THE PURCHASING BEHAVIOUR IN THE DETERGENT INDUSTRY: A PMB CASE STUDY ON THE FEASIBILITY OF STARTING A NEW DETERGENT BUSINESS VENTURE

by

DEEPESH NAVNITLAL GHELA
B. SC (Chem. & Chem. Tech.), PGDIP (Mgt) (Natal)

Submitted in partial fulfilment of the requirements for the degree of Master of Business Administration
at the School of Management, UKZN, Pmb

November 2006

Supervisor: Professor D Mahadea

Abstract

This study analyses the purchasing behaviour of households and briefly on industrial consumers with regard to their detergent purchases. Following from this analysis, the scope for a new detergent business venture will be investigated. The local industry has a plethora of detergent manufacturing companies supplying the retail and industrial markets, thus an appropriate analysis and strategy developed from this study will enable a new detergent business venture to have an improved understanding of the detergent industry in Pietermaritzburg leading to some minimisation of the risks for potential detergent entrepreneurs. The objectives for the study is detailed below.

Primary Research Objectives:

1. To examine whether income accounts for household purchasing preferences between branded and non-branded detergents.
2. To determine whether location is a factor that must be considered in the marketing of detergents.
3. To examine whether there are gender differences in the purchasing behaviour of detergents among households.
4. To determine which are the major factors that influence detergent buying behaviour among industries.

Secondary Research Objective:

To determine whether there is scope for the introduction of a new detergent venture among households in Pietermaritzburg.

This study found that income accounts for differences in purchasing of detergents. The manufacturer of detergents needs to be aware that location is a factor that must be considered in the marketing of detergents. Branded detergents carry a premium price whereas non-branded detergents are cheaper. Correspondingly, the marketer must match the type of detergent product to the consumer profile of the location in which the business is operating. It was found that gender does not account for differences in monthly

expenditure on detergents. Price and quality of detergents were found to be important characteristics for both the household and business user.

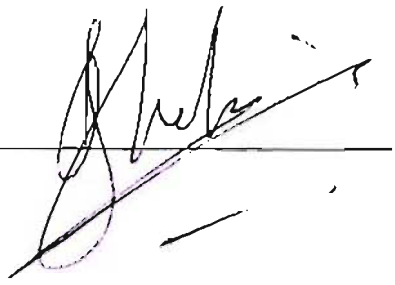
In addition, it was found that consumers were willing to support a new detergent business venture in Pietermaritzburg. The major variables influencing detergent brand choice in the Pietermaritzburg market seem to be attitudinal variables such as perception regarding the efficacy (QUALITY) of the brand, closely followed by the perception on the value-for-money (PRICE). Field level promotional activities such as price-offs, freebies associated with different pack sizes of the same brand also seem to impact the choice of the brand, although the impact was low. Base price reduction is generally resorted to quite infrequently and hence a price elasticity measure may be found to be statistically insignificant. A critical result drawn from this study is the importance of attitudes in affecting behavior in the purchase of detergents. In the South African market, it is generally believed that brand attitudes are primarily influenced by advertising. If this assertion is assumed to be true, this research makes a case for better management of consumer attitudes through the deployment of appropriate advertisements using the correct media (Banerjee, 2004: 3).

The major recommendations from this study found that manufacturers of household detergents need to dedicate resources to print media when advertising their products. Targeting the most appropriate consumer and capturing potential consumers by television should be looked at by marketers (Dutta-Bergman, 2006: 103). Liquid detergent manufacturers need to major more on the price of the product and the quality. These two factors are critical in ensuring a new detergent business venture is successful and sustainable. Davis (1993: 19) punts 'green marketing' as one of the strategies that may shift consumers to purchase products. Accordingly, companies that can market a 'green' detergent product would have a greater chance of penetrating the market, and gaining market share from the dominant and larger multi-national detergent companies.

DECLARATION:

I declare that *The Purchasing Behaviour in the Detergent Industry: A PMB Case Study on the Feasibility of Starting a New Detergent Business Venture* is my own work, that it has not been submitted before for any degree or examination in any other university, and that all the sources I have used or quoted have been indicated and acknowledged as complete references.

Deepesh .N. Ghela October 2006

Signed: 

ACKNOWLEDGEMENTS

I wish to thank the following individuals for their time and effort in helping and supporting me in accomplishing dissertation.

Professor D. Mahadea for his invaluable guidance, time, understanding and help on this dissertation.

Harshna Munglee for constantly motivating me throughout my career. Thank you for all the time spent supporting me and the time waiting for me. Thank you for helping me with my work, and sacrificing your time. I appreciate it and love you.

To my parents, Navnitlal and Bhanoo Ghela - Thank you for inculcating in me the need to pursue education as a way to better my life. Thank you for guiding me on that first day at school and in-graining in me that learning is a life-long journey.

Shaun Ramroop for conducting the statistical analysis.

TABLE OF CONTENTS

LIST OF FIGURES:

LIST OF TABLES:

CHAPTER 1

INTRODUCTION

1.1. Background

According to President Mbeki, in his State of the Nation address, "South has entered the Age of Hope" (Bishop, 2006: 1). South Africa's economy is booming and the economic growth rate sits just under 4.5% (Mokopanele, 2006: 8). In addition government has committed itself to investing billions of rands into the economy over the next 5 years. The aim of this cash injection is to increase the economic growth rate to well over 6% over the next 5 years (Mokopanele, 2006: 8). It is with this purpose in mind that the researcher has set out to establish a new detergent business venture in Pietermaritzburg. However, establishing a new detergent business venture requires a thorough analysis of the current market, the current buying trends of consumers and strategies that would allow a new firm to thrive in the face of what Kennedy (2002: 2) states is heavy competition.

Porter (1990: 25) states that entrepreneurship is at the heart of economic advantage and thus the government of South Africa is actively promoting the small, medium and micro enterprise (SMME). Entrepreneurship is a process of innovation and new-venture creation through four major dimensions – individual, organisational, environmental, process – that is aided by collaborative networks. The entrepreneur is a catalyst for economic change and one who uses purposeful searching, careful planning, and sound judgment when carrying out the entrepreneurial process. Uniquely optimistic and committed, the entrepreneur works 'creatively' and 'innovatively' to establish new resources or endow old ones with a new capacity, all for the purpose of creating wealth (Kuratko & Hodgetts, 2001: 45).

1.2. Motivation

According to Euromonitor International (2005: paragraph 1), South Africa's household care market is relatively mature with some changes in volume and value growth. For household care overall growth in retail value was achieved, up from R5.8 billion in 2003 to R6.1 billion in 2004. Compared to the previous years 4.9% growth in retail volume for powder detergents the rise of 5.2% in 2004 is seen as strong and positive growth. The same is true of liquid detergents which showed a positive growth from 7% in 2003 to 7.6% in 2004. Laundry care is seen as the most important sector of the household care market, with strong positive growth in most sub-sectors over the review period, and stable growth expected over the next 5 years.

Euromonitor International (2005: paragraph 2) states that with new product innovation, improved marketing and advertising as well as improved packaging in areas like laundry care, surface care and dishwashing products, a detergent manufacturing business would be able to consistently gain market share. Using this a the basis, I believe that target market positioning, product education, strategising and thinking out-of-the-box will allow one to start a business venture in the detergents industry and sustain the venture. Product quality will no doubt play a leading role in the battle to obtain market share. In addition, capturing of the industrial market share can be attained with technical advice on the use of the product. All too often, many users assume that any detergent will do a cleaning job; this assumption is indeed false (Hargreaves, 2003: 3). The researchers motivation to succeed in the highly competitive detergent industry, and the growth potential forecasted by Euromonitor International (2005: paragraph 1), leads the researcher to believe that there would most likely be space for a new detergent business venture in Pietermaritzburg. This study focuses on this and the next section details the objectives of this study.

1.3. Research Objectives

Primary Research Objectives:

1. To examine whether income accounts for household purchasing preferences between branded and non-branded detergents.
2. To determine whether location is a factor that must be considered in the marketing of detergents.
3. To examine whether there are gender differences in the purchasing behaviour of detergents among households.
4. To determine which are the major factors that influence detergent buying behaviour among industries.

Secondary Research Objective:

To determine whether there is scope for the introduction of a new detergent venture among households in Pietermaritzburg.

1.4. Benefits of the Research

The literature reviewed revealed no implicit study on the purchasing behaviours of consumers with regards to detergents or any findings on the feasibility of starting a new detergent business venture. Current empirical research specifically focussed on large organisations internationally. No published research could be found which specifically focussed on small and start-up organisations in South Africa. Due to the lack of a comprehensive analysis on the detergent industry in South Africa, and more especially Pietermaritzburg, this study would provide recommendations on the purchasing behaviour of households. In addition, this study will also benefit other (or potential) manufacturers of detergents as well as small and medium enterprises' (SME) struggling to manage their detergent business. Furthermore, the strategies recommended would allow the detergent firm to major on those specific strategies to attain competitive advantages against the larger detergent companies currently active in South Africa.

1.5. Chapter Plan

The current chapter described the background and motivation for the study. The objectives were also presented with some literature by an international market research company. The remainder of this thesis is divided into the following sections:

Chapter 2: The Detergent Industry and Consumer Purchasing Behaviour

This chapter will provide a theoretical discussion the international market of detergents and soaps. This is funneled to the South African market, where key brands and its associated market shares are presented. A discussion on two of the world's largest detergent manufacturing firms is presented, together with the advertising budgets of a select few firms. The remainder of the chapter deals with the body of knowledge on consumer purchasing behaviour and its relatedness to detergents. A decision making model is presented, which consumers use to make their purchasing decisions.

Chapter 3: Entry Route and Strategy

This chapter discusses the start-up entry route the researcher has chosen for a detergent business. It discusses various approaches in a start-up phase and the strategy the start-up firm can adopt. Furthermore, the advantages and disadvantages of the start-up entry route is discussed. The remainder of the chapter discusses strategic management as a way for attaining a competitive advantage for the new detergent business venture.

Chapter 4: Research Methodology

This chapter provides a description of the problem statement and the various hypotheses linked to the primary and secondary research objectives associated with this study. The choice of research methodology is discussed with reference to the sample, data collection instrument, data analysis, and the statistical tests used.

Chapter 5: Findings and Discussion

This chapter presents the findings from the empirical research ranging from general findings to specific, statistical findings. The results are initially reported on a question-by-question basis, matched to the questionnaire used to collect the data.

Chapter 6: Conclusions

This chapter presents the studies major findings.

Chapter 7: Recommendations, Future Research and Limitations of the study

The study concludes with the recommendations, together with a discussion on future research proposals and the limitations of this study.

1.6. Conclusion

The study found that the critical factors that influence detergent purchasing among households and business users was price and quality of the detergent product. Any company wishing to trade or start a business in the detergent industry should take cognisance of this and actively work with this in mind. However, the detergent manufacturer would need effective strategies to sustain the market share that can be attained if the product meets and exceeds the customers needs.

The next chapter is devoted to the detergent industry and the latter part of the chapter reviews the literature on consumer purchasing behaviour.

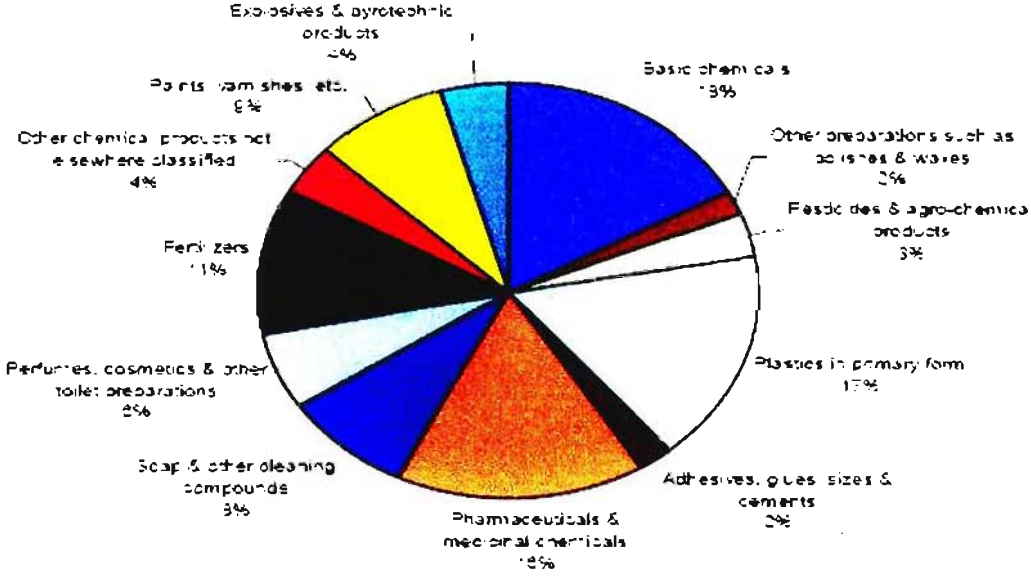
CHAPTER 2

THE DETERGENT INDUSTRY

2.1. Introduction

This chapter starts with a basic overview of the world detergent market. From this large perspective, the chapter focuses on the South African detergent industry. It is important to note that the chemical industry worldwide is extremely secretive, and correspondingly the detergent industry. The chemicals sector is highly complex and diversified, comprised of broadly twelve industries. Most recent disaggregated data shows that basic organic and inorganic chemicals, are clearly the largest individual contributors to output, accounting for just over 50% of the sectors output (May, 2002: 8). Detergents are a class of chemical compounds that fall into the chemicals manufacturing sector. This can be viewed in figure 2.1.1 below.

Figure 2.1.1: Composition of the chemicals sector



(May, 2002: 8)

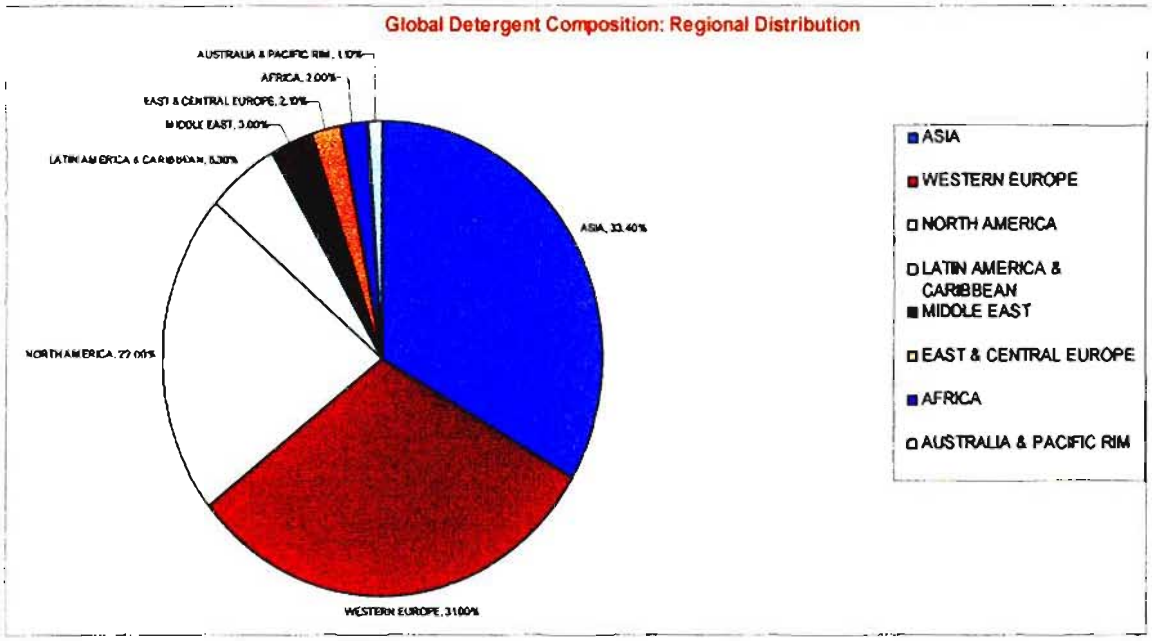
2.2. World Detergent Market

Market analysis by Euromonitor (2000: paragraph 1 - 20) shows that in 1999 soaps and detergents together represented around 12.4 % of consumer expenditure on household goods in industrialized countries and between 2.6 % to 5 % in the developing world. For the developed economies this reflects the growing maturity of the market and intense price competition in the market place. The report however suggests that there is much greater scope for marketers to induce consumers in the emerging markets to raise consumption levels. The same analysis showed that bar and liquid soaps accounted for around 40% of the personal wash sector and around 7% of the total personal care market worldwide in 1999.

2.2.1. The world market for soap and detergents

The world market for soaps and detergents was worth US$ 88 billion in 2000. Asia, Western Europe and North America account for about 87% of total detergent consumption (Euromonitor, 2000: paragraph 15). Global soap and detergent consumption has grown by 29% in the five years to 2000. Figure 2.2.1 shows that the primary drivers of this sales growth were Western Europe (± 31%), Asia (± 59%) and Latin America and the Caribbean (± 41%). During the same period, the mature North American market expanded by just 14%, while the impact of economic recession has severely curtailed sales in Australasia and the Pacific Rim during the latter 1990's. The Middle East and African regions expanded sales by approximately 72% and 65% respectively during the period. Overall it appears that emerging markets will be a key driver of growth in the soap and detergent market (Euromonitor, 2000: paragraph 17).

Figure 2.2.1: Global Detergent Composition



(Datamonitor, cited in London School of Hygiene, 2002: 13)

In absolute terms, the US market continues to dominate the world stage, although the Japanese market has steadily grown stronger during the same period. In Eastern Europe, the liberalization of economies such as the Czech Republic, Hungary and Poland have had the effect of accelerating the sales development, while France continues to make a strong contribution to the European total. Sales of detergents have received strong impetus from recent economic developments in China and India, where continued future expansion is anticipated. The Indian market also benefited significantly from the dramatic 1995 reduction of excise duty rates on soaps and detergents which effectively doubled the market in a single year (London School of Hygiene, 2002: 13).

The global market for soaps and detergents is dominated by a small number of multinational companies with strong brand identity and enormous advertising budgets. The top global players include Unilever, Procter and Gamble, Colgate Palmolive and Johnson & Johnson, to name a few. There is cut-throat competition between these multinationals. Important regional players include Beiersdorf in Europe, the Kao Corporation in Asia-Pacific, Paterson Zochonis in Northern Africa and Nirma and Godrej in South Asia (London School of Hygiene, 2002: 14).

2.2.2. Markets in the developed world

The world market for soaps and detergents has continued to experience steady growth since 1995 despite the maturity of the products, with retail sales rising from US$68.4 billion in 1996 to US$ 88.2 billion in 2000 (Mintel, cited in London School of Hygiene Report, 2002: 14). The market comprises soaps, fabric washing products, dishwashing products and household cleaning products. The greatest growth came from soaps with an increase of 21% over the same period. The market is characterized by growing maturity and fierce competition between major brands. Market expansion has been attributed mainly to new product developments, such as liquid detergents for hand-washing, dishwashing, and fabric care. This is supported by heavy media advertising and promotional activity by the major branded manufacturers. In 2005, Unilever had total advertising expenses of R438 million (Shevel, 2006: 15). The small business has a difficult time in trying to break the stranglehold of these multi-national companies, as small businesses cannot compete with such cash-rich companies or their dominant product positioning in the mind of the customer.

The increasing trend toward value-added products has also boosted market value. To counter the growing threat from supermarket and chemists' own labels which have become increasingly sophisticated, leading manufacturers have stepped up their new product development programs with brand extensions and re-launches of core brands, focusing on added value and convenience (for example, liquid dishwashing detergents with antibacterial, and deodorizing properties). Growing environmental concerns have also led to the development of eco-friendly products using natural ingredients which are biodegradable, including the use of biodegradable packaging and refill packets. The industry is constantly researching products which maintain performance characteristics, but which reduce environmental impact. For example, phosphate-based products have been banned and there has been a move away from chlorine bleaches to non-chlorine products based on hydrogen peroxide and borax (London School of Hygiene, 2002: 14).

In the toilet detergent market, new product innovations such as liquid detergents, soap-free synthetic detergents and no-wash soaps have taken an increasing share of the market from

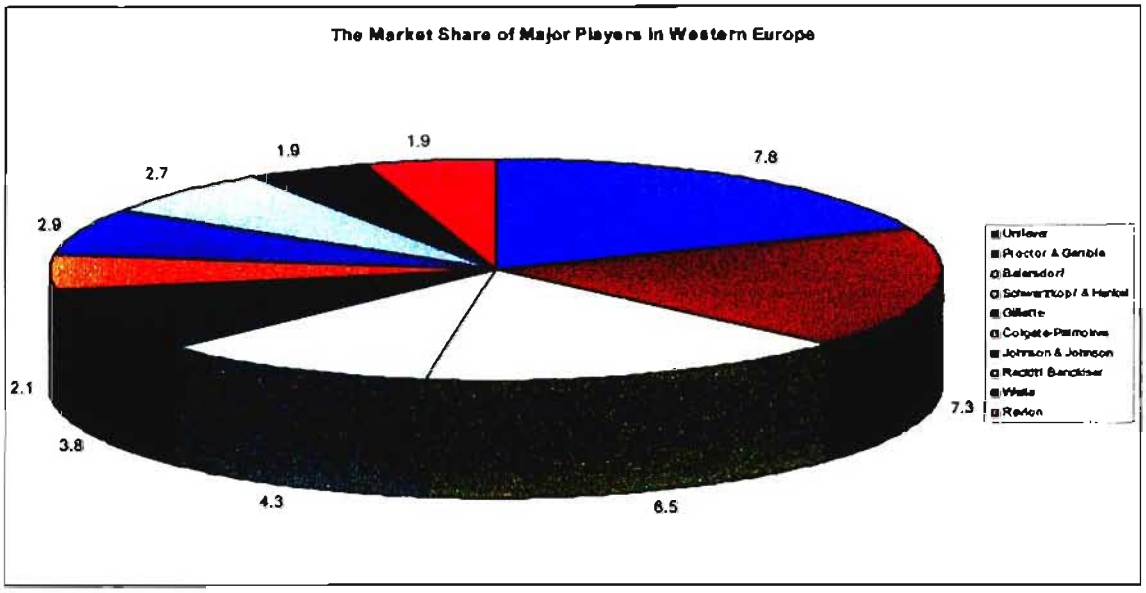
traditional soap bars and acid-based detergents. The North American and European markets are likely to slow down during the next few years. This is due mainly to price competition among the major market players, the growing maturity of products and consolidation of own-label brands by the large supermarket chains like Wal-Mart, Tesco, and ALDI (London School of Hygiene, 2002: 15).

2.2.2.1 Central and Eastern Europe

In 1999 total consumption of detergents was estimated at US$222.2 million. The potential market is estimated at about $US663.8 million. Initially, as detergents were imported from the West, the purchasing behaviour of consumers was favorable. However, sentiment has changed, thus causing a reduction in consumer spending power on detergents. However, demand has been constant for some detergent products, and remains unsatisfied, due to a lack of products on the market. The demand for detergents is expected to decline as expenditure on personal-care products increase (Datamonitor; cited in London School of Hygiene, 2002: 32 - 33).

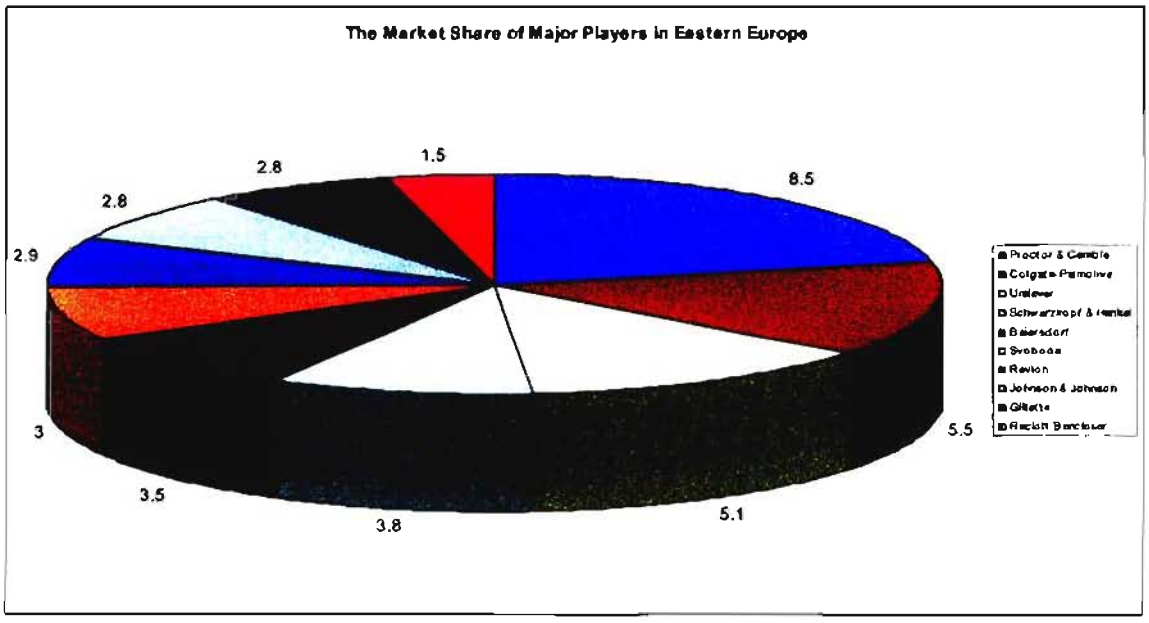
The total consumption of detergents in Central and Eastern Europe in 1999 was estimated at US$222.2 million and accounted for almost 50% of the total market share. The potential market for detergents in this region is estimated to be around US$663.8 million. Multinationals operating in the market report rates of growth in demand as high as 25% annually for soap and detergent products in the Visegrad countries (Czech Republic, Hungary, Poland and Slovakia). The rapid growth of imports of soap and detergents into the region from the West, was initially met with an enthusiastic response from consumers who were hungry for world -famous products. Initial enthusiasm has since been dampened by the drastically reduced consumer spending power resulting from market reforms. However, growth in the consumption for some soap and detergent products indicate that demand is still high and remains unsatisfied because of a lack of products on the market. The proportion of total expenditure on detergents in this sector is expected to decline from over 60% from the 1999 levels to around 36% in the next 3 years, as expenditure on personal-care products increases (Datamonitor; cited in London School of Hygiene, 2002: 33).

Figure 2.2.2.1.1: Displays the market share of the multi-national soap and detergent companies in Western Europe



(Datamonitor; cited in London School of Hygiene, 2002: 33)

Figure 2.2.2.1.2: Displays the market share of the multi-national soap and detergent companies in Eastern Europe



(Datamonitor; cited in London School of Hygiene, 2002: 33)

2.2.3. The market in developing countries

The market for soap and detergents has enjoyed healthier growth in developing countries than in developed countries. Wide and growing income differentials exist in developing countries and each segment of the population consumes the products it can afford while aspiring to a better product at a future date. This, together with the sheer increase in population, has been the driving force for the detergent industry (Euromonitor, 2005: 3).

It has been found that in developing countries, individuals use a single detergent to fulfill all their washing needs. Accordingly, a single detergent product may serve to wash clothes, surfaces and utensils as well as hands, from time to time. Despite the introduction and increasing use of laundry powders and liquids in these markets since the early 1970s, washing with laundry bars, and to a lesser extent with detergent pastes is still common practice in many developing countries. The fabric washing market which was dominated for 20 years by fatty oil-based washing bars made in the organized industrial and cottage industry sectors still exists to a very large extent. The copious availability of palm oil in many tropical and sub-tropical countries continues to stimulate the industry's growth in these markets. Most people still use bar soap with brands such as Sunlight, Carbolic, Key-Soap, 501, etc (Euromonitor, 2005: 2).

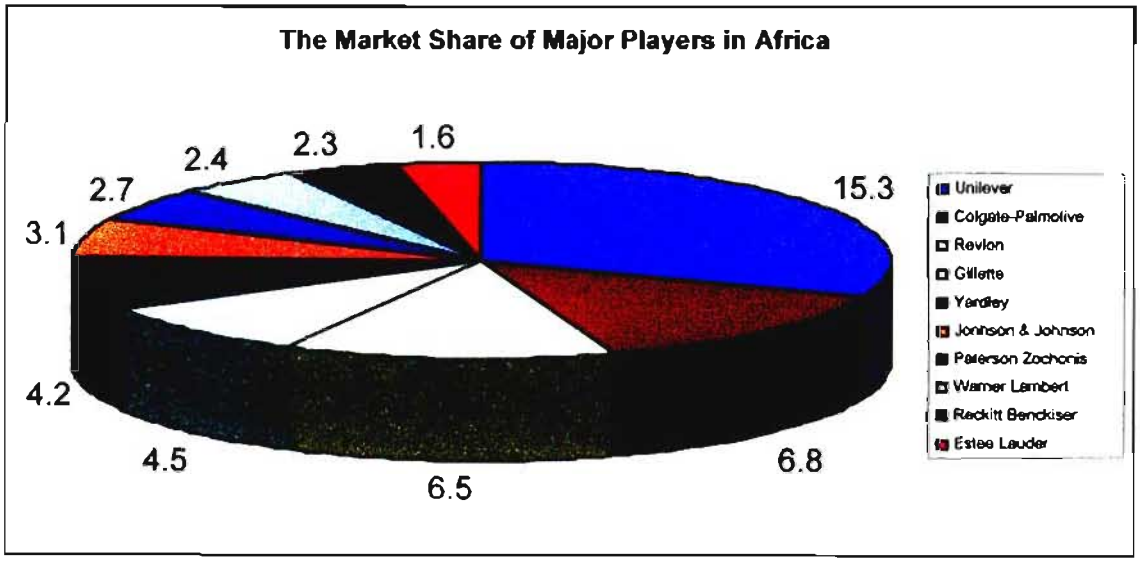
2.2.3.1. Africa

Kennedy (2002: 2) states that Unilever dominates the market in Africa, and Paterson Zochonis (more usually known by its Cussons brand name) dominates the West African market. In West Africa, market penetration of soap and detergents is estimated at 98%, due to strong hygiene habits and a large raw material base. Production tends to be localized for economic reasons. Local detergent manufacturing is strong in rural areas, with 10-15% of detergent in local markets being made by local businesses, rather than multinationals.

