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# KEY FACTORS INFLUENCING THE SUCCESS OF GENERIC PHARMACEUTICAL LAUNCHES IN SOUTH AFRICA

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# 1. INTRODUCTION

## 1.1. Purpose of Study

The purpose of this study is to identify the factors that influence the success of generic pharmaceutical launches, and to understand how these factors can be used to ensure the successful launch of generic pharmaceutical products and ensure continued growth.

## 1.2. Context of Study

With the advent of patent expiry on a number of blockbuster drugs around the world (Scrip Magazine, 2005), the generics industry is experiencing an unprecedented period of growth (Robinson, 2003). According to Espicom Business Intelligence Report (2003), 79.7% of 2003 blockbuster sales are potentially exposed to generic competition by 2010, equating to a value at 2003 sales of $ 103.7 billion.

There have been an increasing number of successful generic launches in South Africa, with the innovator products having been subject to severe erosion in unit volume, and ultimately profitability. Many generic products, as measured by IMS are amongst the top 100 products sold in the South African market by value, having significantly exceeded the value of the innovator product.

In an effort to increase the access and affordability of Healthcare and medicines in particular, to all South Africans, the government has promulgated Act 90 of 1997, with an amendment in 2003. As a result of this legislation, the cost of medicines paid by the patient has been reduced. As pharmaceutical manufacturers were forced to reduce the cost of their drugs based on historic price increases as well as bonuses and rebates, that were historically common practice within the industry.

A further piece of the legislation was the implementation of mandatory generic substitution at pharmacy level i.e. when a patient goes to the pharmacy to fill a prescription, the pharmacist is obliged by law to inform the patient of the options of generic drugs available for the particular molecule prescribed by the Doctor.

The Managed Care environment in South Africa has also become extremely stringent in terms of the amount of money spent on medicines. In a bid to reduce the cost of spend on medicines, managed care organisations have become formulary driven and also institute minimum medical aid payments for drugs based on the lowest cost of the drug in the disease area. Any costs over and above the amount covered by the Medical Aid have to be covered by the patient, with this price difference being referred to as a “co-pay”.

The changes in legislation together with the changes in the healthcare environment including the increased power of Managed Care and pharmacists in the choice of drugs, has resulted in a visible increase both in the launch of generic products by pharmaceutical companies as well as the prescription of generic drugs by Healthcare professionals and the use of generics by patients.

The Medicines Control Council (MCC) is the Regulatory Authority governing the approval and registration of all new drugs in South Africa. The MCC is currently in the process of aiming to reduce the registration time of new products in South Africa. The current timeline is approximately 24 to 36 months.

As part of this effort, similar molecules are being evaluated simultaneously and there has been recent evidence to show that multiple new products of similar molecules are being registered at the same time. This would suggest that there could be significant competition between generic companies to ensure the successful launch of their products.

In order to ensure the successful launch of their new generic products, it would be important to identify the key factors that influence the success of generic pharmaceutical products. By identifying these factors, the pharmaceutical industry will be able to have an improved understanding, and ensure that these factors are taken into account when launching new products. This will also assist in creating a more competitive environment while enabling the launch of many more successful generic products.

## 1.3. The Problem and Sub-Problems

The research problem is to understand the key factors for the successful launch of generic products in South Africa and how these factors can be utilized for future successful launches.

### 1.3.1. Sub-Problem 1.

What is the rating or relative importance of the key factors that impact on the successful launch and growth of generic pharmaceuticals?

### 1.3.2. Sub Problem 2.

What are pharmaceutical companies' perceptions of the differences in the factors required for a successful launch vs ensuring growth after launch?

### 1.3.3. Sub Problem 3

What are the principal dimensions of the perceptions of different brands that can be identified?

## 1.4. Significance of the Study

The significance of this research is to determine the importance of the key factors identified as well as the use of these factors by pharmaceutical companies, to ensure successful launches.

Generic companies that are preparing for new product launches now have a list of key factors which enables them to ensure that these factors have been considered, prior to launch. This could assist to improve their generic product launch capabilities. They would also be able to use this in the post launch review in assessing product performance, and ensure continued success of the product post launch. This also enables them to determine whether specific factors have been neglected or over looked in the launch of the product, and whether to take steps to correctly address these factors.

Multinational or innovative companies should be able to better defend their products following patent expiry, by anticipating the factors that have been identified, and developing strategies to counter or minimise the effect of these factors, and hence being able to extend the mature phase of the product life cycle prior to entering the decline phase. In most cases, the additional months of revenue, should there be no evergreening strategy, will definitely be an advantage to the company.

According to Espicom (2003), the operating environment for generics is becoming increasingly competitive, and both ethical and generic companies need to be prepared for this competition.

## 1.5. Delimitations and Limitations

The research was limited to the opinions and perceptions of key people within pharmaceutical companies active in South Africa.

The research was evaluated from the perspective of pharmaceutical companies and did not take into consideration the opinions of customers, patients, wholesalers or managed care organisations.

The in-depth interviews were conducted with people working for pharmaceutical companies located in Gauteng.

The research was limited to suggesting the list of factors for pharmaceutical companies to consider, but not suggesting solutions to overcome any potential defence tactics.

## 1.6. Assumptions

The assumption was made that the data required to develop this research was readily available and accessible.

An assumption was made that the people who have been involved with successful generic launches would be willing to complete a questionnaire and/or be interviewed.

## 1.7. Subsequent Chapters of the Research Report

Chapter 2 begins with an overview of the marketing theory relating to the launch of a new product. This looks at the various stages of the process including understanding the product, preparing the company and preparing the market which requires a look at product, price, place and promotion, which are considered the 4 P's of marketing.

An overview of both the global as well as the South African pharmaceutical markets is covered, followed by the differences between the innovative and generic pharmaceutical markets.

The factors impacting on successful generic launches as identified from literature is then covered, substantiated by examples of generic products launched and available in South Africa. This chapter is concluded with the presentation of the supporting literature.

Chapter 3 describes the research methodology employed and details both the qualitative and quantitative approaches employed, including the validity and reliability of the methodology.

Chapter 4 presents and analyses the results of the research.

Chapter 5 interprets the results presented in Chapter 4 and discusses whether the results confirm or deny the research propositions.

Chapter 6 is the concluding chapter that presents a summary of the findings as well as making recommendations for potential areas of further research.

# 2. LITERATURE REVIEW

## 2.1. Launching a New Product

The launch of a new product requires in depth analysis, understanding and preparation in three main areas in order to ensure a product launch is successful. These areas are the product itself, the external environment including the market in which the product will participate and the internal environment including the company itself (Tucker, 2005).

According to Tucker (2005), the pre-launch period is a period characterized by a number of activities that assist in ensuring that the product, market and company are all ready at the time that the product obtains marketing authorization from the Health Regulatory Authority. In South Africa, the Health Regulatory Authority is the Medicines Control Council (MCC).

The effort that is put into the pre-launch activities has a significant impact on the off take of the product at launch, by exercising a downward influence on the degree of initial market penetration. It is therefore critical that all the internal and external activities and tactics are collectively orchestrated to climax at the launch date (Tucker, 2005).

### 2.1.1 Understanding the Product

It is imperative to understand the product, including its indication, its target audience and the competitor landscape. This may be done by gathering information on past product performances and forecasting trends within the foreseeable future (Lidstone & MacLennan, 2000) of the therapeutic area and the innovator product.

As a result of the data analysis, marketing executives should challenge themselves to find a way forward in ensuring that they thoroughly understand the market in which the new product will be launched (Lidstone & MacLennan, 2000).

Market Analysis, including the SWOT analysis, market segmentation and calculation of market potential are some of the ways in which to ensure an understanding of the market, making use of the data collected. It is also crucial to get an understanding of the competitive environment. Items that need to be considered include the competitors, the segments/therapeutic area that they participate in and their relative strength/advantage in these areas, as well as trying to take into account their observable brand strategies and future strategies (Lidstone & MacLennan, 2000). It is also important to ensure that market awareness is heightened when new products are being planned for launch, as it is crucial to keep abreast of any changes in the environment that may affect the new product launch.

According to Engel, Warshaw & Kinnear (1994), positioning is defined as "the perception that targeted consumers have of a firm's offering relative to competitors". Positioning defines the perception the company intends its target audience to have of its product. A clear positioning statement is key to the direction of the promotional activity and may be approached in a number of different ways including by attributes, by price and quality, by use or application, by product user, product class or by competitor (Engel *et al*, 1994).

Understanding the market dynamics is crucial when launching a new product. This should be looked at in three main areas, in order to ensure that appropriate tactical decisions are made (Lidstone & MacLennan, 2000).

- **Promotion:** It is important to ascertain the level of spend in the market and to determine whether the market is promotion sensitive or not.

- **Price:** It is important to understand where to position your price in order to be competitive. This is moreso in a market that is characterised as "price sensitive", as a generic market is.

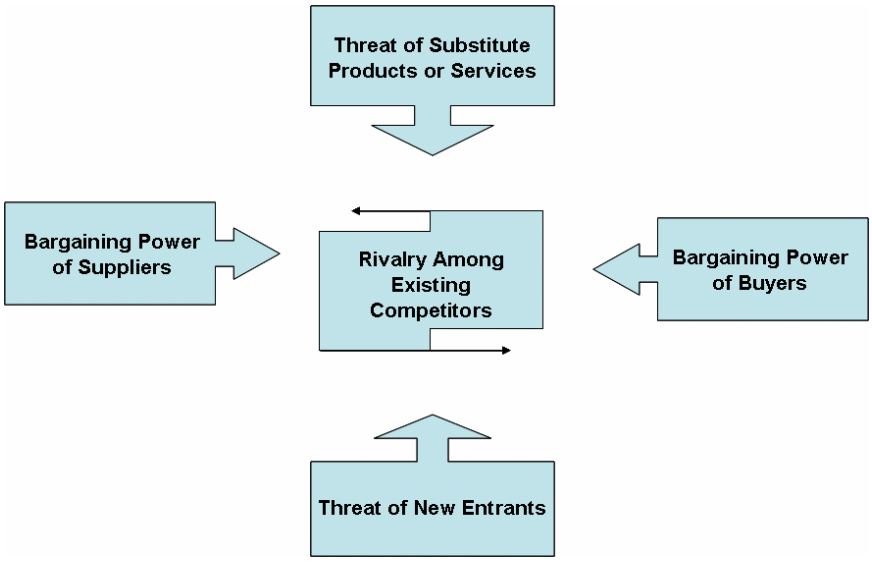
- **Habit:** The **"**level of habit" is interchangeable with satisfaction, i.e. if a product or brand is available that satisfies the customer's needs, it may be more difficult to penetrate a market where "habit" is high and this may require large promotional expenditure sustained for a longer period of time.

The intensity of competition within a market should be analysed beyond the behaviour of competitors and depends on five basic competitive forces as identified by Porter (2004).

These forces are:

- Potential new entrants
- Threat of substitution
- Bargaining power of buyers
- Bargaining power of suppliers
- Rivalry among current competitors

**Fig 1: Porter's Competitive Advantage Model**




Source: Porter, 2004

### 2.1.2 Preparing the Company (Company Readiness)

Company readiness involves the co-ordination of internal efforts and contributions from across the organisation. This should involve the formation of a project team that will be responsible for driving the internal processes related to the launch and should include a variety of functions present within the organisation including Sales, Medical, Managed Care, Supply Chain/Logistics and Manufacturing (Tucker, 2005).

This team is responsible for developing a project plan to drive the pre-launch activities, as well as overseeing other activities and tactics including training of appropriate personnel, territory and sales force planning, resource (staff) allocation and planning, structuring and approval of incentive schemes, forecasting and logistics, IT requirements, pricing and re-imbursement approvals,

preparation and timing of launch plan, budgets and selection of advertising agency, regulatory timing and ensuring the smooth management of these activities (Tucker, 2005).

### 2.1.3 Preparing the Market (Market Readiness)

In preparing the market for the launch of a new product it is important to take into account the 4 P's of marketing:

- Promotion
- Product
- Price
- Place /Distribution

These 4 elements interact with each other in contributing to the overall communications plan and preparing the market for the launch of a new product (Lidstone & MacLennan, 2000).

**Promotion**

Elements of the promotional mix may include advertising, direct marketing, sales promotion, publicity/public relations, personal selling or interactive marketing. It is important to decide and test what to say to the target segment in order to produce the desired response or a change in behavior. Central to this, is the unique selling point i.e. the benefit/motivation as to why the target audience should prescribe and ensure use of the product (Lidsone & MacLennan, 2000).

**Product**

According to Lidstone & MacLennan (2000), a product is not just a physical object, but a bundle of benefits or values that satisfies the needs of customers and consumers. It is important, therefore to take into account issues such as service, brand name and package design. In an effective communications programme, the promotion, branding and packaging are all designed to present an image or positioning of the product that extends beyond its functional attributes (Lidstone & MacLennan, 2000).

**Price**

The price should support the product's positioning. It should be consistent with the perceptions of the product, as well as the communications strategy. Incorrect positioning in terms of price may cause confusion in the mind of the consumer. (Lidstone & MacLennan, 2000).

**Place/Distribution**

The way one makes a product available is an important decision. A quality product is of little or no value unless it is available where the consumer wants it, when they want it and with the proper support and service available (Lidstone & MacLennan, 2000).

## 2.2. The Global Pharmaceutical Industry

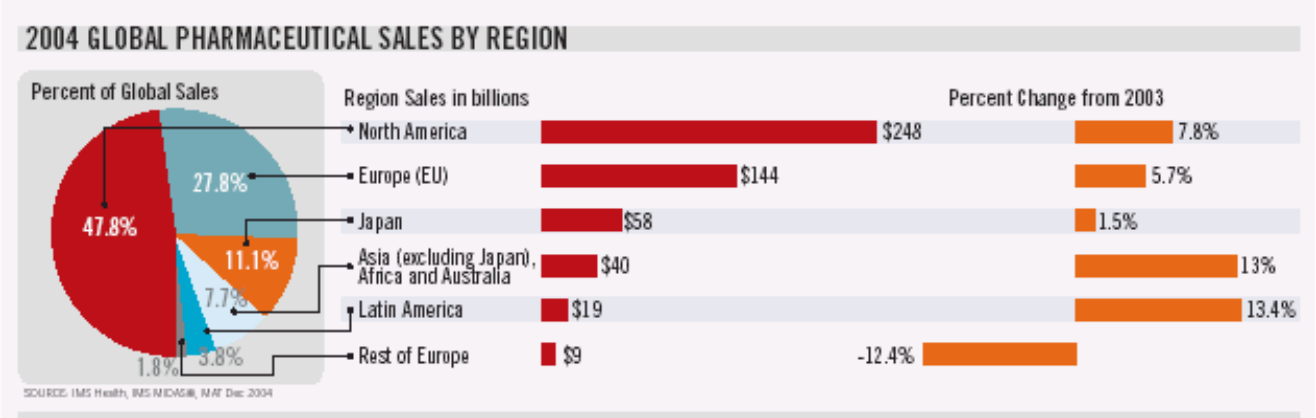
As at December 2004, the global pharmaceutical industry according to IMS Health is valued at $ 518 billion, growing at 9%. According to Holland & Batiz-Lazo (2004), the majority of global pharmaceutical sales originate in US, Europe and Japan, with only ten key countries accounting for eighty percent of the global market.

**Table 1: 2004 Global Pharmaceutical Sales by Region**

| 2004 Global Pharma Sales by Region | 2004 Sales ($ bn) | % Global Sales ($) | % Growth (constant $) |
|---|---|---|---|
| North America | 248 | 47.8% | 7.8% |
| European Union | 144 | 27.8% | 5.7% |
| Rest of Europe | 9 | 1.8% | 12.4% |
| Japan | 58 | 11.1% | 1.5% |
| Asia, Africa and Australia | 40 | 7.7% | 13.0% |
| Latin America | 19 | 3.8% | 13.4% |
| **Total** | **518** | **100%** | **9%** |

Source: IMS Health (2004)

**Figure 2: 2004 Global Pharmaceutical Sales by Region**




Source: IMS Health (2004)

The global pharmaceutical industry can be characterised by a number of mergers and acquisitions over the past years in response to the slow nature of developing new products as well as the weak R&D pipelines of companies. According to Scrip Magazine (2005), more stringent drug approval guidelines have lengthened the time, cost, and risk of going from discovery to market.

The table below is an indication of the extent of mergers and acquisitions between 1997 and 2002 (Holland & Batiz-Lazo, 2004). This does not taken into account the $57 billion mega-merger of Pfizer and Pharmacia in 2003 to create the world's biggest pharmaceutical corporation, and the most recent merger between Sanofi- Synthelabo and Aventis, a deal valued at $ 60.2 million in 2004 or the merger between Fujisawa and Yamanouchi to form Astellas in 2005, valued at $ 7.9 million.

**Table 2: Worldwide Sales and Major Drug Mergers**

| 1997 | | | 2002 | | | |
|---|---|---|---|---|---|---|
| **Company** | **Total Sales $ bn** | | **Company** | **Total Sales $ bn** | **Share Within Global Retail** | **Sales Growth 2001-2002** |
| Glaxo Wellcome | 11.6 | | Pfizer | 29.5 | 7.3% | 11.4% |
| Merck | 11.4 | | GlaxoSmithKline | 27.9 | 7.0% | 7.0% |
| Novartis | 11.0 | | Merck | 20.0 | 5.0% | 6.6% |
| Bristol-Myers Squibb | 9.3 | | Johnson and Johnson | 18.6 | 4.6% | 16.1% |
| Johnson and Johnson | 8.7 | | AstraZeneca | 18.1 | 4.5% | 8.6% |
| American Home Products | 8.4 | | Novartis | 16.6 | 4.1% | 12.8% |
| Pfizer | 8.4 | | Aventis | 14.3 | 3.6% | 10.0% |
| Roche | 8.0 | | Bristol-Myers Squibb | 14.3 | 3.6% | -7.4% |
| SmithKline Beecham | 7.4 | | Roche | 12.5 | 3.1% | 6.5% |
| Hoechst | 7.4 | | Pharmacia | 12.2 | 3.0% | 8.1% |

Source: Holland & Batiz- Lazo (2004)

**Table 3: Top 10 Pharmaceutical Deals in 2004**

| Rank | Value($m) | Target/Merger Partner | Country | Bidder/Merger Partner | Country |
|---|---|---|---|---|---|
| 1 | 60 | Aventis | France | Sanofi-Synthelabo | France |
| 2 | 7,940 | Fujisawa Pharmaceuticals | Japan | Yamanouchi Pharmaceuticals | Japan |
| 3 | 2,961 | Roche OTC business | Switzerland | Bayer | Germany |
| 4 | 2,948 | Warner Chilcott | UK | Private Equity Consortium | US |
| 5 | 2,747 | Celltech | UK | UCB | Belgium |
| 6 | 2,196 | Sumitomo Pharmaceuticals | Japan | Dainippon Pharmaceuticals | Japan |
| 7 | 1,457 | Tularik (79%) | US | Amgen | US |
| 8 | 1,050 | ILEX Oncology | US | Genzyme | US |
| 9 | 888 | Agis Industries | Israel | Perrigo | US |
| 10 | 833 | Atrix Laboratories | US | QLT | Canada |

Source: Corporate Finance Insights, Price Waterhouse Coopers (2004/5)

A further trend in the global pharmaceutical industry is the increase in the number of generics and the success of generic manufacturers. According to Kirking *et al* (2001), 22 products valued at $5.3 billion lost patent protection in 2000, exposing these products to generic competitors. Between 2001 and 2005, products accounting for $ 26 billion will lose patent and between 2006 and 2010, products currently accounting for $22 billion in annual sales will go off patent (Kirking *et al*, 2001).

