteristics in the data is more suitable to investigate the relationship between such variables.

6.3 RECOMMENDATIONS

At the outset of the study, the focus on marketing accountability and the transparency of marketing return on marketing investment was voiced. It followed that if marketers can expand their skills base to include financial analysis of the actions and tactics that they employ, they would be better equipped to engage top management into a meaningful conversation regarding the role of marketing investment within a company. As stated in Chapter 2, Baker (2000: 317) proposes that the marketer's goal should be to find a profitable mix that combines elements of the 4Ps, conforming to market forces and impacts on business strategy. Moreover, marketers should align strategies and initiatives to the discipline of value based management (see Chapter 3) in order to maximise the shareholder value created. It is therefore vital for marketers to understand the relationship between marketing expenditures and sales as profitable sales generation is a key driver of value.

In this study, the results of time series regression analysis between marketing expenditures and sales revealed that the nature of the relationship between these components and sales are largely dependent on the characteristics of the product.

Brand A appeared to be a budget offering in the category and as such the most significant components of the 4Ps appeared to be distribution and price. Increasing the distribution of the brand will drive sales. It was also noted that Brand A appears to be in the maturity phase of its life cycle and could possibly be approaching the decline phase since the year-on-year sales peaks were lower every consecutive year. Since it is evident that more growth can be achieved through increasing distribution the brand life could be extended by reaching more redistribution outlets.

However, care should be taken in order to develop the optimal distribution strategy. There is a trade-off between the number of outlets a product is distributed to and the real volume (in number of units sold) that moves through the specific outlet. In essence, it might not warrant reaching smaller volume outlets as the cost of servicing them does not equate to the sales revenue returned. Therefore, if the marketer can understand the sales variance created through additional distribution the marketer will be better equipped to balance the trade-off and ultimately strive toward increasing distribution profitably.

Furthermore, the price component of the 4Ps for Brand A significantly explained unique variance in sales. There appears to be room for the brand to increase the sales price of the product without hindering the number units sold adversely since the brand price appears to be inelastic (see Section 5.4.3). The optimal sales price for the brand is the point between where additional profit is generated by the increased price without deflating the number of units sold to the extent that absolute sales start declining. Price can also impact the quality perception of a product, if a product is perceived to be too inexpensive the quality of the product will be questioned. In the case of Brand A the optimal price point should be further explored in order to optimise profit and relay the right quality cues for the product.

Neither the product development expenditures nor promotion appeared to significantly explain unique variance in sales. Therefore, in the case of Brand A the focus should be shifted away from these components and skewed towards the distribution of the product. In this way, the understanding of unique sales variance created through marketing expenditures will put marketers in good stead to formulate the optimal marketing strategy.

Contrary to Brand A, Brand B appeared to be a more premium offering. Accordingly, the only significant relationship that was detected between marketing expenditures and sales was production expenditures. Distribution and price appears to be less important with premium offerings as consumers will seek out the product and pay the required price as they perceive the additional effort required to be justified by the quality of the offering. To this end, once again the understanding of the relationship between the 4Ps and sales variance will aid the marketer in directing resource and efforts to the most profitable components. In the case of Brand B the quality of the offering should be preserved and focus and attention should be placed on manufacturing the product.

The optimal allocation of resources to the different components of the 4Ps is enabled through an understanding of the unique variance created in sales by such components. Marketers should equip themselves with an understanding of managerial accounting principles and the guidelines for cost allocation amongst these components. In turn, marketers will be able to analyse which of the components are the most lucrative to invest resources in, in order to drive profitable growth.

6.4 LIMITATIONS AND FUTURE RESEARCH

Due to the nature of this secondary data analysis, there are inherent limitations to the study. The analysis of the data was dependent on the characteristics of the data supplied. In Chapter 2 (see Figure 2.5) a depiction is presented that summarises marketing activities into the 4Ps components of marketing as classified by Kotler and Keller (2006: 19). In this study, the data available did not encompass all of these activities and as such the 4Ps components included in this study reflect the activities or expenditures available instead of the complete activity set.

As marketers create a marketing mix strategically suited for an individual brand, it is unlikely that one brand will incorporate all possible marketing activities in order to drive brand growth. Yet unless all alternatives are evaluated it could result in not recognising the concern raised by Ambler (2003) in Chapter 3 (see Section 3.3.1) around efficient versus effective marketing. If a marketer measures only the historic actions taken the marketer will not be able to evaluate the lucrativeness of alternatives.