For the reason of economies of large scale production, the multinationals operating in the region have localized their production facilities in one or two countries from where they serve the rest of the African market. For example, Procter & Gamble supply the

continent's markets from its South African plant. Key Soap is the most popular bar for laundry requirements while Lux, Rexona and Geisha are the premium brands of toilet soap most available on the market. Sunlight, Guardian and carbolic soap are most common in the mass market segment (Datamonitor; cited in London School of Hygiene, 2002: 32). The categorisation of soap into toilet and laundry soap in Africa seems to be only a matter of convenience as most consumers use laundry bars, body and crockery detergents interchangeably. Local soap manufacturing seems to be pervasive especially in the rural areas. Unilever estimates that between 10-15% of the soap sold in most African markets are made by businesses other than the multinationals (Unilever, 2005: paragraph 1 – 10).

Figure 2.2.3.1.1: Displays the market share of the multi-national soap and detergent companies in the African Market



(Datamonitor; cited in London School of Hygiene, 2002: 32)

2.2.4. The World's Two Major Detergent Manufacturers

2.2.4.1 Procter & Gamble

Country of origin and base: USA

Procter & Gamble (P&G) is one of the most diversified consumer goods business's in the world. Since 1985 the company has embarked on a programme of rapid expansion through a series of acquisitions to establish itself in a number of new cosmetics and toiletries markets. The company claims to be the world leader in the shampoo, laundry products and feminine protection markets. It created the very successful concept of "soap opera" by sponsoring radio and television dramas targeting women (London School of Hygiene, 2002: 32).

2.2.4.1.1 Operating Structure

In July 1995 P&G changed its organizational structure to move away from its previous focus on two regions (the USA & international) to four (North America, Europe, Middle East & Africa; Latin America & Asia). The aim of this operating change is to leverage global technologies and local strengths and to re-apply them around the world. The company divides its business into six segments of which the Laundry & Cleaning (the largest, accounting for over 30% of turnover in 2000) is of the most interest to this research (London School of Hygiene, 2002: 35).

P&G's Tide brand is number one in both the U.S. liquid and powder detergent markets with 24% and 34% unit shares, respectively. Tide liquid laundry detergent had sales of US $935 million for the year ended November 28, 2004, up 3.1% from the previous year. P&G also owns detergents Cheer and Gain, which compete with other economy brands, and mid-tier brand Era. P&G had combined annual sales of US $620.4 million in powder detergents for 2004, sweeping the top three spots with Tide, Cheer, and Gain. P&G continued to edge out the competition in December, gaining a 55.4% share in the liquid laundry detergent market and 75.2% share of the powder detergent market. Unilever's

share declined 1 percentage point to 16.5% in liquid detergents, and 1.1 percentage point, to 6.7% in powder. P&G's dominance of the laundry detergent market has forced other companies to seek out other areas of growth (London School of Hygiene, 2002: 36).

2.2.4.1.2 Corporate Strategy

Procter & Gamble's stated strategy is to build consumer loyalty to its brands throughout the world with superior products at competitive prices. This requires continual innovation, and frequent price reductions. This has been achieved by eliminating inefficient promotion costs and reducing list prices. The company is starting to concentrate on building cost-effective global brands by minimizing minor regional variations. It has also pursued a policy of introducing economy-priced brands in markets where consumer purchasing power is restricted. For example, in India the company introduced Camay Popular, an economy priced version of the standard Camay bar soap in partnership with Godrej, a national Indian company, although this has not been successful, due to the collapse of the arrangement with Godrej (Proctor & Gamble, 2006: 158).

2.2.4.1.3 Future strategy

Procter & Gamble's aim is pursue its strategy of developing strong brands at the best possible price in as broad a geographic spread as possible. The company's recent reorganization and other activities indicate that it will continue to look for strong positioning in each market in which it operates, but this will require significant investment during the next few years (Proctor & Gamble, 2006: 50).

2.2.4.2 Unilever

Countries of origin and bases: UK/ Netherlands

Unilever, the Anglo-Dutch consumer goods company is among the world's largest soap and detergent manufacturers. It is unusual in its structure, which involves two parent companies; Unilever NV and Unilever PLC. This structure relates back to the 1930s merger of the Lever Soap company with the Dutch edible (oil) fats company NV Margarine Unie. Unilever started its involvement in the soap and detergent market with the manufacturer of Pearls toilet soap, a major force in the soap industry. Since the mid 1980s Unilever has further developed a strong position in the soap sector through acquisition of various established brand names. Unilever has been building its soap and detergent activities in the developing regions through acquisition. In Eastern Europe, it acquired PTZ, the Czech state-owned producer of toilet soaps and skincare products in 1992. In 1995 the Singapore based Hazeline company was acquired from Glaxo for US$150 million. This has strengthened Unilever's skincare position in China and South East Asia (London School of Hygiene, 2002: 36).

2.2.4.2.1 Operating structure

Unilever has operations in more than 90 countries which provide it with a presence in every continent. Apart from direct presence, Unilever's brands are on sale in a further 90 countries through import arrangements and agreements with local companies. Europe accounted for over half of the company's turnover and operating profit in 2000. When sales from European markets and North America are combined, they account for two-thirds of global turnover. The business coordinates its activities through five divisions, namely

(i) foods (which accounts for 50% of Group turnover in 2000)

(ii) detergents,

(iii) personal products, including soap (accounting for 14% of Group turnover in 2000)

(iv) specialty chemicals, and

(v) other products (London School of Hygiene, 2002: 36 - 37).

2.2.4.2.2 Corporate strategy

The broad ranging interests of Unilever are underpinned by a strong corporate strategy which focuses on the core activities and brands. The company has pursued a selective acquisition and disposal strategy with net expenditures on disposals and acquisitions amounting to over US$ 1billion in 1999. The company is also involved in joint ventures (JV) where this method is proved to be the most effective means of entering a new market. For example, in Vietnam the company operates through two JV agreements. Unilever also seeks to expand through organic market development where appropriate. The key to the company's strategy is the importance of product innovation. A world wide network of innovation centres is in place which allows rapid transfer of ideas and the identification of tailoring products required for local markets. While the company enjoys the benefit of owning a number of global brands, its strategy emphasizes the importance of local requirements. The company is keen to position itself as the "Multi-local Multinational" (London School of Hygiene, 2002: 37).

2.2.4.2.3 Future strategy

Unilever is likely to continue to strengthen its presence in and further develop its detergent and personal-care product lines. The company will continue to use the Dove and Lux brands to expand into new skincare related categories. These brands have strong consumer loyalty which will allow the brands to cross sector barriers with relative ease (London School of Hygiene, 2002: 37).

2.2.5. Advertising and Branding of the World's Largest Soap and Detergent Manufacturers

Table 2.2.5.1: Indicates the Total Advertising Spend of Some of the Largest Soap and Detergent Manufacturer's in the World

Multinational company	Global advertising spend (SUS)	Advertising spend outside USA (SUS)	Position in world for advertising spend
Unilever	3.7 bn	3.1 bn	1
Procter & Gamble	4.7 bn	3 bn	2
Colgate Palmolive	725m	591m	21
Gillette	408m	243m	49
Subsidiary company	*Total spend*		*Position in country*
Hindustan Lever (subsidiary of Unilever)	241m		1
Procter & Gamble (India) (subsidiary of Procter & Gamble)	38.6m		2

(London School of Hygiene, 2002: 19)

Multinational companies advertise on television, radio, the internet, in print, posters, direct mail, sponsorship and public relations campaigns. In 2001 Unilever doubled its spending in on-line advertising. The major players in the international market control the major brands in their respective market sectors, and have the financial and marketing muscle to combat the ever-increasing threat of competition. These manufacturers tend to house families of products, not necessarily in the same sector, but rather under a general brand identity. For example, Colgate-Palmolive produce bar soap, liquid soap, shower gel, and shampoo all under the brand name: Palmolive, for both the African/Middle Eastern market. For the Asian market, the brand is extended to include Palmolive Botanicals, Palmolive Naturals and Palmolive Optima. This is done to maximize the impact of advertising and promotional activity, as well as to promote brand loyalty. Generally, the big firms operate strong individual brand identities for their core products (Datamonitor; cited in London School of Hygiene, 2002: 19).

Rationalisation is taking place among large players as a strategy in terms of the brand portfolios. This means concentration on a small number of key brands and dropping non-

performing brands. Such streamlining allows the manufacturers in general to improve margins by lowering costs for sourcing manufacturing and distribution. Creating a strong brand name through advertising is a primary strategy used by most companies in the industry. They then diversify the brand into another sector or sectors, thereby benefiting from the brand's consumer image. Despite the increasing number of brands and products on the global market, established brands from the key global players such as Unilever, Johnson & Johnson, and Colgate-Palmolive etc. are proving difficult to displace. Though these manufacturers' brands are more expensive than national brands and privately labeled products, consumers seem to prefer familiar trusted brands (Datamonitor; cited in London School of Hygiene, 2002: 20).

2.3. The South African Detergent Industry

State of the Industry:

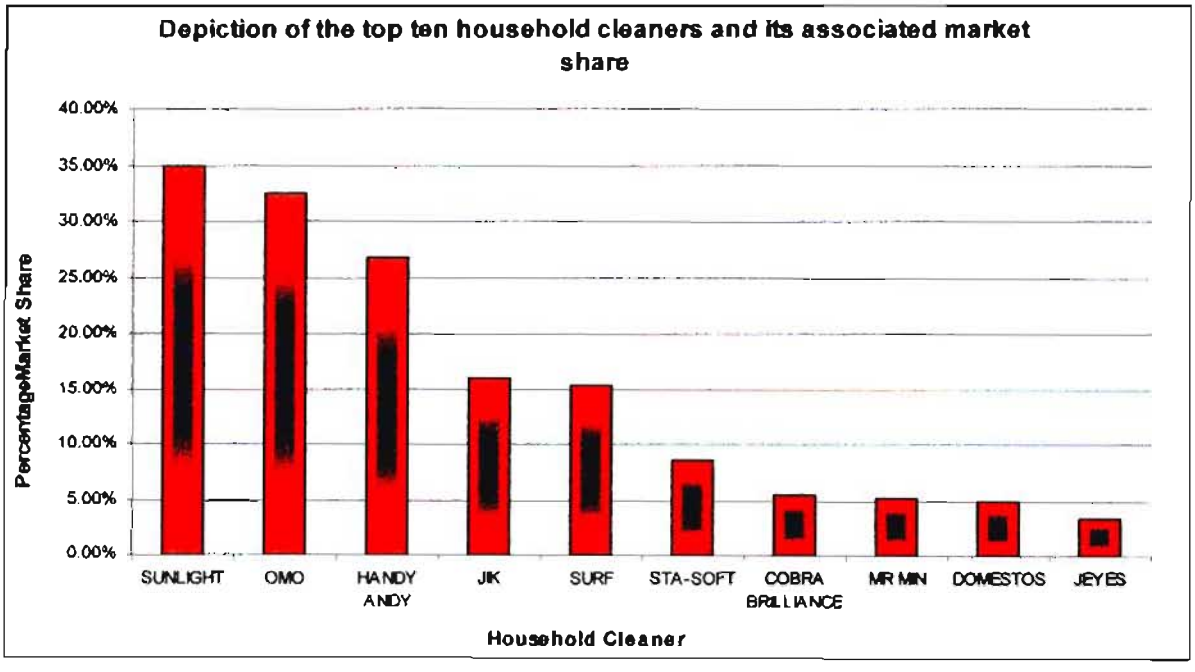
Kennedy (2002: 1) states that the industry profile is changing slowly, but surely. In the industrial sector, many companies which previously focused exclusively on the manufacturing of specialized detergents, polishes and waxes, changed direction and now offer a comprehensive service to the customer. This service includes amongst others the training of staff to measure and apply the detergents correctly, which maximizes product efficiency and mileage. In some instances, product compatible machines are supplied or rented to customers. The latter are then contractually bound to use only the machines provided with that specific manufacturer's detergents. Given these circumstances, it is often very difficult for smaller companies to compete effectively against the larger, well-known companies (Kennedy, 2002: 1).

Companies that retail their products to the domestic market only do not need to offer further service or training. There are quite a few small manufacturers who do business only in the area in which they are situated. These players target shops, businesses, hospitality centres and other government sponsored institutions in their immediate vicinity. Given the retail supply companies, and the industries current liking for no-name

brands, the major retailing chains such as Woolworths and Pick & Pay are moving towards private label branding. It was found that the development of private brand labels would enhance brand differentiation in the detergent market (Hall, 2005: paragraph 1 – 18).

Currently private label, or own brand products, accounted for 4.7% of South Africa's fast moving consumer good (FMCG) product sales, and is growing at 7.6% a year. The most important consumer product categories in private label branding included detergents. This accounted for 25%, or R740m, of total annual store spend. Hall (2005: paragraph 1 – 18) found that one of the fastest-growing product categories based on its annual value growth was prewash treaters at approximately 33.3% growth. Accordingly, retailers and manufacturers should focus their efforts on this category when considering shelf space allocation and private label development (Hall, 2005: paragraph 1 – 18).

Figure 2.3.1: Displays the Top Ten Household Cleaner Brands currently purchased in South Africa



(Markinor; cited in Business Times: 2005: 46)

Markinor (cited in Business Times, 2005: 46) conducted a brand survey for the 'Top Brands' of household cleaners in South Africa. It found that the Unilever brands dominated the household cleaner and detergency category. Figure 2.3.1 above, displays the bar graphs of the survey. Markinor (ibid) found that Sunlight Liquid detergent was the top brand, followed by Omo, Handy Andy, Jik and Surf. These brands accounted for 35%, 32.6%, 26.7%, 16.1% and 15.4% of brand relationship scores respectively. All of the products in the Top Ten in figure 2.3.1, except Jik, are manufactured by Unilever. Clearly, this demonstrates Unilever's sheer dominance. Sta-Soft followed with 8.6%market share. This product is part of the Colgate-Palmolive stable. Cobra Brilliance (5.5%), Mr Min (5.2%), Domestos (5.0%) and Jeyes (3.4%) followed. In total, the top ten was dominated by Unilever, accounting for half of the top ten household cleaner brands purchased by consumers in South Africa.

According to Euromonitor International (2005: paragraph 1), South Africa's household care market is relatively mature with some changes in volume and value growth. For household care overall growth in retail value was achieved, up from R5.8 billion in 2003 to R6.1 billion in 2004. Compared to the previous years 4.9% growth in retail volume for powder detergents the rise of 5.2% in 2004 is seen as strong and positive growth. The same is true of liquid detergents which showed a positive growth from 7% in 2003 to 7.6% in 2004. Laundry care is seen as the most important sector of the household care market, with strong positive growth in most sub-sectors over the review period, and stable growth expected over the next 5 years.

In 2005, the South African Advertising Research Foundation (SAARF) conducted its AMPS survey for detergent use in South Africa. The AMPS survey measured type of detergent product procured, quantities procured, metropolitan areas the respondents were from, the age group that procured the detergents, the household income range, the life-cycle of the household, the literacy level of the household, the living standard measure (LSM) of the household, the population group of the respondents, the employment status of the respondents, the home language, level of literacy and education, and the household purchaser. Therefore, as this is the only reliable statistics of detergent use available, this

research will be benchmarked against the SAARF AMPS 2005 survey. It is hoped that the variables measured in this research project, corresponds or has a dependence on the variables measured in the SAARF AMPS 2005 study. Use of the SAARF AMPS 2005 survey serves a two-fold purpose in this research project:

1. It has reliable and fairly generalisable research findings to the entire population of South Africa. The data is sub-divided into metropolitan areas and thus allows for comparisons to Pietermaritzburg.
2. All of the detergent products covered in the survey correspond with the detergent products surveyed in the research project. Thus, comparisons can be easily drawn.

The SAARF AMPS 2005 survey found that in a community of greater than 250 000 people, 50.4% of the population purchased Handy Andy. This trend decreases as the population of a city decreased. Furthermore, in a community of 250 000 people or more, 1.3% of the population purchased Clean Green. Similarly, 11.0% of a community of 250 000 people or more purchased the Mr Muscle brand of detergent. As with Sunlight, the smaller the population in a city, the lower the incidence of this detergent being purchased. With a population of more than 250 000 citizens; 3.6% purchased Windolene. With decreasing city populations, a lower incidence of Windolene purchasing was found to occur (SAARF AMPS, 2005: 1348).

With regards to Pietermaritzburg, the SAARF AMPS (2005, 1350) survey found that 49.3% of the population purchased Handy Andy, while 0.7% purchased Clean Green. Similarly, 10.1% of the Pietermaritzburg population purchased Mr Muscle and 3.3% purchased Windolene. The AMPS survey also highlighted a further key attribute for Pietermaritzburg. This was that 5.9% of the population uses an alternative, non-branded liquid house cleaner.

Dishwashing Liquids:

Usage in a city greater than 250 000 people:

The SAARF AMPS (2005: 1376) survey found that in a city of 250 000 people and more, Sunlight accounted for 41.7% of the brand purchasing. This was followed by Ajax (7.4%), Non-branded liquid dishwashing detergents (5.0%), Quix (2.8%), Polagric (1.8%) and BioClassic (1.1%). Hence, in built-up environments such as cities, the Unilever brand, Sunlight dominates the market. With the exception of Sunlight and Ajax, the remainder of the dishwashing liquid detergents, have a proportional market share with a decreasing population size. This can be accounted for by Sunlight and Ajax being backed by multi-national companies that have access to superior supply chain networks. However, with Tiger Brands purchasing the BioClassic range of branded dishwashing detergents, this figure should be altered. Tiger Brands is a multi-national fast-moving consumer goods (FMCG) company that has an efficient supply chain in place (Enslin, 2006: paragraph 10).

Usage per Metropolitan Area in South Africa :

The SAARF AMPS (2005: 1380) survey found that in Pietermaritzburg, 43.5% of the population responded in the affirmative to purchasing Sunlight. 8.1% responded that they purchase a non-branded detergent for dishwashing, which bodes well for establishing a detergent company. Interestingly, 2.3% of the population purchased the BioClassic detergent in Pietermaritzburg. This compares favourably with the research project (4.37%) establishing that BioClassic was the second-most purchased branded liquid dishwashing detergent in Pietermaritzburg. Similarly, the AMPS survey (1.9%), (0.6%), (0.3%) and the research project (3.57%), (2.77%), (0.15%) concurred that Ajax, Quix and Polagric were the third, fourth and fifth popular branded dishwashing liquid detergents purchased. Yet again, with non-branded liquid dishwashing detergents, Pietermaritzburg citizen's accounted for 8.1% of the purchasing incidence (SAARF AMPS, 2005: 1380).

This compares favourably with the 9.3% of the research project's sample that indicated their receptiveness to non-branded detergents.

Usage by Households Gross Monthly Income:

The AMPS survey (2005: 1387) revealed that 46.9% of the population who purchased Sunlight earned a gross monthly income of R3201 – R6400. This contrasts to Ajax (11.1%), BioClassic (1.8%), Polagric (2.0%), Quix (4.2%), and no-name brands (6.8%) that were purchased by individuals who earned gross monthly incomes of R12 801 – R25 600, respectively.

Fabric Softeners:

Usage in a city greater than 250 000 people:

The AMPS (2005: 1768) survey found that in a city greater than 250 000 people, Sta-Soft accounted for 35.1% of the brand purchasing. This was followed by Sunlight Fabric Softener (16.8%), Country Pride (5.0%), Surf Fabric Softener (2.6%), Personal Touch (1.9%), Nice & Soft (1.7%), non-branded fabric softener (1.7%) and Daisy (0.5%). Hence, in urban areas, the Colgate brand, Sta-Soft dominates the market. The larger brands such as Sta-Soft, Sunlight, Country Pride and Surf have considerably larger market shares than their competitors as a result of superior and extensive supply chain networks that service every urban and semi-urban area.

Usage per Metropolitan Area in South Africa :

According to the AMPS survey (2005: 1772), Pietermaritzburg has a purchasing incidence of 32.1% for Sta-Soft. The closet the competitor comes to is 13.9% (Sunlight), while Country Pride has an 8.1% market share. This is followed by non-branded fabric softeners (2.3%), Surf (1.4%), Personal Touch (1.2%), Nice & Soft (1.1%) and Spun Soft (0.8%). Daisy fabric softener does not have a significant presence in Pietermaritzburg.

Usage by Households Gross Monthly Income:

The AMPS survey (2005: 1779) revealed that 41.7% and 6.9% of the population that purchased Sta-Soft and Country Pride earned gross monthly incomes in the range of R6401 – R12 800. This contrasts to Sunlight where 19.1% of the population earned R3201 – R6400. 5.1% of the population purchased Surf fabric softener with gross monthly income in the range of R1601 – R3200. The remainder fabric softeners were purchased by individuals who earned R1601 or below except for the non-branded fabric softener where gross monthly income ranges were evenly distributed between R3201 – R6400 and above.

Competitiveness of the Industry:

An obvious disadvantage for local manufacturers is their lack of international capital and strength; with respect to availability of funds for engagement in research and development and to provide customers with expensive cleaning machines. The washing, dishwashing and floor polishing machines which are included in contracts with industrial customers are often second hand machines, which were used in the USA or base country and subsequently imported to South Africa at negligible cost (Kennedy, 2002: 1).

The dominant players in the retail market create barriers to entry through their ability to obtain favourable display areas in supermarkets. Furthermore, they are in a position to engage in price cutting, resulting in bulk discounts (Kennedy, 2002: 1). Recently, there has been a mushrooming of small detergent manufacturers who manufacture and sell products at low prices and inferior quality. This is prevalent in the South African Detergent Industry, because of a lack of regulation. Research carried out by a South African cleaning chemicals company called Chemlog; found that cleaning-chemical companies 'popped-up' almost every day, producing low-grade detergents with little knowledge of products or industry requirements. Chemlog further found that these companies, due to low prices, gain entry into markets like restaurants, schools and

hospitals, causing considerable damage to the detergent industry and its associated pricing structures (Naidoo, 2005: paragraph 14).

Laundry care, dishwashing products and surface care dominate the South African household market in terms of both volume and value share. In these sectors companies invest in large and long-lasting advertising campaigns, and excellent product innovation. In the case of certain products, Euromonitor has found that the primary selling point is affordability of the product (Euromonitor International, 2005: paragraph 6).

Features of the Industry:

Smaller players tend to focus on specialized products. Ecological considerations are gaining ground and the majority of products are now expected to be environmentally friendly. Factories and manufacturing plants have to limit emissions in accordance with international standards. Furthermore, as effluent has to be controlled, water purification treatment plants have correspondingly increased (Kennedy, 2002: 1).

The industry is characterised by consumers who are resistant to change. In 2004, Unilever launched a newly designed bottle of their dishwashing liquid. This was rejected by consumers. According to Unilever, consumers felt that they 'owned the brand'. Unilever currently has 69% of market share in the South African liquid dishwashing industry (Unilever SA, 2004: paragraph 5).

The strongest companies in the household care market in South Africa are Lever Brothers (Pty) Ltd, Reckitt Benckiser South Africa (Pty) Ltd and SC Johnson & Son South Africa. From Euromonitor's research, they have found that private label manufacturing by SMME's is enjoying a growing popularity in South Africa (Euromonitor International, 2005: paragraph 7).

Corporate actions:

The most notable corporate action is that of Johnson Wax Professional, which acquired Diverseylever from Unilever. The merged company was renamed JohnsonDiversey. Market overlap was minimal; the acquisition combines the complementary product platforms of two leaders in the global cleaning and sanitation industry. Johnson Wax Professional has a strong presence in the floor care and housekeeping segments, while Diverseylever has strength in the warewashing, laundry, food processing and sanitation segments (Kennedy, 2002: 1 – 2).

Johnson Wax Professional commenced operations as the Services Division of SC Johnson in the 1940's and gained independence from its parent in 1999. The merger with Diverseylever was completed in May 2002, coinciding with Unilever's rationalisation. Reckitt Benckiser is of the opinion that the floor wax market is stagnant and that competition is dead. Reckitt Benckiser owns the Cobra brand while Diverseylever market the Mr Muscle brand. This might have been the reason for the above merger, as JohnsonDiversey hopes to re-launch its products and gain dominant market share (Kennedy, 2002: 1 – 2).

Recently, Tiger Brands acquired ClassiClean, a manufacturer of washing powder under the Bio Classic brand and manufacturers of home, air and sanitary care products under the Classic and Crystal labels. The rationale for the acquisition was the growing laundry care market in South Africa. The laundry care sector of the detergent industry constituted about 30 percent of annual sales, averaging R6 billion in 2005. Tiger Brands hope to capitalize on the growing retail market in detergents, which is forecast to grow to R8.2 billion by 2009 (Enslin, 2006: paragraph 1 – 2).

Consumer formulated products:

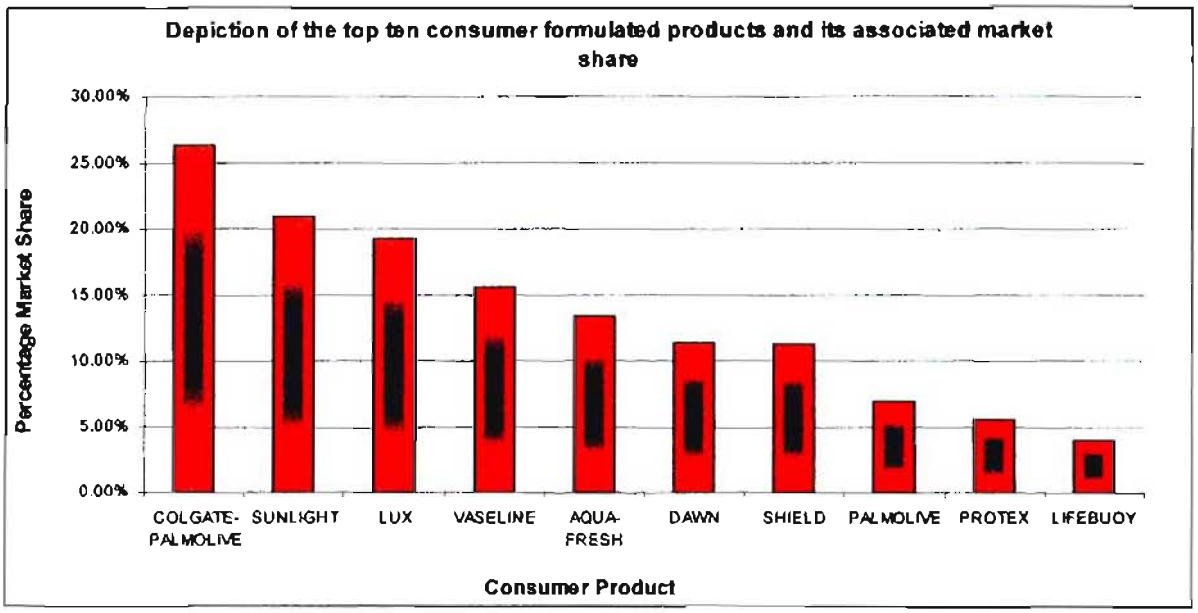
Sunduza (2005: 29) states that this includes the well-known FMCG products like soaps, shampoos, toothpastes, cosmetics, household cleaners, but exclude medicines. The output

of this segment is R 7.7 billion per annum. At least 90% of this production is performed by large multi-nationals, such as

- Pfizer
- Unilever
- Johnson & Johnson
- Procter & Gamble
- Colgate Palmolive

As input materials are mostly imported, production is based at the coast - mainly Durban, Cape Town and East London (Sunduza, 2005: 29 – 30).

Figure 2.3.2: Displays the Top Ten Consumer Formulated Brands currently purchased in South Africa



(Markinor; cited in Business Times: 2005: 46)

Figure 2.3.2 displays the brand relationship scores of the brands used in the consumer formulated products category. Colgate, a Colgate-Palmolive company holds a 26.3% share of the market. Sunlight is second with a 21.0% share. Lux (19.3%), Vaseline (15.6%), Aqua-fresh (13.4%), Dawn (11.4%), Shield (11.3%), Palmolive (6.9%), Protex (5.6%) and Lifebuoy (4.0%) make up the remainder of the top ten, respectively. In 2003,

Lux was second whereas in 2005, Sunlight seemed to have edged the Lux brand into third position. Protex was new on the list (Markinor; cited in Business Times, 2005: 46).

Table 2.3.1: Size of the Industry – excluding Unilever:

MANUFACTURING OF CLEANING COMPOUNDS		
Company	**Turnover – Rm**	**Market Share**
Reckitt Benckiser	1550	58.8
JohnsonDiversey	322	12.2
SC Johnson	273	10.3
Chet Industries Ltd	106	4.0
Hychem	91	3.5
Ecolab	90	3.4
Syndachem	86	3.3
Chemetall	45	1.7
Dynachem	32	1.2
Momar Chemicals	22	0.8
Reinol-Janek Chemicals	21	0.8
TOTAL	**2638**	**100**

(Kennedy, 2002: 2)

Table 2.3.1 shows that the large multi-national companies dominate the detergents landscape in South Africa. Reckitt & Benckiser is a British multi-national that has been extremely successful in the South African retail detergent market (Day, 2003: paragraph 1 – 20).

2.4. Consumer Purchasing Behaviour of Detergents

Hoek *et al* (2003: 52) undertook a study of a new brand's behaviour in established markets. They found that the introduction of a new brand may alter the structure of a marketplace and thus the behaviour patterns of consumers' display. It was concluded that the new brand behaved as an established brand very quickly and that the generalisations used to benchmark existing brands provided accurate predictions of the new brand's performance.