As a result of the large number of innovator products coming off patent, this has resulted in the establishment of major generic players within the pharmaceutical industry.

**Table 4: Top 20 Generic Pharmaceutical Companies 2004**

| Company | Total Retail Dollars | Generic % of Total Sales | % Change of Total Sales from Last Year |
|---|---|---|---|
| TEVA | $5,028,569,060.00 | 94.6% | 770.0% |
| Mylan | 3,459,667,052 | 91.3% | 0.9% |
| Watson | 2,588,816,192 | 74.0% | 2.4% |
| Novartis | 2,167,360,206 | 25.7% | -13.5% |
| Alpharma | 1,674,806,909 | 94.3% | -3.4% |
| Par | 1,477,135,360 | 98.6% | 24.5% |
| Barr Labs | 1,354,614,124 | 60.8% | -7.8% |
| Mallinkcrodt | 1,086,681,048 | 86.6% | 11.8% |
| IVAX | 1,083,724,347 | 99.9% | 9.2% |
| Ranbaxy | 857,625,714 | 92.4% | -0.1% |
| Eon | 824,331,611 | 98.6% | 24.3% |
| Qualitest | 774,144,638 | 98.0% | 6.8% |
| Apotex | 760,332,237 | 100.0% | 123.2% |
| Andrx | 638,883,612 | 79.4% | 32.6% |
| Taro | 554,427,383 | 96.1% | 18.2% |
| Schering-Plough | 554,337,190 | 24.4% | -16.4% |
| Schwarz | 497,560,251 | 64.3% | -64.1% |
| Ethex | 439,203,413 | 79.8% | 7.5% |
| Pfizer | 327,271,229 | 1.4% | 12.1% |
| Boehringer Ingelheim | 269,193,051 | 10.5% | 5.8% |

Source: Drug Topics (April 2005)

## 2.3. The South African Pharmaceutical Industry

The South African pharmaceutical industry is an emerging market, which shows signs of long term growth. According to IMS Health (2004), the market at the end of 2004 was valued at R13.5 billion, with this valued being split 79.6% and 20.4% in terms of the Private and State markets respectively. The industry has a number of key players, with manufacturing and wholesale distribution, as well as sales and marketing, accounting for the bulk of the value adding activities in the pharmaceutical industry.

**Table 5: Total Pharmaceutical Market Estimates (Rands)**

| SECTOR | TOTAL (mil) RANDS | PHARMACY RETAIL | | PUBLIC | | DISPENSING | PRIVATE |
|---|---|---|---|---|---|---|---|
| YEAR | | ETHICAL | PROPRIETARY | PROVINCIAL/ INSTITUTIONAL | CMS & OTHER | DOCTOR | HOSPITAL |
| 2000 R | 9753.3 | 4465.9 | 230.6 | 910.5 | 1360 | 1421.3 | 1365 |
| % | 100% | 45.79% | 2.36% | 9.35% | 13.94% | 14.57% | 13.99% |
| 2001 R | 11018.2 | 5021.9 | 296.4 | 969.9 | 1396.5 | 1603.0 | 1730.5 |
| % | 100% | 45.58% | 2.69% | 8.80% | 12.67% | 14.55% | 15.71% |
| 2002 R | 12281.7 | 5692.3 | 340.4 | 1084.3 | 1430 | 1775.6 | 1959.1 |
| % | 100% | 46.35% | 2.77% | 8.83% | 11.64% | 14.46% | 15.89% |
| 2003 R | 13538.5 | 6271.1 | 392.3 | 1282.2 | 1490 | 1784.1 | 2318.8 |
| % | 100% | 46.32% | 2.90% | 9.47% | 11.01% | 13.18% | 17.13% |
| 2004 R | 14332.3 | 6918.9 | 450.8 | 1427.1 | 1661.3 | 1382.6 | 2491.6 |
| % | 100% | 48.27% | 3.15% | 9.96% | 11.59% | 9.65% | 17.38% |
| 2005 R | 15539.1 | 7439.8 | 512.1 | 1544.1 | 1829.1 | 1457.2 | 2756.8 |
| % | 100% | 47.88% | 3.29% | 9.94% | 11.77% | 9.38% | 17.74% |
| 2006 R | 16982.3 | 8120.5 | 571.0 | 1670.7 | 2008.4 | 1573.8 | 3037.9 |
| % | 100% | 47.82% | 3.36% | 9.84% | 11.83% | 9.27% | 17.89% |

Source: SA In Figures (2005)

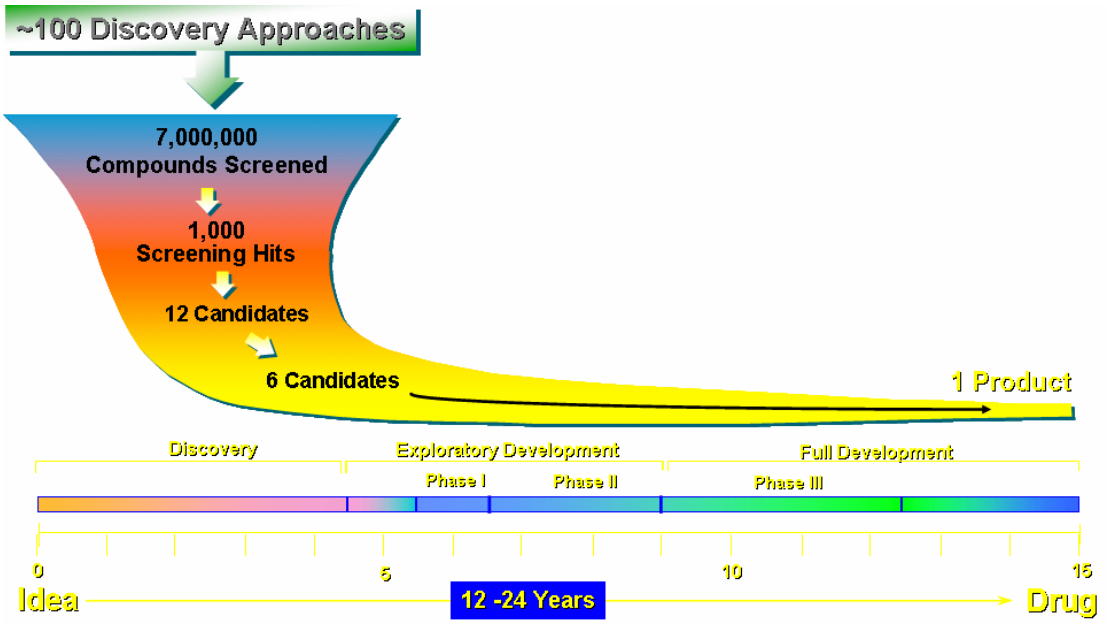
The pharmaceutical manufacturers are companies of South African origin or may be multi-national companies ("MNC's"). These companies compete in both the generic and ethical markets, with some large MNC's, also having a generic subsidiary or division operating within South Africa (IMS Health, 2004). The value of generic drugs is lower than that of ethical products, but in volume terms, accounts for a much higher percentage of the market.

## 2.4. The Difference between Innovative and Generic Pharmaceutical Markets

### 2.4.1 The Innovative Market

The Innovative pharmaceutical market is characterised by a large number of pharmaceutical companies that spend large amounts on research and development (R&D) in the quest for the development of new chemical entities (NCE's) (Ernst and Young Report, 2004).

**Fig 3: Diagram showing the Phases of Development of New Chemical Entities (NCE's)**




Source: Pfizer Internal Presentation (2005)

Large amounts of money are spent on R&D efforts with estimates according to the Pfizer Annual Report, the largest company indicating that it spent $7.1 billion on R&D in 2003. In a paper by Rafiq & Saxon (2000), it is estimated that British Pharmaceutical companies spent 15% of sales revenues on R&D in 1998, a 10% increase over the previous year. As a result of this investment these companies patent the molecules preventing other companies from developing and marketing identical molecules, until the patent has expired.

The table below provides an indication of the R&D spend in 2003 by the leading pharmaceutical companies.

**Table 6: Leading Companies ranked by R&D Spend for 2003**

| Company | R&D Spend (US$ million) | Pharma Sales (US$ million) | R&D as a % of Sales |
|---|---|---|---|
| Pfizer | 7,131 | 39,631 | 18.0 |
| GlaxoSmithKline | 4,416 | 29,736 | 14.9 |
| Astra Zeneca | 3,451 | 18,318 | 18.8 |
| Aventis | 3,241 | 17,196 | 18.8 |
| Johnson and Johnson | 3,199 | 19,517 | 16.4 |
| Merck and Co | 3,178 | 22,486 | 14.1 |
| Novartis | 3,079 | 16,020 | 19.2 |
| Roche | 2,938 | 14,725 | 19.9 |
| Lilly | 2,350 | 11,856 | 19.8 |
| Bristol Myers Squibb | 2,119 | 14,925 | 14.2 |

Source: Scrip Magazine (February 2005)

According to the TUFTS Center for the Study of Drug Development, from the beginning of research until the new prescription medication receives approval from the Food and Drug Administration (FDA) to market the drug in the USA, a pharmaceutical company typically spends $802 million over 10 to 15 years (2001). Further, of every 5000 medicines tested by the Pharmaceutical Researchers and Manufacturers of America, only 5 are tested in a clinical trial and only one is approved for patient use.

The figure below gives an indication of the risk associated in pharmaceutical R&D from a company perspective.

**Fig 4: Diagram Showing the Number of Development Molecules in a Pharmaceutical company's R&D Pipeline vs the Final number of registered new molecules (products)**




Source: Pfizer Analysts Presentation (April 2005)

### 2.4.2 The Generic Market

Over the past 25 years, the global pharmaceutical industry has undergone a major transformation. This transformation is referred to by Blackett (1992), as the "dawning of generic drugs". Generic drugs refer to a product of the exact molecule as an existing drug that is manufactured and marketed following patent expiry of the original product, or according to Vázquez (2003), "interchangeable products with proven bioequivalence with a reference product and of standard quality". In 2002, the generic prescription share in the USA rose from 19% to

47% and as at November 2004, the generic prescription share reported is in excess of 50% (Tuttle, Parece & Hector, 2004).

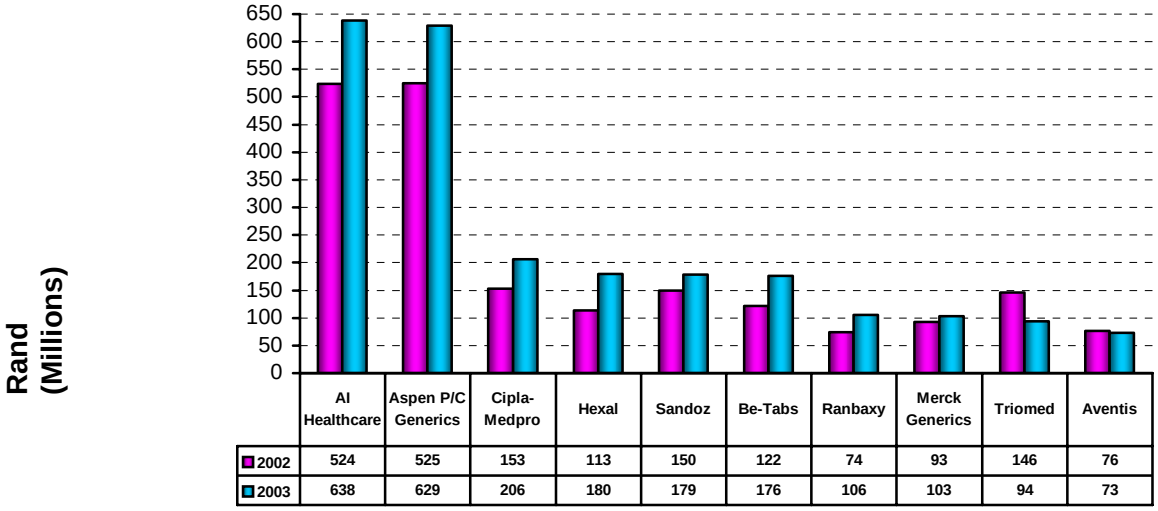
According to Gupta (1996), generic drugs are allowed to be approved by the regulatory authority without the same tests required by the original drug. They are also not subject to the high costs of Research and Development (R&D) or patent costs. Generics manufacturers are therefore able to sell their products at a much lower cost than the original drug. Tuttle *et al* (2004), also suggest that generic companies are stronger and more sophisticated.

In South Africa, there has been a steady increase in the use of generics, over the past few years. This is as a result of the recently promulgated legislation, which enforces mandatory generic substitution, in a bid to improve the access of medicines to the majority of South Africans. A further reason for this growth is the increase in the number of generics that have been launched in response to the expiry of innovator patents.

The South African generic private market according to IMS Health (2004) as at December 2003 is valued at R2, 6 billion, with a unit volume of 55 million units.

The figure below provides an indication of the main generic companies in South Africa.

**Fig 5: Generic Companies in South Africa by Value**




Source: SA in Figures (2005)

## 2.5. Patent Protection and Intellectual Property Rights

According to the Espicom Business Intelligence Report (2003), patent protection in South Africa is regulated under the Patent Act of 1978, and patents remain in force for 20 years. Following the expiry of a patent on a molecule, a generic product is free to be launched. In recent years the industry has also been subject to the launch of generics prior to the process patent expiry, as generic manufacturers are able to develop drugs by bypassing the process patents of innovator or originator drugs.

According to the Datamonitor report “The Generics industry in 2005: A new threat to Pharma”, drugs that have an annual sales of $100 billion dollars will lose patent protection by 2005.

## 2.6. Definition of Success

Historically, financial performance measurements have been used as a measure of success, however Yeoh (1994) suggests that success can also be measured in terms of customer acceptance, product level and firm based measures. In his marketing metrics study, Ambler (2000) has identified awareness, market share and relative price as three marketing metrics when evaluating products. These measures may also be linked to the definition of a successful product.

## 2.7. Factors Impacting on Successful Generics

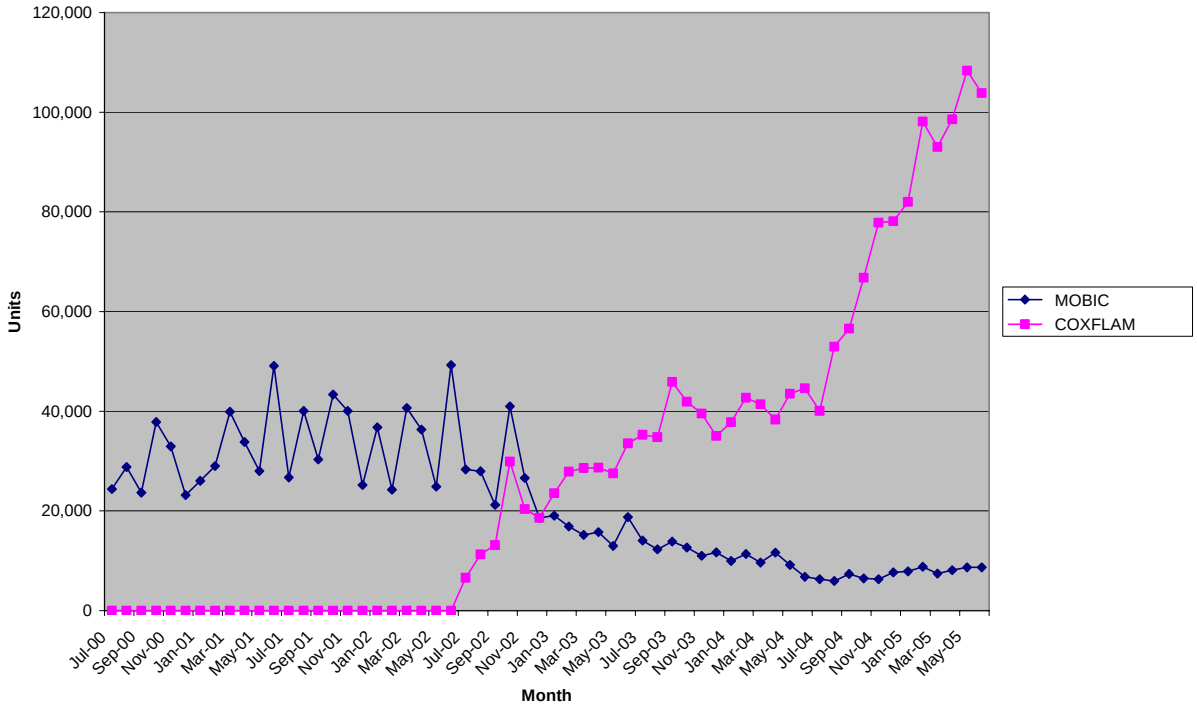
From the current literature there is limited information available related specifically to generics. There is however literature available on pharmaceuticals in general and therefore, where possible this will be used as a substitute for generic comparison in identifying key factors for success.

### 2.7.1 Price Differential to Innovator Product

Kirking *et al* (2001), state that generics are typically priced 30-60% less than the originator brands, with reductions of as much as 80% in some cases. The lower prices of generic drugs vs the innovator products allow these products to capture substantial market share from the originator drugs, and in some cases IMS Health (2005), shows that originator drugs can lose up to 45% of its unit volume following patent expiry and the launch of a generic. According to Blackett, (1992), generic drugs have proved to be very successful, possibly more so than originally anticipated.

The graph below shows the decline in units of the innovator product Mobic, subsequent to the launch of Coxflam, a generic to Mobic that was launched at a price differential of 40%.

**Fig 6: Unit Trend of Mobic following the launch of Generic Coxflam**




Source: IMS Health (2005)

It is clear from the graph above, that only three years after the launch of a generic, Mobic (meloxicam), the innovator product has seen a rapid decline in units from over 40 000 units per month to less that 20 000 units per month.