No description of the actions included as promotional expenditure was available. Promotional expenditures encompass a wide variety of above-the-line and below-the-line marketing actions and some of these actions are likely to have a larger impact on sales than others. If this component can be further broken down to speak to specific actions, more clarity will be generated around the impact of promotion on sales. Also, the impact of promotion on sales is often subject to a lagged effect, as it influences brand equity in the interim which ultimately translates to sales. Further analysis on the short, medium to long term effects of promotional expenditures on brand equity will shed more light on the process in which promotion impacts the bottom line.

The brands and the industry in question were not revealed. Therefore, the inference of findings was limited to assumptions about the nature of the brand and the resulting brand strategy. Brand identity speaks to the fundamentals of the brand strategy and if the brands are revealed it will enable more accurate interpretation of the findings.

Once the relationship between promotion and brand equity is better understood, the subsequent relationship between brand equity and sales can be further explored to fully understand the interaction between promotional marketing expenditures and sales. Ideally such an investigation would also need to be conducted over an extended time period since the brand equity could take a long time to be nurtured and if one is to fully understand if the investment into brand equity is successful, the appropriate time frame would have to be considered. Further exploration of the promotional expenditures component is key to understanding the dynamics between short, medium and long term effects of different promotional activities and sales.

In this study, an overview of the economic landscape revealed that due to the relative consistency in the South African economy over the period under investigation (see Section 5.4.1) it was not necessary to include exogenous influencing variables such as gross domestic product (economic growth), inflation, consumer spending or population growth. If a longer time frame is adopted, these factors would become more significant as they are likely to be more volatile and influential on product sales over an extended period of time.

Moreover, the number of observations ($n = 48$) did not allow for any future forecasts to be made using the model. A longer time frame would allow such forecasts and modelling different variables would allow marketers to create hypothetical outcome scenarios to gauge the impact of different

levels of investment on sales. Forecasting would also allow for further refinement of the model, as outcomes over time can be sense checked against the previously predicted forecast.

The understanding of the unique sales variance created by the different components of marketing expenditure serves as a first step to understanding the impact of marketing on the bottom line. The development of this body of theory should strive to quantify marketing investment and return on investment in a way that will allow marketers to speak a financial language in boardrooms. To this end, possible future research areas could focus on incorporating financial analysis metrics such as the net present value and return on investment. Ultimately, the model depicted in this study serves as a starting point from which to build a more robust measurement tool incorporating financial and non-financial marketing metrics that will serve to justify the investment into the marketing of a brand.

6.5 RECONCILIATION OF OBJECTIVES

The problem investigated in this study was to consider, through creating an understanding of the relationship between marketing expenditures and sales, the role that marketing plays in generating sales. The relationship between the marketing expenditures and sales was investigated in response to the call of Rust *et al.* (2004) for the development of aggregate-level models that link marketing tactics to financial impact.

The objective of this study was to establish whether there is a relationship between the expenditures of different marketing components (4Ps) and sales. To this end the research concluded that the proposition posed was in fact true and that marketing expenditures do have an effect on the sales of a brand albeit true that those different components vary in importance depending on the nature of the brand and subsequent marketing strategy. However, notably, there are other elements that have to be considered such as trend and seasonality that are inherent time-related factors to data collected over time.

6.6 SUMMARY

This study set out to explore the relationship between marketing expenditures and sales of a brand. In this final chapter the results of the time series regression analysis were discussed and

recommendations were made based on the findings. The proposition that the expenditures of the different components of marketing have an effect on sales was found to be true. The chapter provided details on the interpretation of such a finding and suggestions were made on how the understanding of the abovementioned relationship will assist marketers in brand strategy building. Finally the limitations inherent to the study were stipulated and possibilities for future research were posited.

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APPENDIX i

Seasonality										
1	2	3	4	5	6	7	8	9	10	11
0	0	0	0	0	0	1	0	0	0	0
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0	0	0	0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0
0	1	0	0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	0	0	0	0
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0	0	0	0	1	0	0	0	0	0	0
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0	0	0	0	0	0	1	0	0	0	0
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