Ehrenberg *et al* (1990; cited in Hoek *et al*, 2003: 54) found that small brands attracted less loyalty simply because they were small. Thus, brands with a lower penetration are bought less frequently than brands with higher penetration. Similarly, brands with low penetration are viewed less positively by users than are brands with higher penetration (Ehrenberg, 1991; Barwise and Ehrenberg, 1985; Barwise, 1986; cited in Hoek *et al*, 2003: 54).

A new brand's effect on other brands can be examined using the theory of duplication of purchase law. This theory states that in an unsegmented market, the percentage of buyers of one brand who also buy another brand varies in a constant proportion with the penetration of this other brand (Ehrenberg, 1991: 292). Accordingly, where no market partitioning exists, a new brand's share should come proportionally from existing (substitutable) brands in that market. That is, the size of a brand determines the number of its buyers who will also buy the new entrant; in an unsegmented market a similar proportion of all brands' buyers would be expected to purchase the new brand (Hoek *et al*, 2003: 54).

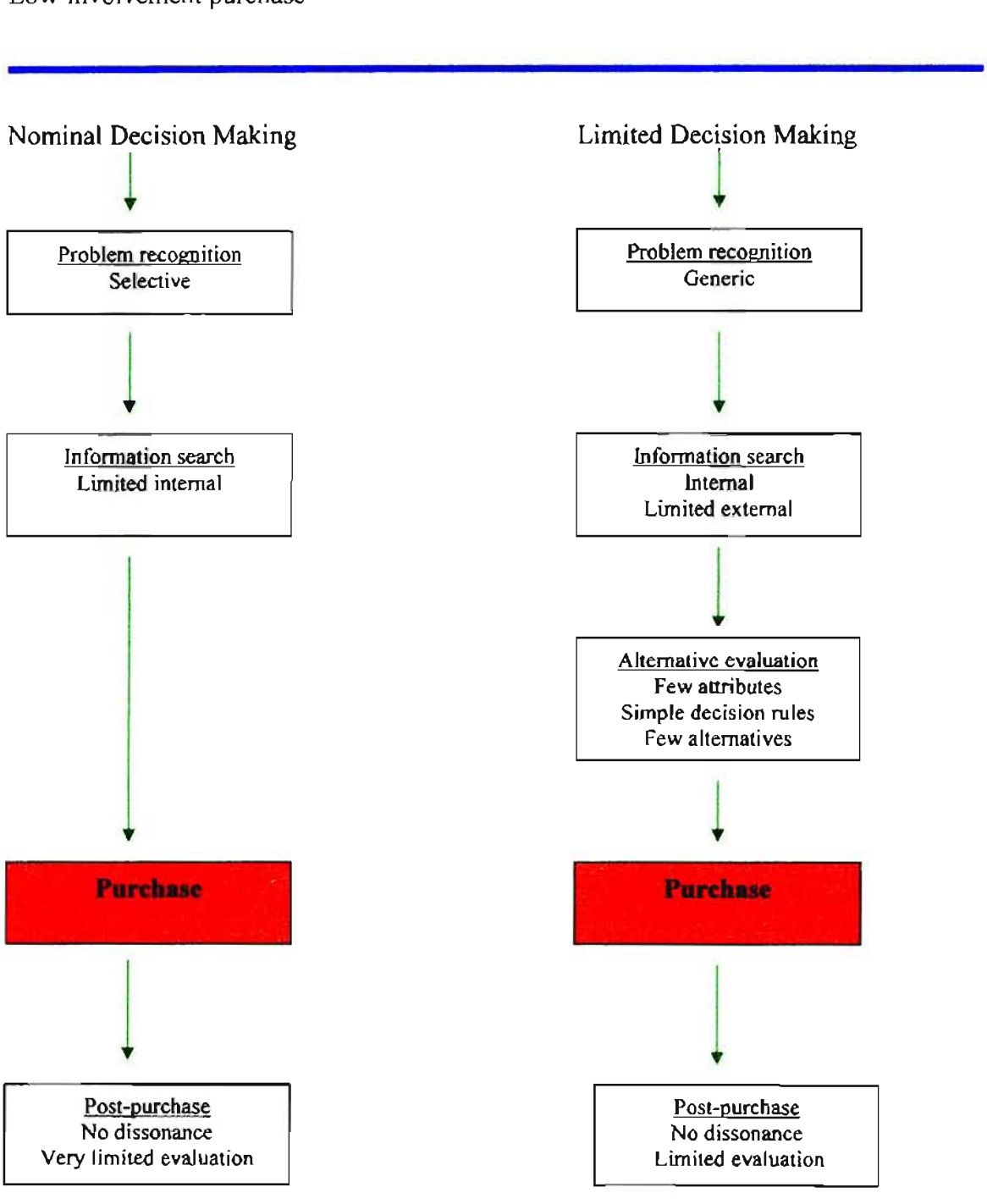
Ehrenberg (1991; cited in Hoek *et al*, 2003: 54) contends that introduction of a new brand almost inevitably leads to changes in market share and market structure of the existing brands. This usually lasts for approximately one year following the brand's entry. Additionally, Morein (1975; cited in Hoek *et al*, 2003: 55) states that by employing

similar visual stimuli, such as logos and packaging; and the pairing these stimuli create; helps to decrease barriers to trial for a new brand that might otherwise exist.

Ehrenberg & Goodhart (2000; cited in Hoek *et al*, 2003: 57) found that new brands quickly reach a regular repeat purchase rate, although the brand's final penetration level may take longer to stabilise, somewhere around 30 – 36 weeks. Thus, it is critical for new brands to be able to sustain itself during this time period in order to be accepted by the market. Stern and Hammond (2004: 5) found that as the number of purchases rises, loyalty initially falls steeply. After approximately 15 purchases, they found that the purchase incidence of laundry detergents stabilised. After 60 to 200 purchases there is very little change in observed measures of customer loyalty to the detergent brand. This has implications for new brands entering the marketplace, aiming to capture market share. Stern and Hammond (*ibid*) state that by making customers loyal to the new brand, there is a high likelihood that the newly captured customer would remain loyal after the determined purchases have elapsed, unless the product no longer satisfies the customers needs.

Understanding the dynamics that go through a potential customer's thought process before a potential purchase to become a customer, will allow businesses to capture a share of any market. By actively taking cognisance and developing strategies that allow a 'capturing' of a potential customer, a new business venture can obtain a larger client base and brand loyalty, thus enjoying organic growth (Hawkins *et al*, 2001: 504). Hawkins *et al* (*ibid*) propose a decision making model that potential customers will use before attempting to purchase a new brand. Detergent purchases fall under a low-involvement purchase category. The potential consumer will use either a nominal or limited decision making approach, herein. The purchase involvement is the level of concern for, or interest in, the purchase process triggered by the need to consider a particular purchase. Thus, purchase involvement is a temporary state of an individual, family, or household unit. It is influenced by the interaction of individual, product, and situational characteristics (Mitchell, 1979: 191 – 196; Otker, 1990: 30 – 36; von Keitz, 1990: 37 – 45).

Figure 2.4.1: Involvement and Types of Decision Making



(Hawkins *et al*, 2001: 508)

Nominal Decision Making:

This type of decision-making is also referred to as habitual decision making. As figure 2.4.1 illustrates, a problem is recognized, internal search (long-term memory) provides a single preferred solution (brand), that brand is purchased, and an evaluation occurs only if the brand fails to perform as expected. Nominal decisions occur when there is very low involvement with the purchase (Hawkins *et al*, 2001: 506).

A completely nominal decision does not even include consideration of the 'do not purchase' alternative. Thus, these types of potential customers will walk into a store and purchase the same type of detergent that they always purchase. Furthermore, consumers will not consider alternative brands, its price, or other potentially relevant factors (Hawkins *et al*, 2001: 506).

Nominal decisions can be broken into two distinct categories:

1. **Brand loyalty:** The consumer has a fairly high degree of product involvement but a low degree of purchase involvement because of the consumer's loyalty to a particular brand. However, should the consumer encounter a problem or a challenge to the superiority of the detergent currently being used, perhaps through a news article or some sort of media, the consumer would most likely engage in a high-involvement decision process before changing brands (Hawkins *et al*, 2001: 506).

2. **Repeat purchase consumers:** In contrast, a consumer may believe that all detergents are the same and may not attach much importance to the product category or the purchase. Having tried a particular detergent brand and finding it to be satisfactory, the consumer will purchase it whenever they require a detergent. Thus, the consumer is a repeat purchaser of that particular detergent, *but is not committed to it*. Should the consumer encounter a challenge to the wisdom of buying that particular detergent, the next time the consumer needs a

detergent, that consumer will probably engage in only a limited decision process before deciding on which brand to purchase. The consumer can be promoted to purchase an alternative brand, if there is a point-of-sale price discount (creative selling) on the alternative brand of detergent (Hawkins *et al*, 2001: 506).

Limited Decision Making:

This involves internal and limited external search, few alternatives, simple decision rules on a few attributes, and little post-purchase evaluation. It covers the middle ground between nominal decision making and extended decision making. In its simplest form (lowest level of purchase), limited decision making is similar to nominal decision making. For example, while purchasing the customer may notice a point-of-purchase display for detergent "A", and the consumer subsequently picks up two packages without seeking information beyond their memory. In addition, the consumer may have considered no alternative except possibly a very limited examination of a 'do-not-buy' option. Alternatively, a consumer may have a decision rule to purchase the cheapest brand of detergent available. Thus, when the consumer is running low on detergents (problem recognition), the consumer simply examines detergent prices the next time and purchases the cheapest brand. Thus, new businesses who wish to capture market share must seriously consider these types of consumers, and actively market their products to these consumers (Hawkins *et al*, 2001: 507).

Limited decision making also occurs in response to some emotional or environmental need. For example, a consumer may decide to purchase a new brand or product because they are 'bored' with the current, otherwise satisfactory, brand. This decision might involve evaluating only the newness or novelty of the available alternatives. A few alternatives are evaluated on a few dimensions using simple selection rules. The purchase and use of the product is given very little evaluation afterwards unless there is a service problem or product failure. Thus, Hawkins states that new brands can be launched and sustainably sold to consumers who have doubts about the existing brands of detergent they currently use. By monitoring consumers and the detergent market, a manufacturer is

able to increase the purchase incidence of its brand and thus increase market share provided the product satisfies the market (Hawkins *et al*, 2001: 507).

Effects of attitudes to advertising:

Dutta-Bergman (2006: 103) states that advertisers need to strategically target appropriate market segments, based on the demographics and psychographic correlates of the market. In addition, consumers' receptiveness (attitudes) to advertising should be analysed to derive maximum benefit from the advertisements in both television and print media.

Notwithstanding the low penetration of television influence, it is recommended that television influence be improved. Targeting the most appropriate consumer and capturing potential consumers by television should be looked at by marketers. Shavitt *et al* (1998: 7) found that men are more receptive to purchasing items in response to direct-response advertising. This could be a method for the new detergent business venture to target the business users, where in this study it was found that men were predominantly the purchasers of their firm's detergent requirements.

Furthermore, Shavitt *et al* (1998: 7) put forward the statement that younger individuals compared to older individuals are or more likely to have a positive attitude to advertising. They are more receptive and understand the products benefits, resulting in positive purchases for such a product. Correspondingly, a new detergent business venture should initially target younger members of society, thus proving the products benefits and efficiency. This effect can then be transferred to the older generation who according to Shavitt *et al* (*ibid*) have a more negative attitude to advertising and new products. Similar findings were found by Alwitt and Prabhakar (1992: 30).

2.5. Conclusion

Consumers are individuals who have their own preferences regarding detergent products and way of undertaking cleaning tasks. Some consumers believe that a foaming product

is of the highest quality while others believe that a detergent product is as good as the amount of mechanical energy used to perform a cleaning task. Thus, for a manufacturer to be successful in the detergent industry, in-depth knowledge of the consumer and their needs will help their manufacturer in designing a product most suitable for the consumer, fulfilling all of his/her cleaning requirements (Hargreaves, 2003: 3).

Emerging from the review of the literature, one notices that branding plays a key part in the selling of detergents. Without strategic branding, the products a new detergent firm manufactures will be out-performed by the detergent products backed by large branding budgets. In addition, consumers purchase detergents for different purposes and uses.

This chapter has set the background for examining the purchasing of household and industrial detergents and the users of these detergent products.

CHAPTER 3

ENTRY ROUTE AND STRATEGIES

3.1. Introduction

By virtue of basing this study on starting a new business venture, a discussion of a new business start-up is merited. Accordingly, this chapter discusses one of the four routes to entrepreneurship. It highlights the advantages and disadvantages of the start-up route. There are four different entry routes to becoming a business owner – essentially an 'entrepreneur'. It is the recognizing of this gap that accentuates the skill of the entrepreneur and essentially the route that should be taken to business ownership. These four routes are *start-up*, *buying an existing business*, *taking over a family business* and *buying a franchise*. This chapter also highlights basic strategies that every entrepreneur should use to ensure that his/her business obtains the maximum return on investment.

3.2. Start-up

Starting a new business is probably the most difficult option as all the processes and infrastructure needed to undertake a 'business' does not exist. No 'history' for the business exists, customers trust and loyalty has to be built up with exceptional service and innovation. The entrepreneur has only the feasibility studies to go on, and unlike an existing business where past records do exist, the new business start-up will have to estimate and reach targets continuously to remain in business. Thus, the start-up route to business, involves greater risks and uncertainties (Siripolis, 1986: 106).

Start-up ventures afford the entrepreneur the opportunity of undertaking the new start-up as a soloist or as a team. Siripolis (1986: 106) states that entrepreneurs whose start-ups are successful be regarded as 'true entrepreneurs' of the business environment.

Three start-up options exist. These can be summarised as

1. Providing customers with an existing product or service not available in the market or location of the business (new-old approach): Barrow (1993: 90) states that the new venture can provide customers with an existing product or service that is not currently available in that particular market. The market penetration rate will be high. By parasiting on an existing idea, the entrepreneur, according to Hodgetts and Kuratko (1995: 92), is using a new marketing approach, but an existing product or service approach.

   In addition, there may be an opportunity for the start-up to provide an exciting product or service when there is a sudden supply shortage in the economy. One must be cautious and undertake proper due diligence and market research to ensure that such a product can indeed fill the sudden 'gap' in a new geographical position (Barrel, 1990: 52).

2. Providing a new product or service is a riskier option (new-new approach): Hodgetts and Kuratko (1995: 92) refer to this as the new product or service introduced to a new market. As is the case with offering new products or services, this option is inherently riskier as the product or service needs to prove itself.
3. Enhancing an old product or service allows a greater utility to customers as a result of the 'improved' product or service (old-new approach).

Entry Strategies:

Mahadea (1994: 145) states that there is three generic strategies to a new venture. These include

(a) ***Niche Strategy:*** whereby there is a particular focus on a customer group or region, not currently served effectively by present businesses. This involves pouncing on an unmet gap or need in the market. Mahadea (2005) states that the entrepreneur must select a clearly defined market segment and 'own' it. The

entrepreneur must compete and operate this gap without going head to head with the mainstream players.

(b) ***Differentiation Strategy:*** this strategy distinguishes the new venture from previous ventures. The 'distinguishing factors' can be through the use and emphasis of:

- Superior design,
- Superior quality,
- Superior products and process information,
- Offering expert support and service to the newly acquired customers,
- Offering speedier and bottleneck free deliveries, and
- Unique marketing ideas.

(c) ***Cost Superiority:*** this generic strategy for a start-up offers the product or service at a lower price than the current competitors. However, competing merely on price is a difficult entry strategy for a start-up business (Robert, 2000: 22).

3.2.1. Advantages of *start-ups*:

- The new business owner experiences satisfaction from his/her idea being converted into a real business. Mahadea (1994: 144) states that the entrepreneurs process to starting a new business begins long before the business ever opens its doors and is the realization of *'dreams'*.
- The new business owner has a choice as to what to produce or market, where to market and for whom to market too. In addition, Brenner *et al* (1990: 7) states that the business owner will also be able to choose which individuals to hire.
- Perhaps more importantly, a start-up offers the new business owner an opportunity to avoid the ill-effects and pitfalls of previous entrepreneurs' mistakes or undesirable precedents (Scarborough and Zimmerer, 2006: 78 – 89).
- New credit connections and relationships are developed. Customer contacts and relationships are new, which permit the entrepreneur to establish his/her own reputation and afford the portrayal of a unique business image (Brenner *et al*, 1990: 7).

- The start-up reflects the founding entrepreneur's personality. Every business has its own personality that cannot be imitated or copied (Scarborough and Zimmerer, 2006: 78).
- Unlike acquiring a business, no bad debts or liabilities are assumed by the new owner (Scarborough and Zimmerer, 2006: 79).

3.2.2. Disadvantages of *start-ups*:

- Starting a new business from scratch requires extended periods of development and refinement, even before the firm begins to operate (Scarborough and Zimmerer, 2006: 78).
- Obtaining credit and finance for the new business may be more difficult as the lending institutions such as banks and venture capital firms have no previous track records of the business (Wickham, 2004: 452).
- Mahadea (1994: 146) states that a start-up business will require adequate time to establish and develop a customer base that will have confidence in the start-up's product or service. This he terms is the learning curve effect for the start-up.
- The risk of utilizing family funds as a supplement for income during a start-up poses huge dilemmas for new start-ups. Most often, the new business owner has invested most, if not all of his/her life-savings into a start-up and this poses untold risks to the entrepreneur. Hence, in times of poor performance, the entrepreneur will have to supplement his/her income.

Regardless of the entry route chosen, each has to be strategically managed to attain the maximum return on investment (ROI). The following section briefly overviews some basic aspects of managing a business strategically.

3.3. Strategic Management for Attaining Competitive Advantages

> *"Without a strategy the organization is like a ship without a rudder"*
> *Joel Ross and Michael Kami*

The literature is littered with authors proclaiming a method to follow that will allow a small business to be competitively superior. Scarborough and Zimmerer (2006), Kuratko and Hodgetts (2001), Wickham (2004), Hisrich and Peters (2000), Van Aardt and Van Aardt (1997), Donckels and Miettinen (1997), Thompson and Strickland (2004), Chaganti *et al* (1989) and Chaganti (1989) all have a theory that will enable a small business to become more competitive.

Chaganti *et al* (1989: 1) found that competition amongst firms occur in the domains of price, advertising and promotion, and quality. Firms often face this competition in more than one domain. Profitable firms respond with an appropriate combination of competitive strategies. Chaganti *et al* (1989: 1) states that researchers in diverse fields such as economics, marketing and strategic management have examined the effectiveness of the various strategies to cope with competition (Clifford and Cavanagh, 1985; Cohen 1986; Khandawalla, 1981; Kotler, 1988; Kotler and Singh, 1989; Porter, 1980, 1985).

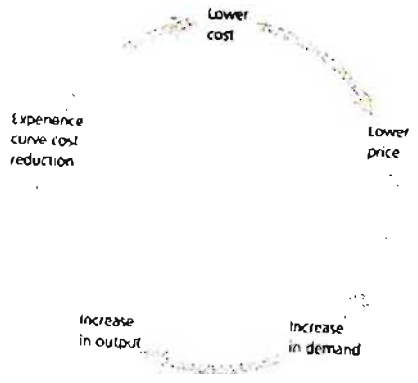
Thompson and Strickland (2003: 3) state that the tasks of crafting, implementing, and executing company strategies are the heart and soul of managing a business enterprise. A company's strategy is the game plan management would use to stake out a market position, conduct its operations, attract and delight customers, compete successfully, and achieve organizational objectives. In essence, Thompson and Strickland (2003: 3) highlight that "strategy relates to a company's competitive initiatives and business approaches - irrespective of the financial and competitive outcomes it produces."

The need for a clearly defined approach to compete in today's fast paced; technological, customer-oriented market should be a top-priority for any firm, whether this is a start-up, buying an existing business, family business takeover or a franchising business

(Thompson and Strickland, 2003: 4). All these modes of entry into the business world require the business to operate to capture market share, please and delight customers, grow, and be profitable. In essence, the business must be sustainable for the duration of its life-cycle (Thompson and Strickland, 2003: 4).

Strategy making is fundamentally a market-driven and customer-driven entrepreneurial activity – the essential qualities are a talent for capitalizing on emerging market opportunities and evolving customer needs, a bias for innovation and creativity, an appetite for prudent risk taking and a strong sense of what needs to be done to grow and strengthen the business (Covin and Miles, 1999: 48). Correspondingly, Thompson and Strickland (2003: 14) state that a business needs to study the market trends, listen to customers and anticipate their changing needs and expectations, scrutinize the business possibilities that spring from technological developments, build the firms market position via acquisition or new-product innovations, and pursue ways to strengthen the firm's competitive capabilities. This will result in the new business venture enjoying strategic growth. This relates to the changes that occur in the way in which the business interacts with its environment as a coherent, strategic, whole. Wickham (2004: 476) states that this primarily concerns itself with the way the business develops its capabilities to exploit a presence in the marketplace.

Figure 3.3.1: The virtuous circle of exploitating the market place leading to cost leadership



(Wickham, 2004: 490)

Thompson and Strickland (2003: 28) put forward six advantages of first-rate strategic thinking and conscious strategy management for a business (as opposed to free wheeling improvisation, gut feel, and hoping for good luck). These are:

1. providing better guidance to the entire organization on the crucial point of " what it is we are trying to do,"
2. making managers and organizational members more alert to new opportunities and threatening developments,
3. helping to unify the organization,
4. creating a more proactive management posture,
5. promoting the development of a constantly evolving business model that will produce sustained bottom line success for the enterprise, and
6. providing managers with a rationale for evaluating competing budget requests – a rationale that argues strongly for steering resources into strategy-supportive, results-producing areas.

It is important for small businesses to take cognisance that strategic management of a business can be the key to better long-term performance. Business history shows that high-performing enterprises often initiate and lead, not just react and defend. They launch strategic offensives to out-innovate and out-manoeuvre rivals and secure sustainable competitive advantage, then use their market edge to achieve superior financial performance. Aggressive pursuit of a creative, opportunistic strategy can propel a firm into a leadership position paving the way for its products and services to become the industry standard (Thompson and Strickland, 2003: 29).

3.4. Conclusion:

Starting a new business is a complex process. Notwithstanding other factors such as competition and a globalized macro-environment, choosing an approach to entrepreneurship is also complex. Mahadea (1994: 157) states that this process is inherently non-routine.

Lastly, the entrepreneur is invariably concerned with strategic decision-making activities. Regardless of whom he/she is or the organizational or institutional context in which he/she operates, he/she remains a key figure in promoting change and economic development (Mahadea, 1994: 157).

CHAPTER 4

RESEARCH METHODOLOGY

4.1. Introduction

This chapter identifies the research objectives, hypotheses and design appropriate to assess the purchasing behaviour of detergent users and whether there is scope for a new detergent business venture in Pietermaritzburg. The study used the personal interview technique for data collection. This chapter provides information on the hypotheses, the sample and the development of the research instrument. In addition, the appropriateness of the data analysis method is discussed. With regards to the methodology and statistical approaches, descriptive analysis of the data, correlation analysis, logit and regression techniques were used. The research under investigation deals with the detergent sector in South Africa. Specifically, the research aims to probe the detergent buying behaviour of Pietermaritzburg residents and its associated suburbs. Furthermore, the question of whether there is scope for a new detergent business venture in Pietermaritzburg was addressed.

4.2.1. Statement of the problem / research question

A detergent has to fulfil the needs of its customers. Correspondingly, the strategies of the business are customised on the requirements of its market. Consequently, what is the purchasing behaviour of households with specific reference to the detergent industry and how would these purchasing behaviours affect the establishment of a new detergent business venture in Pietermaritzburg.

4.2.2. Research Objectives

From the research question in 4.2.1 above, the primary and secondary objectives were formulated as a means of providing a solution to the study. These are described below.

Primary Research Objectives:

1. To examine whether income accounts for household purchasing preferences between branded and non-branded detergents.
2. To determine whether location is a factor that must be considered in the marketing of detergents.
3. To examine whether there are gender differences in the purchasing behaviour of detergents among households.
4. To determine which are the major factors that influence detergent buying behaviour among industries.

Secondary Research Objective:

To determine whether there is scope for the introduction of a new detergent venture among households in Pietermaritzburg.

The primary and secondary objectives allowed the formulation of the following hypotheses. These were tested and the findings presented in chapter 5.

Hypothesis 1:

H_0: Gender is related to the monthly expenditure of household detergents.

H_1: Gender is not related to the monthly expenditure of household detergents.

Hypothesis 2:

H_0: Location (Area of Residence) influences household buying behaviour of detergents.

H_1: Location (Area of Residence) does not influence household buying behaviour of detergents.

Hypothesis 3:

H_0: Area of Residence influences monthly expenditure of detergents.

H_1: Area of Residence does not influence monthly expenditure of detergents.

Hypothesis 4:

H_0: Price and Quality are the major influences of detergent purchasing habits of consumers.
H_1: Price and Quality are not the major influences of detergent purchasing habits of consumers.

Hypothesis 5:

H_0: Television media influences purchasing decisions of liquid detergents.
H_1: Television media do not influence purchasing decisions of liquid detergents.

Hypothesis 6:

H_0: There is a relationship between gender and the use of a print medium to influence the choices of detergents purchased by consumers.
H_1: There is no relationship between gender and the use of a print medium to influence the choices of detergents purchased by consumers.

Hypothesis 7:

H_0: There is an association between location and the purchasing of non-branded detergents.
H_1: There is no association between location and the purchasing of non-branded detergents.

Hypothesis 8:

H_0: Level of Income would allow for a shift in the buying habits of detergents from branded to non-branded detergents.

H_1: Level of Income would not allow for a shift in the buying habits of detergents from branded to non-branded detergents.

Hypothesis 9:

H_0: There is scope for the introduction of a new detergent venture among households in Pietermaritzburg.

H_1: Scope for the introduction of a new detergent venture among households in Pietermaritzburg does not exist.

4.2.3. Data Sources

There are two types of data sources, primary and secondary data (Cooper& Schindler, 1998: 256). Primary data is original data collected specifically for the purpose of the research in question. The primary data for this study was obtained from the questionnaire used in sampling the respondents. Secondary sources included journals, books, websites, databases and brand surveys.

4.2.4. Questionnaire Design

To understand consumer purchasing behaviour in the detergent industry and to develop a sustainable and profitable business in the detergent industry, questionnaires were employed to determine if a new business would be able to manufacture detergents that compete against the dominant manufacturers' in the industry. The questionnaire elicits primary data responses through direct questioning (Wegner, 2002: 15). Wegner (2002: 18) states that a questionnaire consists of three sections

i. The administrative section,
ii. The information sought section, which will make up the major portion of the questionnaire and will consist of all the questions from which data will be extracted to address the research objectives.

iii. The demographic (or classification) section. This will describe the respondent by a number of demographic characteristics which generally include age, gender, residential location, marital status, language, and sometimes the qualifications of the respondents.

The rationale for each question is presented below.

Questions 1 – 5 are classification questions formulated to gather profile information on the respondents. Question 6 was formulated based on the study conducted by Banerjee (2004: 3) where it was determined that the four characteristics in the questions was the most appropriate determining factor for consumer purchases of detergents. Questions 7, 8 and 9 were formulated as a direct result from the SAARF AMPS (2005, 20) survey. The general assumption made here is that monthly expenditure on household detergents, members residing in a household and the volume of detergents purchased for households are related. OMD (2005: 2) conducted a general survey on the relationship between television, print, electronic and billboard media advertising and its associated incidence of resultant purchases. Consequently, question 10, 11 and 12 were based on this research. Question 12 was an open-ended question asking for the respondents idea of media that ensured the respondents being subjected to detergent advertising. Questions 13 and 14 was based on the studies conducted by Hoek *et al* (2003: 52); Ehrenberg (1991: 81) and Goodheart *et al* (1984: 621). Question 15 was formulated to elicit whether a new detergent business venture would be feasible.

The industrial market questions were based on similar reasoning. Questions 16, 17, 18, 19, 20 and 21 were general classification questions formulated to gather profile information on the firms sampled. Kennedy (2002: 2) states that firms purchase their detergent requirements based on the size of the firm, its turnover, the number of staff it employs and the type of activity it engages in. Banerjee's (2004: 3) characteristics was again used to determine what factors are important in the purchasing of detergents for firms in question 22. Question 23 was based on Ehrenberg (1991: 81) and Goodheart *et al* (1984: 624) studies on whether locational factors affect a firms buying behaviour. The

OMD research (2005: 4) was the basis used to gauge if e-commerce facilities would help to influence the purchasing decisions by firms for detergents.

In order to determine if the questionnaire was relevant to addressing the objectives of the study, a pre-testing of the data collection instrument is necessary. Barnett (2002: 164) states that many of the practical difficulties of conducting a designed survey can be accessed and evaluated by a modest amount of pre-survey sampling. Any data collected at this early stage can help to determine a number of critical factors, such as

- Potential sources of measurement error
- Likely non-response rates
- Sensitive issues or sources of ambiguity
- Interviewer inconsistencies
- Difficulties of access to chosen sample members
- Extent of variability (or some other characteristic) of some variable of principal (or secondary) interest.

No simple prescription can be given for the required extent of, or the method of collecting such preliminary information other than to stress the need for appropriate randomisation and for avoiding obvious sources of unrepresentativity. The pre-surveying revealed the following:

(a) Initially, question 2 used a scale that was not coherent with the samples salary ranges, as the scale defined salary ranges in a very wide field. The scale was reviewed and subsequently changed using the salary scales from Statistics South Africa specifically in reference to individual monthly income amongst the employed aged 15 – 65 years in KwaZulu Natal (Stats SA, 2001: 8).

(b) A dedicated business section (section B) was drawn up. This was also attached to the household section (section A) so as to obtain both a household and an industrial user's answer. The industrial user was asked to answer both sections A and B, while the household user only answered section A.