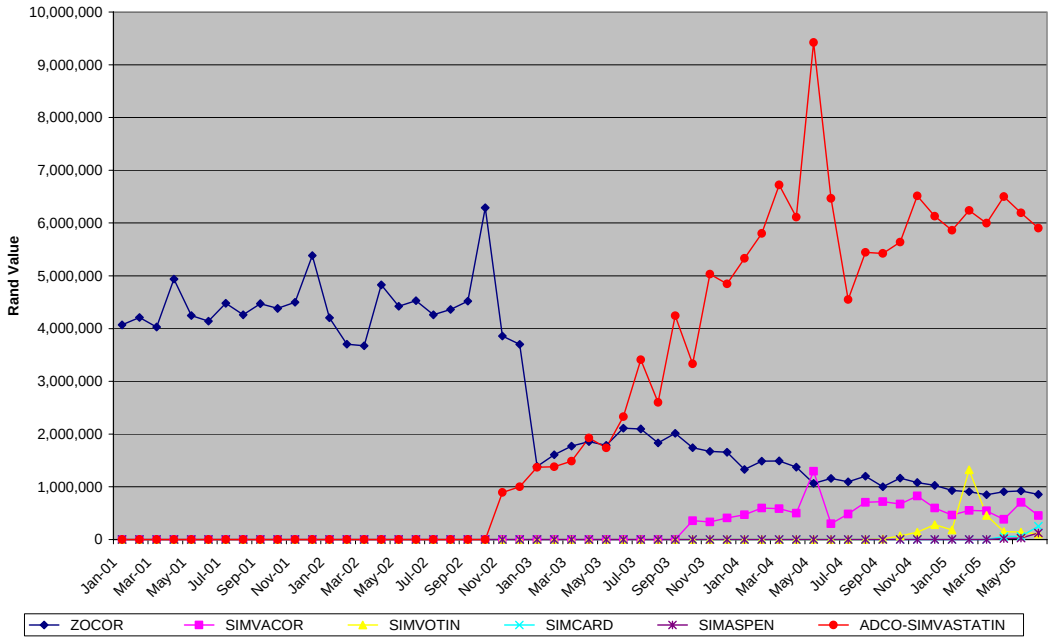
### 2.7.2 Market Entry Position

Gupta (1996) asserts that early entrants into generic markets are likely to gain greater market share. Scott Morton (1999) provides evidence that additional generic entrants erode price-cost margins, which could result in a risk to profits as a result of excessive generic entrants. The payoffs of generic entries are

dependant on the entry decisions of competitor companies. Although generic products may appear homogeneous, several studies have shown that generic prices fall steadily with the increase in the number of generic companies active in the market (Scott Morton, 1999, Wiggins & Maness, 2004).

This can be confirmed by the comparison of Adco-Simvastatin, the generic to MSD's block buster drug Zocor, and the second to market Simvastatin generic Simvacor. After a difference in launch time of 11 months, Adco-Simvastatin has a unit market share of 76.35%, having overtaken the originator drug in terms of both unit and value sales, while Simvacor, the second generic to market has only been successful in capturing 8.99% unit market share, while Zocor has managed to retain a 12.79% market share. Subsequent Simvastatin generics have been unable to make an impact on the market with the third generic Simvotin managing to capture 3.05% and the remaining two generics having a market share of less than 0.5% each.

**Fig 7. Graph showing Monthly Value Sales of the Simvastatin Market Since the Launch of Generics**




Source: IMS Health (2005)

### 2.7.3 Company Product Portfolio and Therapeutic Expertise

According to Scott Morton (1999), the entry opportunity of a generic and the characteristics of the company's portfolio, such as market value and share within a segment are important in explaining their entry. A decision to enter a specific market should be undertaken with the necessary caution, however adequate market research should be undertaken and an awareness of the market conditions as well as the competitors, both innovator products and generic are crucial to marketing success. The anticipation of future competitors is also important as pharmaceutical companies stated concern that there was a business risk posed by the unanticipated entry of competitors and its effect on prices (Scott Morton, 1999).

The area of expertise that the company has within a therapeutic area or a product that is part of a drug family will also play a role in the success of a product.

According to Scott Thompson (1999), a company's reputation of having related products in its portfolio is important, as wholesalers and pharmacies may prefer to purchase a complete range of related products from a single manufacturer, and the manufacturer may already be well known as a result of its previous products. This will also be beneficial to the pharmaceutical company as there would be existing relationships upon which it can build. The marketing company's credibility will also be enhanced by their understanding of the therapeutic area already present in and this adds credibility with its target audience. An example of this is evident in the advertising of products by therapeutic area e.g. Adcock Ingram, that advertises their expertise in the cardiovascular area.

**Fig 8: Advert showing the Portfolio Advertising Approach**




Source: Update Magazine (September 2005)

### 2.7.4 Advertising and Brand Orientation

Two other factors that have been found to have an impact on product success according to Yeoh (1994), are marketing related variables such as advertising as well as non-product differential advantages such as brand names.

According to Urde (1994), decreasing product divergence, increasing media costs and integration of markets can be used as an opportunity for companies to develop a strategy of brand orientation. This talks to the importance of using a therapeutic area and/or corporate brand identity. Urde cites the example of Nicorette when marketed by Pharmacia, however in the South African context, the development of the Adco brand name associated with the pharmaceutical company Adcock Ingram is a well recognised example. The recognition of a product can be aided by a clear, all embracing corporate identity (Urde, 1994). The image of a brand-oriented company is a reflection of all its actions and hence all its operations as well as communication should be synchronized in accordance with the brand vision (Urde, 1994).

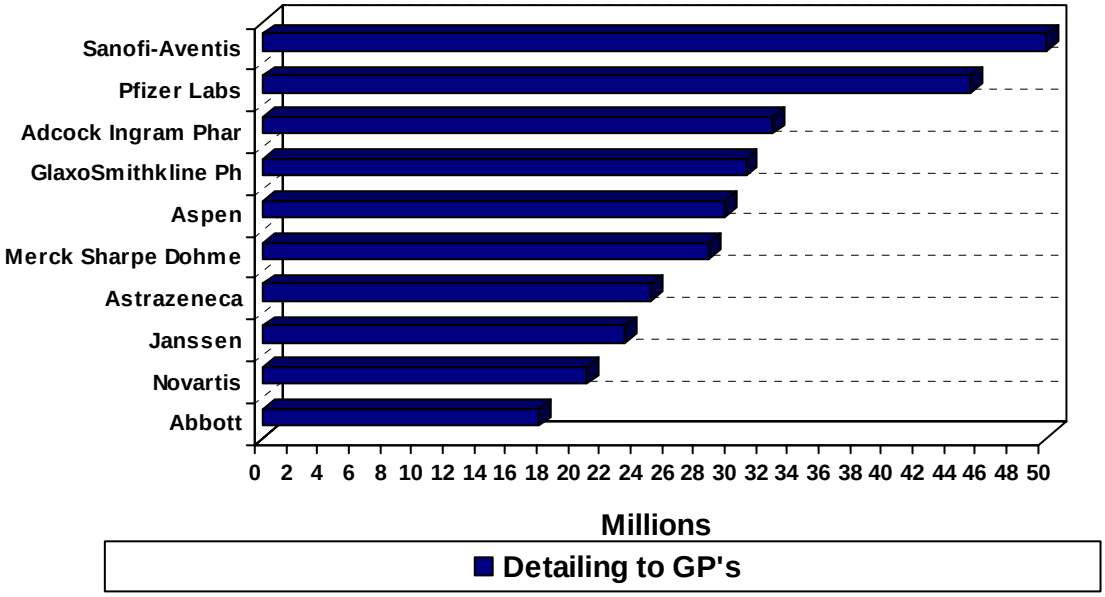
Pharmaceutical brands are important in that they allow prescribers to use the brand name when writing prescriptions and thus influences the product being dispensed at the pharmacy (Vázquez, 2003). Brand names therefore allow pharmaceutical companies to influence both the prescriber as well as the consumer. The impact of marketing both to doctors, specialists and pharmacists who would be the recognised target audience, as the prescriber and having the authority to switch a prescription to a generic respectively, is indicative of the importance of advertising to the correct target audience.

According to Ahn & Dornbusch, (2004), benchmarking is widely used to manage product launch operational efficiencies including pre-launch awareness of physicians and consumers, and direct to consumer advertising.

With the increased use of generics in South Africa, there is a marked increase in the advertising in journals targeted at Doctors and specialists done by generic companies as compared to innovator products. The total market spend on promotional expenditure as at the end of 2004 is R604 million (SA In Figures, 2005). This is as measured by the Medical and Promotions Index, a quarterly publication that measures the amount of money spent by pharmaceutical manufacturers on different forms of promotion, namely detailing to General Practitioners (GP's), journal advertising and direct mailing.

Figure 9 gives an indication of the amount spent by pharmaceutical companies on promotion to doctors and specialists. The money spent on actual advertising in journals is minimal when compared to the actual costs of detailing.

**Fig 9: Promotional Spend by Pharmaceutical Companies as at December 2004**




Source: SA in Figures, 2005

### 2.7.5 Field Force

A well thought out sales force sizing, structure and alignment, according to Rao (2002), can benefit from a market driven view of how valuable potential customers are likely to be. The sales force should be designed to best serve the more valuable customers, who can be identified by sales force targeting, which is done by making use of market research data available in the market.

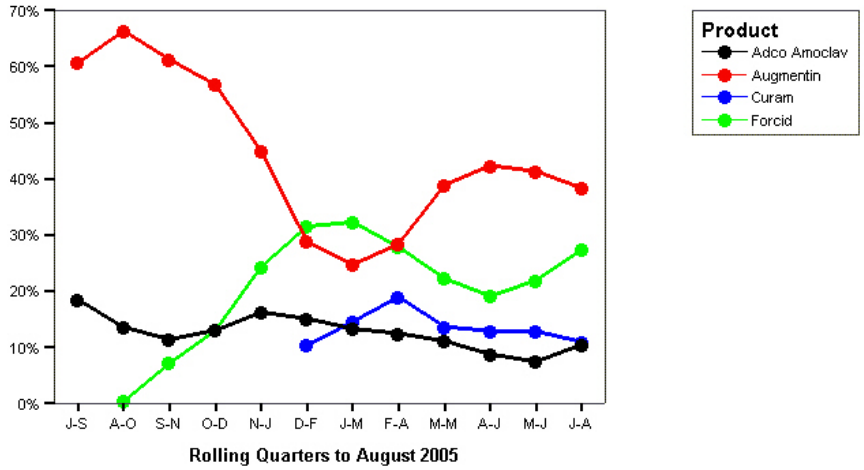
The size of a sales force will increase the visibility of a company and its brands in the market and as a result, will increase the share of voice within the market. Share of voice is a term that defines the **"**The market share of a company or product in a defined market" (GP Monitor Report, August 2005). An increased share of voice is positively correlated with a Doctor's intention to prescribe a brand, as a result of increased awareness.

As re-iterated by Ahn & Dornbusch (2004), the ability to build sales force buy-in by ongoing and early communication as well as fostering cross-functional collaboration across geographies, may also assist in successful biopharmaceutical product launches. This refers mainly to innovative product launches, however since generic companies also make use of sales forces to launch products this would be equally applicable.

General Practitioner's (GP's) prescribing intention as a result of increased share of voice in the market place is related to the growth and uptake of a new product.

When a new product is launched the increase in the activity of the field force is evident. In the graph below Adco-Amoclav is the generic product of Augmentin. It is visible that as there is an increase in the share of voice of Adco-Amoclav, there is a decrease in the share of voice of Augmentin.

**Fig 10: Graph showing an increase in % share of voice for Adco-Amoclav relative to Innovator Augmentin**




Source: GP Monitor (August 2005)

### 2.7.6 Other Factors

The factors discussed above have been identified from the literature available. Other factors may be identified as a result of the in depth interviews that were conducted and confirmed by the questionnaires.

## 2.8 Research Propositions

### 2.8.1 Research Proposition 1:

***The most important factors impacting on the success of generic pharmaceutical launches are:***

- ***The price differential of the generic relative to the innovator***
- ***Being the first generic to market***
- ***A company's product portfolio and therapeutic expertise***
- ***Advertising and brand name***
- ***The correct alignment, size and buy-in of sales force***

This is suggested by Hollis (2002), as well as Blackett (1992), and is substantiated by Gupta (1996), and Scott Morton (1999) in their evaluation of market entry and the impact with subsequent products. Wiggin & Maness (2004) assert that there is a significant inverse relationship between price and the number of competitors.

Scott Thompson (1999) asserts that there is a link between a company's product portfolio and therapeutic expertise and the decision to launch a generic. This is substantiated by Yeoh (1994) and his research on the important factors impacting on marketing pharmaceuticals. This is further substantiated by Rao (2002).

### 2.8.2 Research Proposition 2:

***There is no difference between the factors ensuring the success of generic pharmaceutical launches and the factors to ensure growth post launch.***

Hollis (2002), Blackett (1992), as well as Gupta (1996) and Scott Morton (1999) discuss the impact of new product entry, while Wiggin & Maness (2004) look at the relationship between price and the number of competitors. Rao (2002) also makes reference to this.

### 2.9.3 Research Proposition 3:

***The principal dimensions of the perceptions of different generic brands are:***

- ***Brand Reputation***
- ***Price***
- ***Advertising and***
- ***Sales Force Enthusiasm***

This is mentioned by Soni & Cohen (2004). This is further asserted by Hultink & Hart (1998), whilst discussing the marketing mix that takes into account price, product, promotion and distribution.

# 3. RESEARCH METHODOLOGY

## 3.1. Introduction

A mainly quantitative research approach was used in this study. Prior to the finalization of the questionnaire, semi-structured in-depth interviews were conducted with four people considered to be “experts” in the industry, with the aim being to probe for information, as a guide to the development of the structured questionnaire and to identify any additional factors that may not have been identified through the literature.

The pharmaceutical industry has the ability to both compete and co-operate within the market, and the prevalence of industry bodies such as the National Association of Pharmaceutical Manufacturers (NAPM), Innovative Medicines South Africa (IMSA) as well as the Pharmaceutical Manufacturers Association (PMA) are some examples of these bodies. It is for this reason that it was possible to obtain industry wide participation in the research. Further, the research does not specifically look at the factors from a specific company perspective, but is based on the experience of the respondents.

The data that was gathered from these interviews was then assimilated, and used to identify any additional factors that had not been identified from the literature. The questionnaires developed, were then used to elicit a response from a wider group of people within the pharmaceutical industry.

The data gathered as a result of the questionnaires, is a combination of both quantitative data as well as qualitative data in the form of open ended questions. The responses to the open ended questions were analysed and the results used to support the research questions.

## 3.2. Quantitative Analysis

Following the in-depth interviews conducted, a measuring instrument in the form of a questionnaire was developed. The questionnaire makes use of a Likert Scale rating system to elicit a response from participants. The responses from participants have been ranked and rated and were analysed using the appropriate statistical methods, including the calculation of the means, medians, standard deviation and dispersion. This data was then used to determine the list of factors that should be taken into account when launching generic drugs.

### 3.2.1. The Research Population

The research population included all employees within the pharmaceutical industry who have had experience relating to the launch of new products, and this included both generic and ethical/innovative products.

### 3.2.2. The Sample Size and Selection

According to Malhotra (1996), the sample size should be at least 5 times the number of factors. The sample size targeted was 150 completed questionnaires with approximately 220 questionnaires sent out.

The pharmaceutical industry in South Africa has more than 100 companies from which to draw samples. The samples were required to have different areas of expertise including, general management, sales, marketing, manufacturing, logistics and regulatory. This would indicate that there is a potential population with a size greater than 500.

The companies that were targeted for participation included:

-Adcock Ingram Healthcare
-Aspen Pharmacare
-Sanofi-Aventis
-Irex Pharmaceuticals
-Pfizer Laboratories
-Glaxo-SmithKline
-Roche
-Schering Plough
-Ranbaxy
-Sandoz/Hexal
-Novartis
-Novo Nordisk
-Altana Madaus
-Thebe Medicare
-Astra Zeneca
-Be-Tabs

These companies include companies that specialize in the marketing of both innovative as well as generic products, while some companies have a combination of both product types within their product portfolio. The reason that these companies were targeted is that they are all based in the Gauteng area, which made accessibility and administration of the questionnaire easier than employing a national sample.

Companies that contributed to the research have been provided with a summary of the findings.

### 3.2.3. Sampling Methodology

The companies chosen to participate are all well known and reputable companies both locally and internationally, and have made a contribution in terms of supplying pharmaceuticals to the South African market.

The companies listed above include 4 of the top 5 generic manufacturers, as well as all 5 of the top 5 innovative companies, as measured by IMS Health. The people who completed the questionnaire therefore have a vast pool of experience and knowledge from which to tap, with regards to the launch of generic products and the impact on the business.

### 3.2.4. Data Collection

#### 3.2.4.1. Overview

The companies identified were contacted either telephonically or via e-mail, and were provided with a brief overview of the research being conducted and its benefit to the pharmaceutical industry, as well as the methodology that would be employed.

If the company was willing to participate a meeting was set up at which stage more information was provided to the participants, who were then exposed to the questionnaire.

A willing co-ordinator was appointed at each of the companies to assist with the process of administering, collecting and returning the questionnaires to the researcher.

### 3.2.4.2. Questionnaire

A questionnaire was used as the measuring instrument. The questionnaire was drawn up using the factors identified by the literature review and confirmed by the interviews conducted, and additional factors were identified from the interviews.

The questionnaire was drawn up in English and was made up of three main parts:

- Part 1 contains questions relating to demographic data and job function

- Part 2 made use of a five point Likert Scale, ranging from not at all important (1) to extremely important (5). Respondents were asked to rate a list of factors in terms of their contribution to a successful generic launch, as well as the factors contributing to ensuring growth post launch. Respondents were also requested to provide an example from the market of a successfully launched generic product and provide reasons for the successful launch. In order to ensure a maximum response, they were further requested to mention whether there are any additional factors that could have contributed to the success of the products cited. The final question in this section, required respondents to state 3 factors that they personally believed were important when launching a new generic product.

- Part 3 required that respondents identify and choose the most important /relevant statements pertaining to the generic brands listed.

Refer to Appendix B for the questionnaire.

#### 3.2.4.3. Administration

The questionnaire was administered in one of either two ways, depending on the preference of the company.

The questionnaire was administered to the co-ordinator who then distributed the questionnaire as well as the researcher's contact details to the respondents. The questionnaires were then returned to the researcher directly or in some cases were returned to the co-ordinator, who then returned the questionnaires to the researcher. If the questionnaire was distributed electronically to the respondents, they were then returned directly to the researcher.

In all cases, the questionnaires were returned directly to the researcher to ensure confidentiality, while encouraging respondents to provide honest feedback.

### 3.2.5. Validity and Reliability

#### 3.2.5.1. External Validity

External validity deals with the ability of the research to be generalized across a population. This would require that the sample chosen is representative and random. The sample chosen, provided there is a high response rate could be chosen as representative of pharmaceutical companies in South Africa. The sample is not random as there is a choice of respondents, representative of different departments. The aim of this is to ensure as wide as possible coverage.

#### 3.2.5.2. Internal Validity

Internal validity refers to the extent to which the instrument allows inferences about the causal relationships between data elements (Leedy & Ormrod, 2001). The use of the in-depth interviews together with the literature review ensured that there is internal validity in the research.

Respondents were also provided with an opportunity to expand on their understanding in part two of the questionnaire, where they were required to provide examples of successfully launched generic products and provide reasons to substantiate their answers.

#### 3.2.5.3. Reliability

The in-depth interviews prior to administering the questionnaires were used as a method to ensure that the researcher has the correct understanding required in the pharmaceutical industry and to ensure that there is consistency in the understanding of the respondents when evaluating the statements posed in the questionnaire.

### 3.2.6. Data Analysis

The data analysis included a statistical method of analysis called Distribution Fitting Algorithmic Approach on Quantitative Data (Stacey, 2005) on the Likert scale ratings of the statements in the second part of the questionnaire. This approach proposes an alternative approach to analyzing ordinal level response data which involves the fitting of hypothesized distributions to the observed response data (Stacey,2005).

The data was collected in a spreadsheet and controls were used to ensure that there were no errors in capturing data. According to Stacey (2005), normal distributions are used, however where the verbal response scale is unipolar, then the underlying distributions should be modeled using a distribution that is bounded such as a log-normal distribution. The validity of the distribution-fitting approach is determined by examining whether the estimated threshold values differ significantly from the known underlying threshold values (Stacey, 2005).

The qualitative responses from part two of the questionnaire were analysed to provide an indication of the main factors that have contributed to the successful launch of specific generic brands. This would also provide a list of the most successfully launched generic brands according to the respondents, as well as the main factors contributing to their success.

The final part of the data analysis entailed the interpretation of the data from part three of the questionnaire. This was done using correspondence analysis. The correspondence analysis required nominal data as input, and then calculated eigenvalues. It then clustered the attributes that respondents said go together. The use of perceptual mapping produced a landscape of attributes as perceived by the respondents, relevant to the various brands (Martins, Loubser & van Wyk, 1996). After generation of the perceptual map the data was analysed to ascertain what attributes differentiated each brand.

## 4. PRESENTATION AND ANALYSIS OF RESULTS

A target number of 150 questionnaires were required in order to analyse the data and obtain statistically significant results.

Two hundred and twenty questionnaires were distributed, either physically or via e-mail and 150 questionnaires were received in order to begin the analysis. This equates to a response rate of 63%.

### 4.1. Demographics

The sample of 150 questionnaires that was collected was analysed in terms of the demographics of the respondents as can be seen in Table 7 below.

**Table 7: Demographics Summary of Respondents**

| | TOTAL | Work Experience in Pharmaceutical Industry | | | | Department Respondent Works In | | | | | Employer Type | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0-3 Yrs | 4-7 Yrs | 8-11 Yrs | 12+ Yrs | Sales | Marketing | Medical/ Regulatory | General Management | Other | Originator/ Innovative | Generic Medicines | Both |
| **BASE** | **150** | **13** | **44** | **36** | **57** | **35** | **59** | **19** | **12** | **25** | **64** | **22** | **64** |
| **Work Experience in Pharma Industry** | | | | | | | | | | | | | |
| 0-3 Yrs | **13** | 13 | 0 | 0 | 0 | 0 | 5 | 3 | 1 | 4 | 7 | 3 | 3 |
| 4-7 Yrs | **44** | 0 | 44 | 0 | 0 | 10 | 13 | 11 | 3 | 7 | 21 | 4 | 19 |
| 8-11 Yrs | **36** | 0 | 0 | 36 | 0 | 11 | 20 | 2 | 0 | 3 | 15 | 6 | 15 |
| 12+ Yrs | **57** | 0 | 0 | 0 | 57 | 14 | 21 | 3 | 8 | 11 | 21 | 9 | 27 |
| **Dept Work In** | | | | | | | | | | | | | |
| Sales | **35** | 0 | 10 | 11 | 14 | 35 | 0 | 0 | 0 | 0 | 17 | 3 | 15 |
| Marketing | **59** | 5 | 13 | 20 | 21 | 0 | 59 | 0 | 0 | 0 | 23 | 9 | 27 |
| Medical/Regulatory | **19** | 3 | 11 | 2 | 3 | 0 | 0 | 19 | 0 | 0 | 8 | 4 | 7 |
| General Management | **12** | 1 | 3 | 0 | 8 | 0 | 0 | 0 | 12 | 0 | 3 | 4 | 5 |
| Other | **25** | 4 | 7 | 3 | 11 | 0 | 0 | 0 | 0 | 25 | 13 | 2 | 10 |
| **Employer Type** | | | | | | | | | | | | | |
| Originator/Innovative | **64** | 7 | 21 | 15 | 21 | 17 | 23 | 8 | 3 | 13 | 64 | 0 | 0 |
| Generic Medicines | **22** | 3 | 4 | 6 | 9 | 3 | 9 | 4 | 4 | 2 | 0 | 22 | 0 |
| Both | **64** | 3 | 19 | 15 | 27 | 15 | 27 | 7 | 5 | 10 | 0 | 0 | 64 |

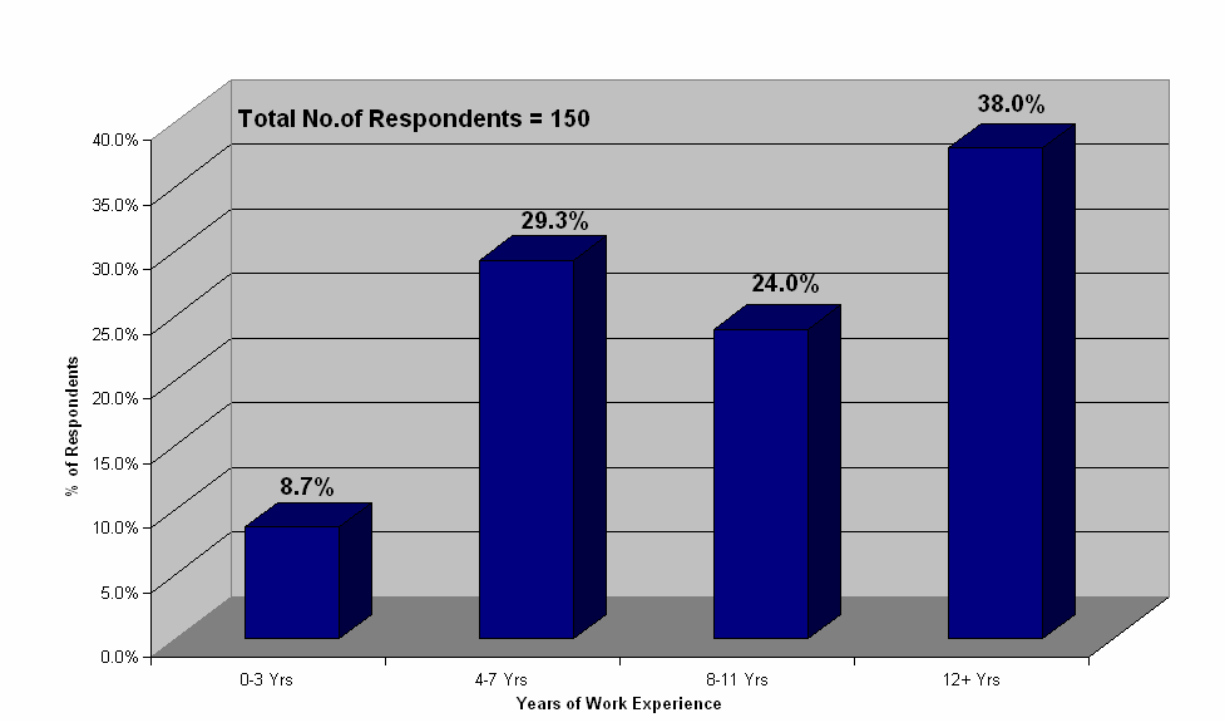
The table evaluates the responses of the respondents according to three main characteristics:

- Work Experience in the Pharmaceutical Industry,
- Job Function/Department Respondent Works in, and
- Employer Type

The results show that the respondents are representative of all the different categories, which suggests a balanced sample of respondents, with varying work experience, job functions as well as employed by companies that have only innovator or generic products as well as companies that have a combination of innovator and generic products within its portfolio.

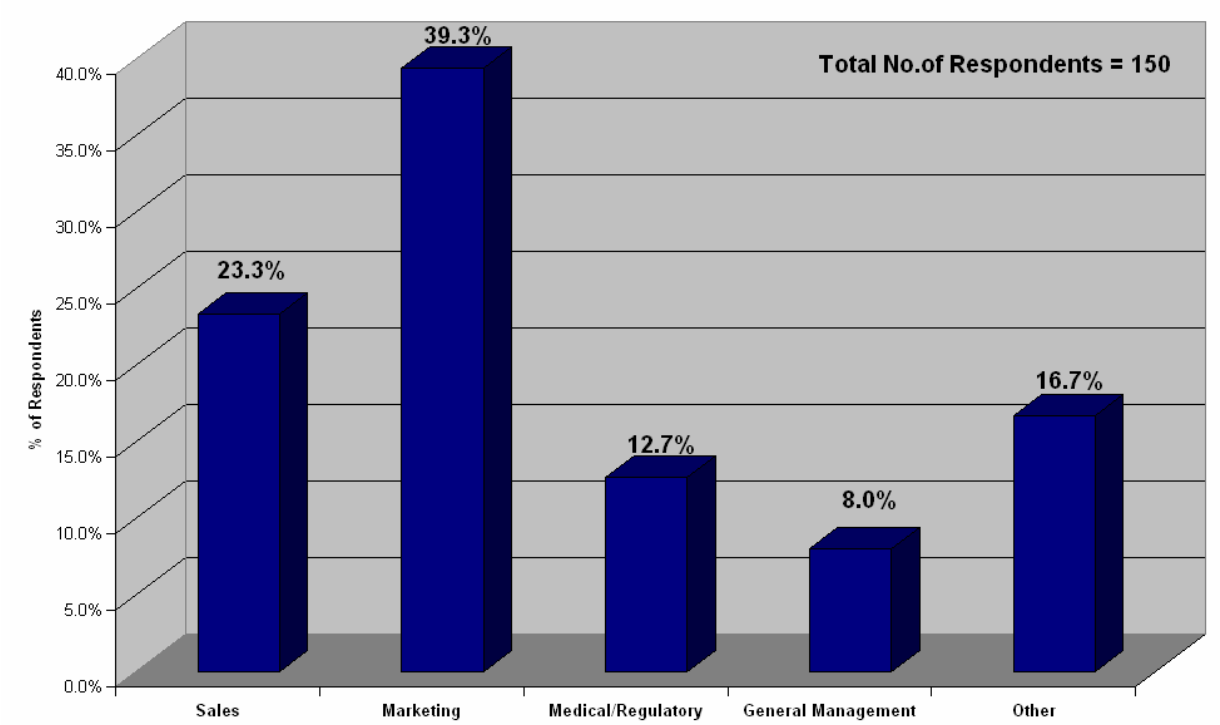
The figures that follow illustrate the break down of the respondents by the different categories, namely years of work experience, the department they work in as well as the type of company they work for.

**Fig 11: Respondents Categorised by Years of Work Experience**



It is clear from Fig 11, that the majority of the respondents to the questionnaire have a wealth of industry work experience. Of the total population, 38% respondents have 12 or more year's industry experience, while 24% respondents have 8-11 years industry experience and 29.3% respondents have 4-7 years industry experience. The smallest group of respondents has 0-3 years industry experience, accounting for only 9% of the total respondents.

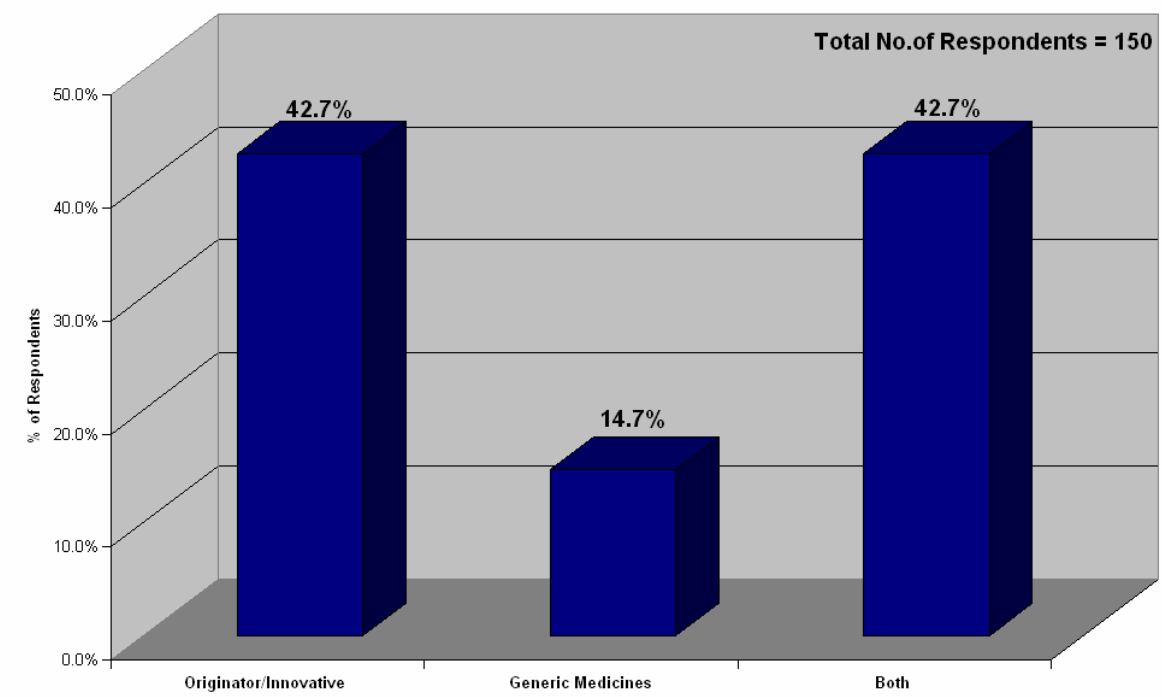
**Fig 12: Respondents Categorised by Job Function**




Of the total number of respondents, the majority of the respondents are representative of the Marketing and Sales departments accounting for almost 63% of the total sample size. The respondents that made up the Medical/Regulatory sample were either Regulatory Pharmacists or Product Physicians and this made up 12.7%of the respondents.

General Management accounted for 8% of respondents while Other accounted for 16.7% of all respondents. Respondents falling into the other category may have job functions including Finance, Managed Care or a combination of both Sales and Marketing functions.

**Fig 13: Respondents Categorised by Company Type**




There was a fairly even split in terms of representation from both Originator and Generics companies with 42.7% respondents from originator companies only and 14.7% from companies specializing only in generics. When taking into account the respondents working for companies that market both originator and generic products, 57.4% of the respondents are currently exposed to the generic pharmaceutical industry as a result of the products their companies market. This split of 57.4% generic company input vs 42.7% of only originator company input suggests a balanced view of the research, based on industry knowledge and their work environment.

## 4.2 Factors for Successful Product Launches

### 4.2.1 Quantitative Research

The distribution fitting algorithmic approach was the statistical method used to analyse the quantitative data collected from 150 questionnaires. This resulted in the factors being classified into three main categories, with the average equal to zero (0):

- Significantly more important than the average,
- Not significantly different to the average and
- Significantly less important than the average.

μ: represents the average, while LCL μ : represents the lowest control limit of the average and UCL μ : represents the upper control limit of the average.

Questions one and five were analysed using this technique, which allowed one to compare that factors that were considered necessary for success at launch and the factors that were considered necessary to sustain growth following the launch.

Table 8 depicts the results for the various factors at launch and post launch.

**Table 8: Results of Distribution Fitting Algorithmic Approach**

| Question 1 | μ | $LCL_{\mu}$ | $UCL_{\mu}$ | Question 5 | μ | $LCL_{\mu}$ | $UCL_{\mu}$ |
|---|---|---|---|---|---|---|---|
| Being the first generic to market | 0.93 | 0.74 | 1.13 | Stock Availability | 0.81 | 0.68 | 0.94 |
| Stock Availability | 0.71 | 0.55 | 0.88 | Re-imbursement | 0.63 | 0.48 | 0.77 |
| Re-imbursement | 0.64 | 0.47 | 0.81 | Relationship with funders | 0.50 | 0.35 | 0.65 |
| The price of the generic relative to the innovator | 0.54 | 0.40 | 0.68 | Effective Distribution | 0.48 | 0.36 | 0.59 |
| Effective Distribution | 0.43 | 0.32 | 0.55 | Sales force enthusiasm | 0.29 | 0.14 | 0.43 |
| Relationship with funders | 0.32 | 0.16 | 0.49 | The price of the generic relative to the innovator | 0.22 | 0.10 | 0.34 |
| Sales force enthusiasm | 0.30 | 0.14 | 0.45 | Being the first generic to market | 0.15 | -0.03 | 0.34 |
| Respected brand name | 0.11 | -0.04 | 0.26 | Well known brand name | 0.14 | 0.00 | 0.28 |
| Aggressive marketing | 0.04 | -0.09 | 0.17 | Respected brand name | 0.14 | 0.00 | 0.27 |
| Well known brand name | 0.00 | -0.13 | 0.13 | Price differential to other generics | 0.08 | -0.05 | 0.22 |
| A company's product portfolio and therapeutic expertise | -0.07 | -0.20 | 0.06 | Aggressive marketing | 0.00 | -0.12 | 0.12 |
| Price differential to other generics | -0.10 | -0.22 | 0.03 | Continued Promotion | -0.03 | -0.15 | 0.08 |
| Advertising to healthcare professionals | -0.14 | -0.26 | -0.02 | Advertising to healthcare professionals | -0.06 | -0.18 | 0.07 |
| Continued Promotion | -0.17 | -0.29 | -0.06 | A company's product portfolio and therapeutic expertise | -0.15 | -0.27 | -0.04 |
| Sales force structure and alignment | -0.26 | -0.39 | -0.12 | Relationship with specialists | -0.19 | -0.33 | -0.05 |
| Sales force size | -0.38 | -0.49 | -0.26 | Sales force structure and alignment | -0.21 | -0.35 | -0.08 |
| Relationship with specialists | -0.40 | -0.57 | -0.23 | Sales force size | -0.33 | -0.44 | -0.22 |
| Pre-launch activity | -0.48 | -0.63 | -0.32 | Advertising to patients | -0.48 | -0.64 | -0.32 |
| Advertising to patients | -0.69 | -0.81 | -0.56 | Differentiation to innovator in dosage forms or line extensions | -0.56 | -0.70 | -0.42 |
| Differentiation to innovator in dosage forms or line extensions | -0.81 | -0.96 | -0.66 | Pre-launch activity | -1.08 | -1.32 | -0.85 |

The factors that produced values significantly larger than the average and hence suggesting higher importance and contributing to the successful launch were:

- Being the First generic to Market
- Stock Availability
- Re-imbursement
- The price of the generic relative to the innovator
- Effective Distribution
- Relationship with Funders
- Sales Force Enthusiasm

The factors that produced values not significantly different to the average and hence can be interpreted as having not much importance are:

- Respected Brand Name
- Aggressive Marketing
- Well Known Brand Name
- A company's product portfolio and therapeutic expertise
- Price differential to other generics

The factors that were significantly lower than the average and hence interpreted as being the least important are:

- Advertising to Healthcare Professionals
- Continued Promotion
- Sales Force Structure and Alignment
- Sales Force Size
- Relationship with specialists
- Pre-launch Activity
- Advertising to patients
- Differentiation to innovator in dosage forms or line extensions

The factors that produced values significantly larger than the average and suggesting higher importance to ensure growth post launch were:

- Stock Availability
- Re-imbursement
- Relationship with Funder
- Effective Distribution
- Sales Force Enthusiasm
- The price of the generic relative to the innovator

The factors that produced values not significantly different to the average and hence can be interpreted as having not much importance are:

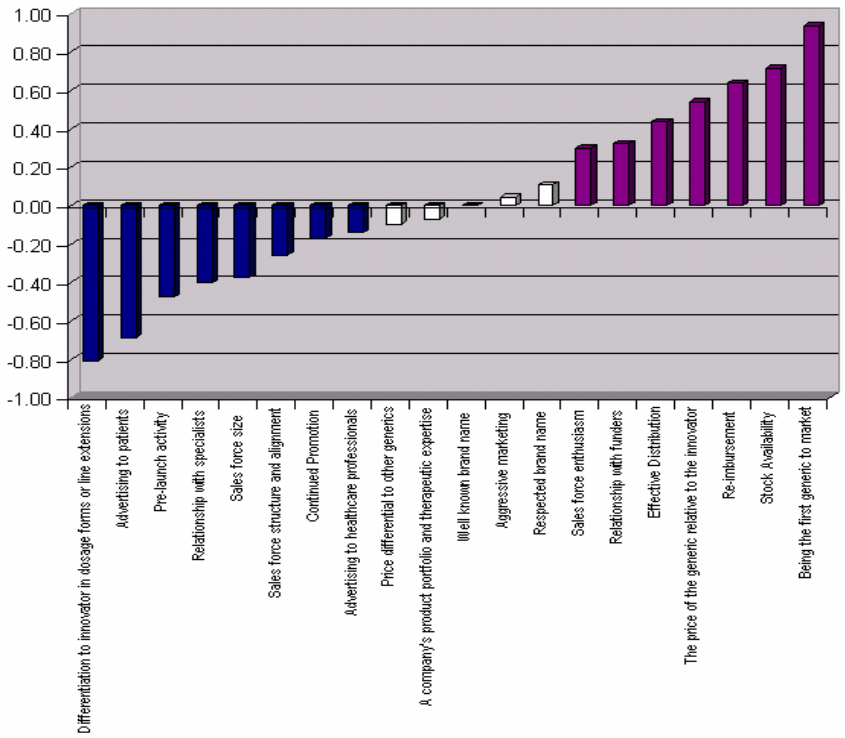
- Being the First Generic to Market
- Respected Brand Name
- Well Known Brand Name
- Price Differential to Other Generics
- Aggressive Marketing
- Continued Promotion
- Advertising to Healthcare Professionals

The factors that were significantly lower than the average and hence interpreted as being the least important to ensure growth post launch are:

- A Company's Product Portfolio and Therapeutic expertise
- Relationship with specialists
- Sales Force Structure and Alignment
- Sales Force Size
- Advertising to patients
- Differentiation to innovator in dosage forms or line extensions
- Pre-launch Activity

Fig 14 below provides a graphical representation of the factors in ascending order of importance.

**Fig 14: Factors identified in Increasing Order of Importance for a Successful Launch**




The factors identified as important in order to ensure growth following the launch and hence sustain the growth of the product were ranked in a different order to that of the factors at launch.

The factors that were significantly more important than the average are:

- Stock Availability
- Re-imbursement
- Relationships with Funders
- Effective Distribution
- Sales Force Enthusiasm
- The Price of the Generic relative to the Innovator

The factors that were not significantly different to the average are:

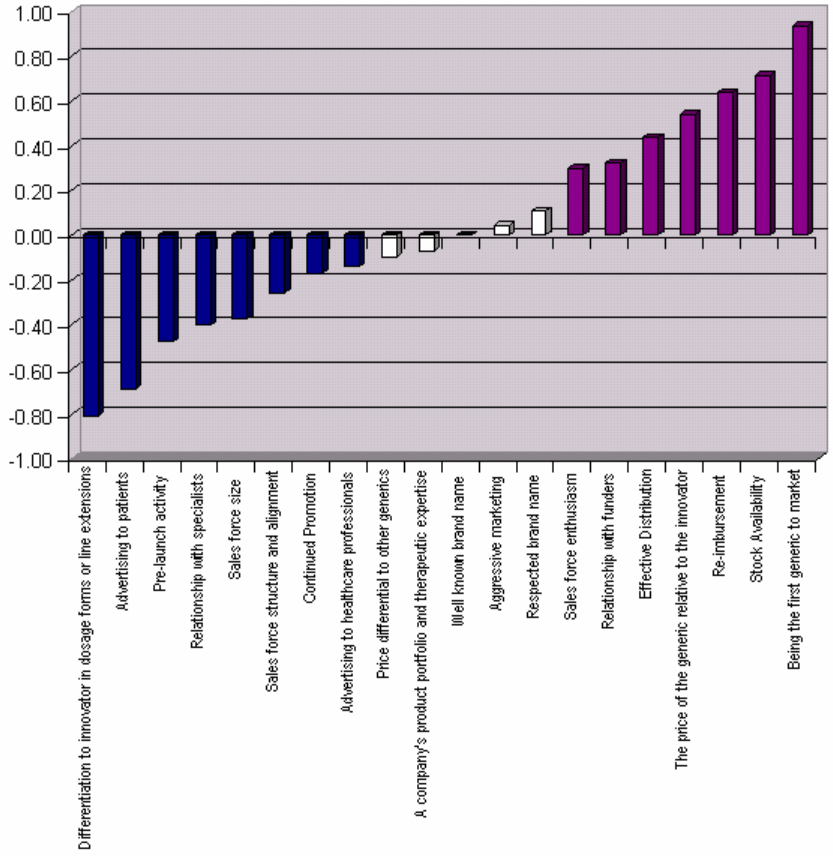
- Being the First Generic to Market
- Well Known Brand Name
- Respected Brand Name
- Price Differential to other Generics
- Aggressive Marketing
- Continued Promotion
- Advertising to Healthcare Professionals

The factors that were significantly less important than the average are:

- A company's product portfolio and therapeutic expertise
- Relationships with Specialists
- Sales Force Structure and Alignment
- Sales Force Size
- Advertising to Patients
- Differentiation to innovator in dosage forms or line extensions
- Pre-Launch Activity

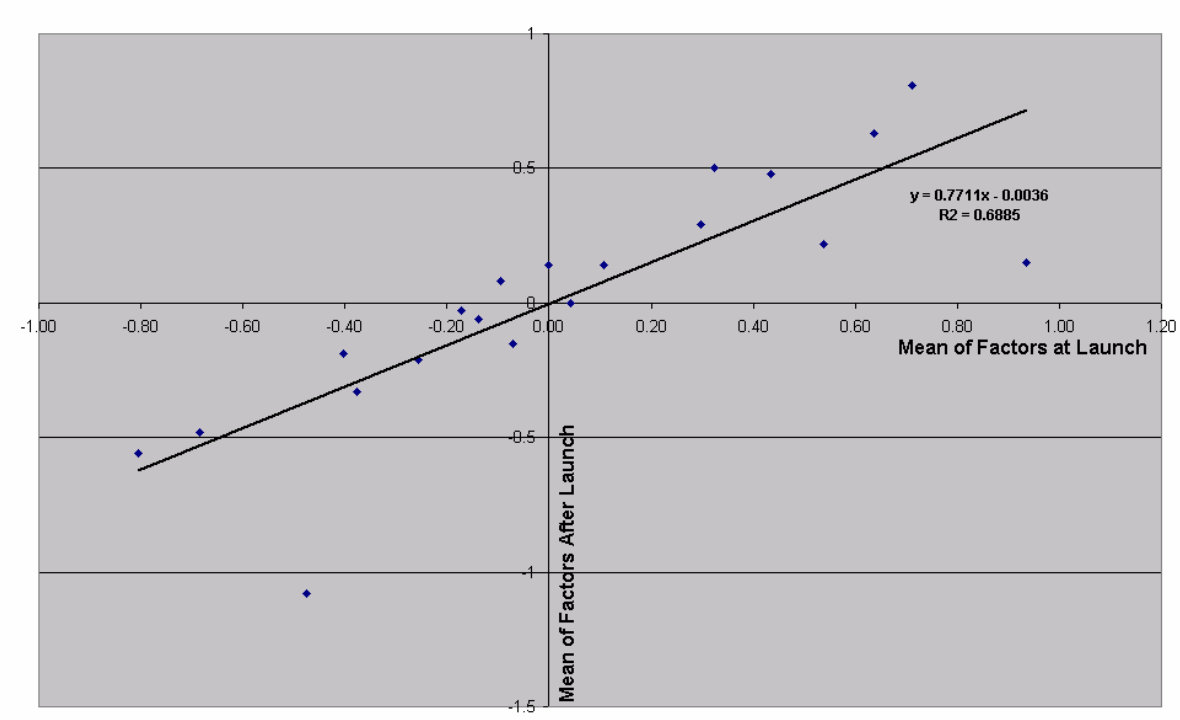
Fig 15 below provides a graphical representation of the factors that are considered most important for sustaining the growth of a product after the launch.

**Fig 15: The Factors for ensuring Growth of the Product After the Launch in ascending order of importance**




The means of the factors in Q1 and Q5 were plotted against each other on a correlation graph in order to ascertain the degree of correlation of the factors at launch and after launch.

Fig 16 below shows a 68.85% correlation between the factors required for a successful launch and factors required after the launch to ensure continued growth.




The factors that are notably different at launch are:

- Being the First Generic to Market
- Pre-Launch Activity
- The price of the Generic relative to the Innovator
- Price Differential to other Generics

### 4.2.2 Qualitative Research

The second part of the questionnaire consists of five questions, each of which is discussed separately. This section comprises a combination of both quantitative and qualitative responses.

The qualitative section (Q2 and Q3) requested respondents to name the generic product they believed was launched most successfully and provide reasons for this.

Of the 150 respondents, 129 respondents answered the question. This equates to an 86% overall response rate for Question 2. Fifteen factors were identified as reasons for the successful launch of the generic product mentioned. These factors, together with the number of responses by factor, both as a number and a percentage are depicted in Figures 14 and 15 below. A total of 301 responses were received for this question.

In order to identify the factors that had the maximum number of responses, a cut-off was imposed. If any factor had <5% responses, this factor was excluded. The abbreviated list of factors is represented by Fig 19.

**Fig 17: All Factors Identified as Contributing to Successful Product Launches**

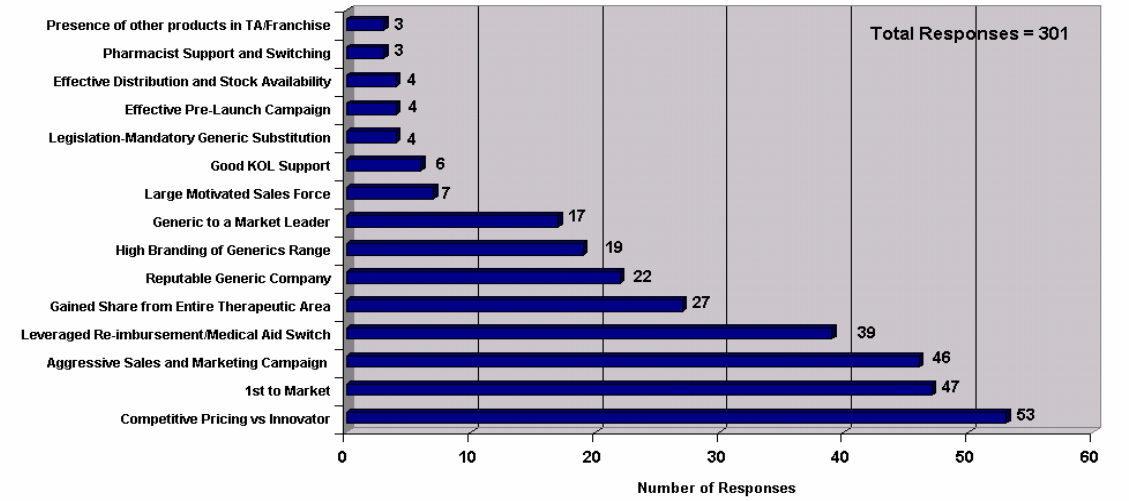
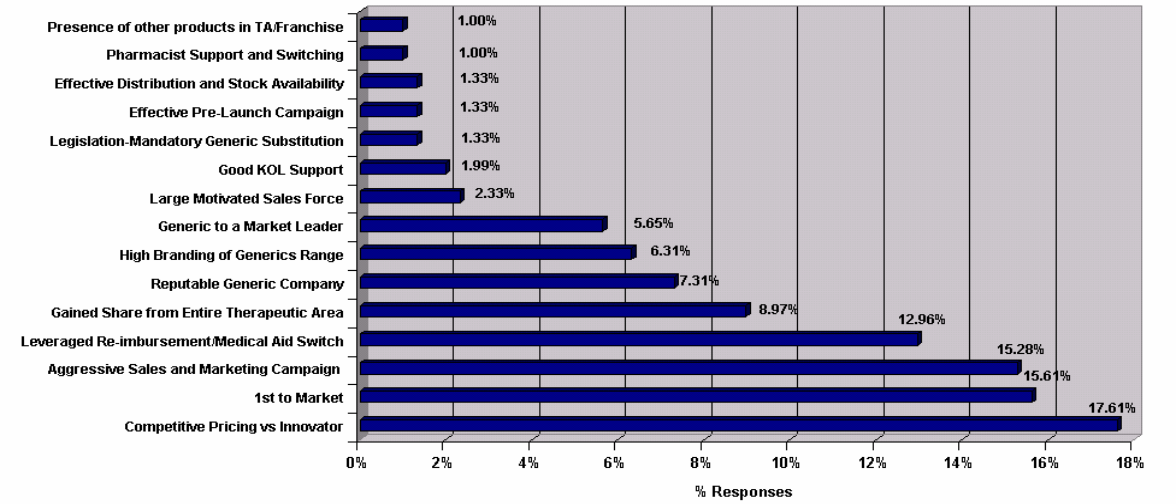
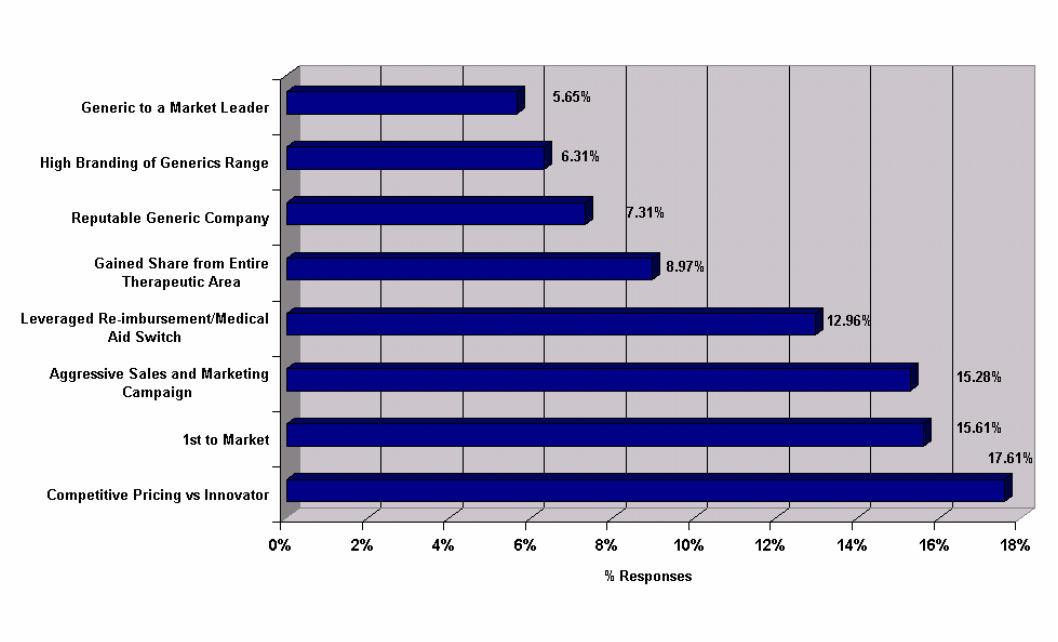



**Fig 18: All Factors Identified as Contributing to Successful Product Launches (% Responses)**



From the data used to derive Figures 17 and 18, a cut off was imposed at a response rate of <5% per factor. This enabled a more concise view of the factors that were considered to be most important. Fig 19 below, provides an indication of what these factors are.

**Fig 19: The Main Factors Identified as Contributing to Successful Product Launches (>5% Response Rate per Factor) as Identified by Q2**




The four main factors identified as contributing to the successful launch of specific generic products all received response rates within a band of 12.96%-17.61%. The factor identified as being most important is competitive pricing vs the innovator product, receiving 17.61% of responses. Being the first generic to market and having an aggressive sales and marketing campaign received response rates of 15.61% and 15.28% respectively, while Leveraging re-imbursement/medical aid switching recorded a 12.96% response rate.

Being the first to market also had an aspect regarding the period of exclusivity as the first generic on the market. A long lead time before the launch of the second generic, and hence a period of exclusivity on the market as was the case for both Adco-Simvastatin as well as Cilift were mentioned as part of this factor.

An aggressive sales and marketing campaign included a number of elements including a strong marketing message and product positioning, as well as correct targeting of healthcare professionals. In the case of the Adco range of products, this included the direct to consumer advertising campaign that was cited as playing a role in the successful launch of the three Adco products mentioned.

Other factors that were not excluded by the cut-off were gained share from entire therapeutic area, reputable generic company, high branding of generics range and generic to a market leader.

Fig 20 provides an indication of the brands that were regarded as being launched most successfully. As a result of the multiple brands mentioned, many of which had minimal responses, a filter was used to identify the main brands and any brand that received less than 2% of total responses was excluded from the analysis.

The main brands mentioned were Adco-Simvastatin, Prexum, Adco-Amoclav BD, Cilift, Adco-Zolpidem and Rolab Zopiclone. Brands that were excluded as a result of the cut-off or filter imposed, but were mentioned by respondents included Lorien, Fluzol, Adco-Dol, Ceroxim, Ulzec, Zanocin, Glucomed, Panamor, Venteze, Degranol, Tazobax, Merck-Metformin, Clarinese, Acnetane, Clamentin, Cepodem, AP Loratadine, Clavumox, Lilly Fluoxetine, Pharmapress and Altosec.

The results below show that one product stands out as being regarded as the most successful generic launch. This product had a 58.1% response and is Adco-Simvastatin, a product that is used to treat hyperlipidaemia. The remaining products all had a much lower response rate with Prexum, a drug used to treat hypertension and Adco-Amoclav BD, an antibiotic having the next highest, but the same response rates of 5.4%. Cilift had a response rate of 4.7% and Adco-Zolpidem and Rolab-Zopiclone have response rates of 3.1% and 2.3% respectively.