4.3. Sample Design

Pietermaritzburg has an approximate population of 500 000 individuals (SAARF AMPS Survey, 2005: 1375). Accordingly, Sekaran (2000: 295) states that a generalized sample size for this research project is approximately 382 subjects or more. This research project was made up of 267 households and 124 businesses. This allowed the findings to be generalised across detergent users. The population is detergent users in Pietermaritzburg and its surrounding suburbs. The sample comprised different categories of users. For the purposes of this study, the focus was on households, the catering, hotel, and general business users. The latter three were categorised as industrial users. It is the intention of the researcher to also address the 'townships' as this represents an untapped market that provides an opportunity for the business to enjoy organic growth. The 'township' was classified as semi-urban and the same questionnaire was administered to this category of users.

As time, a lack of general data on consumers purchasing habits and whether scope for a detergent business exists are not readily available, the judgement sampling technique was used. The sampling technique chosen offers convenience, minimised costs and accessibility to those variables being measured (Terre Blanche & Durrheim, 1999: 279). Sekaran (2000: 280) states that judgement sampling involves the choice of subjects who are in a position to provide the information required. Judgement sampling is a form of a non-probability sampling technique and as such, there exist some limitations; chiefly being the sample size and the biasness that the experimenter inadvertently incurs. It is recognised that this sample is not representative of the total population but the aim was to obtain some insight into the perceptions and expectations of consumers with regard to their detergent purchasing habits.

4.4. Data Collection

The nature of research can be either qualitative or quantitative. Quantitative research involves the collection of primary data from a large number of individuals, frequently with the intention of projecting the results to the larger population (Martins *et al*, 1996: 125). Qualitative research is an unstructured, exploratory research method based on small samples intended to provide insights and understanding of the problem setting (Malhotra, 2004: 164). The primary research data required for this study is of a quantitative nature. The quantitative research data was collected by means of a questionnaire, on a face-to-face basis. Table 4.4.1, below, provides a summary of the methods that can be used for data collection. Each criterion must be used when deciding on the type of data collection method.

The interviewer, the respondent and the instrument are brought together in various ways depending on the method of data collection. The most commonly used methods of data collection in sample surveys are personal interviews, a mailed questionnaire, direct observation and telephone interviews (Scheaffer *et al*, 2006: 25). Personal interviews have their observation errors with the interviewer. If the interviewer is not thoroughly trained, he/she may deviate from the required protocol, thus introducing bias into the sample data. In addition, leading questions can tend to elicit matching responses. Furthermore, errors in recording the response can also lead to erroneous results (Scheaffer *et al*, 2006: 23). Scheaffer *et al* (2006: 23) states that a major problem with telephone interviews is the establishment of a frame that closely corresponds to the population. Telephone directories have many numbers that do not belong to households, and many households have unlisted numbers. In South Africa, many households have no telephone service (fixed line as compared to wireless, with the latter being more expensive to conduct a telephone interview).

Table 4.4.1: A summary of the data collection methods

CRITERIA	MAIL	TELEPHONE	FACE-TO-FACE (SURVEY)
Versatility	Not much	Substantial but complex or lengthy scales are difficult to use.	Highly flexible
Quantity of Data	Substantial	Short, lasting typically between 15 - 20 minutes	Greatest quantity
Sample control	Little	Good, but non-listed households can be a problem	Theoretically provides the greatest control.
Quality of data	Better for sensitive or embarrassing questions; no interviewer present to clarify misleading questions.	Interviewer is able to clear up any ambiguities; bias in that can lead to socially acceptable answers.	Possibility of cheating
Response rate	Usually around 10%	60% - 80%	Greater than 80%
Speed	Several weeks	Large studies can be completed in 3 - 4 weeks.	Faster than mail but typically slower than telephone surveys.
Cost	Inexpensive	Not as low as mail; depends on incidence rate and length of questionnaire.	Can be relatively expensive, but has a considerable amount of variability.

(Dillon *et al*, 1993: 173)

For purposes of this research study, a face-to-face personal interview, using a questionnaire was employed. The procedure usually requires the interviewer to ask prepared questions and to record the answers or to present the respondent with a questionnaire where he/she records their answers in relation to a set number of questions (Scheaffer *et al*, 2006: 23). Scheaffer *et al* (*ibid*) state that the primary advantage of using a face-to-face questionnaire is that people will usually respond when confronted in person. In addition, the interviewer can note specific reactions and eliminate misunderstandings about the questions asked in the survey.

Household and the township categories will be interviewed at their place of residence, and industrial users at their place of operation. Data was collected by driving out into designated areas of Pietermaritzburg, and interviewing the subjects with the use of the questionnaire. Potential consumers at various locations were asked to fill in a

questionnaire, to determine perceptions of their detergent purchasing habits. Furthermore, the questionnaire collected information on whether income groups and socio-economic backgrounds determine the purchasing of detergents. Businesses were asked to fill in the same household questionnaire and a further business based questionnaire on the business's purchases and consumption of detergents.

4.5. Sources of Errors in Surveys

Sample surveys are afflicted with many types of errors; some arise because only a sample from the population is intended for measurement and because, even for the sampled elements, data may be incomplete or incorrect. Survey errors can be divided into two major groups: *errors of non-observation*, where the sampled elements make up only part of the target population, and *errors of observation*, where recorded data deviate from the truth. Errors of non-observation can be attributed to sampling, coverage, or non-response. Errors of observation can be attributed to interviewer, respondent, instrument, or method of data collection (Scheaffer *et al*, 2006: 18).

4.5.1. Errors of Non-observation

4.5.1.1. Sampling Error

Generally, the data observed in a sample do not precisely mirror the data in the population from which that sample was selected, even if the sampling and measuring is done with extreme care and accuracy. This deviation between an estimate from an ideal sample and true population value is the *sampling error* that is produced. Sampling errors can be reduced by good survey designs and appropriate choice of sample size (Scheaffer *et al*, 2006: 18). The survey made use o secondary sources of information for the formulation of the questionnaire. Each source was from previous studies that were done in the detergent, marketing, and branding industries. The SAARF AMPS (2005) survey

was also utilised as a means of benchmarking the questionnaires developed. The sample size was determined by the use of a generalised sampling population table for non-probable samples from Sekaran (2000: 295).

4.5.1.2. Errors of Coverage

In almost all surveys the sampling frame does not match up perfectly with the target population, leading to errors of coverage (Sudman & Blair, 1998: 225). For telephone surveys, the telephone directory is inadequate because of unlisted numbers. Similarly, for mail surveys of property owners, the most recent list of addresses available in the country is most probably out of date because some non-resident owners have moved and some would have sold their property recently. Thus, this lack of coverage introduces an error into the sampling process, an error that is not easily measured or corrected in many surveys. This coverage problem must be clearly elucidated in the report on the data analysis so that those using the results of the study can see clearly how the sampled population differs from the target population (Scheaffer *et al*, 2006: 19). To avoid the errors of coverage, the interviewer chose the areas to be sampled as follows:

- Households were interviewed on the weekends when most of the residents were at their residence, and
- Businesses were interviewed during the week (Monday to Friday).

4.5.1.3. Non-Response

Scheaffer *et al* (2006: 19) state that the most serious of non-observational errors is non-response. Non-responses arise in one of three ways: the inability to contact the sampled element (person, household, industrial user), the inability of the person responding to come up with the answer to the question of interest, or refusal to answer. To reduce

possible non-responses in this survey, all the possible respondents were contacted and their questionnaires checked to ensure that all of the questions are answered.

4.5.1.3.1. Dealing with non-responses

Sudman and Blair (1999: 275) state that there has been a decreasing trend in sample co-operation in the past 25 years. Sudman and Blair (*ibid*) believe that reasonable high quality samples will continue to be possible but will only be achieved with greater cost and effort. Correspondingly, Sudman and Blair (*ibid*) and Tull and Hawkins (1993: 190) suggest the following possibilities to deal with non-responses:

- Make more contact attempts to locate respondents,
- Use of greater mixed modes to obtain co-operation,
- Introduce some sort of incentive to the interviewer and/or the respondent. However, this can lead to the respondent answering questions only if the incentive is worthwhile, and the incentive will lead to biasness.
- As co-operation declines, it becomes increasingly important that intensive efforts be made to get a sample of previous non-respondents to enable better post-survey adjustments.

4.5.2. Errors of Observation

Barnett (2002: 162) defines observational errors as information obtained from the chosen sample member but information that is faulty. This can happen in a variety of ways. A question may be misleading or wrongly expressed and lead to an incorrect response (interviewer error). Alternatively, an answer, although correct, may be wrongly recorded (a recording error), or subsequently wrongly coded (a coding error) or wrongly entered into a database (a transmission error). It is important to note that these errors are not the

fault of the selected sample member. Scheaffer *et al* (2006: 20) allocates observational errors to the interviewer, the respondent, the measurement instrument, or the method of data collection. These are discussed below.

4.5.2.1. Interviewers

Interviewers have a direct and dramatic effect on the way a person responds to a question. Reading a question with inappropriate emphasis or intonation can force a response in one direction or another. Most people who agree to an interview do not want to appear disagreeable and will tend to side with the view apparently favoured by the interviewer, especially on questions for which the respondent does not have a strong opinion. Friendly interviewers have more success than the overtly forceful ones. How gender issues affect interviews is not clear, but male interviewers get a higher rate of cooperation from male respondents than do female interviewers. In addition, interviewers of the same gender, racial, and ethnic groups as those being interviewed are slightly more successful (Scheaffer *et al*, 2006: 22).

To ensure that the interviewers accounted for the least possible degree of errors of observation, the writer interviewed the sample personally. Hence, all respondents were treated identically, the survey explained and the respondents given time to make their own judgements on what they sought when purchasing detergents.

4.5.2.2. Respondents

Respondents differ greatly in motivation to answer correctly and in ability to do so. Each respondent must understand the entire question and be clear about the options for the answer. A long questionnaire leads to boredom and tiredness from the respondent, thereby causing the respondent to answer the questions in an untruthful manner. An

attempt to place response errors in categories suggests that most are due to either recall bias, prestige bias, intentional deception, or incorrect measurement (Scheaffer *et al*, 2006: 22).

The questionnaire was kept short so as not to elicit boredom on the part of the respondents. The interviewer had also explained the purpose of the questionnaire thus motivating the sample to answer the questionnaire correctly. Furthermore, this allowed the sample to have the ability to answer the questionnaire.

4.5.2.3. Measurement Instrument

In point 4.5.2.2 above, the incorrect measurement issue is related to the measurement instrument as a source of error. In any measurement question, the unit of measurement must be clearly defined. Inaccurate responses are often caused by errors of definition in survey questions. If not precisely defined, items to be measured cannot be unambiguously measured (Scheaffer, 2006: 22).

Barnett (2002: 163) adds another dynamic to this error and refers to it as an intrinsic error. He contends that an intrinsic error arises when there is a specific value Y_i relevant to the individual i but it is physically difficult to observe without an additional superimposed error. The example he puts forward to explain this is as follows:

Suppose Y is the pulse-rate of a patient. If measured on the ith patient who is 78, does this mean $Y_i = 78$? Not really, since there will be error arising from the *inaccuracy of measurement*, and due to variation from moment to moment by natural (intrinsic) effects.

Therefore, the sources of errors as mentioned above can be summarised as follows:

Figure 4.5.2.3: Summary of the different sources of errors

General Type	Forms	Specific versions
Sample variation	sampling error	
Non-observational errors	non-inclusion error	coverage error
	non-response error	
Observational errors	response error	interview error
		question error
		recording error
		coding error
	measurement error	inaccuracy of measurement
		intrinsic error

(Barnett, 2002: 163)

4.6. Data Analysis

After the data has been collected, the raw data needs to be assimilated into information that can be inputted into a statistical package such as SPSS, to produce an output that is useful and addresses the research question and objectives set out under section 5.2. Accordingly, Barnett (2002: 179); Jolliffe (1986: 102); Sekaran (2000: 302); Luck (1987: 342, 366); and Tull & Hawkins (1993: 602) state that raw data obtained from a questionnaire needs to be scaled, coded, edited and tabulated. In addition, there needs to be a statistical method to deal with missing data. These are then statistically analysed using a computer software package. For the purposes of this study, SPSS version 9 was utilised.

4.6.1. Coding and scaling

The responses were coded in a convenient manner. The codes were based on numeric variables. For example, question 1 coded 'Male' and 'Female' as 0 and 1, respectively.

Questions 6 and 22 asked respondents to rank their choices using a ranking system of 1 to 5 – with 1 being most important and 5 not mattering to their choice. These ranked choices were used as the codes for these two questions. With structured attitudinal questions, a (numerical) coding system was used. At the very least, there should exist some progression through the coded numbers expressing a progressional attitude, *e.g.* Always, Very often, Sometimes, and Never. With unstructured questions, or those with large numbers of permitted distinct (and even multiple) responses, it may be necessary to determine coding schemes *post hoc*: deciding from the pattern of responses what might constitute a manageable set of response categories and a coding system for it.

The ability to conduct meaningful statistical analysis is one of the stimuli to scaling of data. Its object is to transform a response (or a combination of responses to some related question) to a numerical coding which is interpretable and justifies formal statistical analysis. It presupposes that there is a natural scale of measurement on which the qualitative responses lie, and seeks to determine what that scale is (Barnett. 2002: 180).

4.6.2. Editing and tabulating

Editing includes checking for *completeness of response*, including checking if there is an answer to each question. A fairly common difficulty is in interpreting whether non-responses imply no view, inapplicability, refusal to answer or failure to ask the question. Apart from incomplete responses, the editing process must seek to highlight any regular (or frequent) misinterpretations evident in the pattern of responses and seek to identify specific inaccuracies (Barnett, 2002: 181).

Sekaran (2000: 303) states that editing of data should be done on the same day of the questionnaires being administered and returned. This will help in deciphering any confusion as the interviewer is able to follow up with the respondent if an answer to a question is not clear. In addition, Sekaran (*ibid*) states that any edited data should be

identifiable through the use of a different colour pencil or ink so that the original information is still available in case further doubts persist.

4.6.3. Blank Responses

Not all respondents answer every item in the questionnaire. Answers may have been left blank because the respondent did not understand the question, did not know the answer, was unwilling to answer, or was simply indifferent to responding to the entire questionnaire. Sekaran (2000: 304) states that if more than 25 % of the questionnaire was left blank, then that specific questionnaire must be discarded.

One way to handle a blank response to an interval-scaled item with a midpoint would be to assign the midpoint in the scale as the response to that particular item. Secondly, the computer package should be commanded to ignore the blank response. The disadvantage of this is that the sample size is reduced whenever that variable is involved in the analyses. A third way is to assign to the item the mean value of the responses of all those who have responded to that particular item. A fourth way is to give the item the mean of the responses of this particular respondent to all other questions measuring this variable. A fifth way of dealing with it is to give the missing response a random number within the range for that scale (Sekaran, 2000: 304).

For the current research, the researcher left the blank responses out of the analysis as they were negligible and do not affect the estimators or the statistical analysis of the research.

4.7. Analysing the raw data

Sekaran (2000: 307) states that data analysis has three objectives, namely

1. obtaining a feel for the data, giving preliminary ideas of how good the scales are, how well the coding and entering of data have been done.
2. testing the goodness of data, accomplished by submitting the data for factor analysis, obtaining the Cronbach's alpha or the split-half reliability of the measures, and
3. testing the hypotheses developed for the research.

4.7.1. Feel for the data

This is accomplished by checking the central tendency and the dispersion. The mean, range, standard deviation and variance allow the inference of deducing how well the respondents have reacted to items in the questionnaire. Sekaran (2000: 307) states that if the response to each individual item in a scale does not have a good spread (range) with little variability, the researcher can conclude that the particular question was probably improperly worded and respondents did not fully understand the intent of the question. Biases, if any, could also be detected if the respondents have tended to respond similarly to all questions. The maximum and minimum scores, mean, standard deviation, and variance indicate whether responses range satisfactorily over the scale (Sekaran, 2000: 308). The term satisfactorily implies that all outliers were dealt with giving means, standard deviations and variances closely related.

A frequency distribution of the nominal variables of interest was presented. Visual displays thereof through bar charts/histograms were presented. The central tendency measures relating to the perceptions and expectations of the respondent (potential future customer) with regard to cleaning products and profitability therefrom were also presented. Wegner (2002: 54) contends that observations of a random variable tend to group about some central value. It is assumed that customers have perceptions of cleaning products and expect the product to accomplish some sort of effect. It is this

effect that the central tendencies help in identifying. By virtue of this identification, a new business is able to concentrate on these factors in order to promote its products.

Sekaran (2000: 308) states that it is prudent to obtain the frequency distributions for the demographic variables; the mean, standard deviation, range and variance on the dependant and independent variables; and to obtain an intercorrelation matrix of the variables (chi-square). The growth potential of the product in the various target markets will be probed by the chi-square test. Wegner (2002: 248) states that the chi-square (χ^2) test is a statistical measure used to test hypotheses on *patterns of outcomes* of the random variables in a population. The data required for the χ^2 test is frequency counts. Wegner (2002: 249) further states that the questionnaire often provides the number of times something is likely to occur and thus lends itself to statistical calculations of the average number of occurrences. Coakes and Steed (2003: 195) state that there are two main types of chi-square test. The chi-square test for the goodness of fit applies to the analysis of a single categorical variable, and the chi-square test for independence or relatedness applies to the analysis of the relationship between two categorical variables.

4.7.2. Testing Goodness of Data

This involves the testing of the reliability and validity of the measures.

4.7.2.1. Reliability

Sekaran (2000: 308); Wegner (2002: 78); and Smithson (2000: 258) state that the reliability of a measure is established by testing for both consistency and stability. Consistency indicates how well the items measuring a concept group together as a set. Cronbach's alpha is a reliability coefficient that indicates how well the items in a set are positively correlated to one another. Coakes and Steed (2003: 140) state that there are a number of different reliability coefficients. One of the most commonly used is the

Cronbach's alpha, which is based on the average correlation of items within a test if the items are standardised. If the items are not standardised, it is based on the average covariance among the items. The Cronbach's alpha can range from 0 to 1.

Another measure of consistency reliability is the split-half coefficient. This coefficient reflects the correlations between two halves of a set of items, the coefficients obtained will vary depending on how the scale is split. The stability of a measure can be accessed through parallel form reliability and test-retest reliability. When a high correlation between two similar forms of a measure is obtained, parallel form reliability is established. Test-retest reliability can be established by computing the correlation between the same tests administered at two different time periods (Sekaran, 2000: 308).

For purposes of this study, Cronbach's alpha was calculated as part of the reliability test to assess how valid the results were and whether the results can be generalized if the sample size is increased. A value of 0.7 or higher is a very good value that can lead us to say that we will get almost the same results if we carried out this survey with a larger sample of respondents (Coakes and Steed, 2003: 140). Cronbach's alpha method is uaually considered to be sufficient for scale type questions that were present in the current questionnaire and accordingly was deemed suitable for the study. Other methods such as the Kuder-Richardson are more suited to dichotomous questions.

Table 4.7.2.1.1: Displays the reliability statistics determined using Cronbach's Alpha

Cronbach's Alpha	N of Items
0.724	6

Accordingly, a Cronbach's Alpha of 72.4% was obtained, indicating that the results are reliable. The Alpha value is good.

4.7.2.2. Validity

There are four types of validity. Factorial validity can be established by submitting the data for factor analysis. The results will confirm whether or not the theorized dimensions emerge. Criterion related validity can be established by testing for the power of the measure to differentiate individuals who are known to be different. Convergent validity can be established when there is a high degree of correlation between two different sources responding to the same measure. Lastly, discriminant validity can be established when two distinctly different concepts are not correlated to each other. Well-validated measures offer no need to re-establish their validity, however, the reliability of the items can be tested (Sekaran, 2000: 309).

4.7.3. Hypothesis Testing

This involves testing the hypotheses developed for the study. The information obtained from the questionnaires will be analysed using mainly non-parametric statistical methods and to highlight the objectives of this research. A comparison of the purchasing behaviour between different users will be made using a regression approach. Chi-Square tests will be used to test goodness of fit and the relationship between categorical variables. The log-linear regression was employed to test whether there exists scope for a new detergent manufacturing business in Pietermaritzburg. Logistic regression is a generalised linear model with categorical or continuous explanatory variables. The response or outcome variable is binary and assumed to follow a binomial distribution with a log link. Hence, he logistic regression is fitted as a generalised linear model with a binomial distribution and a log link (Coakes and Steed, 2003: 252).

4.8. Conclusion

This chapter provided a description of the various data collection methods and the survey technique employing a questionnaire as the data collection method. Reference was made to the sampling technique employed, the determination of the sample size, the compilation of the final questionnaire, and the pre-testing procedure followed during the empirical execution of the research. This study was based on a questionnaire administered to respondents. As such, ethical clearance was sought and given by the University of KwaZulu Natal. The ethical clearance certificate can be found in the appendix E.

Chapter five will provide a discussion of the results and interpretation thereof along with the outcomes of the different research propositions as formulated in the introductory chapter and substantiated in chapters four and five.

CHAPTER 5

FINDINGS AND DISCUSSION

5.1. Introduction

This chapter provides the results of the survey into the purchasing habits of consumers with regard to detergents. Both the household user and the industrial user were surveyed and the results follow. This chapter indicates whether there is a need for a detergent company in Pietermaritzburg or whether Pietermaritzburg is saturated with detergent companies.

The chapter begins with the frequency distributions of each questionnaire asked in the survey. Thereafter, the descriptive statistics of the sample is presented. This includes the median, mode, standard deviation and variance of the sample. Furthermore, the data was subjected to statistical techniques such as Analysis of Variance (ANOVA), the logistic regression and the Chi-Square test apart from univariate analyses. These were applied to both the household and business users data. Lastly, Cronbach's alpha was used to test the reliability of the data collected. The findings presented in this chapter are based on the above statistical approaches.

5.2. Structure of the sample

Household Users:

5.2.1. Gender Profile of the Sample

The sample consisted of 391 respondents: 159 males (42.1%) and 219 females (57.9%).

Table 5.2.1.1: The gender profile of the sample

Gender		Frequency	Percent (%)	Valid Percent (%)	Cumulative Percent (%)
Valid	Male	159	40.7	42.1	42.1
	Female	219	56.0	57.9	100.0
	Total	378	96.7	100.0	
Missing	System	13	3.3		
Total		391	100.0		

The SAARF AMPS survey (2005: 29) had a total sample size of 50.1% males and 49.9% females. This is approximately similar to the amount of respondents in the current research project.

5.2.2. Gross Monthly Income of the Respondents

Table 5.2.2.1 indicates that the modal gross income groups were R3201 - R6400 followed by the R6401 - R12 800 ranges. The SAARF AMPS survey (2005: 1387) revealed that 46.9% of the population who purchased Sunlight earned a gross monthly income of R3201 – R6400. This contrasts to Ajax (11.1%), BioClassic (1.8%), Polagric (2.0%), Quix (4.2%), and no-name brands (6.8%) that were purchased by individuals who earned gross monthly incomes of R12 801 – R25 600, respectively.

The SAARF AMPS survey (2005: 1779) also revealed that 41.7% and 6.9% of the population that purchased Sta-Soft and Country Pride earned gross monthly incomes in the range of R6401 – R12 800. 5.1% of the population purchased Surf fabric softener with gross monthly income in the range of R1601 – R3200. The remainder fabric softeners were purchased by individuals who earned R1601 or below except for the non-branded fabric softener where gross monthly income ranges were evenly distributed between R3201 – R6400 and above. From the above analysis, it can be deduced that the middle income earners purchase fabric softeners while lower income earners do not seem to purchase fabric softeners. Thus, South Africa generally has a normally distributed

workforce, with the modal gross monthly income similar to that found in this research project (SAARF AMPS, 2005: 30). This reinforces the point that the world's lower income citizens utilise a single detergent for a variety of purposes (Euromonitor, 2005: 2).

Table 5.2.2.1: Frequency count, percentages and the number of respondents that failed to indicate their gross monthly income

Gross Monthly Income		Frequency	Percent (%)	Valid Percent (%)	Cumulative Percent (%)
Valid	R1-R400	6	1.5	1.6	1.6
	R401-R800	8	2.0	2.1	3.7
	R801-R1600	34	8.7	8.9	12.6
	R1601-R3200	81	20.7	21.3	33.9
	R3201-R6400	93	23.8	24.5	58.4
	R6401-R12800	89	22.8	23.4	81.8
	R12801-R25600	38	9.7	10.0	91.8
	> R25601	31	7.9	8.2	100.0
	Total	380	97.2	100.0	
Missing	System	11	2.8		
Total		391	100.0		

5.2.3. Area of residence

Table 5.2.3.1 indicates that there was an approximate even spread of respondents from the different areas in Pietermaritzburg. The Pietermaritzburg CBD accounted for the greatest representation (19.9%), followed by Northdale (19.2%); Mountain Rise (17.1%); Scottsville/Hayfields (12.3%); and Sobantu (9.0%), respectively. 'Other' area's predominantly consisted of households in the Ashdown suburb (7.7%). This is a black township located on the outskirts of Pietermaritzburg.

Table 5.2.3.1: The number of respondents categorized by their area of residence

Area of Residence		Frequency	Percent (%)	Valid Percent (%)	Cumulative Percent (%)
Valid	Mountain Rise	67	17.1	20.1	20.1
	Pietermaritzburg CBD	78	19.9	23.4	43.5
	Scottsville Hayfields	48	12.3	14.4	58.0
	Sobantu	35	9.0	10.5	68.5
	Northdale	75	19.2	22.5	91.0
	Other	30	7.7	9.0	100.0
	Total	333	85.2	100.0	
Missing	System	58	14.8		
Total		391	100.0		

5.2.4. The Brands of Liquid Detergents currently purchased by respondents

Table 5.2.4.1 shows that the modal detergents purchased were Sunlight (20.83%), Handy Andy (21.70%) and Sta-Soft (21.85%). BioClassic (4.37%), Ajax (3.57%), Polagric (0.15%), Quix (2.77%), Green Clean (3.42%), Mr Muscle (11.43%), and Windolene (8.08%) made up the remainder of the sample. 11.43% of respondents indicated their liking for the Mr Muscle brand in this research project, which compares favourably with the findings of the Markinor study (Business Times, 2005: 46) and the SAARF AMPS study (2005: 1350). The SAARF AMPS (2005: 1376) survey found that in a city of 250 000 people and more, Sunlight accounted for 41.7% of the brand purchasing. This was followed by Ajax (7.4%), Non-branded liquid dishwashing detergents (5.0%), Quix (2.8%), Polagric (1.8%) and BioClassic (1.1%).

Unilever claims that Sunlight has a 69% share of the local market of liquid hand dishwashing detergents. This result corroborates this assertion (Unilever SA, 2004: paragraph 1 – 2). Although, Sunlight dominates the liquid detergent landscape, it was interesting to note that Sta-Soft has a larger market share. It seems that due to Unilever's

enormous advertising budget, they are able to create a 'perception' that Sunlight is the largest liquid detergent brand in South Africa (Shevel, 2006: 15).

Table 5.2.4.1: The modal brands of the liquid detergents purchased

Type of Liquid Detergent Brand	Frequency	Percent (%)
Sunlight	286	20.83
Bioclassic	60	4.37
Ajax	49	3.57
Polagric	2	0.15
Quix	38	2.77
Handy Andy	298	21.70
Green Clean	47	3.42
Mr Muscle	157	11.43
Windolene	111	8.08
StaSoft	300	21.85
Other	25	1.82
Total	1373	100.00

5.2.5. The detergent purchaser in the household

Table 5.2.5.1 illustrates that the respondents usually purchase their own detergents. Thus, a husband, wife, or individual will purchase the liquid detergent by themselves. An emphatic 71.1% purchase detergents by themselves. In addition, a fairly large proportion (23.2%) of the respondent's spouse purchases the liquid detergents and a further 5.7% of a household's detergents were purchased by their children.

Table 5.2.5.1: The person who purchases the household's liquid detergent requirements

Person who purchases		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yourself	261	66.8	71.1	71.1
	Spouse	85	21.7	23.2	94.3
	Children	21	5.4	5.7	100.0
	Total	367	93.9	100.0	
Missing	System	24	6.1		
Total		391	100.0		

5.2.6. The Characteristics that influences the purchasing of detergents

This question asked the respondents to rank the characteristics that influenced their purchasing decisions using a Likert-type scale. The characteristics were price, quality, packaging, brand names, and items on promotion including discounts. Each of these characteristics is presented in table 5.2.6.1. Chaganti *et al* (1989: 21) states that competition among firms principally occurs in the domains of price, advertising and promotion, and quality. Furthermore, these forces of competition can impact on a firm singularly or in combination with each other.

PRICE

Table 5.2.6.1: The influence of the *price* characteristic on the households purchasing behaviour of detergents

Degree of Importance		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Important (1.00)	147	37.6	39.4	39.4
	Important (2.00)	99	25.3	26.5	66.0
	Minor Importance (3.00)	64	16.4	17.2	83.1
	Not Important (4.00)	39	10.0	10.5	93.6
	Does Not Matter (5.00)	24	6.1	6.4	100.0
	Total	373	95.4	100.0	
Missing	System	18	4.6		
Total		391	100.0		

Table 5.2.6.1 indicates that ***pricing*** of detergents is an extremely important characteristic that consumers seek when purchasing liquid detergents. Accordingly, 37.6% indicated pricing as *extremely important,* 25.3% indicated pricing as *important,* 16.4% indicated pricing as of *minor importance,* 10.0% indicated pricing as *not important,* and 6.1% of the sample indicated that pricing *does not matter* in their detergent purchasing decisions. These findings were confirmed by Banerjee (2004: 3) and Chaganti *et al* (1989: 1).

QUALITY

Table 5.2.6.2 illustrates that ***quality*** is 'relatively' important (31.7%) and 31.2% of the sample indicating that quality was *very important*. 22.3% respondents indicated quality was a *minor* importance, while 6.4% felt that quality was *not important*. Lastly, 5.4%

indicated that quality *does not matter* when they purchased their liquid detergents for their household Similarly, these findings were confirmed by Banerjee (2004: 3) and Chaganti *et al* (1989: 1).