**Fig 20: Brands Regarded as Having the Most Successful Generic Launches**

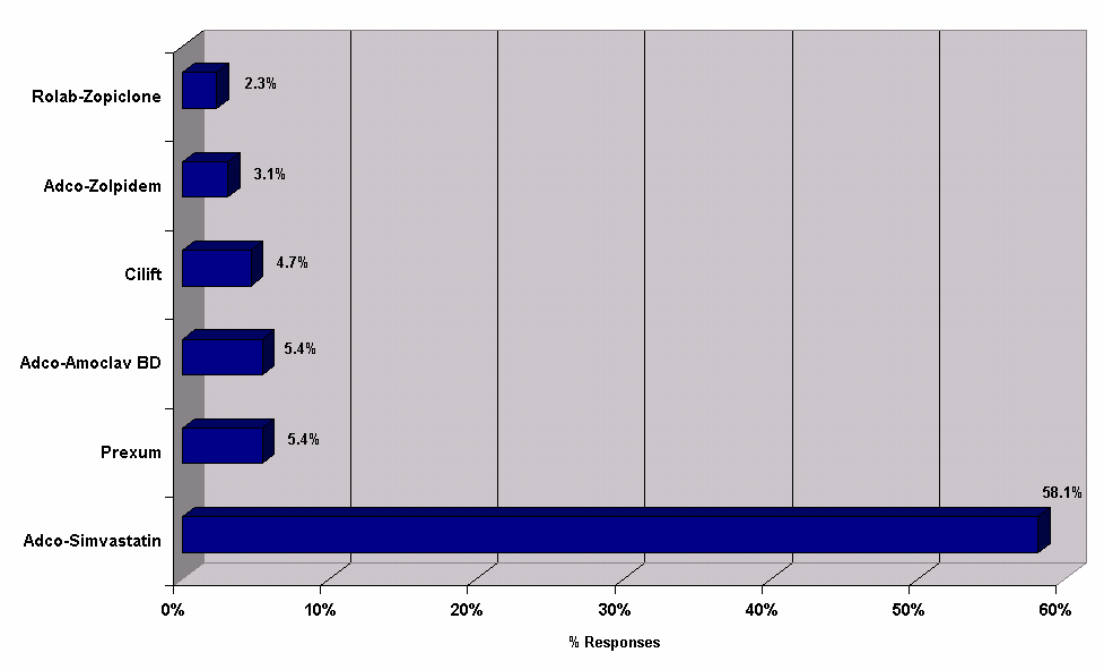
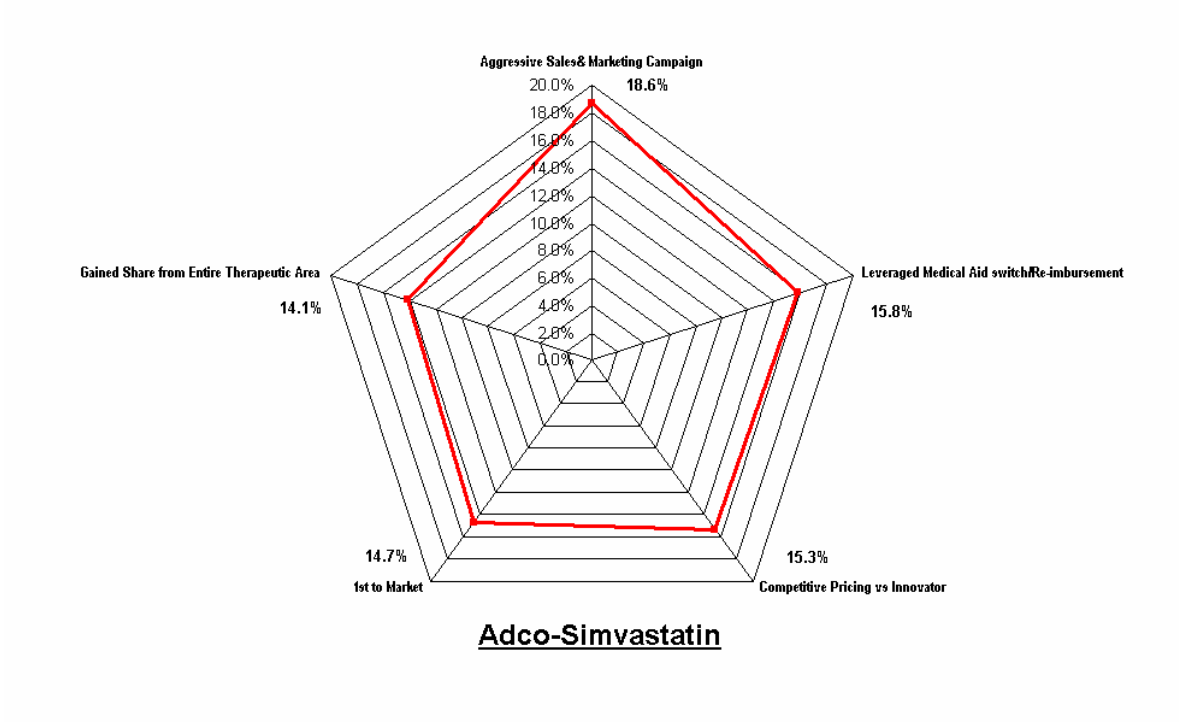


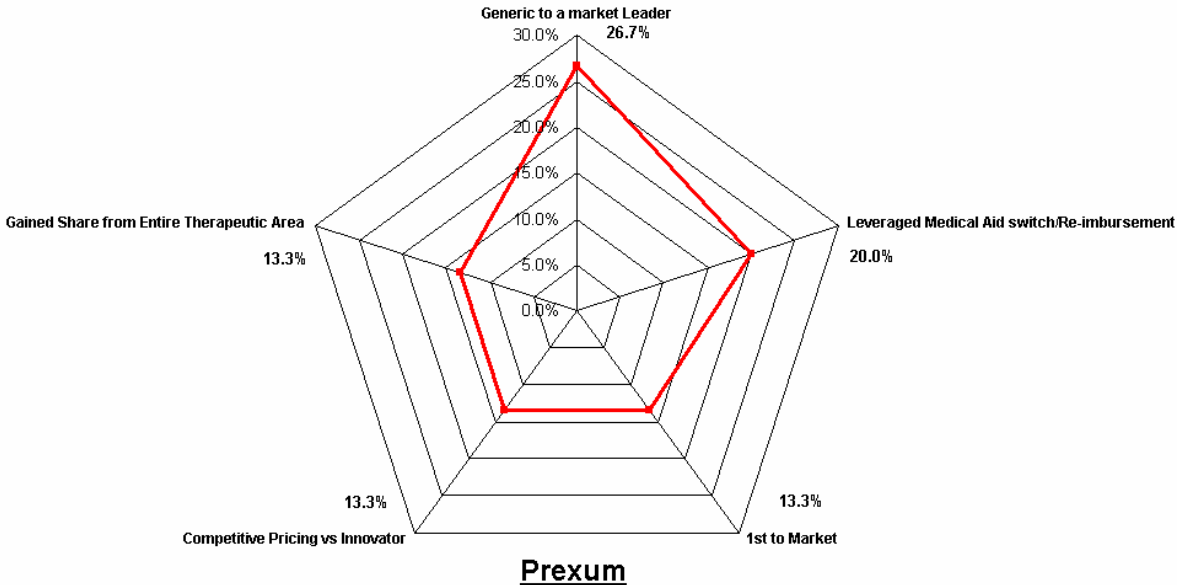

Fig 21 shows a series of graphs that link the main factors that have contributed to the products above, being regarded as successful generic launches, as cited by the respondents in questions two and three of the qualitative section of the questionnaire.

This gives an indication that there are multiple factors that contribute to the successful launch of generic products and that these factors have varying impacts on the success of individual products. This would also suggest that there is a need to develop different strategies for different products, depending on the therapeutic class as well as the target audience the specific product is aimed at.

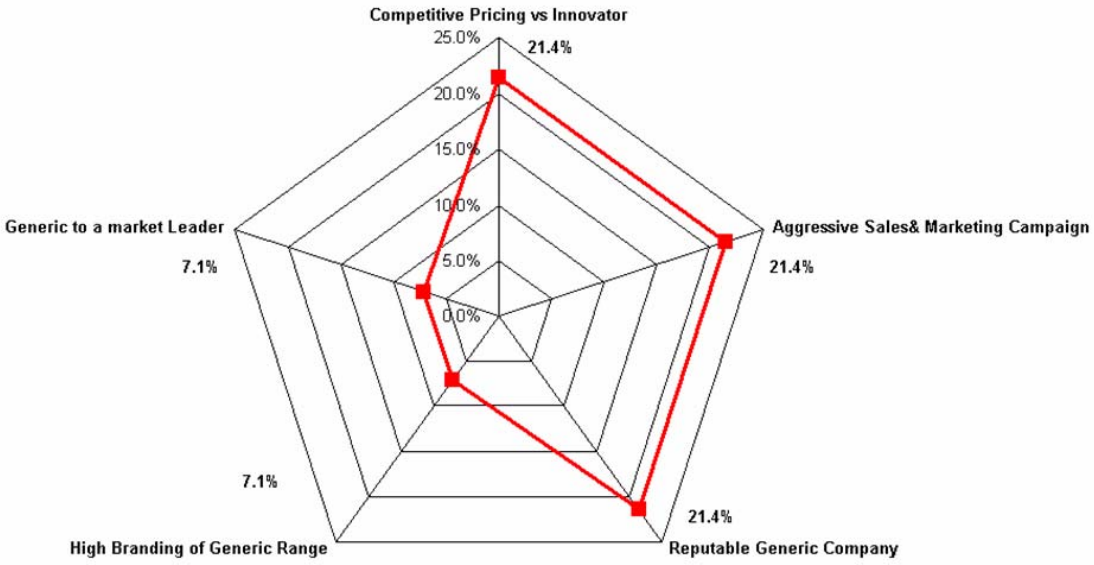
## Fig 21: Main Factors Associated with Successfully Launched Brands



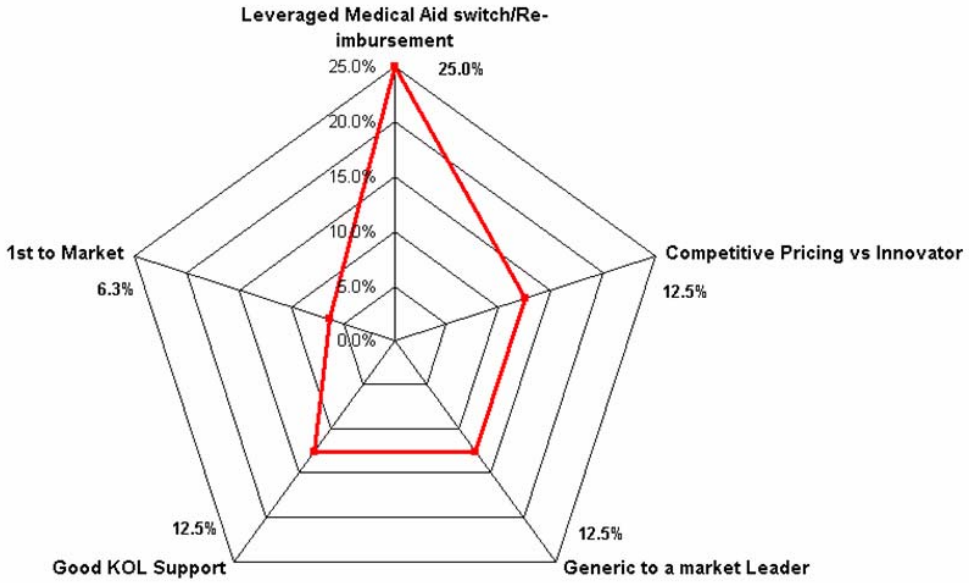

**Adco-Simvastatin**



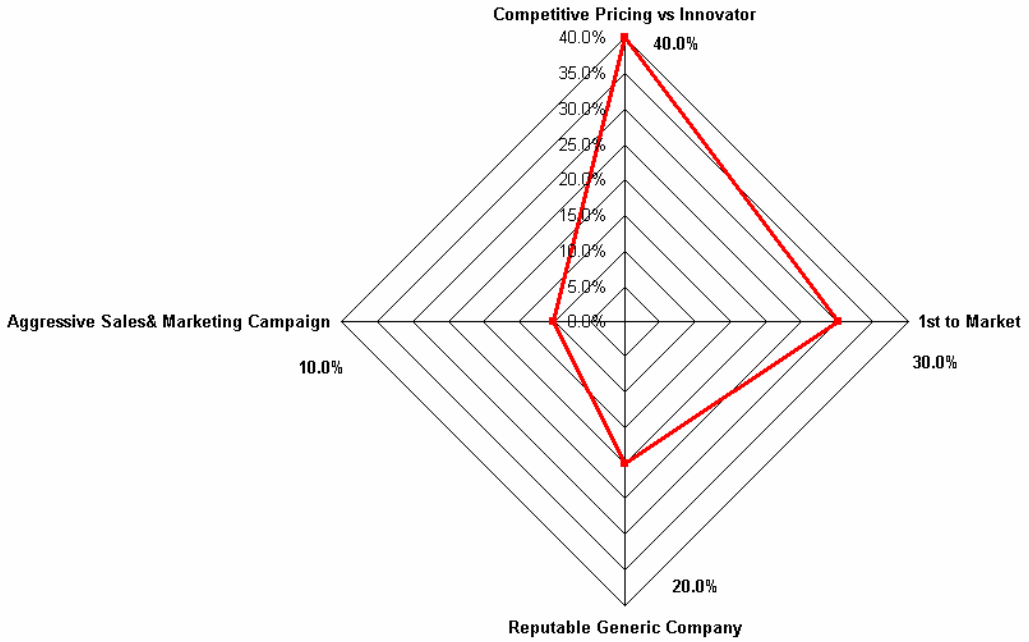

**Prexum**



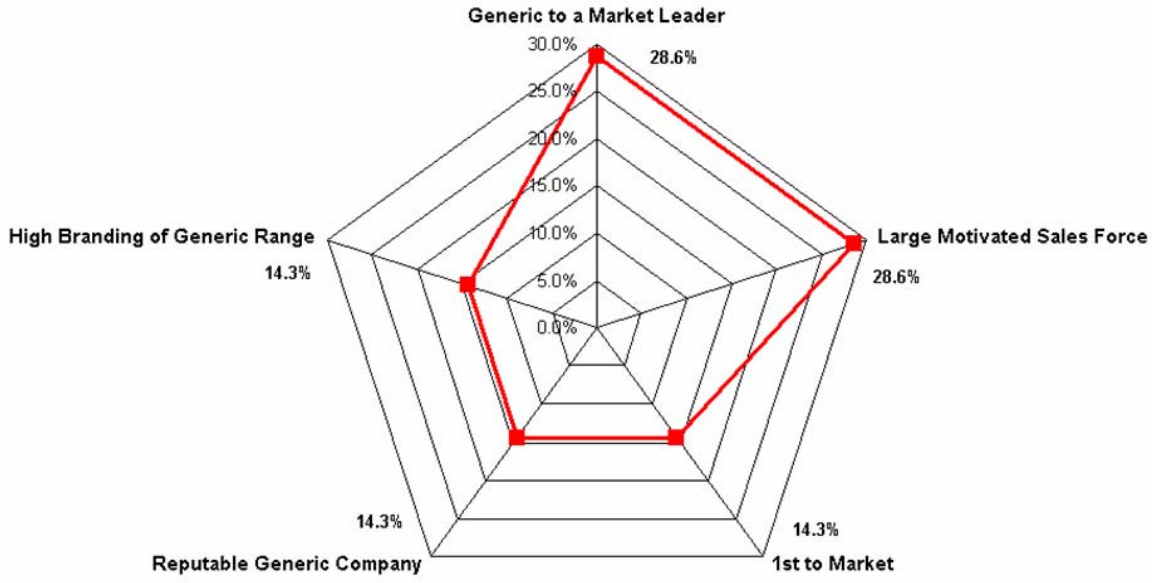

**Adco-Amoclav BD**




**Cilift**




**Adco-Zolpidem**




**Rolab-Zopiclone**

The five main factors that have had an impact on each of the main products identified by the respondents are listed below:

**Adco-Simvastatin:**
- Aggressive Sales and Marketing Campaign
- Leveraged Medical Aid Switch/Re-imbursement
- Competitive Pricing vs Innovator
- First to Market
-Gained Share from Entire Therapeutic Area

**Prexum:**
- Generic to a Market Leader
- Leveraged Medical Aid Switch/Re-imbursement
- First to Market
- Competitive Pricing vs Innovator
-Gained Share from Entire Therapeutic Area

**Adco-Amoclav:**
-Competitive Pricing vs Innovator
- Aggressive Sales and Marketing Campaign
- Reputable Generic Company
- High Branding of Generic Range
- Generic to a Market Leader

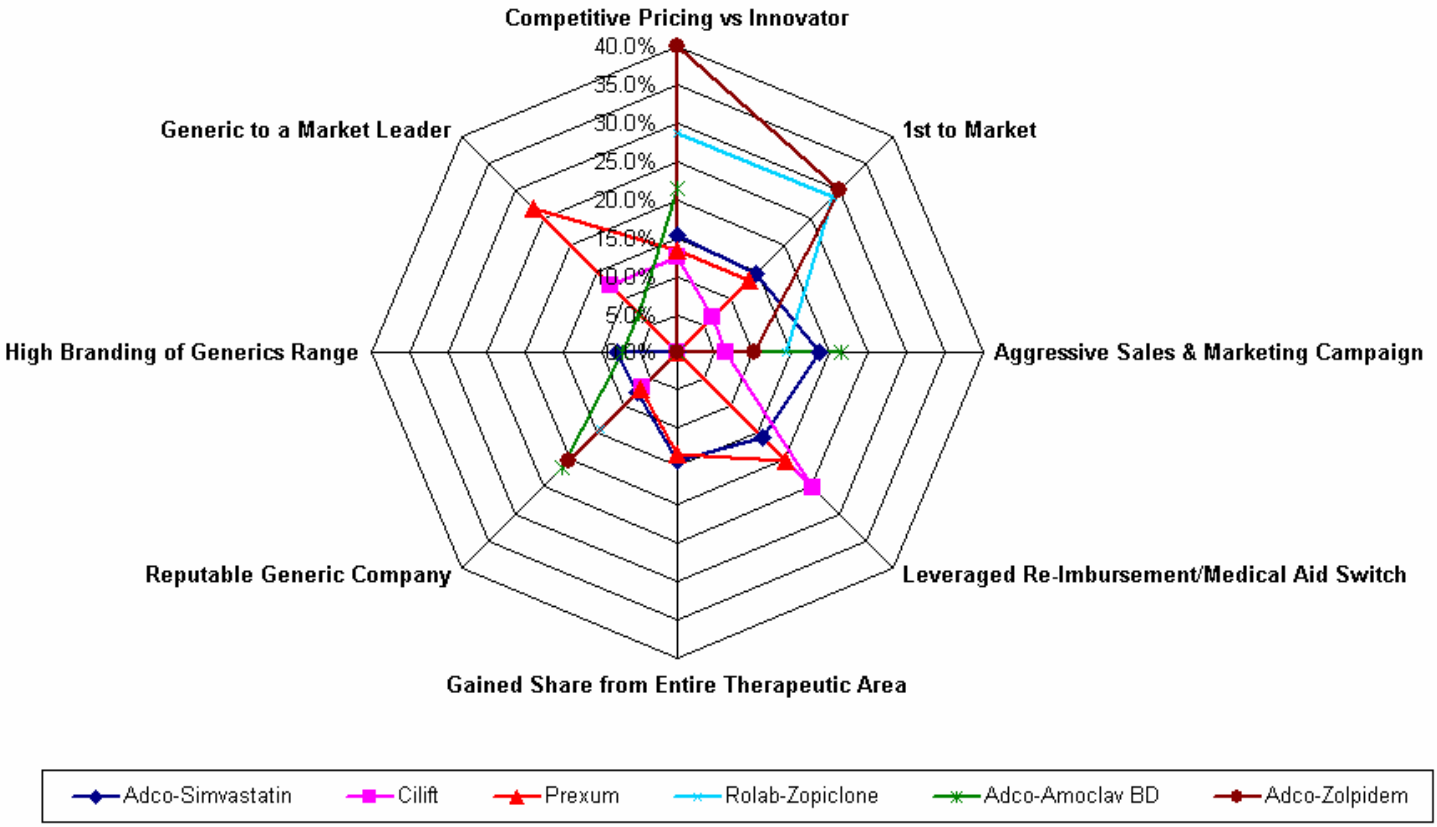
**Cilift:**
- Leveraged Medical Aid Switch/Re-imbursement
- Competitive Pricing vs Innovator
- Generic to a Market Leader
-Good KOL Support
- First to Market

**Adco-Zolpidem:**
- Competitive pricing vs Innovator
- First to Market
- Reputable Generic Company
- Aggressive Sales and Marketing Campaign

**Rolab-Zopiclone:** - Generic to a Market Leader
- Large Motivated Sales Force
- First to Market
- Reputable Generic Company
- High Branding of Generics Range

Figure 22 below provides a graphical representation of all the factors that have had an impact on the successfully launched brands, but shows that the same factor may impact different brands to different degrees.

**Fig 22: Consolidated View of Main Factors Associated with Successfully Launched Brands**

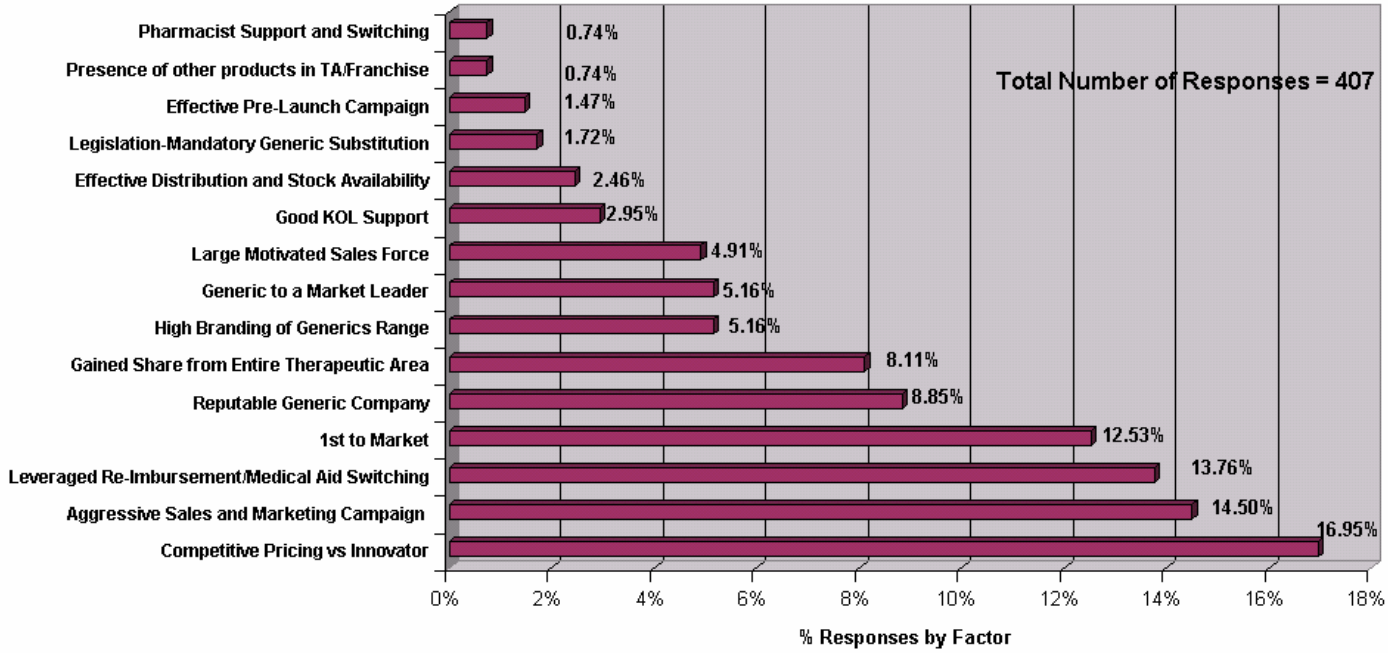


As part of the qualitative section of the questionnaire, question three asked respondents whether there are any further factors that could have contributed to the success of the brand mentioned. In analyzing the responses to this question, the additional factors quoted were pooled with the responses from question two, as there was overlap in terms of the factors.

Of the total number of respondents (150), 43% provided additional factors as part of question 3, while 57% did not contribute any additional factors. The total number of responses to question three, when pooled with question two was 407 responses, while there were only 301 responses to question 2 alone.

The factors identified following the pooling of the information from questions 2 and 3 are depicted in Figure 23 below.

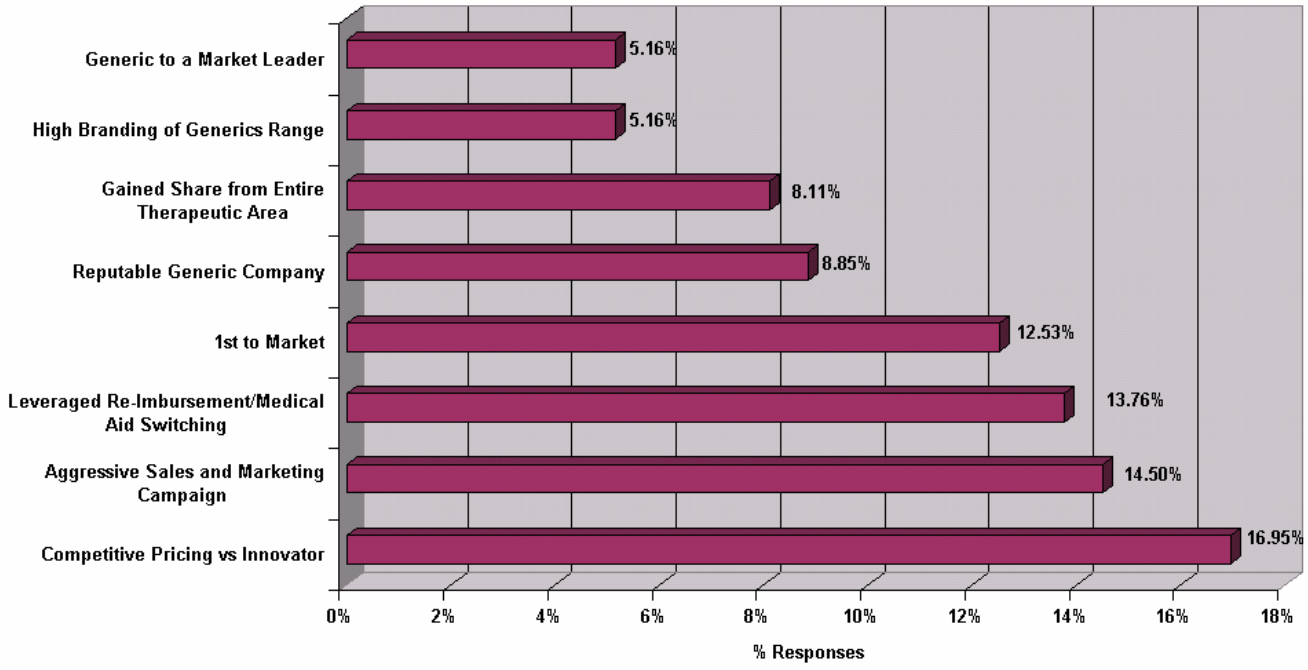
**Fig 23: The Factors Associated with Successfully Launched Brands (Pooled Data from Responses to Q2 and Q3)**



When comparing the responses to question 2 to that of the pooled responses from question 3, competitive pricing vs innovator is still ranked number one with the highest number of responses (16.95%). The rank order of importance of the next three factors has changed with first to market, previously ranked number four, second in terms of responses. Aggressive sales and marketing campaign and leveraged re-imbursement/medical aid switch have switched places in rank order of responses, however the percentage difference between the two is only 0,33%.

In the case where the percentage responses per factor was <5%, these factors were eliminated and the remaining factors, considered the main factors are depicted below.

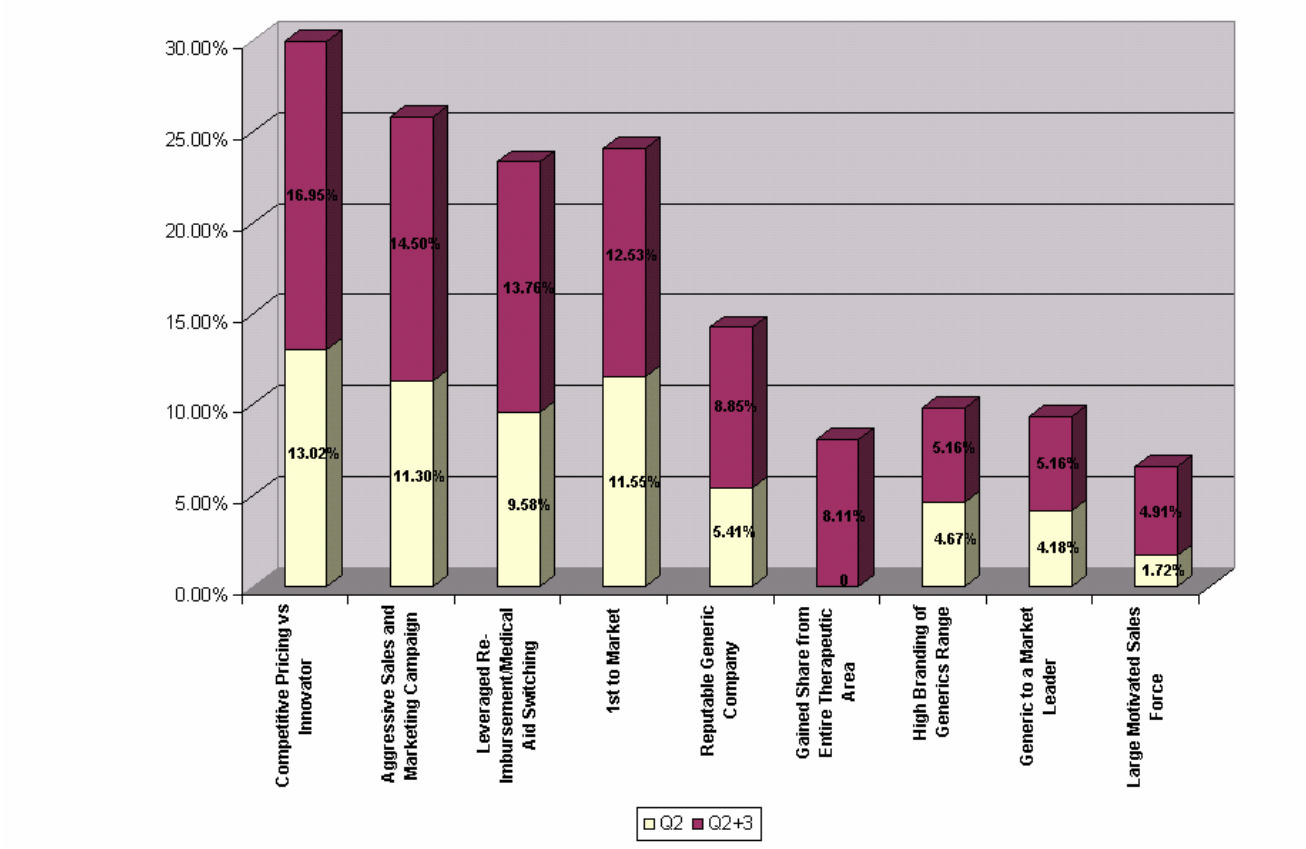
**Fig 24: The Main Factors (>5% Response Rate) Associated with Successfully Launched Brands (Pooled Data from Responses to Q2 & Q3)**



The factors identified are further depicted in Figure 25 below where the percentage responses for each factor from question 2 and question 3 are compared to each other.

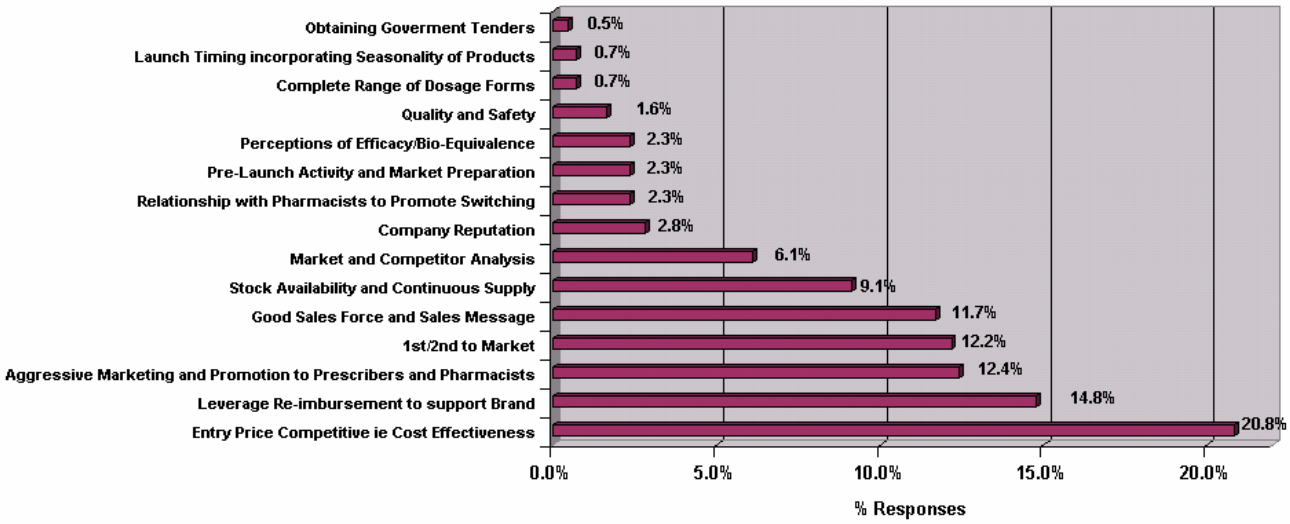
The four main factors as identified previously remain the same, however the rank order varies between them.

**Fig 25: The Factors Associated with Successfully Launched Brands (% Responses for Q2 & Q3)**



Question five required respondents to mention the three main factors they personally thought were the most important if they were preparing for the launch of a new generic product. A number of different responses were noted and when analyzing the data, the factors in the figure below obtained the highest responses.

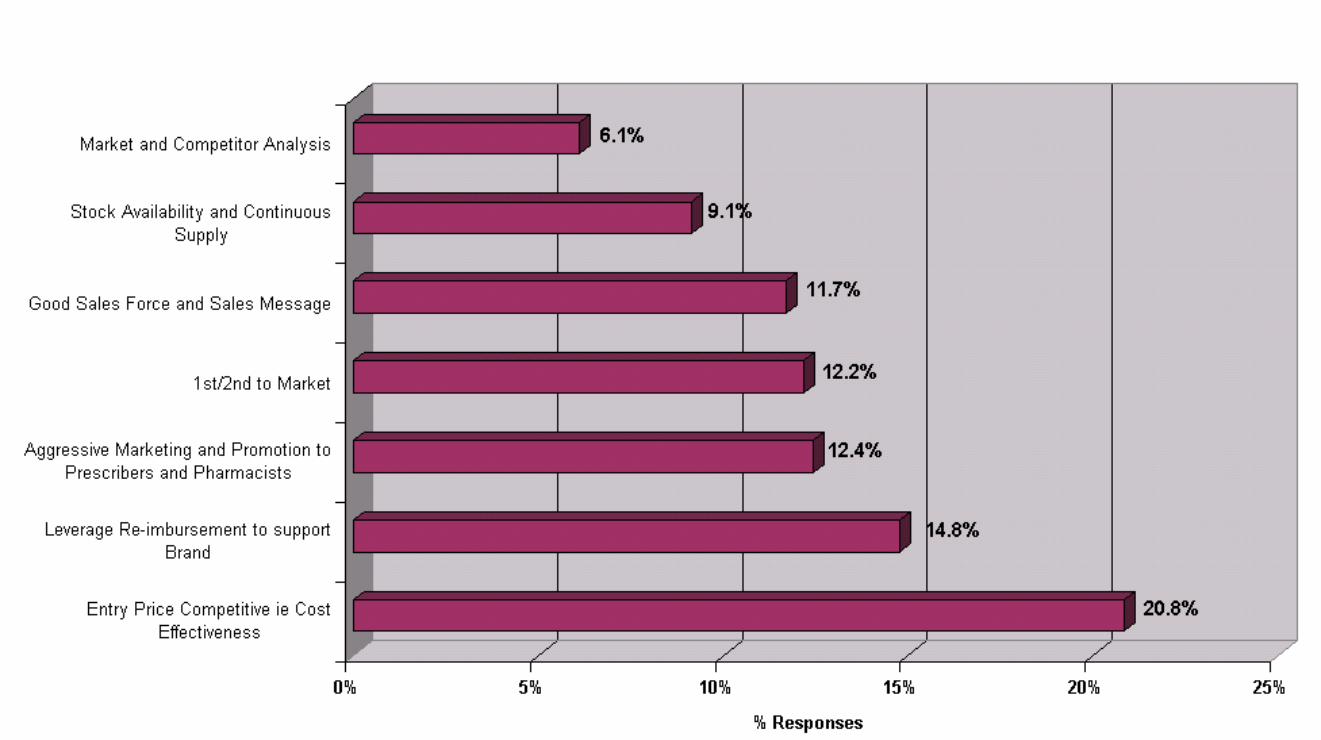
**Fig 26: All Factors Respondents Mentioned they would Take into Account when Personally preparing for the Launch of a New Generic Product**




The five main factors mentioned with a response rate between (11.7% and 20.8%), in descending order of importance were entry price competitive, leverage re-imbursement to support the brand, aggressive marketing and promotion to prescribers and pharmacists, first or second to market and a good sales force and sales message.