Table 5.2.6.2: The influence of the *quality* characteristic on the households purchasing behaviour of detergents

Degree of Importance		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Important (1.00)	122	31.2	32.2	32.2
	Important (2.00)	124	31.7	32.7	64.9
	Minor Importance (3.00)	87	22.3	23.0	87.9
	Not Important (4.00)	25	6.4	6.6	94.5
	Does Not Matter (5.00)	21	5.4	5.5	100.0
	Total	379	96.9	100.0	
Missing	System	12	3.1		
Total		391	100.0		

PACKAGING

Packaging (35.5%) is a characteristic that *does not matter* when the consumer purchases liquid detergents. 30.4% indicated packaging was *not important*. However, Ehrenberg (1991; cited in Hoek *et al*, 2003: 54) states that the introduction of a new brand leads to changes in market share and market structure of the existing brands. Morein (1975; cited in Hoek *et al*, 2003: 55) takes this further by stating that one can capitalise on these market changes by employing visual stimuli such as logos and better packaging. The pairing of these stimuli helps to decrease barriers to trial by consumers for a new brand that might otherwise exist on the shelf without being tried.

Table 5.2.6.3: The influence of the *packaging* characteristic on the households purchasing behaviour of detergents

Degree of Importance		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Important (1.00)	15	3.8	4.0	4.0
	Important (2.00)	25	6.4	6.7	10.8
	Minor Importance (3.00)	74	18.9	19.9	30.6
	Not Important (4.00)	119	30.4	32.0	62.6
	Does Not Matter (5.00)	139	35.5	37.4	100.0
	TOTAL	372	95.1	100.0	
Missing	System	19	4.9		
Total		391	100.0		

BRAND NAMES

Table 5.2.6.4 illustrated that ***brand names*** is *not important* (25.1%), while 21.0% indicated that brand names *do not matter*. *Very important* accounted for 14.3%, while 16.1% (important) and 18.7% (*minorly important*). Approximately, 19 respondents or 4.9% of the sample did not indicate if a brand name was an influence that determined their purchasing habits of detergents.

Table 5.2.6.4: The influence of the *brand name* characteristic on the households purchasing behaviour of detergents

Degree of Importance		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Important (1.00)	56	14.3	15.1	15.1
	Important (2.00)	63	16.1	16.9	32.0
	Minor Importance (3.00)	73	18.7	19.6	51.6
	Not Important (4.00)	98	25.1	26.3	78.0
	Does Not Matter (5.00)	82	21.0	22.0	100.0
	Total	372	95.1	100.0	
Missing	System	19	4.9		
Total		391	100.0		

PROMOTIONS INCLUDING DISCOUNTS

Table 5.2.6.5 indicated that promotions *does not matter* (27.1%), is *not important* (22.3%), was of *minor importance* (17.9%), important (15.3%), and *very important* (12.5%), respectively.

Table 5.2.6.5: The influence of the *promotion/discounts* characteristic on the households purchasing behaviour of detergents

Degree of Importance		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Important (1.00)	49	12.5	13.2	13.2
	Important (2.00)	60	15.3	16.1	29.3
	Minor Importance (3.00)	70	17.9	18.8	48.1
	Not Important (4.00)	87	22.3	23.4	71.5
	Does Not Matter (5.00)	106	27.1	28.5	100.0
	Total	372	95.1	100.0	
Missing	System	19	4.9		
Total		391	100.0		

In summary, ***price*** and ***quality*** seem to be the main factors that influence the purchasing of detergents. Both pricing and quality seem to be the most important characteristics when people choose detergents. Banerjee (2004: 3) found that the major variables influencing detergent brand choice seem to be the attitudinal variables such as the perception regarding the efficacy (QUALITY) of the brand, closely followed by the perception on the value-for-money (PRICE). Field level promotional activities such as price-offs, freebies associated with different pack sizes (packaging varieties) of the same brand also seem to impact the choice of the brand, although the impact was low. Base price reduction is generally resorted to quite infrequently and hence a price elasticity measure may be found to be statistically insignificant (promotions/discounts).

5.2.7. The monthly expenditure of households on liquid detergents

The modal monthly expenditure of households on liquid detergent products was R101 – R125 (17.6%) per month (table 5.2.7.1). This approximately mid-point range can be explained, as most of the households surveyed indicated that the number of members residing in their household averaged was 1 – 4 members. Hence, the low number of members that reside in a household is directly proportional to the amount (rand-value) spent on detergents.

South Africa, as a country, has an extensive network of supply chains in place. Furthermore, most consumers are over-exposed to advertising and as such, a small percentage of consumers spend R1 – R25 and R26 – R50 per month on liquid detergents. This can be explained by the fact that these households will use 'a' detergent as an all-purpose detergent, washing their cutlery, clothing and using the one product as a personal-care item (London School of Hygiene, 2002: 35).

Table 5.2.7.1: The monthly expenditure of households on detergent purchasing

Monthly Expenditure		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	R1-R25	21	5.4	5.5	5.5
	R26-R50	21	5.4	5.5	11.1
	R51-R75	27	6.9	7.1	18.2
	R76-R100	50	12.8	13.2	31.4
	R101-R125	69	17.6	18.2	49.6
	R126-R150	36	9.2	9.5	59.1
	R151-175	30	7.7	7.9	67.0
	R176-R200	55	14.1	14.5	81.5
	R201-R225	18	4.6	4.7	86.3
	> R225	52	13.3	13.7	100.0
	Total	379	96.9	100.0	
Missing	System	12	3.1		
Total		391	100.0		

5.2.8. Measure of the number of members residing in a household

The modal range for the number of members residing in households is 1 – 4 people (54.2%) per household (table 5.2.8.1). This figure is proportional to the monthly expenditure in point 6.2.7 above. Accordingly, having 1 – 4 members residing in a household; the average amount spent on detergents per month is justified. The 5- 8 member household (28.6%), the 9 – 12 member household (6.6%) and the greater than 12 member household (7.2%) made up the remainder.

Table 5.2.8.1: The number of members residing in a household

Number of Members per Household		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-4	212	54.2	56.1	56.1
	5-8	112	28.6	29.6	85.7
	9-12	26	6.6	6.9	92.6
	> 12	28	7.2	7.4	100.0
	Total	378	96.7	100.0	
Missing	System	13	3.3		
Total		391	100.0		

5.2.9. The total quantity (literage) of liquid detergent purchased by households

Table 5.2.9.1 shows that the modal total quantity of liquid detergents used per household per month was found to be greater than *2501 ml* (30.4%). Furthermore, 20.5% used *1501 ml – 2000 ml* per month. The smallest quantity range was accounted for by 4.3% of the sample. This small use is characterized by individuals who earn less than R1600 per month, and use the detergent as a general purpose 'soap and detergent'. In accordance with table 5.2.7.1, the smallest total quantity of liquid detergents has the lowest representation in the sample as most consumers are over-exposed to advertising, and as

such a small percentage of consumers use *0 ml – 500 ml* of liquid detergents per month. This over-exposure to advertising media has in-effect educated the general population on the varied and necessary uses of the various brands and non-brands of liquid detergents. Thus, the information provided educates the population that one detergent is in-sufficient to satisfy all of their cleaning requirements (London School of Hygiene, 2002: 25 - 35).

Table 5.2.9.1: The total quantity of liquid detergents purchased by households per month

Total Quantity of Liquid Detergents Purchased Per Month		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0ml-500ml	17	4.3	4.5	4.5
	501ml-1000ml	51	13.0	13.5	18.0
	1001ml-1500ml	74	18.9	19.6	37.6
	1501ml-2000ml	80	20.5	21.2	58.7
	2001ml-2500ml	37	9.5	9.8	68.5
	> 2501ml	119	30.4	31.5	100.0
	Total	378	96.7	100.0	
Missing	System	13	3.3		
Total		391	100.0		

5.2.10. The Influence of a Television Medium in Helping to Determine the choice of detergent to be purchased

A television medium *never* (35.0%), *sometimes (30.7%)*, *always* (19.7%), and *very often* (11.5%) help in influencing households in their determination of the choice of detergent to be purchased (table 5.2.10.1). The General Household Survey conducted in 2005, found that approximately 55% of all households in South Africa owned or had access to a television in 2004 / 2005. This can account for the low influence of televisions on household's choice of detergent purchasing. This can be justified in that approximately 56.7% of this sample earned a gross monthly income in the range of R1 – 6400 (see Figure 5.2.2.1, 2006: 5). Accordingly, there is tremendous competition for the available

disposable income in a South African household. Cellular phones have a market penetration of 59.7% in households in South Africa. Hence, many households are exposed more too mobile technology as compared to the fixed cable line technology (Statistics SA, 2006: 9).

Table 5.2.10.1: Indication of a television medium influencing the choice of detergent to be purchased

Influence of Television Medium		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	always	77	19.7	20.3	20.3
	very often	45	11.5	11.9	32.2
	sometimes	120	30.7	31.7	63.9
	never	137	35.0	36.1	100.0
	Total	379	96.9	100.0	
Missing	System	12	3.1		
Total		391	100.0		

5.2.11. The Influence of a Print Medium in Helping to Determine the choice of detergent to be purchased

For purposes of this research, a print medium is defined as the newspaper, pamphlets, brochures and other print related media. It is apparent that a print medium *sometimes* (34.5%), *always* (26.1%), *very often* (16.4%), and *never* (19.9%) influences consumer's detergent purchasing behaviours. Table 5.2.11.1 depicts this.

Both points 5.2.10 and 5.2.11 involved evaluating the television and print medium in influencing a consumer's detergent purchasing habits. As was evident, the print medium

was able to expend greater information on detergents than the television medium. While undertaking this research project, the interviewer found that the respondents were more receptive to newspapers, brochures and pamphlets than viewing a detergent product on television. This un-receptiveness was a result of television being able to manipulate results so as too fit the advertisement in the allotted time schedule

Table 5.2.11.1: Indication of a print medium influencing the choice of detergent to be purchased

Influence of Print Medium		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	always	102	26.1	26.9	26.9
	very often	64	16.4	16.9	43.8
	sometimes	135	34.5	35.6	79.4
	never	78	19.9	20.6	100.0
	Total	379	96.9	100.0	
Missing	System	12	3.1		
Total		391	100.0		

5.2.12. Other Media pertinent to detergents

Most of the respondents who had answered this question indicated their preference for radio advertisements as a source of notifying them about new and innovative detergent products, including promotions and discounts.

5.2.13. Branded, Non-Branded or Both

The study revealed that 43.7% purchased *branded* detergents, 9.0% purchased non-branded detergents only, and 44.0% purchased both branded and non-branded detergents (table 5.2.13.1). This is significant as it was expected that the majority of the respondents,

purchased only branded detergents due to the monopolisation of the detergent industry by the large multi-national companies. Bucklin & Gupta (1992: 202) state that the non-branded detergent consumers are merely interested in purchasing a product that does its job – cleaning.

The figures in table 5.2.13.1 correspond with the figures obtained from the SAARF AMPS survey (2005) where it was found that 8.1% of Pietermaritzburg respondents used non-branded detergents. Cape Town (6.5%), Port Elizabeth (3.6%), East London (6.9%), Bloemfontein (5.6%), Welkom (1.4%), Durban (5.5%), Johannesburg (4.0%), and Pretoria (5.2%) were all considerably lower than Pietermaritzburg's non-branded detergent usage levels (SAARF AMPS, 2005: 1380 – 1381). From these statistics, it seems that the coastal cities like Durban, Cape Town, East London, and Pietermaritzburg (45 minutes from the Durban Harbour) has the highest percentages of citizens who use non-branded detergents as compared to the in-land cities of South Africa. Sunduza (2005: 29) proposes that this can be accounted: "as most input materials are imported, higher volume production and sales is based at the coast".

Table 5.2.13.1: The number of respondents that purchased branded and non-branded detergents in a household

Type of Detergent Product Purchased		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Branded	171	43.7	45.2	45.2
	Non-Branded	35	9.0	9.3	54.5
	Both	172	44.0	45.5	100.0
	Total	378	96.7	100.0	
Missing	System	13	3.3		
Total		391	100.0		

5.2.14. If using mostly branded detergents, under what circumstance would the sample consider shifting to a non-branded detergent?

The modal groups that will cause a shift to non-branded detergents is both *quality* and to a lesser degree *price*. Quality (41.7%) and price (26.9%) were the two most important characteristics chosen that may affect a shift to non-branded detergents (table 5.2.14.1). Promotions/discounts will cause a shift only if the quality and price exceed the consumers' perception. This again conforms the findings by Banerjee (2004: 3) that price and quality were most important to consumers when purchasing detergents.

Table 5.2.14.1: The circumstances under which consumers would consider shifting from a branded to a non-branded detergent

Non-Branded Detergent Shifter		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Price	105	26.9	27.8	27.8
	Quality	163	41.7	43.1	70.9
	Promotion / Discounts	58	14.8	15.3	86.2
	Unsatisfied with the current brand of detergent	52	13.3	13.8	100.0
	Total	378	96.7	100.0	
Missing	System	13	3.3		
Total		391	100.0		

5.2.15. Support for a new detergent business venture

The respondents were asked whether they would support a new detergent business venture, assuming that the quality of the detergents would be identical to that of branded detergents. The modal response indicator was *sometimes* (40.2%). The remainder was made up of always (22.8%), *very often* (23.3%) and *never* (10.0%). This is viewed in

table 5.2.15.1. Banerjee (2004: 6) states that firms who are able to meet and satisfy the needs of consumers are more than likely to capture these consumers from existing suppliers. Accordingly, viewing this in relation to the percentage of respondents that indicated quality as an important shift variable; the 40.2% of respondents who had indicated that they would *sometimes* support a new detergent business venture matches closely with the 41.7% of respondents that indicated quality as a likely shift variable.

Table 5.2.15.1: Support a new detergent business venture manufacturing products similar to the detergents that they are currently purchasing

Support of a new detergent business venture		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	89	22.8	23.7	23.7
	Very Often	91	23.3	24.2	47.9
	Sometimes	157	40.2	41.8	89.6
	Never	39	10.0	10.4	100.0
	Total	376	96.2	100.0	
Missing	System	15	3.8		
Total		391	100.0		

Business Users:

The following section looks at businesses as users of detergents.

5.2.16. Number of employees currently employed in the organization

Table 5.2.16.1 indicates that the modal group was the *greater than 41* employees (27.4%). These are large, high turnover organizations based in Pietermaritzburg. Approximately, 42% of the businesses sampled, employ 11 – 30 people in their organizations. Furthermore; in the sample and hence Pietermaritzburg; 12.9% of businesses employed 31 – 40 people in their organization. Thus, Pietermaritzburg appeals

more to the very small enterprise owner - ten or less paid employees - and the small enterprise - less than 100 employees (Small Business Development, 2002: paragraph 5).

Table 5.2.16.1: The number of employees currently employed in the business sample

Number of Employees		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-10	22	5.6	17.7	17.7
	11-20	26	6.6	21.0	38.7
	21-30	26	6.6	21.0	59.7
	31-40	16	4.1	12.9	72.6
	> 41	34	8.7	27.4	100.0
	Total	124	31.7	100.0	
Missing	System	267	68.3		
Total		391	100.0		

5.2.17. Gross turnover of the firm per month

Table 5.2.17.1 corroborates the discussion in point 5.2.15 above. The financial size of the firm is directly proportional to the number of employees employed. Accordingly, firms with *greater than R301 000 gross* monthly turnovers accounted for 34.1% of the firms in the sample. The remainder of the sample has gross monthly turnover's of R1 – R50 000 (10.6%), R51 000 – R100 000 (5.7%), R101 000 – R150 000 (11.4%), R151 000 – R200 000 (17.1%), R201 000 – R250 000 (11.4%), and R251 000 – R300 000 (9.8%).

Table 5.2.17.1: The sampled firms gross monthly turnover

Gross Monthly Turnover		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	R1 - R50 000	13	3.3	10.6	10.6
	R51 000 - R100 000	7	1.8	5.7	16.3
	R101 000 - R150 000	14	3.6	11.4	27.6
	R151 000 - R200 000	21	5.4	17.1	44.7
	R201 000 - R250 000	14	3.6	11.4	56.1
	R251 000 - R300 000	12	3.1	9.8	65.9
	> R301 000	42	10.7	34.1	100.0
	Total	123	31.5	100.0	
Missing	System	268	68.5		
Total		391	100.0		

5.2.18. Business Activity of the Firm

Most respondents of the business sample were involved in the *manufacturing* (30.1%) and *services* (28.5%) sectors, respectively. The retail (13.8%) and catering (12.2%) sectors were approximately identical. The holiday oriented firms accounted for 9.8% of the sample while the wholesale firms made up 5.7% of the business sample. This is indicated in table 5.2.18.1.

Table 5.2.18.1: The business activity of the sampled firms

Business Activity		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Services	35	9.0	28.5	28.5
	Manufacturing	37	9.5	30.1	58.5
	Retail	17	4.3	13.8	72.4
	Wholesale	7	1.8	5.7	78.0
	Catering	15	3.8	12.2	90.2
	Holiday	12	3.1	9.8	100.0
	Total	123	31.5	100.0	
Missing	System	268	68.5		
Total		391	100.0		

5.2.19. Detergent Procurement in the Sampled Firms

It is apparent from table 5.2.19.1 that most of the firm's detergents were procured by the person responsible for answering the questionnaire (67.2%). Detergent procurement for most firms was seen to be viewed as a non-core item of purchasing. Viewing non-core items as *low value purchases* is where the company loses on its savings gained in other areas of the business. The companies sampled procure or use a small quantity of detergents. In fact, this was calculated to be 23.4% of all the sampled firms (table 5.2.20). Lamber & Bennion (1990) state that "small orders are a major source of inefficiency and high cost for many companies..." Pahiti (1999) found that for many organizations, low value purchases often followed the same order processing as carried out for high value orders. In South Africa, for example, he found that the cost of ordering is estimated to be in the range of R150 (Umgeni Water) to R260 (SASOL) per order! In the USA estimates ranged from $40 - $75 per order and in the UK it was estimated that the average order costs £50 to process (Lamber & Bennion, 1990; Pahiti, 1999).

Thus, detergent purchasing, no matter how small, needs to be viewed by firms as a complex decision-making purchase. In the long run, the costs saved far outweigh the current lack-of-interest approach to detergent purchasing.

Table 5.2.19.1: The person/s responsible for detergent purchasing in a firm

Person Responsible for Purchasing Detergents		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yourself	82	21.0	67.2	67.2
	Purchasing Officer / Buyer	35	9.0	28.7	95.9
	Other	5	1.3	4.1	100.0
	Total	122	31.2	100.0	
Missing	System	269	68.8		
Total		391	100.0		

5.2.20. Monthly Expenditure of the Sampled Firms on Detergents

Approximately 29.0% of the sampled firms spend *less than R300* per month, 22.6% spend *greater than R1501* per month, 17.7% spend between R301 – R600, 9.7% spend between R601 – R900, 13.7% spend between R901 – R1200 and 7.3% spend R1201 – R1500 per month, respectively (table 5.2.20.1).

Table 5.2.20.1: The monthly expenditure of the sampled firms on detergents

Monthly Expenditure on Detergents		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	R1 - R300	36	9.2	29.0	29.0
	R301 - R600	22	5.6	17.7	46.8
	R601 - R900	12	3.1	9.7	56.5
	R901 - R1200	17	4.3	13.7	70.2
	R1201 - R1500	9	2.3	7.3	77.4
	> R1501	28	7.2	22.6	100.0
	Total	124	31.7	100.0	
Missing	System	267	68.3		
Total		391	100.0		

5.2.21. Total Quantity of Detergents Purchased by the Sampled Firms per Month

Table 5.2.21.1 illustrates that the total modal quantity of liquid detergents purchased by businesses was between $0l - 25l$ (23.4%), while the second highest was greater than 225 litres (16.1%). This has implications in that businesses seem have a need for specialized detergent products such as degreasers and concentrated surfactants. Indications are that dishwashing liquid detergents, fabric softeners and hard surface cleaners required for businesses are purchased at a retail supermarket. This, in most cases satisfies the modal group which is $0l - 25l$.

Table 5.2.21.1: Frequency count, and percentage of the total quantity of detergents purchased by the firms per month

Total Quantity Purchased Per Month		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0l - 25l	29	7.4	23.4	23.4
	26l - 50l	19	4.9	15.3	38.7
	51l - 75l	12	3.1	9.7	48.4
	76l - 100l	13	3.3	10.5	58.9
	101l - 125l	7	1.8	5.6	64.5
	126l - 150l	6	1.5	4.8	69.4
	151l - 175l	4	1.0	3.2	72.6
	176l - 200l	8	2.0	6.5	79.0
	201l - 225l	6	1.5	4.8	83.9
	> 225l	20	5.1	16.1	100.0
	Total	124	31.7	100.0	
Missing	System	267	68.3		
Total		391	100.0		

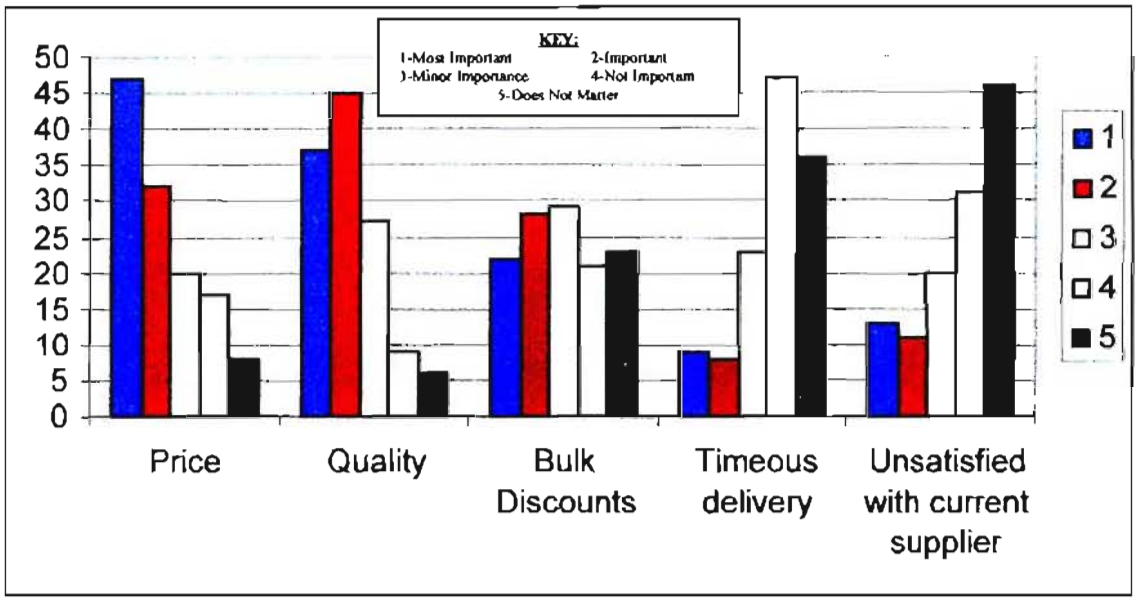
5.2.22. Attributes that Influences a Firm to purchase detergents

Both figure 5.2.22.1 and table 5.2.22.1 were included due to its significance. Both clearly show the most important characteristics businesses look for when purchasing detergents.

Table 5.2.22.1: The degree of importance for each attribute

Degree of Importance	Price	Quality	Bulk Discounts	Timeous delivery	Unsatisfied with current supplier
Most Important (1.00)	47	37	22	9	13
Important (2.00)	32	45	28	8	11
Minor Importance	20	27	29	23	20
Not Important (4.00)	17	9	21	47	31
Does Not Matter (5.00)	8	6	23	36	46

Figure 5.2.22.1: Graphical representation of the attributes that influences a firm to purchase detergents



From figure 5.2.22.1 and table 5.2.22.1, price is the *most* important followed by quality. 29 respondents stated that bulk discounts was of *minor importance* to their businesses, while 47 respondents stated that timeous delivery was *not important*. An emphatic 46 respondents felt that a below par supplier *does not matter*. As such, these firms will purchase detergents regardless of the service, from suppliers as long as the price is cheaper than the current supplier to the firm.

Additionally, from table 5.2.22.1 clearly shows that price has the highest frequency distribution, indicating the high emphasis placed on pricing as the main attribute decider when purchasing detergents. The same argument follows for the Unsatisfied with supplier factor, which has a high frequency of '*does not matter*'.

5.2.23. Influence of location on the choice of supplier

Table 5.2.23.1: The degree of importance of location of the supplier

Influence of Location		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	43	11.0	35.2	35.2
	Very Often	13	3.3	10.7	45.9
	Sometimes	20	5.1	16.4	62.3
	Never	46	11.8	37.7	100.0
	Total	122	31.2	100.0	
Missing	System	269	68.8		
Total		391	100.0		

Table 5.2.23.1 shows that the location of a detergent supplier *always* (35.2%) and *never* (37.7%) influences choice of supplier for an organization. Accordingly, some firms will prefer a detergent supplier to be operating from the same city or area as the firm while others wouldn't mind purchasing from a detergent firm that is not based in the same city or area as the firm. The condition of being *never* influenced can only be satisfied if firstly, the price is at the rate the firm feels is competitive and secondly, the quality exceeds the firm's expectations.

5.2.24. E-commerce influence on a firm's decision to purchase detergents.

Table 5.2.24.1: Influence of e-commerce facilities on a firms decision in determining what detergents should be purchased

E-commerce Influence		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	8	2.0	6.6	6.6
	Very Often	8	2.0	6.6	13.1
	Sometimes	29	7.4	23.8	36.9
	Never	77	19.7	63.1	100.0
	Total	122	31.2	100.0	
Missing	System	269	68.8		
Total		391	100.0		

Table 5.2.24.1 indicates that the modal response for this question was *never* (63.1%). Detergents are still viewed as a spontaneous purchase, thus the latest technological advertising routes, such as mobile telecommunications, may fail miserably. However, this is an opportunity for future advertising routes once the consumer is educated on the cost-savings that can be reaped when buying detergents for one's business.

Thompson and Strickland (2003: 94) consider the use of e-commerce facilities such as business-to-business and business-to-customer applications a key driving force of an industry. They state that this driving force, like globalisation, mandates fundamental changes in business practices and thus causes a business, more so a new business, to find new, innovative ways of conducting business.

5.2.25. Support for a venture, specializing in the manufacture of detergents

Table 5.2.25.1: The characteristic degree of support for a new detergent business venture among businesses in Pietermaritzburg

Degree of Support		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	23	5.9	19.0	19.0
	Very Often	34	8.7	28.1	47.1
	Sometimes	56	14.3	46.3	93.4
	Never	8	2.0	6.6	100.0
	Total	121	30.9	100.0	
Missing	System	270	69.1		
Total		391	100.0		

Table 5.2.25.1 shows that the modal response was *sometimes* with 46.3% of the business sample responding in the positive that they are willing to try the product provided that the price and quality is competitive.

5.3. Chi-Square Tests (χ^2)

5.3.1. The Chi-square test was used to test if gender is related to the monthly expenditure of household detergents. This addresses hypothesis 1 from Chapter 4.

H_0: Gender is related to the monthly expenditure of household detergents.

H_1: Gender is not related to the monthly expenditure of household detergents.

Table 5.3.1.1: Gender and monthly expenditures on detergents

		GENDER		Total
		Male	Female	
MONTHEXP	R1 – R25	11	10	21
	R26 – R50	6	15	21
	R51 – R75	12	15	27
	R76 – R100	24	26	50
	R101 – R125	20	49	69
	R126 – R150	18	17	35
	R151 – 175	14	16	30
	R178 – R200	22	32	54
	R201 – R225	7	11	18
	> R225	25	27	52
Total		159	218	377

Table 5.3.1.2: Chi-Square test for the above hypothesis

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.510[a]	9	.311
Likelihood Ratio	10.748	9	.293
Linear-by-Linear Association	.243	1	.622
N of Valid Cases	377		

At the 5% significance level, the H_0 (null hypothesis) is rejected because the p-value = 0.311 which is greater than 0.05, χ^2 = 10.51, degrees of freedom (df) = 9. It can be

concluded that *gender* and *monthly expenditure on detergents* are independent. Hence, no relationship exists between a buyer's gender and the rand-value (amount) of detergents that they purchase for their household. While interviewing, it must be mentioned that the interviewer noted that most of the male respondents relied on their spouses (female) to purchase the household detergents.

This analysis was extended to examine whether there is any relationship between gender of the household purchasers and quantity of liquid detergents purchased. Using the chi-square test, it was again found that no relationship exists between the households' gender and the total quantity of liquid detergents that they purchased for their household. $\chi^2 = 8.3$, df = 5, and p = 0.14. As the p-value is greater than 0.05, we conclude that gender and total quantity of liquid detergents purchased are independent.

5.3.2. The Chi-square test was used to test the following hypotheses

H_0: Area of residence influences monthly expenditure of detergents.

H_0: Area of residence does not influence monthly expenditure of detergents.

Table 5.3.2.1: The area of residence and monthly expenditure on liquid detergents

		AREA						Total
		Mountain Rise	Pietermaritzburg CBD	Scottsville/ Hayfields	Sobantu	Northdale	Other	
MONTHEXP	R1 – R25	3	3	3	3	6	0	18
	R26 – R50	1	4	4	3	6	2	20
	R51 – R75	1	6	3	3	8	1	22
	R76 – R100	3	10	7	9	14	2	45
	R101 – R125	12	17	8	7	11	7	62
	R126 – R150	1	12	7	2	4	3	29
	R151 – R175	11	5	1	1	4	4	26
	R176 – R200	6	8	8	5	12	6	45
	R201 – R225	4	2	1	1	4	5	17
	> R225	24	11	6	1	5	0	47
Total		66	78	48	35	74	30	331

Table 5.3.2.2: The Chi-Square test for the hypothesis stated above

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	94.001[a]	45	.000
Likelihood Ratio	95.951	45	.000
Linear-by-Linear Association	12.926	1	.000
N of Valid Cases	331		

At the 5% significance level, the H_0 (null hypothesis) is accepted because p = 0.000 which is less than 0.05. Furthermore, χ^2 = 94, and df = 45. Accordingly, it can be concluded that the area of residence and monthly expenditures on detergents are dependent. Partly owing to the legacy of apartheid, some areas are 'upper-market' locations (Mountain Rise, Scottsville/Hayfields) and inhabited by upper-income household earners, whereas others, such as Northdale and Sobantu are inhabited by middle or low-income earners. Thus higher income areas will spend larger amounts in terms of rand-value and quantity-value in their consumption of detergents. The reverse will apply to low income and medium income areas.

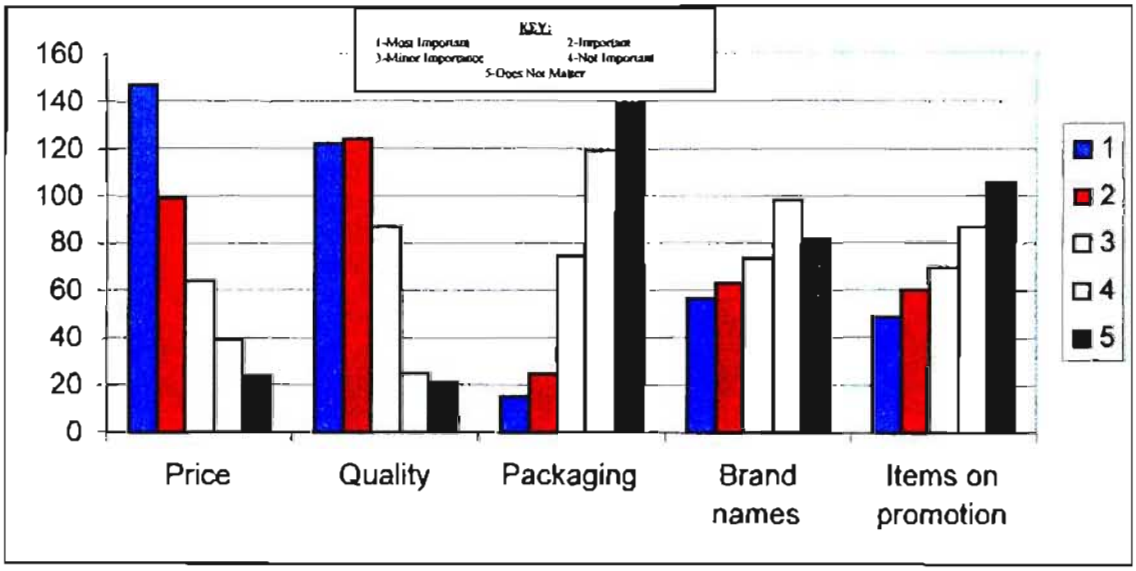
5.3.3. The most important characteristics affecting purchasing of detergents for households and businesses

Because of the significance of these characteristics, both table 5.3.3.1 and figure 5.3.3.1 have been included. As seen, the two most important characteristics affecting purchasing of household detergents was determined to be price and quality. This addresses hypothesis 4. However, brand names occupy a relatively important position for determining household purchasing of detergents. This was followed by items on promotion and lastly packaging. It is apparent from this study that most of the respondents do not place emphasis on the packaging of the detergents.

Table 5.3.3.1: Importance of each characteristic for households

Degree of Importance	Price	Quality	Packaging	Brand names	Items on promotion
Most Important (1.00)	147	122	15	56	49
Important (2.00)	99	124	25	63	60
Minor Importance	64	87	74	73	70
Not Important (4.00)	39	25	119	98	87
Does Not Matter (5.00)	24	21	139	82	106

Figure 5.3.3.1: The degree of importance for households on the main characteristics

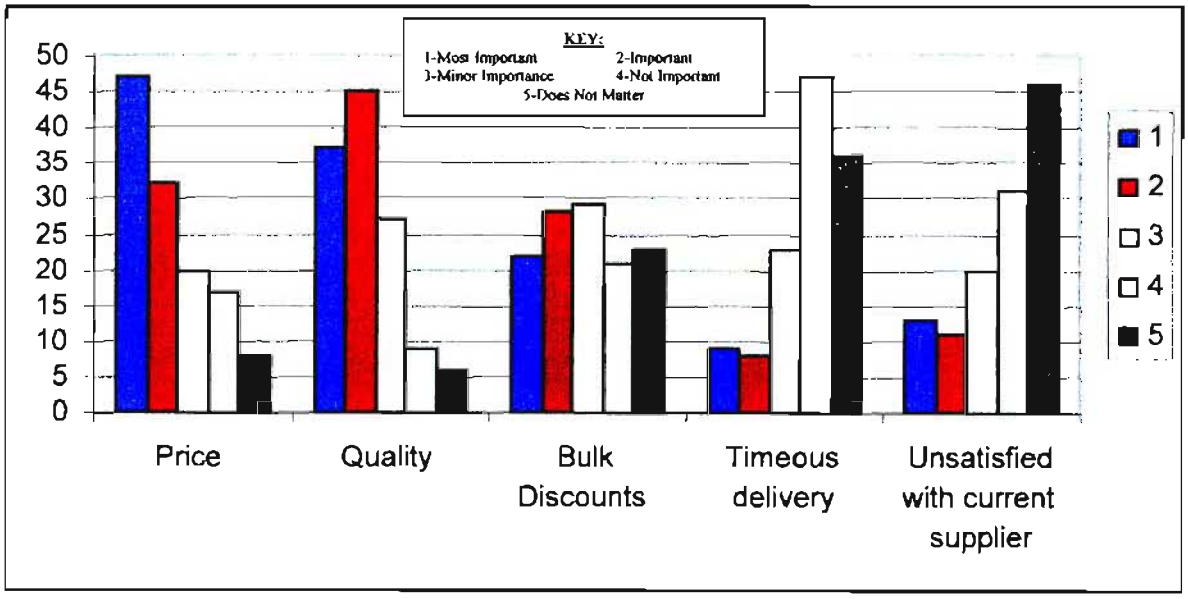


Similarly, as a result of the significance of the characteristics for business detergent purchasing, both table 5.3.3.2 and figure 5.3.3.2 have been included. As seen, the two most important characteristics affecting purchasing of detergents for **businesses/industries** were determined to be price and quality.

Table 5.3.3.2: The degree of importance of each characteristic for businesses

Degree of Importance	Price	Quality	Bulk Discounts	Timeous delivery	Unsatisfied with current supplier
Most Important (1.00)	47	37	22	9	13
Important (2.00)	32	45	28	8	11
Minor Importance	20	27	29	23	20
Not Important (4.00)	17	9	21	47	31
Does Not Matter (5.00)	8	6	23	36	46

Figure 5.3.3.2: The degree of importance for businesses on the main characteristics



5.3.4.

Households:

A.

The Chi-square test was employed to test whether there is any relationship between each characteristic and gender and thus to test the following hypotheses.

H_0: price, quality, packaging, brand names, items on promotions/discounts and gender are independent.

H_1: price, quality, packaging, brand names, items on promotions/discounts and gender are dependent.

Table 5.3.4.1: The Chi-Square test for the *pricing* and *gender* variables in the hypothesis above

PRICE	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.173[(a)]	4	.025
Likelihood Ratio	11.293	4	.023
Linear-by-Linear Association	8.582	1	.003
N of Valid Cases	370		

From table 5.3.4.1 above, it was found that the variables of ***price*** and ***gender*** are dependent as the p-values are below 0.05 ($\chi^2 = 11.173$, df = 4, and p = 0.025). Hence, gender influences the price at which an individual is more likely to spend on purchasing detergents. Thus, the null hypothesis (H_0) is rejected.

Table 5.3.4.2: Chi-Square test for the *quality* and *gender* variables in the hypothesis above

QUALITY	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.545[a]	4	.162
Likelihood Ratio	6.499	4	.165
Linear-by-Linear Association	1.534	1	.216
N of Valid Cases	376		

From table 5.3.4.2 above, it was found that the variables of ***quality*** and ***gender*** are independent as the p-values are greater than 0.05 (χ^2 = 6.545, df = 4, and p = 0.162). Hence, no relationship between gender and quality of the detergent purchased exist. Thus, the null hypothesis (H_0) is accepted.

Table 5.3.4.3: Chi-Square test for the *packaging* and *gender* variables in the hypothesis above

PACKAGING	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.198[a]	4	.525
Likelihood Ratio	3.161	4	.531
Linear-by-Linear Association	2.305	1	.129
N of Valid Cases	369		

From table 5.3.4.3 above, it was found that the variables of ***packaging*** and ***gender*** are independent as the p-values are greater than 0.05 (χ^2 = 3.198, df = 4, and p = 0.525). Hence, no relationship between gender and the choice of packaging influencing the detergent purchased exists. Thus, the null hypothesis (H_0) is accepted.

Table 5.3.4.4: Chi-Square test for the *brand name* and *gender* variables in the hypothesis above

BRAND NAME	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.920[(a)]	4	.296
Likelihood Ratio	4.932	4	.294
Linear-by-Linear Association	.167	1	.682
N of Valid Cases	369		

From table 5.4.3.4.4 above, it was found that the variables of ***brand name detergents*** and ***gender*** are independent as the p-values are greater than 0.05 ($\chi^2 = 4.92$, df = 4, and p = 0.296). Hence, no relationship between gender and branded names influencing the detergent purchased exists. Thus, the null hypothesis (H_0) is accepted.

Table 5.3.4.5: Chi-Square test for the *items on promotions/discounts* and *gender* variables in the hypothesis above

ITEMS ON DISCOUNT	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.631[(a)]	4	.157
Likelihood Ratio	6.559	4	.161
Linear-by-Linear Association	3.302	1	.069
N of Valid Cases	369		

From table 5.3.4.5 above, it was found that the variables of ***items on promotion/discounts*** and ***gender*** are independent as the p-values are greater than 0.05 ($\chi^2 = 6.631$, df = 4, and p = 0.157). Hence, no relationship between gender and items on promotion/discounts seem to exist in influencing the detergent purchased. Thus, the null hypothesis (H_0) is accepted.

B.

In an attempt to understand which of the characteristics of household detergent purchasing is relevant to the households' gross monthly income; the price, quality,

packaging, discounts and brand names of a detergent were tested by means of a chi-square. The hypothesis follows:

H_0: price, quality, packaging, brand names, items on promotions/discounts and income are independent.
H_1: price, quality, packaging, brand names, items on promotions/discounts and income are dependent.

Table 5.3.4.6: Chi-Square test for the *pricing* and *income* variables in the hypothesis above

PRICE	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	46.881[(a)]	28	.014
Likelihood Ratio	53.480	28	.003
Linear-by-Linear Association	16.933	1	.000
N of Valid Cases	372		

From table 5.3.4.6 above, it was found that the variables of ***price*** and ***income*** are dependent as the p-values are below 0.05 ($\chi^2 = 46.881$, df = 28, and p = 0.014). Hence, income influences the price at which an individual is more likely to purchase a detergent. Thus, the null hypothesis (H_0) is rejected.

This analysis was extended to examine whether there is any relationship between the quality of detergents purchased, packaging of the detergents, branded names of the detergents, and the detergents on promotions to that of the households' gross monthly income. Using the chi-square test, it was found that no relationship exists between the households' gross monthly income and the quality of detergents purchased ($\chi^2 = 13.258$, df = 28, and p = 0.992), packaging of the detergents ($\chi^2 = 36.073$, df = 28, and p = 0.141), branded names of the detergents ($\chi^2 = 37.114$, df = 28, and p = 0.116), and those detergents on promotion ($\chi^2 = 29.751$, df = 28, and p = 0.375). Hence, for these characteristics the null hypothesis (H_0) is accepted.

Businesses:

The following hypothesis was tested.

H_0: price, quality, bulk discounts, timeous delivery, dissatisfaction with current supplier and sales income are independent.

H_1: price, quality, bulk discounts, timeous delivery, dissatisfaction with current supplier and sales income are dependent.

Table 5.3.4.7: Chi-Square test for the *dissatisfaction with supplier* and *gross monthly turnover (sales income)* variables in the hypothesis above

DISSATISFACTION WITH SUPPLIER	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	39.434[(a)]	24	.025
Likelihood Ratio	44.684	24	.006
Linear-by-Linear Association	3.464	1	.063
N of Valid Cases	120		

From table 5.3.4.7 above, it was found that the variables of ***unsatisfied with supplier*** and ***gross monthly turnover (sales income)*** are dependent as the p-values are below 0.05 (χ^2 = 39.434, df = 24, and p = 0.025). Hence, the gross monthly turnover of a company is related to that company's ability to change suppliers. For example, a company with a larger turnover will be able to easily shift suppliers to one that meets or exceeds it expectations of customer service, product quality and favourable pricing. Thus, the null hypothesis (H_0) is rejected. In this study, 34.1% of the businesses have gross monthly turnover's exceeding R301 000. Thus, it follows from the chi-square test in table 5.3.4.7, these companies will shift to a supplier that is able to satisfy or exceed all of its expectations. Similarly, bulk discounts negotiated by businesses with their suppliers was found to be dependent (χ^2 = 38.24, df = 24, and p = 0.033). Accordingly, businesses in and around Pietermaritzburg negotiate for bulk discounts on their detergent purchasing even though 29.0% of the business sample purchase between R1 – R300 per month. Lamber & Bennion (1990) and Pahiti (1999) assert that those companies who spend

small amounts of low value orders should negotiate for discounts. This leads to greater efficiency on their small (low) order detergent purchases.

This analysis was extended to examine whether there is any relationship between the prices of detergents purchased, bulk discounts negotiated, quality of the detergents purchased and timeous delivery of these detergents to that of the businesses gross monthly turnover (sales income). Using the chi-square test, it was found that no relationship exists between the businesses gross monthly turnover (sales income) and the quality of detergents purchased (χ^2 = 27.882, df = 24, and p = 0.265), pricing of the detergents (χ^2 = 29.465, df = 24, and p = 0.203), and timeous delivery of detergents (χ^2 = 20.48, df = 24, and p = 0.669). Hence, for these characteristics the null hypothesis (H_0) is accepted.

5.3.5. Influence of television media

The following hypothesis was tested.

H_0: Gross monthly income, gender, size of household, location and TV influence are independent.
H_1: Gross monthly income, gender, size of household, location and TV influence are dependent.

It was found that the area of residence and the household size compared with television influence is dependant. Table 5.3.5.1 lists the chi-square test for the area of residence with television media exposure. This study found that a relationship between the area of residence of a household and television influence exists in determining what brand or non-brand of detergent should be purchased (χ^2 = 39.673, df = 15, and p = 0.001). Similarly, household size is influenced by television media displaying detergent products (χ^2 = 20.081, df = 9, and p = 0.017). Hence, the null hypothesis (H_0) is rejected.

This analysis was extended to examine whether there is any relationship between the gender of the purchaser and gross monthly income of the purchaser to that of television media. Using the chi-square test, it was found that no relationship exists between the television media and the purchasers' gender ($\chi^2 = 2.788$, df = 3, and p = 0.425) and the purchaser's gross monthly income ($\chi^2 = 23.896$, df = 21, and p = 0.298). Hence, for these characteristics the null hypothesis (H_0) is accepted.

Typical television advertisements last between 5 seconds and up to 90 seconds. As such, advertisers have to complete an advert in the allotted time slot primarily due to the exorbitant costs of advertising on national television. A 30 second advertisement in November 2004 costed R4500 (OMD, 2005: 14 - 15). The salient point that can be inferred from the above is that detergent advertisements on television need to be directed at the most appropriate living standard measures (LSM) group and not to everyone who watches television. Approximately 56.7% of this research sample earned gross monthly incomes between R1 – R6400. Hence, the lower income viewers are not being targeted or are not receptive to television advertisements in influencing their detergent purchasing behaviours. A further point is that in 2003 – 2004, OMD (2005: 16) measured the average monthly share of watched television in South Africa for adults 16 years and above. OMD (ibid) found that the average monthly share fluctuated between 8.1% and 8.8% over the stated time period. Hence, approximately 90% of South Africans who either own or have access to television did not watch television at some point during the stated time period.

However, television is receptive to certain consumers. This is in all likelihood the higher LSM groups who have the financial muscle, are more educated and have the motivation to want to purchase the liquid detergent product. This probably accounts for Unilever's large expenditure on television advertisements. In 2004, Unilever spent R211 million on television adverts, excluding print medium adverts. Proctor and Gamble had the second largest television expenditure budget with R146 million (OMD, 2005: 19; Estelle, 2002: 58).

Table 5.3.5.1: Chi-Square test for the *area of residence* and *television influence*

AREA OF RESIDENCE	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	39.673[(a)]	15	.001
Likelihood Ratio	40.486	15	.000
Linear-by-Linear Association	13.672	1	.000
N of Valid Cases	331		

Table 5.3.5.2: Chi-Square test for the *household size* and *television influence*

NUMBER OF MEMBERS RESIDING IN A HOUSEHOLD	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	20.081[(a)]	9	.017
Likelihood Ratio	18.495	9	.030
Linear-by-Linear Association	5.163	1	.023
N of Valid Cases	378		

5.3.6. Influence of print media

The following hypothesis was tested.

H_0: Gross monthly income, gender, size of household, location and Print medium influence are independent.

H_1: Gross monthly income, gender, size of household, location and Print medium influence are dependent.

It was found that the household size compared to that of print media influence was dependant. Table 5.3.6.1 displays the chi-square test for the household size with print media exposure. This study found that a relationship between the household size and print influence exists in determining what brand or non-brand of detergent should be purchased ($\chi^2 = 18.06$, df = 9, and p = 0.034).

Table 5.3.6.1: Chi-Square test for the *size of a household* and *print media influence*

HOUSEHOLD SIZE	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	18.060[(a)]	9	.034
Likelihood Ratio	18.447	9	.030
Linear-by-Linear Association	4.422	1	.035
N of Valid Cases	378		

This analysis was extended to examine whether there is any relationship between the gender of the purchaser, gross monthly income of the purchaser and the area f residence of the purchaser to that of print media. Using the chi-square test, it was found that no relationship exists between the print media and the purchasers gender ($\chi^2 = 1.35$, df = 3, and p = 0.717) and the purchaser's gross monthly income ($\chi^2 = 23.178$, df = 21, and p = 0.335) and the area of residence ($\chi^2 = 18.433$, df = 15, and p = 0.241). Hence, for these characteristics the null hypothesis (H_0) is accepted. Thus, hypothesis 6 is rejected as no relationship between gender and the use of print media to influence purchasing decisions exist.

Hence, no relationship between a household's location and print media such as newspaper, brochures, magazines etc exist in determining what brand or non-brand of detergent should be purchased for the household. Thus, the null hypothesis (H_0) is accepted. This is an interesting finding as many of the 111 community newspaper currently existing in South Africa target consumers in the area of delivery of the community newspaper (OMD, 2005: 35). Thus, the retail supermarkets advertising to a specific area through a community newspaper does not reach their target market, as no relationship between the area of one's residence and a print medium influences a households choice of detergents.

OMD (2005: 21) states that South Africa has 38 major newspaper titles and 300 community newspapers. These newspapers have a weekly penetration of 30.4% and a daily penetration of 21.0%. In the age group of 16 years – 65 years, men have readership values of approximately 55% - 60% whereas women have readership values of 40% –

50%. Both these gender groups actively read the newsprint, and as such the results of table 5.2.11.1 is somewhat justified in that 34.5% of individuals (both male and female) read the detergent advertisement *sometimes*. The high rating of a print medium in influencing consumer's detergent choices can thus be accounted for. Compared with television, wherein the actual manufacturer was advertising their products (has no price value attached on television), a print medium advertises the manufacturer's products under the retail supermarket brand and has a price value attached to the advertisement. Pick & Pay (R182 million), Checkers (R172 million), Spar (R82 million) and Makro (R67 million) were the top five advertisers in South Africa for 2004 (OMD, 2005: 25).

Estelle (2002: 8) states that both the print and television media (points 5.3.5 and 5.3.6 above) vehicles have a ceiling in terms of reach potential. Once this is achieved, the advertiser needs to find alternative media vehicles to add incremental reach. In essence, more affluent communities are more expensive to reach *i.e.* to reach 1000 people of LSM 6 - 10 might be 4 times as expensive as reaching those in LSM 1 - 10. The LSM 6 – 10 group is educated, financially independent and thinks for themselves. Thus, educating this group requires spending resources on them to persuade them to purchase your product/s. Those media vehicles (across all media types) that have upper income profiles tend to do better and receive disproportional advertising. This re-inforces why the television medium had a low *always* influence on consumers decision in determining their detergents purchasing behaviour. The converse is true for the print medium, where a wider variety of the population has access to a newspaper (OMD, 2005: 22; Estelle, 2002: 68).

Interestingly, the research carried out by OMD (2005: 22) showed that 'housewives' had a negatively skewed distribution toward readership of newspapers. In fact, more housewives read newspapers (10% - 30%) between the ages of 45 – 64 and decreasing after 65 years of age. Housewives between the ages of 20 – 44 years seemed to read the newspaper between 5% - 10%. The housewives in the latter age group are asserting themselves and managing their careers between this age group; consequently pay little if no attention to reading the newspaper. However, housewives between the ages of 45 – 64

years have settled in their life's and consequently have more time available to sit down and spend a few minutes browsing the newspaper. Therefore, a potential strategy to obtaining market share from the 20 – 44 years housewife is to have an in-store promotion on detergents. Consequently, Estelle (2002: 88) states that advertisers of detergents need to target ***potential consumers*** (those who can afford the liquid detergent) and not citizens (whole country).

With respect to both television and print media influence, Shavitt *et al* (1998: 10) found that income historically has a significant relationship with attitudes towards economic and social aspects of advertising. The study found that consumers with lower income were more likely to be receptive advertising and relied solely on advertising to conduct their purchases. This tends to agree with the point discussed above in OMD (2005: 22) and Estelle (2002: 68). However, these results tend to diverge from the results obtained from the current study under investigation!

5.3.7. Purchasing of branded or non-branded detergents

H_0: Gross monthly income, gender, and branded and non-branded detergents are independent.

H_1: Gross monthly income, gender, and branded and non-branded detergents are dependent.

Table 5.3.7.1: Chi-Square test for the *gender* and *branded/non-branded purchasing* variables in the hypothesis above

GENDER	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.958[a]	2	.619
Likelihood Ratio	.953	2	.621
Linear-by-Linear Association	.301	1	.583
N of Valid Cases	375		

From table 5.3.7.1 above, it was found that the variables of ***gender*** and ***purchasing choice of a branded or non-branded detergent*** is independent as the p-values are greater than 0.05 (χ^2 = .958, df = 2, and p = 0.619). Hence, no relationship between the purchasers' gender and choice of branded or non-branded detergents purchased exist. Thus, the null hypothesis (H_0) is accepted.

Table 5.3.7.2: Chi-Square test for the *gross monthly income* and *branded/non-branded purchasing* variables in the hypothesis above

GROSS MONTHLY INCOME	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	23.421[a]	14	.054
Likelihood Ratio	27.285	14	.018
Linear-by-Linear Association	1.429	1	.032
N of Valid Cases	377		

From table 5.3.7.2 above, it was found that the variables of ***gross monthly income*** and ***the choice of purchasing branded or non-branded detergents*** were dependent as the p-values are below 0.05 (χ^2 = 23.421, df = 14, and p = 0.054). Hence, a relationship between the gross monthly income of a household and the choice to either purchase branded or non-branded detergents does exist. Thus, the null hypothesis (H_0) is rejected. Accordingly, a household that earns a greater gross monthly income will most probably purchase the more expensive detergent, which is usually a branded detergent. The lower the household monthly income, the greater the degree of the members of the household purchasing cheaper liquid detergents as their disposable income is limited. Thus, it follows that those households in the low earning group (LSM 1 -4), are more than likely to use the liquid detergent for a variety of ways. This confirms the finding of the London School of Hygiene (2002: 15).

5.3.8. Purchasing of branded or non-branded detergents by area

H_0: Area of Residence and its impact on shifting to a non-branded detergent are independent, that is, there is no relationship between the areas of residence to influence household buying behaviour of detergents.

H_1: Area of Residence and its impact on shifting to a non-branded detergent are dependent, that is, does the area of residence influence household buying behaviour of detergents.

Table 5.3.8.1: The *area of residence* and *non-branded detergent* variables to be tested using Chi-Square

		Q14SHIFT				Total
		Price	Quality	Promotion /Discounts	Unsatisfied with the current brand of detergent	
AREA	Mountain Rise	19	28	9	11	67
	Pietermaritzburg CBD	20	38	6	13	77
	Scottsville /Hayfields	8	24	7	9	48
	Sobantu	18	7	8	2	35
	Northdale	21	31	14	7	73
	Other	10	14	5	1	30
Total		96	142	49	43	330

Table 5.3.8.2: Chi-Square test for the *area of residence* and *non-branded detergent* variables for the hypothesis presented under 6.3.8

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	26.814[a]	15	.030
Likelihood Ratio	28.541	15	.018
Linear-by-Linear Association	2.199	1	.038
N of Valid Cases	330		

At the 5% significance level the null hypothesis (H_0) is rejected because the p-values are less than 0.05 ($\chi^2 = 26.814$, df = 15, and p = 0.030). Thus, it can be concluded that the area of residence (location) and the likelihood of causing a shift to non-branded detergents are dependent. Thus, lower income areas are more likely to shift to an alternative (cheaper) detergent if the price satisfies their expectations, whereas high income locations are unlikely to shift to a non-branded detergent.

The SAARF AMPS (2005: 1380) survey found that in Pietermaritzburg, 8.1% responded that they purchase a non-branded detergent for dishwashing. This can only bode well for establishing a detergent company retailing to consumers.

5.4. LOGISTIC REGRESSION

A logistic regression was run with question 15 (whether a new venture specializing in the manufacture of detergents would be supported) changed to a "yes" or "no" type *i.e.* a binary question. This was regressed against question 13 (whether the sample purchased a branded (Q13), non-branded (Q13 (1)) or both (Q13 (2)) and question 14 (under what circumstances would the sample consider shifting to a non-branded detergent – price (Q14), quality (Q14 (1)), promotions/discounts (Q14 (2)), unsatisfied with current brand of detergent (Q14 (3)). Table 5.4.1 presents the results.

Table 5.4.1: The variables in the equation for the household

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Q13			2.695	2	.260	
	Q13(1)	.436	.368	1.403	1	.236	1.547
	Q13(2)	-.931	1.065	.764	1	.382	.394
	Q14SHIFT			21.996	3	.000	
	Q14SHIFT (1)	-2.093	.551	14.409	1	.000	.123
	Q14SHIFT (2)	-1.478	.409	13.073	1	.000	.228
	Q14SHIFT (3)	-1.994	.668	8.904	1	.003	.136
	Constant	-1.013	.367	7.601	1	.006	.363

a. Variable(s) entered on step 1: Q13, Q14SHIFT.

It can be seen that from table 5.4.1 above, Q14 is significant in this model, as the p-values are below 0.05. For Q13, the p-values are greater than 0.05 and consequently are in-significant. The interpretation of table 5.4.1 follows:

A respondent that is supporting an existing venture specializing in the manufacture of detergents is 0.123 times more likely to support the new venture if the ***price*** compared to ***dissatisfaction with the current brand of detergent*** is a factor to change. A respondent that is not supporting a new venture specializing in the manufacture of detergents is 0.228 times more likely to support the new venture if the ***quality*** compared to ***dissatisfaction with the current brand of detergent*** is a factor to change. A respondent that is not supporting a new venture specializing in the manufacture of detergents is 0.136 times more likely to support the new venture if the ***promotion/discount*** compared to ***dissatisfaction with the current brand of detergent*** is a factor to change.

Key support to these results was the study undertaken by Ehrenberg (1991: 292) wherein he states that a new brand's effect would be determined by the theory of duplication of purchase. That is, the new detergent brand's share should come proportionally from existing brands in the detergent market. Day (2003: paragraph 30) states that Reckitt & Benckiser seems to be enjoying unprecedented growth on their 'Vanish' brands of liquid detergents in spite of tough competition from Unilever's range of fabric care products. This phenomenon of expansion in growth, in-spite of other more prominent brands can be clearly attributed to Ehrenberg's (1991: 252) theory of duplication of purchase. Accordingly, a similar argument can be put forward when analysing the feasibility of a new business detergent venture. That is, the size of a current detergent brand in a market, determines the number of its buyers who would also purchase the new entrant's brand.

Stern and Hammond (2004: 5) found that as the number of purchases rises, loyalty to the brand initially falls steeply. After approximately 15 purchases, they found that the purchase incidence of laundry detergents stabilised. After 60 to 200 purchases there is very little change in observed measures of customer loyalty to the detergent brand. Thus, for those respondents who shift to the new detergent brand, it is important for the

detergent business venture to ensure smooth running of the business, leading to hassle-free products. After the determined 15 purchases, the customer is a degree more loyal than initially. A similar analysis was undertaken for businesses, found under appendix D.

5.5. MULTIPLE REGRESSION (Industrial Demand for Detergents)

The following model was fitted:

$$Q20 = \beta_0 + \beta_1 Q16 + \beta_2 17 + \beta_3 Q18\ \varepsilon \qquad (1)$$

Where:

Q16 = Number of employees

Q17 = Monthly turnover

Q18 = Activity of the firm

β_0 = Constant

ε = Error term

Table 5.5.1: Model summary of the relationship between activity of the business, gross monthly income, number of employees in the business and the monthly expenditure of the firm on detergents

Model Summary[(b)]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.628[(a)]	.395	.380	1.52932

a. Predictors: (Constant), BQ18ACTI, BQ17GROS, BQ16
b. Dependent Variable: BQ20EXP (MONTHLY EXPENDITURE)

The R-square value is approximately 38% meaning that the independent variables are accounting for 38 % of the variation with respect to the dependent variable.

Table 5.5.2: Summary of Analysis of Variance for testing whether a significant regression exists between the activity of the business, gross monthly income, number of employees in the business and the monthly expenditure of the firm on detergents

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	180.127	3	60.042	25.672	.000
	Residual	275.980	118	2.339		
	Total	456.107	121			

a. Predictors: (Constant), BQ18ACTI, BQ17GROS, BQ16
b. Dependent Variable: BQ20EXP

The above ANOVA table tests the following hypothesis

H_0: $\beta_0 = \beta_1 = \beta_2 = \beta_3 = 0$

H_1: at least one of the β_i is not zero

That is, whether or not a significant regression does in fact exist. At the 5% significance level, we reject the null hypothesis (H_0) because the p-value is 0.00.

Table 5.5.3: Determines the co-efficients of the multiple regression equation in (3) above

Coefficients[a]

Model		Unstandardised Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.526	.437		1.203	.231
	BQ16 (number of employees)	.665	.124	.502	5.360	.000
	BQ17GROS (gross turnover per month)	.160	.088	.170	1.820	.071
	BQ18ACTI (activity of the firm)	-.040	.083	-.034	-.479	.633

a. Dependent Variable: BQ20EXP (monthly expenditure of the firm on detergents per month)

At the 1% significance level Q16 (number of employees) and Q17 (gross monthly turnover) are significant in this model. That is, as the expenditure increases by one unit, the number of employees and gross turnover increases by 0.665 and 0.160, respectively.

They are directly proportional to the expenditure of the business. The regression results show that the model explains almost 40% of the variation in industrial purchasing behaviour of detergents (R-Squared = 0.395; F = 25.672; p = 0.000). Stern and Hammond (2004: 5) corroborates this finding. They found that laundry detergent purchases across and equal number of light and heavy buyers, the heavier buyers were more likely to purchase detergents.

5.6. Test for an association between attributes that influences a firm to purchase detergents (Q22) and whether the location of the supplier influences the purchasing decisions of detergents (Q23)

H_0: price, quality, bulk discounts, timeous delivery, dissatisfaction with current supplier and influence of the choice of supplier are independent.

H_1: price, quality, bulk discounts, timeous delivery, dissatisfaction with current supplier and influence of the choice of supplier are dependent.

Table 5.6.1: Chi-Square test for the *price* and *location of the choice of supplier*

PRICE	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	29.465[a]	24	.605
Likelihood Ratio	32.577	24	.505
Linear-by-Linear Association	.009	1	.723
N of Valid Cases	123		

From table 5.6.1 above, it was found that the variables of ***price*** and ***location as to the choice of supplier*** were independent as the p-values are greater than 0.05 ($\chi^2 = 29.465$, df = 24, and p = 0.605). Hence, no relationship between the detergents pricing structure and the location of a supplier exist in determining whether the business purchases detergents from a local supplier or from a non-local supplier. Thus, the null hypothesis (H_0) is accepted

Table 5.6.2: Chi-Square test for the *quality* and *location of the choice of supplier*

QUALITY	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	27.882[(a)]	24	.779
Likelihood Ratio	28.030	24	.662
Linear-by-Linear Association	.378	1	.783
N of Valid Cases	123		

From table 5.6.2 above, it was found that the variables of ***quality*** and ***location as to the choice of supplier*** were independent as the p-values are greater than 0.05 ($\chi^2 = 27.882$, df = 24, and p = 0.779). Hence, no relationship between the detergents quality and the location of a supplier exist in determining whether the business purchases detergents from a local supplier or from a non-local supplier. Thus, the null hypothesis (H_0) is accepted.

Table 5.6.3: Chi-Square test for *bulk discounts* and *location of the choice of supplier*

BULK DISCOUNTS	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	38.240[(a)]	24	.001
Likelihood Ratio	39.779	24	.007
Linear-by-Linear Association	7.276	1	.001
N of Valid Cases	122		

From table 5.6.3 above, it was found that the variables of ***bulk discounts*** and ***location as to the choice of supplier*** were dependent as the p-values are below 0.05 ($\chi^2 = 38.24$, df = 24, and p = 0.001). Hence, there exists a relationship between providing bulk discounts and the location of a supplier. Essentially, if a new detergent business provided bulk discounts to a local business, that business would purchase detergents only if the supplier was locally based as well. Thus, the null hypothesis (H_0) is rejected.

Table 5.6.4: Chi-Square test for *timeous deliveries* and *location of the choice of supplier*

TIMEOUS DELIVERY	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	20.480[a]	24	.402
Likelihood Ratio	20.845	24	.390
Linear-by-Linear Association	2.861	1	.116
N of Valid Cases	122		

From table 5.6.4 above, it was found that the variables of ***timeous delivery*** and ***location as to the choice of supplier*** were independent as the p-values are greater than 0.05 (χ^2 = 20.48, df = 24, and p = 0.402). Hence, no relationship between the timeous deliveries to an industrial consumer and the location of a supplier exist in determining whether the business purchases detergents from a local supplier or from a non-local supplier. Thus, the null hypothesis (H_0) is accepted.

Table 5.6.5: Chi-Square test for *dissatisfaction with current supplier* and *location of the choice of supplier*

DISSATISFACTION WITH CURRENT SUPPLIER	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	39.434[a]	24	.009
Likelihood Ratio	44.684	24	.089
Linear-by-Linear Association	3.464	1	.041
N of Valid Cases	120		

From table 5.6.5 above, it was found that the variables of ***dissatisfied with the current supplier*** and ***location as to the choice of supplier*** were dependent at the 1% significance level. The p-values are below 0.05 (χ^2 = 39.434, df = 24, and p = 0.009). Hence, there exists a relationship between a business being dissatisfied with the current supplier and the location of the choice of supplier. Thus, the null hypothesis (H_0) is rejected.

5.7. Test for an association between e-commerce facilities (Q24) and a firm's business activity (Q18)

H_0: E-commerce facilities (Q24) and the firms' business activity (Q18) are independent.

H_1: E-commerce facilities (Q24) and the firms' business activity (Q18) are dependent.

Table 5.7.1: Association test between e-commerce and business activity

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	16.222[a]	15	.367
Likelihood Ratio	20.321	15	.160
Linear-by-Linear Association	1.850	1	.174
N of Valid Cases	120		

At the 5% significance level, the null hypothesis (H_0) is accepted *i.e.* A firm's business activity does not seem to dictate whether a particular firm will employ e-commerce facilities to conduct its business, although e-commerce is an increasing feature of modern business.

5.8. CONCLUSIONS

Households:

There were more females than males that participated in this survey. Most households had a modal gross income group of R3201 – R12 800. Respondents were interviewed at their place of residence and the Pietermaritzburg Central Business District accounted for the majority of respondents (19.9%). The modal detergents purchased were Sunlight (20.83%), Handy Andy (21.70%) and Sta-Soft (21.85%). The respondents, who were part of this study, purchased the detergents for their household themselves (71.1%). 23.3% of the respondent's spouse purchased the household's detergents.

Price (37.6%) and quality (31.1%) is the two principal factors that influence the purchasing of detergents. This finding conforms to the finding by Chaganti *et* al (1989: 21), wherein it was found that competition principally occurred amongst price, quality, promotions and advertising.

The modal group for monthly expenditure on detergents was found to be R101 – R125 per month (17.6%). Majority of the respondents have 1 – 4 members residing per household (54.2%). Most of the respondents (30.4%) use greater than 2501ml of detergent in their households per month.

The TV medium does not appear to influence the choice of purchasing of advertised detergents, while the print medium always influences the choice of purchasing of advertised detergents.

Respondents buy both branded and non-branded detergents. This study identified two characteristics that can cause a shift to a non-branded detergent - quality and price. However, the logistic regression indicated that respondents sometimes may support a new venture that manufactures a specific detergent, provided that the price and quality satisfies or exceeds their expectations.

Businesses:

Most of the firms sampled employed greater than 41 staff members (8.7%), 11-20 (6.6%) and 21-30 (6.6%), respectively. The modal turnover was the group >R301 000 (10.7%). Most respondents were involved in Services and Manufacturing (9% and 9.5%). The respondents themselves do the purchasing and the modal monthly expenditure group on detergents are R1 – R300 and >R1501 (29% and 22.6%). Purchasing of detergents is highest at 0*l* – 25*l* (23.4%) followed by 76*l* – 100*l* (10.5%). Price and Quality are attributes that influence the businesses to buy detergents. Location "always" (35.2%) and "never" (37.7%) influences choice of supplier.

E-commerce facilities do not seem to influence the decisions to buy detergents. (This is a point of recommendation to advertise more using these facilities!).

CHAPTER 6

CONCLUSIONS

6.1. Introduction

This chapter will summarize and highlight the salient facts that were investigated in this research study. The research study was underpinned by statistical analyses; answers questions on household detergent purchasing behaviours by consumers and businesses in Pietermaritzburg. It follows that by studying why people or firms of a city purchase detergents, one can obtain insights into the feasibility of starting a new business venture, in a similar line of activity. The new venture is thus able to use these findings and concentrate on the findings as factors to be exploited in the marketing of the new business venture. This would allow the firm to capture market share from the current detergent manufacturers.

6.2. Synthesis

6.2.1. This study found that three household detergents were of prime importance to consumers. These were Handy Andy (21.70%), Sunlight Liquid Detergent (20.83%) and Sta-Soft (21.85%). All three of these detergent brands were manufactured by large multi-national enterprises. This was corroborated in a study conducted by Markinor (cited in Business Times, 2005: 46). In this study, it was found that Unilever's Sunlight brand was the top detergent and household cleaner brand. Further support of Unilever's dominance in the household detergent industry was seen in the SAARF AMPS survey (2005).

Unilever accounts for two of the top three brands surveyed in this study, while the third brand was manufactured by S. C. Johnson. Shevel (2006: 15) states that Unilever accounted for the largest advertising spend and thus are able to actively advertise their brands, leading to market dominance. Datamonitor (cited in London School of Hygiene, 2002: 19) found that the major players in the international detergent market control the major brands in their respective market sectors. These multi-national enterprises have the financial and marketing muscle to combat the ever-increasing threat of competition.

6.2.2. The study determined that 43.70% of households purchased branded detergents 9.0% purchased non-branded detergents and 44.0% purchased both branded and non-branded detergents. Accordingly, using Hawkins *et al* (2001: 504) decision-making model, detergent purchases fall under a low-involvement purchase category. It is possible to convert the 44.0% who purchase both branded and non-branded detergents to non-branded only. To do this, Hawkins *et al* (2001: 507) state that while purchasing the consumer may notice a point-of-purchase display for non-branded detergents. The consumer subsequently picks this detergent without seeking information beyond their memory.

6.2.3. This study determined that the area of residence and monthly expenditure on detergents are dependant for household detergent purchasers'. At the 5% significance level, the H_0 (null hypothesis) is accepted ($p = 0.000$, $\chi^2 = 94$, and $df = 45$). Accordingly, it can be concluded that there is a significant relationship between area of residence and monthly expenditures on detergents.

6.2.4. It was determined that quality and price influence both households and businesses in their choice of detergents. Hence, the null hypothesis (H_0) is accepted (table 5.3.3.1, chapter 5: 34). Similar results were obtained for industrial/business buyers. Banerjee (2004: 3) found similar results for a study conducted in India where the price and quality of a new detergent is most critical to overcoming the initial trial by consumers. Ehrenberg and Goodhardt (2000; cited in Hoek *et al*, 2003: 57) state that if a new detergent brand is acceptable to consumers with regard to the pricing and quality, the new brand would reach regular repeat purchase rates after 30 – 36 weeks.

6.2.5. This study concluded that price and gender was dependant with respect to purchasing detergents. The p-value was below 0.05 ($\chi^2 = 11.173$, $df = 4$). The SAARF AMPS survey (2005: 1350 – 1389) found across all areas of detergent purchasing, that females seem to purchase the detergents in a household.

6.2.6. An interesting finding, in accordance with Porter's five force theory, was that price and income levels of a household and a business were related factors, with respect to purchasing of detergents ($\chi^2 = 46.881$, $df = 28$, and $p = 0.014$). This was found for both households and businesses. If a business is dissatisfied with the current supplier it will shift to a new supplier if the business sales income is substantial. Porter (cited in Thompson and Strickland, 2003: 90) terms this as the buying power of the customer being greater than the supplier. Accordingly, the buyer (both the business and the household) have the flexibility to fill their detergent needs by switching brands or sourcing the detergent from several other retailers and sellers. Thompson and Strickland (2003: 91) state that most of the

low-value detergents used in everyday house cleaning are virtually identical, thus it is relatively easy for buyers to switch from seller to seller at little or no cost.

6.2.6. It was found that the area of residence and television influence were associated factors when the respondents had purchased their branded or non-branded detergents (χ^2 = 39.673, df = 15, and p = 0.001). In addition to the correlation between ones area of residence and the influence of television, it was also determined that the size of the household and print medium influenced the purchasing behaviour of households with respect to their detergents (χ^2 = 18.06, df = 9, and p = 0.034). Larger households (usually lower-income) actively scan print mediums to obtain the best value-for-money deals when undertaking their detergent purchasing. This finding is in accordance with the findings by Dutta-Bergman (2006: 102), Bartos and Dunn (1974), Lutz (1989), and Bush *et al* (1999). It was found that certain groups of individuals display a defined type of attitude to media advertising. Dutta-Bergman (*ibid*) states that individuals classified in a hierarchical manner (such as higher-income and lower-income) had different receptiveness to advertising.

6.2.7. The study confirmed the London School of Hygiene (2002: 15) findings that there is a relationship between the monthly income of households and the choice to either purchase branded or non-branded detergents. A household that brings in more income per month, was more likely to purchase a more expensive detergent (branded). The lower the household monthly income, the likelihood increased that cheaper, 'alternative' detergent products were being used. Kennedy (2002: 2) found that the LSM 1 – 4 group households more than likely utilised a single detergent for a variety of uses. Area of residence can cause a shift to non branded detergents.

6.2.8. The detergent expenditure of a business is significantly influenced by the number of employees and gross turnover. The study found that for every one unit, the number of employees and gross turnover increases by 0.665 and 0.160,

respectively. These variables were directly proportional to the expenditure of the business. Accordingly, the number of employees account for the greater detergent expenditure of a business. Thus high employee businesses purchase high volumes of detergents for use by their employees.

6.2.9. The availability of bulk discounts in relation to a suppliers location significantly influenced a firm's detergent purchasing behaviour. Empirically, this study determined that if a new detergent business venture was to provide bulk discounts to the local businesses, buyers would purchase the detergents from this locally based detergent supplier. This has more to do with ease of supply from the supplier and with the supplier being locally based, the buyer is able to order only the stock needed to accomplish their task. Thus, the buyer neither stores any excess inventory nor has to pay the normal price (Ehrenberg, 1991: 90; Ehrenberg and Goodhardt, 2000).

6.2.10. It was found that dissatisfaction with the current supplier and choice of a supplier was dependant, in that a firm that is dissatisfied with a current supplier of detergent is more likely to choose another supplier. Therefore, quality of service and customer satisfaction is important in building customer relationship marketing even among industrial users.

6.2.11. The area of residence (location) and the likelihood of causing a shift to non-branded detergents were determined to be dependent. Hence, a lower income area is more likely to shift to an alternative (cheaper) detergent if the price satisfies and meets with their expectations. Conversely, high income locations are unlikely to shift to a non-branded detergent. This result seems to reinforce point 6.2.7 above where the lower income households (LSM 1 – 4) were more than likely to purchase non-branded detergents to fulfil their detergent requirements. Kennedy (2002: 2) found that higher income areas do not readily shift to non-branded detergents primarily due to the fact that higher income residentials can afford the more expensive, branded detergents.

6.2.12. Finally, the study proved that an overwhelming majority of respondents indicated that they would support a new detergent business venture, provided the price and quality meets their expectations. This finding conforms to those of Banerjee (2004: 3) where the major variables influencing detergent brand choice seem to be the attitudinal variables such as the perception regarding the efficacy (QUALITY) of the brand, closely followed by the perception on the value-for-money (PRICE). Field level promotional activities such as price-offs, freebies associated with different pack sizes of the same brand also seem to impact the choice of the brand, although the impact was low. Base price reduction is generally resorted to quite infrequently and hence a price elasticity measure may be found to be statistically insignificant. A critical result drawn from this study is the importance of attitudes in affecting behavior in the purchase of detergents. These findings will be relevant for marketing managers responsible for detergents in designing effective brand development initiatives. In the South African market, it is generally believed that brand attitudes are primarily influenced by advertising. If this assertion is assumed to be true, this research makes a case for better management of consumer attitudes through the deployment of appropriate advertisements using the correct media (Banerjee, 2004: 3).

6.2.13. The researcher of the current study has chosen a new detergent business venture. Following the positive results obtained from the respondents interviewed with regards to the feasibility of the detergent venture, starting a new business venture allows the researcher to imprint his own culture on the organisation. Barrow (1993: 90) states that the current start-up option is one of enhancing an old product or service allowing a greater utility to customers as a result of the improved product (old-new approach).

Furthermore, a differentiation strategy seems likely to be the choice for the new business venture. In this way, the new detergent venture is able to distinguish itself from existing detergent companies with superior formulation design, superior quality, superior products, offering expert support and service to newly

acquired customers, offering speedier deliveries. By pursuing this, the new venture will be conforming to the quality variables investigated in the current study where it was found that quality was one of the major influencers for consumers to purchase ones product. Similarly, Banerjee's (2004: 3) study confirms this assertion.

6.2.14. No matter how successful a start-up business can be, it nonetheless has to effect thorough strategies to be sustainable once the 'honeymoon period' of a new business expires. Accordingly, Covin and Miles (1999: 48) state that strategy-making must be considered in relation to market-drivers and customer-driven activity – the essential qualities are a talent for capitalizing on emerging market opportunities and evolving customer needs, a bias for innovation and creativity, an appetite for prudent risk taking and a strong sense of what needs to be done to grow and strengthen the business In addition, Thompson and Strickland (2003: 14) state that a business needs to study the market trends, listen to customers and anticipate their changing needs and expectations, scrutinize the business possibilities that spring from technological developments, build the firms market position via acquisition or new-product innovations, and pursue ways to strengthen the firm's competitive capabilities. This will result in the new business venture enjoying strategic growth. Wickham (2004: 476) states that this primarily concerns itself with the way the business develops its capabilities to exploit a presence in the marketplace and to experience cost economies to be sustainable in a globalised macro-environment[1].

In summary, income does account for differences in purchasing of detergents. Furthermore, the marketer of the detergents needs to be mindful that location is a factor that must be considered in the marketing of detergents. Branded detergents carry a premium price whereas non-branded detergents are cheaper. The marketer must thus match the type of detergent product to the consumer profile of the location in which the business is operating. It can be concluded that gender does not account for differences on

[1] Thompson and Strickland (2003: 93) consider globalization as one of the drivers in the business world today.

monthly expenditure of detergents. Lastly, price and quality of detergents are found to be the important characteristics for both the household and business user.

CHAPTER 7

RECOMMENDATIONS, FUTURE RESEARCH AND LIMITATIONS OF THIS STUDY

This chapter makes recommendations regarding the sale of detergents on the basis of the statistical analyses and the literature review. It is hoped that the recommendations may allow a new detergent venture to be successful. Finally, directions for future research areas of study are suggested. Findings from this study should allow the expansion of knowledge on marketing of detergents in Pietermaritzburg.

7.1. Recommendations

a. Many of the large multi-national companies such as Unilever, Proctor & Gamble, and ClassiClean advertise their liquid detergent products on television. On the basis of this study, it was found that very little relationship exists between television advertising and influencing consumers to purchase liquid detergents. However, it was found that most of the respondents and thus, the generalized population seem to read the newspaper more often. Thus, manufacturers of household detergents need to dedicate resources to print media such as the newspaper when advertising their products. Dutta-Bergman (2006: 103) states that advertisers need to strategically target appropriate market segments, based on the demographics and psychographic correlates of the market. In addition, consumers' receptiveness (attitudes) to advertising should be analysed to derive maximum benefit from the advertisements in both television and print media.

Notwithstanding the low penetration of television influence, it is recommended that television influence be improved. Targeting the most appropriate consumer and capturing potential consumers by television should be looked at by marketers. Shavitt *et al* (1998: 7) found that men are more receptive to purchasing items in response to direct-response advertising. This could be a method for the new detergent business venture to target the business users, where in this study it was

found that men were predominantly the purchasers of their firm's detergent requirements.

Furthermore, Shavitt *et al* (1998: 7) put forward the statement that younger individuals compared to older individuals are or more likely to have a positive attitude to advertising. They are more receptive and understand the products benefits, resulting in positive purchases for such a product. Correspondingly, a new detergent business venture should initially target younger members of society, thus proving the products benefits and efficiency. This effect can then be transferred to the older generation who according to Shavitt *et al* (*ibid*) have a more negative attitude to advertising and new products. Similar findings were found by Alwitt and Prabhakar (1992: 30). Dutta-Bergman (2006: 105) found no correlation between advertising a product in a certain manner and gender. Thus, advertising a certain product for a set sex group can backfire.

For those manufacturers who wish to organically increase their market share, the research study indicated that by focussing advertising of detergent products in areas where shifts do not readily occur, the new detergent business venture should gain market share and increase the use of its products across a multitude of users. Dutta-Bergman (2006: 108) found that innovative consumers purchased new and different detergents relied predominantly on advertising to receive information on new products. This is important for a new detergent business venture. The new venture is able to obtain market share from an otherwise un-reachable consumer had the new company not advertised its 'new and different' product.

b. Liquid detergent manufacturers need to major more on the price of the product and the quality. These two factors are critical in ensuring a new detergent business venture is successful and sustainable. Banerjee (2004: 3) found that the major variables influencing detergent brand choice seem to be the attitudinal variables such as the perception regarding the quality of the brand, closely followed by the perception of the price of such a liquid detergent brand. Chaganti *et al* (1989: 1)

also found that competition between firms normally exists between price and quality. These are in agreement that two of the major factors influencing detergent buying behaviour among industries and households is price and quality. This confirms hypothesis 4.

c. New product innovation, improved marketing and advertising as well as improved packaging in areas like laundry care, surface care and dishwashing products should underpin volume and value growth for a new detergent business (Euromonitor International, 2005: paragraph 2).

d. Most importantly, all dependent factors (where a statistical relationship exists) needs to be exploited. By exploiting the dependent relationships, a new detergent business venture is able to 'customize' its marketing of its detergent product portfolio. Thus, a marketing strategy by area of residence and the income levels prevalent in such an area will allow the new detergent business venture to rapidly gain market share. Further dependent relationships that must be exploited include that of pricing and gender. By marketing detergents to a specific customer profile, the target market would be more receptive to such a detergent product and would be more likely to purchase the product. Shavitt *et al* (1998: 10), OMD (2005: 22) and Estelle (2002: 88) confirm that by targeting an appropriate segment of the population, the detergent business venture would attain greater market shares from the exiting suppliers in the industry.

e. Most businesses are beginning to use e-commerce and its associated technologies to conduct its business. This helps to simplify the daily activities of a business. Accordingly, a new detergent business venture needs to view e-commerce platforms as one of the ways in which it can market its products to a wider customer base at a cheaper rate of cost. For any business, it is important to be aware of changing conditions. These conditions 'drive' the industry participants (competitors, customers or suppliers). It is these driving forces that Thompson and Strickland (2003: 93) feel are major underlying causes of changing industry and

competitive conditions. Thompson and Strickland (*ibid*) state that e-commerce is unquestionably spawning a sweeping business revolution. This can only alter boundaries and open up all kinds of business-to-business and business-to-customer market opportunities.

The challenge for a new detergent business venture is to assess how growing use of e-commerce facilities will alter the industry and competitive landscape. Even though the current study under investigation showed little or no influence of e-commerce facilities (point 5.2.24) on detergent purchasing, the new detergent business venture would be wise to have some sort of e-commerce strategy in place.

f. For the industrial user, a new locally-based detergent business needs to market its detergent products with the aid of bulk discounts. This will capture the industrial/business users of detergents. In addition, the new locally-based detergent business must be actively visible in its local environment. The study found that when a business user is dissatisfied with its current supplier, it will look at another locally-based detergent supplier to satisfy its needs. However, the needs are subject to attitudinal variables such as the price and quality of the detergent products being approved by the user (Banerjee, 2004: 8).

g. Marketing a detergent product to retailers for use by households is one of the methods of reaching the end consumer. Whitehead (2001: 14) states that for a new detergent business the strategies of strength of marketing and branding, efficiencies of production and distribution and a unique technological process will empower the new venture to be successful when selling its products to a retailer. Thompson and Strickland (2003: 97) state that marketing innovation is another driving forces that can have a major competitive advantage for a firm. In this case, a new detergent business venture should be able to introduce new ways to market their products, sparking a burst of buyer interest.

One innovative marketing strategy that many firms are now pursuing is that of environmental ownership. Davis (1993: 19) punts 'green marketing' as one of the strategies that may shift consumers to purchase products. The world has seen a proliferation of "environmentally friendly" products, such as hybrid automotive vehicles, organic foodstuff, and natural alternatives to crude oil. Thus, companies that can market a 'green' detergent product may have a greater chance of penetrating the market, and gaining market share from the dominant and larger multi-national detergent companies. Confirming the findings of Davis (*ibid*) above, Dutta-Bergman (2006: 109) states that environmentally conscious consumers were more likely to use some sort of marketing information such as advertising, to make purchase decisions. Accordingly, it was stated that marketers and manufacturer's of green products utilise advertising to convey information to their target audience.

Hawkins *et al* (2001: 507) puts forward a limited decision-making model as a stimuli for causing consumers to purchase a new detergent. Hawkins *et al* (*ibid*) use the following example: a consumer may decide to purchase a new brand of detergent because they are 'bored' with the current, otherwise satisfactory brand. The decision to purchase an alternative brand compared to the normal brands, can be hastened if the detergent business venture uses emotional or environmental benefits. The decision to purchase the new brand only involves evaluating a select few alternative brands, other than that currently used.

h. According to Hawkins *et al* (2001: 507) decision-making model, a detergent venture would be successful in obtaining market share by following point-of-purchase sales for the detergent. This consumer follows the limited decision making model (presented on page 30), and purchases the new, unknown detergent. Hawkins *et al* (*ibid*) states that new brands can thus successfully be launched and sustainably be sold to consumers who have doubts about the existing brands of detergents they currently use. They further state that by monitoring consumers needs and the detergent market happenings, a manufacturer is able to increase the

purchase incidence of its brand and thus increase market share providing the product satisfies its users.

i. Covin and Miles (1999: 48); Thompson and Strickland (2003: 93) and Wickham state that essentially a new business venture, including one starting in the competitive detergent industry (Kennedy, 2002: 2), needs to have clear strategies in place to effect a sustainable business. This involves studying the market trends, listening to both industrial and household consumers of detergents, anticipating their changing needs and expectations, scrutinizing the business possibilities that spring from technological developments, building the firm's market position via acquisition or new-product innovations, and pursuing ways to strengthen the firm's competitive capabilities.

j. In accordance with Stern and Hammond (2004: 5) findings on customer loyalty to purchase incidence, the new detergent business venture must prove itself for approximately 15 purchases by buyers of the product. After this time, the new product would have its dedicated customer market provided that the product satisfies the needs of the customer. The finding by Stern and Hammond (*ibid*) that heavier buyers are more loyal provides a platform for the new business venture to target larger users of detergents. These users would remain loyal to the company and the product.

7.2. Future Research

It must be empirically tested if e-commerce will have a bearing on the industrial/business user. Thompson and Strickland (2003: 93) regard this as one of the major driving forces of today's business landscape. Electronic business-to-business platforms are forming a major part of the business landscape. The way in which businesses learn and place orders for new detergent products is constantly changing.

Furthermore, research into the effects of television and print media need to be investigated. One of the findings from this study pointed out that newspaper advertising specific to a location has no bearing on whether consumers' would purchase from that detergent manufacturer. It was also found that television has a slight effect on the detergent purchasing habits of consumers' directly. However, Shavitt *et al* (1998: 7) showed that it was the lower income individuals that were more likely to use advertising cues as stimuli to purchase detergent products. Thus, further studies on these findings should shed more light.

In accordance with Davis's (1993: 19 – 36) assertions on green products, additional research focussing on the marketability of green detergents should be considered. A healthy and natural alternative is one of the drivers of the 'modern' world today and any research on this branch of detergents should provide a totally new knowledge field.

A consideration for future research should be a determination of what the impact of implementing an ISO 9001: 2000 certification in controlling and enforcing quality would be. The findings from this study showed quality as one of the characteristics that influenced respondents to purchase a detergent. In line with this and Banerjee (2004: 3) findings, it is assumed that adoption of the ISO 9001: 2000 certification would enhance the likelihood of the detergent venture increasing its market share.

It would be interesting to note the results from a Dirichlet model analysis. Stern and Hammond (2004: 8) state that the Dirichlet is a stochastic model of buyer behaviour developed for the study of branded packaged goods in established competitive markets. Due to the lack of information on branded detergents in South Africa, a study utilising the Dirichlet model would be useful in helping to analyse brand loyalty to current detergents in the market.

7.3. Limitations

The sampling method employed – judgement sampling – deliberate judgement. Thus, the sample is not representative of the entire general population has the sample was not chosen randomly. No known probabilities were included for each sample member when interviewing the respondents. Thus, the results are biased in that the results pertain only to that group/s of people who were sampled.

One of the major limitations of this study was the lack of information on the detergent industry in South Africa and the lack of data on purchasing habits in South Africa for detergents. Unilever was approached for information on the detergent industry in South Africa and the purchasing habits of its consumers but they declined to divulge any information. The information gathered by Markinor was on behalf of clients only. The clients did not want such sensitive information to be divulged. The Department of Trade and Industry could not shed any information on the detergents industry in South Africa.

REFERENCES

LIST OF BOOKS & JOURNALS:

Alwitt, L. F. and Prabhakar, P. (1992) Functional and Belief Dimensions of Attitudes to Television Advertising. Journal of Advertising Research, 32(5), p. 30 – 42.

Banerjee, A. (2004) A Brand Share Prediction Model Based on Several Disparate Sources of Data: An Empirical Model of Detergent Choice in Mumbai. Asia Pacific Journal of Marketing and Logistics. 16(3), p. 3 - 10.

Barnett, V. (2002) Sample Survey: Principles and Methods. 3rd edition. London: Arnold Publishers

Brenner, D., Ewan, J. and Custer, H. (1990). The Complete Handbook for the Entrepreneur. Prentice Hall: Englewood Cliffs.

Bucklin, R. E. and Gupta, S. (1992) Brand Choice, Purchase Incidence and Segmentation: An Integrated Modeling Approach. Journal of Marketing Research, 29(2), p. 201 – 215.

Bush, A. J., Smith, R and Martin, C. (1999). The influence of consumer socialisation variables on attitudes toward advertising. Journal of Advertising, 28(3), p. 13 – 24.

Chaganti, R., Chaganti, R. and Mahajan, V. (1989) Profitable Small Business Strategies Under Different Types of Competition. Entrepreneurship Theory and Practice, p. 21 – 35.

Coakes, S. J. and Steed, L. G. (2003) SPSS: Analysis Without Anguish. Version 11 Windows. Singapore: Kyodo Printing Co.

Covin, J. G. & Miles, M. P. (1999) Corporate Entrepreneurship and the Pursuit of Competitive Advantage. Entrepreneurship: Theory and Practice 23(3) pp. 47 – 63.

Davis, J. J. (1993) Strategies for Environmental Advertising. Journal of Consumer Marketing 10(2) pp. 19 – 36.

Dillon, W. R., Madden, T. J., and Firtle, N. H. (1993) Essentials of Marketing Research. New York: Irwin-McGraw Hill.

Dillon, W. R., Madden, T. J., and Firtle, N. H. (1994). Marketing Research in a Marketing Environment. 3rd edition. Burr Ridge: Irwin-McGraw Hill.

Donckels, R. & Miettinen, A. (1997) Entrepreneurship and SME Research: On its way to the Next Millennium, Aldershot: Ashgate.

Dutta-Bergman, M. J. (2006) The Demogrphic and Psychographic Antecedents of Attitude toward Advertising. Journal of Advertising Research, 3, p. 102 – 112.

Ehrenberg, A. S. C. (1988) Repeat buying: Facts, Theory and Applications, London: Oxford University Press.

Ehrenberg, A. S. C., Goodhardt, G. J. and Barwise, P. (1990). Double Jeopardy Re-visited. Journal of Marketing. 54, p. 82 – 91.

Ehrenberg, A. S. C. (1991) New Brands and the Existing Market. Journal of the Market Research Society. 27, p. 81 – 93. Oxford University Press, London.

Ehrenberg, A. S. C. and Uncles, M. (1999). Understanding Dirichlet-type markets, London: Southbank University.

Ehrenberg, A. S. C. and Goodhardt, G. J. (2000) New Brands: Near-Instant Loyalty. Research Report, London: Southbank University.

Goodhardt, G. J., Ehrenberg, A. S. C. and Chatfield, C. (1984). The Dirichlet: A Comprehensive Model of buying Behaviour. Journal of Royal Statisticians Society. 47(A), p. 621 – 655.

Hargreaves, T. (2003) Chemical Formulation: An overview of surfactant-based preparations used in everyday life, Cambridge: Royal Society of Chemistry.

Hawkins, D. I., Best, R. J. and Coney, K. A. (2001) Consumer Behaviour: Building Marketing Strategy. 8th edition, New York: Irwin McGraw-Hill.

Hisrich, R. D. and Peters, M. P. (2000). Entrepreneurship. 4th edition. Singapore, Irwin/McGraw Hill.

Hoek, J., Kearns, Z. and Wilkinson, K. (2003) A new brand's behaviour in an established market. Journal of Product and Brand Management, 12(1), p. 52 – 65.

Jolliffe, F. R. (1986) Survey Design and Analysis, Sussex: Ellis Horwood Ltd.

Kuratko, D. F. and Hodgetts, R. M. (2001) Entrepreneurship: A Contemporary Approach. 5th edition. New York: Harcourt, Inc.

Levy, S. P. and Lemeshow, S. (1991) Sampling of Populations: Methods and Applications, New York: John Wiley & Sons, Inc.

Luck, D. J. (1987) Marketing Research. 7th edition, New York: Prentice Hall International Inc.

Lutz, R. J. (1989) An Empirical Examination of Attitude toward the Ad in an Advertising Pretest Context. Journal of Marketing, 53(2), p. 48 – 65.

Mahadea, D. (1994) Alternative Approaches to Entrepreneurship. Acta Academia. 26(1). p. 143 – 160.

Mahadea, D. (2003) Growth and Employment in South Africa: Hope or Despair. South African Journal of Economics. 71(1), p.21 – 48.

Malhotra, N. (2004) Marketing Research: An Applied Orientation. 4th edition. New York: Pearson/Prentice Hall.

Martins, J.H., Loubser, M. & Van Wyk, H de J. (1996) Marketing Research: A South African Approach, Pretoria: Unisa Press.

Mitchell, A. A. (1979) Involvement: A Potentially Important Mediator of Consumer Behaviour. Advances in Consumer Research VI, Chicago, *Association for Consumer Research*, p. 191 – 196.

Ngcobo, K. H. (2003) *Divesting and Investing as Strategic Decisions in Small Business Entrepreneurship.* Unpublished M.B.A dissertation, University of Natal.

Otker, T. (1990) The Highly Involved Consumer. *Marketing and Research Today*, February, p. 30 – 36.

Robert, M. (2000) The Power of Strategic Thinking: Lock in Markets, Lock out Competitors, *New York:* McGraw-Hill.

Scarborough, N. M. and Zimmerer, T. W. (2006) Effective Small Business Management: An Entrepreneurial Approach. 8th edition. New Jersey: Prentice Hall.

Scheaffer, R.L., Mendenhall, W. and Ott, R, L. (2006) Elementary Survey Sampling. 6th edition. California: Thompson Brooks/Cole.

Schlegelmilch, B. B., Bohlen, G. M. and Diamantopoulos, A. (1996) The Link between Green Purchasing Decisions and Measures of Environmental Consciousness. European Journal of Marketing. 30(5), p. 35 – 55.

Sekaran, U. (2000) Research Methods for Business: A Skill Building Approach. 3rd edition. New York: John Wiley & Sons.

Shavitt, S., Lowrey, P. and Haefner, J. (1998) Public Attitudes Towards Advertising: More favourable than you might think. Journal of Advertising Research, 38(4), pp. 9 – 15.

Siripolis, N. C. (1986) Small Business Management. 3rd edition. Boston, Houghton Mifflin Company.

Smithson, M. (2000) Statistics with Confidence, London: Sage Publications.

Stern, P. and Hammond , K. (2004) The Relationship between Customer Loyalty and Purchase Incidence. Marketing Letters, 15(1), p. 5 – 19.

Steyn, A.G.W., Smit, C.F., Du Toit, S.H.C. and Strasheim, C. (2000) Modern Statistics in Practice. 4th impression. Pretoria: Van Schaik Publishers.

Sudman, S. and Blair, E. (1998) *Marketing* Research: A Problem Solving Approach. Boston: Irwin-McGraw Hill.

Temtime, Z.T. (2002) The Planning Behaviour of SME's in Developing Economies: A Preliminary Investigation. African Journal of Finance and Management. 11(1), p. 36 - 42.

Temtime, Z.T. (2004) Linking Environmental Scanning to TQM through Business Planning. Journal of Management Development. 23(3), p. 219 - 233.

Terre Blanche, M. and Durrheim, K. (1999) Research in Practice, Cape Town: University of Cape Town Press.

Tull, D. S. & Hawkins, D. I. (1993) Marketing Research: Measurement and Method. 6th edition. Ontario: Macmillan Publishing.

Van Aardt, I. & Van Aardt, C. (1997) Entrepreneurship and New Venture Management, Johannesburg: Thompson Publishing.

Von Keitz, B. (1990) Consumer Involvement. *Marketing and Research Today*, February, p. 37 – 45.

Ward, J. C., Russick, B. & Rudelius, W. (1985) Reducing Callbacks and Not-at-Home Bias in Personal Interviews. Journal of Marketing Research. 2, p. 66 – 73.

Wegner, T. (2002) Applied Business Statistics: Methods and Applications. Cape Town, Juta & Co, Ltd.

Whitehead, P. A. (2001) Profitably marketing products through Grocery Retailers. European Journal of Marketing. 20(6), p. 52 – 67.

Wickham, P. A. (2004) Strategic Entrepreneurship. 3rd edition. London, Prentice Hall.

Bishop, C. (2006) South Africa's "Age of Hope". *The Witness*, February, p. 1 - 15.

Day, C. (2003) Financial Review. *Reckitt Benckiser Corporate Website* [Online]. 42 paragraphs. Available: http:// www.reckittbenckiser.com /annual_ report_2003 /downloads/financial review [2006, 26 June]

Enslin, S. (2006) Tiger Brands hopes to clean up with its ClassiClean buy. *Business Report* [Online]. 9 paragraphs. Available: http://www.busrep.co.za [2006, 15 March]

Estelle, G. (2002) *Advertising Transformation Index*. Nielson Media Research, Nielson Publishers.

Euromonitor (2002) *Household Care in South Africa* [Online] 50 paragraphs. Available: http://www.euromonitor.com/household_care/index/2002.aspx [2006, 14 February]

Euromonitor (2005) *Household Care in South Africa: Introduction* [Online] 13 paragraphs. Available: http://www.euromonitor.com/household_care [2006, 14 February]

Gimbel, B. (2005) Conquer and Divide. *Fortune*, October 24 2005, p. 65 – 71.

Hall, W. (2005) Private Label Becoming the Future. *Business Day* [Online]. 18 paragraphs. Available: http://www.fastmoving.co.za/folderView?Id=564 [2006, 11 June]

Kennedy, R. (2002) *Report on the Manufacturing of Soap and Other Compounds in South Africa*. Published Report. Who Owns Whom/African Statistics.

Markinor. (2005) Top Brands. *Business Times*. September 25 2005, p. 46.

May, C. (2002) *A Preliminary Analysis of the Performance of the Chemicals Sector.* Published Report. University of Witwatersrand.

Mokopanele, T. (2006) Growth expected to continue at 5%. *Business Report*, February 16 2006, p. 8.

Naidoo, T. (2005). Ozonewash making bubbles in the industry. *Creamer's Engineering News* [Online]. 24 paragraphs. Available: http://www.engineeringnews.co.za [2006, 17 May]

London School of Hygiene (2002) *The Global Market for Soaps and Detergents*. London School of Hygiene and Tropical Medicine Publishers, London.

Stats SA (2006) *General Household Survey: July 2005*. Statistics South Africa, Government Publishers.

Unilever. (2004) Unilever Idea gets Flushed. *Business Report* [Online]. 2 paragraphs. Available: http://www.unilever.co.za/articles [2006, 6 May]

OMD. (2005) *A Brief Market Overview: South Africa*. OMD Media Research Publishers.

Procter & Gamble. (2006) *Annual Financial Statements* [Online]. 200 pages. Available: http://www.pg.com/investorrelations [2006, 15 March]

Shevel, A. (2006) Unilever stirs up ad industry. *Business Times*. March 26 2006, p. 15.

SAARF AMPS (2005). [Online] 200 pages. Available: http://www.saarf.co.za [2006, 05 April]

Statistics SA. (2004) *Census 2001 Primary Tables Kwazulu Natal: 1996 and 2001 compared*. Pretoria, Statistics South Africa.

Stein, N. The Age of the Scion. *Fortune*, April 2, 2001, pp. 121-128.

Sunduza, F. (2005) Support for SMMEs in the South African Chemicals Sector. *Blue Print Strategy and Policy (Pty) Ltd* [Online]. 19 pages. Available: www.nedlac.org.za/research/fridge/2005/chemical/step3/part2.pdf [2006, 25 June]

Taylor, A. (2006) Hyundai's Heavies. *Fortune*, May 22 2006, p. 14 – 15.

Temtime, Z. T. (2004) *Bridging the Operational-Strategic Gap in Small Business Management*. Third International Conference on Entrepreneurship – Sustainable Globalization. p.271 – 278.

Unilever. (2005) *Annual Report and Accounts* [Online]. 191 pages. Available: http://www.unilever.com/publications [2006, 15 March]

Unilever. (2005) *Annual Review - English* [Online]. 41 pages. Available: http://www.unilever.com/investor relations [2006, 15 March]

APPENDIX A:

Descriptive Statistics

	N		Mean	Median	Mode	Std. Deviation	Variance	Range	Minimum	Maximum
	Valid	Missing								
GENDER	378	13	1.5794	2.0000	2.00	.49432	.24435	1.00	1.00	2.00
INCOME	380	11	5.1605	5.0000	5.00	1.53689	2.36203	7.00	1.00	8.00
AREA	333	58	3.1892	3.0000	2.00	1.68183	2.82856	5.00	1.00	6.00
SUNLIGHT	286	105	1.0000	1.0000	1.00	.00000	.00000	.00	1.00	1.00
BIOCLASS	60	331	1.0000	1.0000	1.00	.00000	.00000	.00	1.00	1.00
AJAX	49	342	1.0000	1.0000	1.00	.00000	.00000	.00	1.00	1.00
POLAGRIC	2	389	1.0000	1.0000	1.00	.00000	.00000	.00	1.00	1.00
QUIX	38	353	1.0000	1.0000	1.00	.00000	.00000	.00	1.00	1.00
HANDYAND	298	93	1.0000	1.0000	1.00	.00000	.00000	.00	1.00	1.00
GREENCLN	47	344	1.0000	1.0000	1.00	.00000	.00000	.00	1.00	1.00
MRMUSCLE	157	234	1.0000	1.0000	1.00	.00000	.00000	.00	1.00	1.00
WINDOLEN	111	280	1.0000	1.0000	1.00	.00000	.00000	.00	1.00	1.00
STASOFT	300	91	1.0000	1.0000	1.00	.00000	.00000	.00	1.00	1.00
OTHER	25	366	1.0000	1.0000	1.00	.00000	.00000	.00	1.00	1.00
Q5	367	24	1.3460	1.0000	1.00	.58453	.34167	2.00	1.00	3.00
PRICE	373	18	2.1796	2.0000	1.00	1.23889	1.53485	4.00	1.00	5.00
QUALITY	379	12	2.2058	2.0000	2.00	1.12916	1.27499	4.00	1.00	5.00
PACKAGIN	372	19	3.9194	4.0000	5.00	1.09591	1.20103	4.00	1.00	5.00
BRANDNAM	372	19	3.2339	3.0000	4.00	1.36638	1.86699	4.00	1.00	5.00
PROMOTIO	372	19	3.3790	4.0000	5.00	1.38684	1.92333	4.00	1.00	5.00
MONTHEXP	379	12	5.9024	6.0000	5.00	2.62940	6.91372	9.00	1.00	10.00
Q8SIZE	378	13	1.6561	1.0000	1.00	.89988	.80979	3.00	1.00	4.00
Q9QUANTI	378	13	4.1270	4.0000	6.00	1.57728	2.48781	5.00	1.00	6.00
Q10ADVER	379	12	2.8364	3.0000	4.00	1.12671	1.26946	3.00	1.00	4.00
Q11MEDIU	379	12	2.4987	3.0000	3.00	1.09683	1.20304	3.00	1.00	4.00
Q13	378	13	2.0026	2.0000	3.00	.95384	.90981	2.00	1.00	3.00
Q14SHIFT	378	13	2.1508	2.0000	2.00	.98045	.96129	3.00	1.00	4.00
Q15VENTU	376	15	2.3883	3.0000	3.00	.95960	.92082	3.00	1.00	4.00
BQ16	124	267	3.1129	3.0000	5.00	1.46620	2.14975	4.00	1.00	5.00
BQ17GROS	123	268	4.7886	5.0000	7.00	2.06950	4.28282	6.00	1.00	7.00
BQ18ACTI	123	268	2.7236	2.0000	2.00	1.67577	2.80821	5.00	1.00	6.00
BQ19	122	269	1.3689	1.0000	1.00	.56336	.31737	2.00	1.00	3.00
BQ20EXP	124	267	3.2016	3.0000	1.00	1.94635	3.78829	5.00	1.00	6.00
BQ21	124	267	4.6129	4.0000	1.00	3.33425	11.11723	9.00	1.00	10.00
BQ22PRIC	124	267	2.2500	2.0000	1.00	1.27276	1.61992	4.00	1.00	5.00
BQ22QUAL	124	267	2.2097	2.0000	2.00	1.09896	1.20771	4.00	1.00	5.00
BQ22BULK	123	268	2.9593	3.0000	3.00	1.36945	1.87538	4.00	1.00	5.00
BQ22TIME	123	268	3.7561	4.0000	4.00	1.16183	1.34986	4.00	1.00	5.00
BQ22UNSA	121	270	3.7107	4.0000	5.00	1.34436	1.80730	4.00	1.00	5.00
BQ23	122	269	2.5656	3.0000	4.00	1.31103	1.71881	3.00	1.00	4.00
BQ24	122	269	3.4344	4.0000	4.00	.88128	.77666	3.00	1.00	4.00
BQ25	121	270	2.4050	3.0000	3.00	.87157	.75964	3.00	1.00	4.00

We will consider the mean, the mode, the median, the sample variance and the sample standard deviation. The mean or the arithmetic mean is the sum of all the values divided by the sample size, the mode is the most frequent response given by the respondents and the median is the middle most value when the data(per variable/question) is arranged from highest to lowest. The sample variance is the degree or quantity by which each observation varies one from another. The sample standard deviation is the square root of the sample variance. From the table above, majority of the questions have a variety of modes depending on what is being asked by the question. The standard deviations are consistently about 1 and this indicates good consistency between the observations due to the low variability. The mean and median values are consistent with modal values.

APPENDIX B:

Linear Regression for households

A linear regression analysis was run to investigate the relationship between income (question 2) and the size of household (question 8).

The fitted model was:

$$\text{Income} = \beta_0 + \beta_1 \text{size of household} + \varepsilon \qquad (1)$$

The results indicated the following:

Table i: Model summary of the relationship between gross monthly income and the size of the household

Model Summary [b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.122[a]	.015	.012	1.52719

a. Predictors: (Constant), Q8SIZE
b. Dependent Variable: INCOME

The size of household accounts for only 1.2% of the variation accounting for income. Thus, no relationship can be found between the gross monthly income of a household and the related size of the household.

Table ii: Summary of Analysis of Variance for testing whether a significant regression exists

ANOVA [b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13.177	1	13.177	5.650	.018
	Residual	874.616	375	2.332		
	Total	887.793	376			

a. Predictors: (Constant), Q8SIZE
b. Dependent Variable: INCOME

The above ANOVA table (table iii) tests the following hypothesis:

H_0: $\beta_0 = \beta_1 0$

H_1: at least one of the β_i are not zero

That is, whether or not a significant regression does in fact exists. At the 5% level, we reject H_0 (null hypothesis) because the p-value is 0.018.

Table iii: Determines the co-efficients of the simple linear equation in (1) above

Coefficients [a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.828	.165		29.318	.000
	Q8SIZE	.208	.087	.122	2.377	.018

a Dependent Variable: INCOME

From table iv, the estimated regression equation is:

$$\text{Income} = 4.828 + 0.208\text{size of household}$$

Accordingly, for 0.208 units increase in household size, the income increases by one unit. It is also important to note that the size of house variable is significant at the 5% level with a p-value of 0.018. A similar model was employed to analyze the businesses.

APPENDIX C:

Linear Regression for businesses

A linear regression analysis was run to investigate the relationship between the number of employees currently employed in a business (question 16) and the firm's gross turnover (question 17).

The fitted model was:

$$\text{Sales Income} = \beta_0 + \beta_1 \text{size of business} + \varepsilon \qquad (2)$$

The results indicated the following:

Table iv: Model summary of the relationship between gross monthly income and the size of the household

Model Summary [b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.646[a]	.418	.413	1.58598

a. Predictors: (Constant), BQ16
b. Dependent Variable: BQ17GROS

It is apparent from table v that the size of business accounts for 41.3% of the variation accounting for sales income in a business. Thus, a very small relationship exists between the number of employees in a firm and the gross monthly turnover of the firm.

Table v: Summary of Analysis of Variance for testing whether a significant regression exists

ANOVA [b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	218.149	1	218.149	86.728	.000
	Residual	304.355	121	2.515		
	Total	522.504	122			

a. Predictors: (Constant), BQ16
b. Dependent Variable: BQ17GROS

The above ANOVA table (table vi) tests the following hypothesis:

H_0: $\beta_0 = \beta_1 0$

H_1: at least one of the β_i are not zero

That is, whether or not a significant regression does in fact exists. At the 5% level, we reject H_0 (null hypothesis) because the p-value is 0.018.

Table vi: Determines the co-efficients of the simple linear equation in (1) above

Coefficients [a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.956	.336		5.819	.000
	BQ16	.915	.098	.646	9.313	.000

a Dependent Variable: BQ17GROS

From table vii, the estimated regression equation is:

$$\text{Income} = 1.956 + 0.915\text{size of household}$$

Accordingly, for 0.915 units increase in business size, the gross monthly income increases by one unit. It is also important to note that the size of the business variable is significant at the 5% level with a p-value of 0.000. This is a better fitting model.

APPENDIX D:

Logistic Regression to determine the support of a new detergent business venture among businesses

A logistic regression was run with Q25 (whether business would support a new detergent venture) changed to a yes or no type *i.e.* binary question and this was regressed against Q16 –Q18 (number of employees, firm's gross monthly turnover and activity of the firm currently engaged in) with the following results:

Table vii: Displays the variables in the equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1(a)	BQ16			.725	4	.948	
	BQ16(1)	-1.426	1.825	.610	1	.435	.240
	BQ16(2)	-1.223	1.852	.436	1	.509	.294
	BQ16(3)	-20.723	7046.191	.000	1	.998	.000
	BQ16(4)	-.182	1.448	.016	1	.900	.833
	BQ17GROS			3.858	6	.696	
	BQ17GROS(1)	3.534	2.108	2.812	1	.094	34.272
	BQ17GROS(2)	3.007	2.001	2.259	1	.133	20.235
	BQ17GROS(3)	-17.508	9148.395	.000	1	.998	.000
	BQ17GROS(4)	2.043	1.783	1.314	1	.252	7.715
	BQ17GROS(5)	-17.549	9290.946	.000	1	.998	.000
	BQ17GROS(6)	2.891	1.674	2.983	1	.084	18.014
	BQ18ACTI			3.982	5	.552	
	BQ18ACTI(1)	19.175	10181.792	.000	1	.998	212521420.743
	BQ18ACTI(2)	17.220	10181.792	.000	1	.999	30113237.003
	BQ18ACTI(3)	18.975	10181.792	.000	1	.999	174089028.424
	BQ18ACTI(4)	.413	17011.287	.000	1	1.000	1.512
	BQ18ACTI(5)	20.935	10181.792	.000	1	.998	1235977776.451
	Constant	-21.989	10181.792	.000	1	.998	.000

a. Variable(s) entered on step 1: BQ16, BQ17GROS, BQ18ACTI.

One can see from the above table that none of the explanatory variables are significant. Therefore the regression is not a good one.

APPENDIX E:

RESEARCH OFFICE (GOVAN MBEKI CENTRE)
WESTVILLE CAMPUS
TELEPHONE NO.: 031 – 2603587
EMAIL : ximbap@ukzn.ac.za

UNIVERSITY OF
KWAZULU-NATAL

6 DECEMBER 2006

MR. DM GHELA (983172765)
MANAGEMENT STUDIES

Dear Mr. Ghela

ETHICAL CLEARANCE APPROVAL NUMBER: HSS/06204A"

I wish to confirm that ethical clearance has been granted for the following project:

"The feasibility of a new business venture in the highly competitive detergent industry"

Yours faithfully

MS. PHUMELELE XIMBA
RESEARCH OFFICE

cc. Faculty Office (Gail Ponsford)
cc. Supervisor (Prof. D Mahadea)

APPENDIX F:

UNIVERSITY OF KWAZULU NATAL, SCHOOL OF BUSINESS

Purchasing Behaviour in the Competitive Detergent Industry: A PMB Case Study of the Viability of Starting a New Business Venture

This questionnaire requires ten minutes of your time. You may remain anonymous. No dissemination of your answers will be provided to any other party. All information submitted by you will be treated as confidential and only used for research purposes. You may withdraw from answering this questionnaire at any time. Please tick the appropriate answers.

SECTION A: (to be completed by household and business users)

1. Tick the appropriate

MALE	FEMALE

2. What is your current gross monthly income?

R1 - R400	
R401 - R800	
R801 - 1600	
R1601 - R3200	
R3201 - R6400	
R6401 - R12800	
R12801 - R25600	
R25601 and above	

3. Area of residence?

MOUNTAIN RISE	
PIETERMARITZBURG CBD	
SCOTTSVILLE/HAYFIELDS	
SOBANTU	
NORTHDALE	
OTHER. PLEASE SPECIFY?	

4. What liquid detergents do you currently purchase? Please tick all the appropriate.

SUNLIGHT		BIOCLASSIC		AJAX		POLAGRIC		QUIX	
HANDY ANDY		CLEAN GREEN		MR MUSCLE		WINDOLENE		STA SOFT	

OTHER. PLEASE SPECIFY? _____

5. Who does the detergent purchasing for your household?

YOURSELF	
SPOUSE	
CHILDREN	
OTHER. PLEASE SPECIFY?	

6. What characteristics influences your purchasing of detergents? Please rate your choice using the numbers 1, 2, 3, 4, 5.

1 – most important 2 – important 3 – minor importance 4 – not important 5 – does not matter

PRICE	
QUALITY	
PACKAGING	
BRAND NAMES	
ITEMS ON PROMOTION, INCLUDING DISCOUNTS	

7. What is the monthly expenditure of your household on detergents?

R1 - R25		R126 - R150	
R26 - R50		R151 - R175	
R51 - R75		R176 - R200	
R76 - R100		R201 - R225	
R101 - R125		R225 and above	

8. How many members reside in your household?

1 - 4	
5 - 8	
9 - 12	
12 and above	

9. What is the total quantity of liquid detergents purchased in your household?

0ml - 500ml	
501ml - 1000ml	
1001ml - 1500ml	
1501ml - 2000ml	
2001ml - 2500ml	
2501ml and above	

10. Does a television medium influence you in determining your choice of detergents to be purchased?

ALWAYS	
VERY OFTEN	
SOMETIMES	
NEVER	

11. Does a print medium (e.g. newspaper, pamphlets, brochures, etc) influence you in determining your choice of detergents to be purchased?

ALWAYS	
VERY OFTEN	
SOMETIMES	
NEVER	

12. What other media do you feel is important in notifying you of detergent prices, specials, sales, etc?

_____

_____

_____

13. Do you purchase a branded or non-branded (no-name) detergent?

BRANDED	
NON-BRANDED	
BOTH	

14. If you are mostly using branded detergents, under what circumstance would you consider shifting to a non-branded detergent?

PRICE	
QUALITY	
PROMOTION/DISCOUNTS	
UNSATISFIED WITH THE CURRENT BRAND OF DETERGENT	

15. If a venture, specializing in the manufacture of detergents, similar to the one you are currently using is set up, would you support it?

ALWAYS	
VERY OFTEN	
SOMETIMES	
NEVER	

SECTION B: (to be completed by business/industrial users only)

16. Number of employees currently employed?

1 - 10	
11 - 20	
21 - 30	
31 - 40	
41 and above	

17. What is the firm's gross turnover per month?

R1 - R50 000	
R51 000 - R100 000	
R101 000 - R150 000	
R151 000 - R200 000	
R201 000 - R250 000	
R251 000 - R300 000	
R301 000 and above	

18. What is your firm engaged in?

SERVICES	
MANUFACTURING	
RETAIL	
WHOLESALE	
CATERING	
HOLIDAY/ACCOMODATION	
OTHER. PLEASE SPECIFY?	_____

19. Who does the detergent purchasing in your firm?

YOURSELF	
PURCHASING OFFICER/BUYER	
OTHER. PLEASE SPECIFY?	_____

20. What is the monthly expenditure of your firm on detergents?

R1 - R300	
R301 - R600	
R601 - R900	
R901 - R1200	
R1201 - R1500	
R1501 and above	

21. What is the total quantity of detergents purchased by your firm per month?

1 litre - 25 litres		126 litres - 150 litres	
26 litres - 50 litres		151 litres - 175 litres	
51 litres - 75 litres		176 litres - 200 litres	
76 litres - 100 litres		201 litres - 225 litres	
101 litres - 125 litres		225 litres and above	

22. What attributes influences your firm to purchase detergents? Please rate your choice using the numbers 1, 2, 3, 4, 5.

1 – most important 2 – important 3 – minor importance 4 – not important 5 – does not matter

PRICE	
QUALITY	
BULK DISCOUNTS	
TIMEOUS DELIVERY	
UNSATISFIED WITH CURRENT SUPPLIER	
OTHER. PLEASE SPECIFY?	_____

23. Does location influence the choice of your supplier from where your firm purchases its detergents?

ALWAYS	
VERY OFTEN	
SOMETIMES	
NEVER	

24. Do e-commerce facilities (e.g. websites, e-mail, cell phone technology, etc) influence your decision in determining what detergents should be purchased for your firm?

ALWAYS	
VERY OFTEN	
SOMETIMES	
NEVER	

25. If a venture, specializing in the manufacture of detergents, is able to provide you with specialized technical know-how, latest innovative detergents, timeous deliveries and above-average service levels, would your firm support it?

ALWAYS	
VERY OFTEN	
SOMETIMES	
NEVER	

THANK YOU FOR YOUR CO-OPERATION