Of the factors identified above, the main factors were isolated by using a cut off of <10% of responses per factor. This enabled a shortlist of the main factors to be identified. These factors are depicted in Figure 29 below. It is interesting to note that the first four factors identified, despite being in a different rank order are the similar four factors identified in questions 2 and 3.

**Fig 27: The Main Factors Respondents would take into Account when Personally Preparing for the Launch of a New Generic Product**



## 4.3 Perceptual Mapping

The final question required respondents to associate a number of different attributes to a list of generic brands. The results were analysed using correspondence analysis to generate a perceptual map.

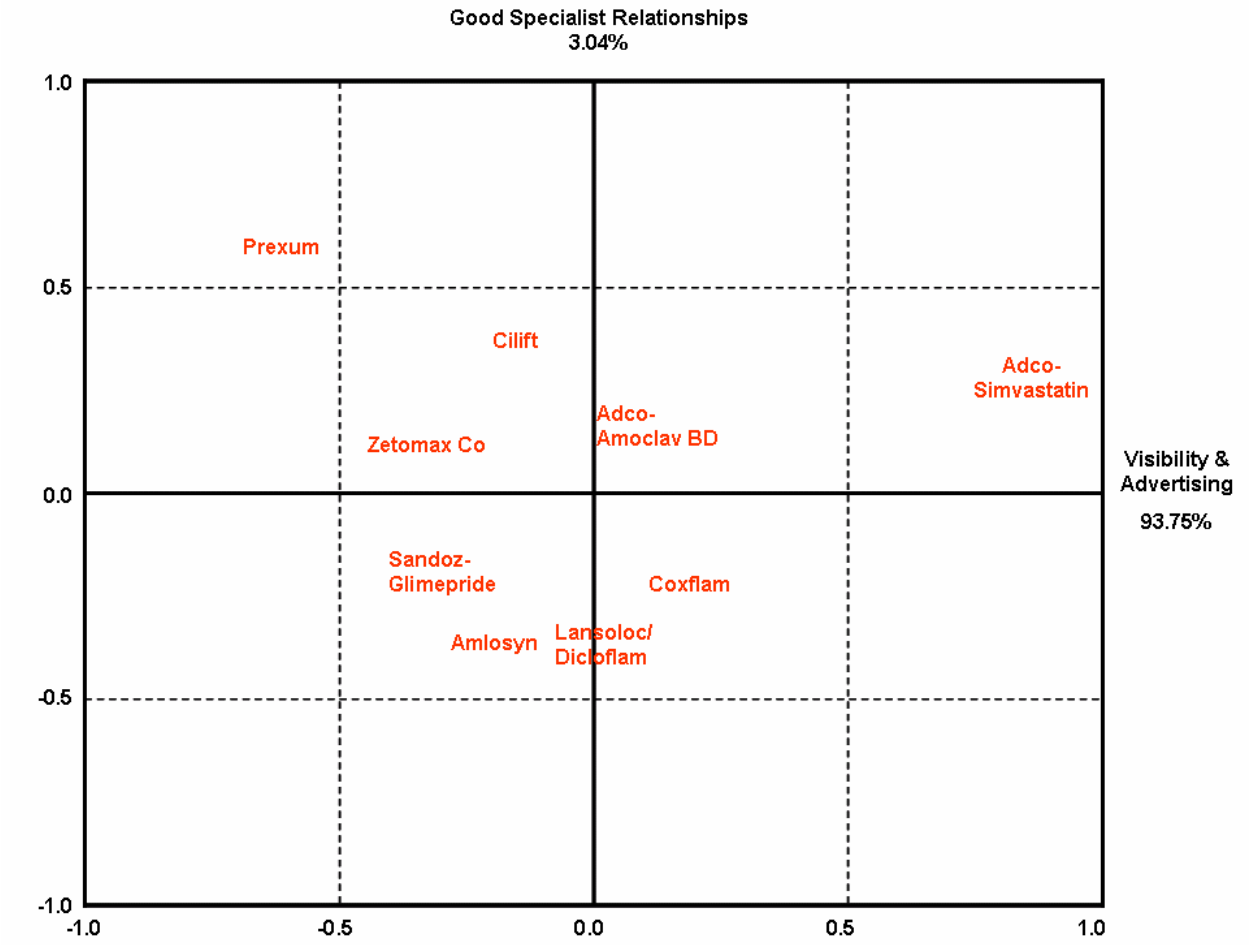
Two main factors emerged from the perceptual map, as can be seen below.

**Table 9: Eigenvalues Calculated from Correspondence Analysis**

| Factor | Eigenvalue | Percent | Cumulative |
|---|---|---|---|
| 1 | 16.874 | 93.75 | 93.75 |
| 2 | 0.548 | 3.04 | 96.79 |

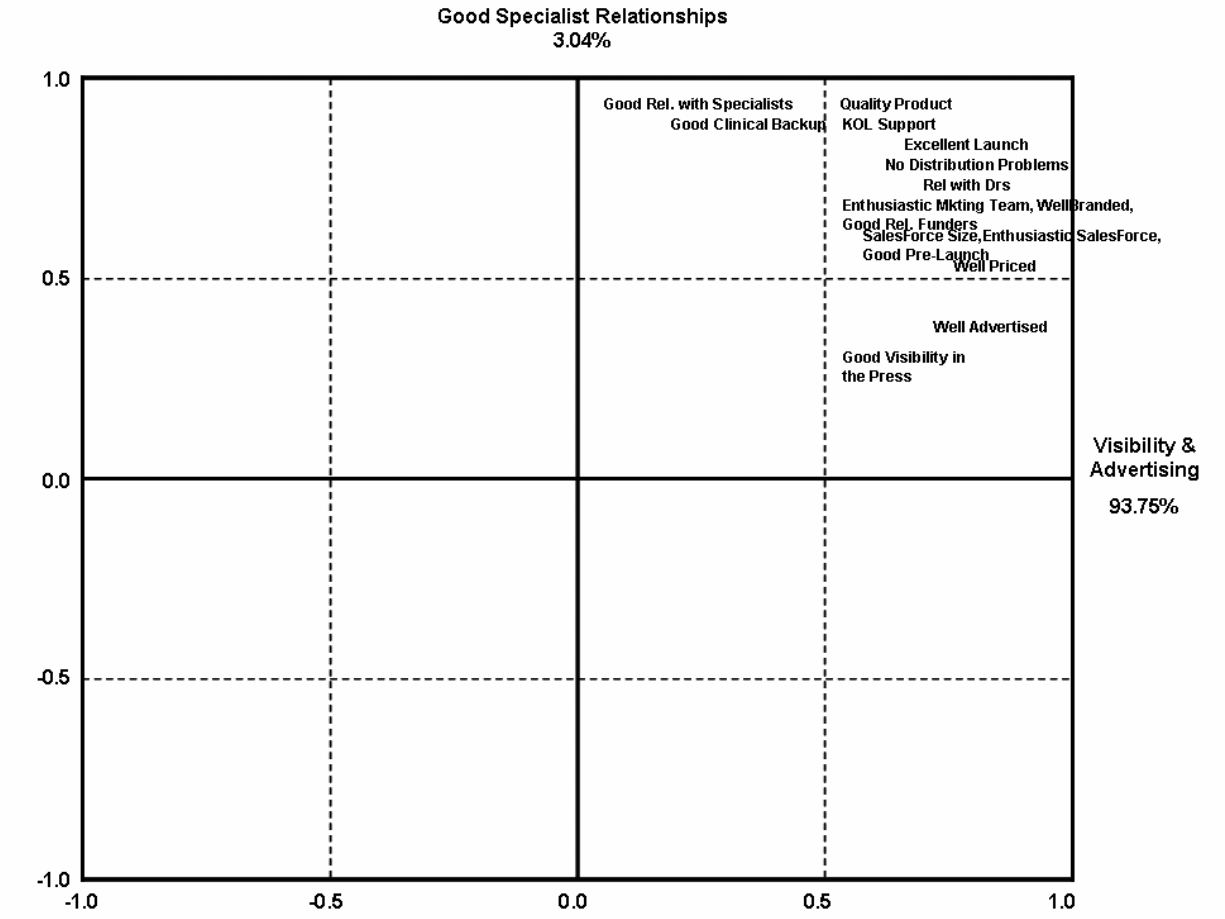
In Figure 28, factor 1 (X-axis) is a “visibility and advertising” axis, while factor 2 (Y-axis), is a “good specialist relationships” axis.

**Fig 28: Perceptual Map Showing Generic Brands**




Adco-Simvastatin was associated positively and above average with all the attributes, while Cilift and Prexum had one positive association each. Cilift had a positive association with “has a good relationship with specialists” while Prexum has a positive association with “has good clinical back up”. All other brands had no positive or negative associations with any of the attributes.

**Fig 29: Perceptual Map Showing the Brand Attributes**




The “good visibility in the press “as well as the “well advertised” attributes are two of the strong attributes. This would suggest the importance of advertising and increasing the awareness around the product, in order to ensure a measure of success.

The factors associated with sales and marketing efforts, including “good pre-launch”, “sales force size”, “enthusiastic sales force”, “well branded” and “enthusiastic marketing team” are all closely clustered in the top quadrant, which indicates the link between these activities and the perceptions of these actions in ensuring a successful product launch.

# 5. CONCLUSIONS AND RECOMMENDATIONS

In this chapter the analysis of the results is linked to the research propositions to conclude whether or not to accept the research propositions and recommendations are made.

## 5.1 Research Proposition 1

Restated as follows:

**The most important factors impacting on the success of generic pharmaceutical launches are:**

- **The price differential of the generic relative to the innovator**
- **Being the first generic to market**
- **A company's product portfolio and therapeutic expertise**
- **Advertising and brand name**
- **The correct alignment, size and buy-in of sales force**

Hollis, (2002), Blackett (1992), Gupta (1996), and Scott Morton (1999) have identified these factors when evaluating market entry. The quantitative research shows that being the first generic to market, the price of the generic relative to the innovator and sales force enthusiasm had responses significantly higher than the mean. The qualitative research shows that Competitive pricing vs the innovator, being the first generic to market, and an aggressive sales and marketing campaign were the factors that received the highest number of responses.

Four of the five factors described above were highlighted by the research, however brand name had a ranking of nine. We therefore **PARTIALLY ACCEPT** Proposition 1.

## 5.2 Research Proposition 2

Restated as follows:

**There is no difference between the factors ensuring the success of generic pharmaceutical launches and the factors to ensure growth post launch**

Hollis, (2002), and Blackett (1992), as well as Gupta (1996) and Scott Morton (1999) discuss the impact of new product entry, while Wiggin and Maness (2004) look at the relationship between price and the number of competitors.

The quantitative research shows that there is a difference between the factors ensuring a successful launch and the factors to ensure growth post launch. The main differences are the importance of the factors relative to each other as depicted below:

**Table 10: Comparison of Factors for a Successful launch and Factors to Ensure Growth Post Launch**

| Rank in Importance | Factors at Launch | Factors After Launch |
|---|---|---|
| 1 | Being the First Generic to Market | Stock Availability |
| 2 | Stock Availability | Re-Imbursement |
| 3 | Re-Imbursement | Relationship with Funders |
| 4 | The Price of the Generic Relative to the Innovator | Effective Distribution |
| 5 | Effective Distribution | Sales Force Enthsuiasm |
| 6 | Relationship with Funders | The Price of the Generic Relative to the Innovator |
| 7 | Sales Force Enthusiasm | Being the First Generic to Market |
| 8 | Respected Brand Name | Well Known Brand Name |
| 9 | Aggressive Marketing | Respected Brand Name |
| 10 | Well Known Brand Name | Price Differential to other Generics |
| 11 | A company's product Portfolio & Product Expertise | Aggressive Marketing |
| 12 | Price Differential to other Generics | Continued Promotion |
| 13 | Advertising to Health Care Professionals | Advertising to Health Care Professionals |
| 14 | Continued Promotion | A company's product Portfolio & |
| 15 | Sales force Structure and Alignment | Relationship with Specialists |
| 16 | Sales Force Size | Sales force Structure and Alignment |
| 17 | Relationship with Specialists | Sales Force Size |
| 18 | Pre-Launch Activity | Advertising to Patients |
| 19 | Advertising to Patients | Differentiation to Innovator in Dosage Forms or Line Extensions |
| 20 | Differentiation to Innovator in Dosage Forms or Line Extensions | Pre-Launch Activity |

The factors at launch that are of higher importance are being the first generic to market, the price of the generic relative to the innovator, as well as a much lower importance of pre-launch activity and a company's product portfolio and therapeutic expertise after the launch. We therefore **PARTIALLY ACCEPT** the research proposition.

## 5.3 Research Proposition 3

Restated as follows:

**The principal dimensions of the perceptions of different generic brands are:**

- **Brand Reputation**
- **Price**
- **Advertising and**
- **Sales Force Enthusiasm**

The research shows that the highest attribute scores were “has good visibility in the press”, “is well advertised”, “is well priced”, and “has an enthusiastic sales force”.

**Table 11: Attribute Scores of Perceptions Associated with Generic Brands**

| | | |
|---|---|---|
| 1 | Has Good Visibility in the Press | 0.891 |
| 2 | Is Well Advertised | 0.868 |
| 3 | Is Well priced | 0.810 |
| 4 | Had Good Pre-launch Activity | 0.800 |
| 5 | Has an Enthusiastic Sales Force | 0.782 |
| 6 | Has Good Relationships with Funders | 0.780 |
| 7 | Has Good Relationships with Pharmacists | 0.778 |
| 8 | Is Well Branded | 0.775 |
| 9 | Has a Sizeable Sales Force | 0.766 |
| 10 | Has an Enthusiastic Marketing Team | 0.759 |
| 11 | Has Good Relationships with Doctors | 0.730 |
| 12 | No Problems with Distribution | 0.703 |
| 13 | Had an Excellent Launch | 0.642 |
| 14 | Has Opinion Leader Support | 0.590 |
| 15 | Is a Quality Product | 0.539 |
| 16 | Has Good Clinical Back Up | 0.482 |
| 17 | Has Good Relationships with Specialists | 0.434 |

These attributes cover three of the four principal dimensions of the perceptions tested. Brand Reputation was not one of the highest scores, but did score the seventh highest of 18 attributes. We can therefore **PARTIALLY ACCEPT** the research proposition.

## 5.4 Recommendations

Based on the Research findings, the list below gives an indication of the main factors that should be considered when launching a generic pharmaceutical product.

### Competitive Pricing

Pricing should be regarded as one of the key aspects to consider when preparing to launch a generic product. The pricing is indicative of the additional costs patients may be expected to pay, should they not use a generic and also assist the Managed Care organisations to lower their spend on medicines. A competitive price, whilst also benchmarking against competitor generics should be taken into consideration when preparing for launch.

### First Generic to Market

The ability to launch the first generic has shown advantages, both in the case of Adco-Simvastatin as well as Coxflam. Being the first generic to market allows one to set the price, while also determining and set the expectations of the market. The longer the period of exclusivity, the greater the chance of a successful launch.

### Stock Availability and Effective Distribution

The availability of stock at launch is crucial to the success of a product. If the prescriber or patient is not able to obtain the drug they require, this could translate to a lost sale and subsequent revenue losses. It is also essential to ensure that efficient distribution is available to ensure stock availability to the target audience.

**An Aggressive Sales and Marketing Campaign**

This point encompasses the importance of an enthusiastic and motivated sales force as well as the company's product portfolio and therapeutic expertise and also ties in with the importance of ensuring that the sales reps as well as the marketing team have a good relationship with all healthcare providers including Doctors, Specialists as well as Pharmacists. It is also important to target the appropriate prescribers and develop the appropriate messages. The branding of the generics range, together with the company reputation as perceived by the target audience are import to take into account.

**Managed Care/Medical Aid Providers**

The Medical Aid Providers and Managed Care organizations are playing an increasingly important role in the development of formularies and support of generic brands. Managing these relationships as well as leveraging the support from Funders in terms of switching should be a key consideration at launch and throughout the life of the product.

The factors identified may vary in importance from product to product depending on the market dynamics and the different therapeutic areas. It is therefore important to have a thorough understanding of the market into which the product will be launched as well as the competitor activity within the market. This will enable marketers to place the correct emphasis on the factors that are relevant to the product that is being launched, based on the activity taking place at the time of launch.

## 5.5 Suggestions for Future Research

- A study on the amount patients are willing to co-pay for the innovator product or a higher priced generic

- An analysis of the impact of medical aid formularies on generic drugs

- The impact of single exit pricing on the pricing of pharmaceutical products at launch

- Patient perceptions of generic products and the effect of direct to consumer advertising

- The decision making process pharmacists undergo that impacts the choice of generic product dispensed to patients

- The decision making process Doctors and Specialists undergo that impacts the choice of generic product prescribed to patients

- Successful strategies by Innovator companies for defending against generic competitors

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# APPENDICES

## Appendix A

### Qualitative Questionnaire

**Overview of the Research**

The aim of the research is to identify the key success factors of generic pharmaceutical launches.

1. What factors, in general, constitute a successful generic launch?

2. Which product launch do you see as having been most successful?

3. Why was this launch successful?

4. Are there any other factors that could have impacted on/contributed to this as a successful launch?

5. Which launch/launches did not work and were not a success?

6. Why do you think this is the case/what did they do wrong/not do?

7. If you were the Marketing manager preparing for the launch of a new product, what factors would you personally take into account?

**SHOW SHEET 1**

8. Are these factors clear and understandable?

9. Please rate the importance of each of these attributes or factors on a scale of 1 to 5, where 1 means not at all important and 5 means very important. What extent do you see them as important?

10. What factors do you consider as important to ensure the growth of a product after a successful launch?

12. Is there anything else you would like to add that could be of interest?

## Rating Exercise

Please rate the importance of each of these attributes or factors on a scale of 1 to 5, where 1 means not at all important and 5 means very important

**1 (Not at all important)** **5 (Very Important)**

| Factor | Rating |
|---|---|
| The price of the generic relative to the innovator | |
| | |
| Being the first generic to market | |
| | |
| A company's product portfolio and therapeutic expertise | |
| | |
| Advertising and Brand name | |
| | |
| Sales Force Size , Structure and Alignment | |
| | |

## Appendix B

### Qualitative Questionnaire- Summary of Findings

**Overview of the Research**

The aim of the research is to identify the key success factors of generic pharmaceutical launches. Four CEO's of both generic and innovative companies were interviewed with the aim being to use the results to develop the quantitative questionnaire for circulation to a broader audience.

***1. What are the factors in general that constitute successful generic launches?***

The following factors were consistent across all four interviews

- First to market
- The level of branding and company reputation
- Price differential to the innovator product
- Understanding your customers (Dr's, Pharmacists, Specialists and Managed Care Providers) needs

Other factors identified included:

- An astute, capable and enthusiastic sales and marketing function
- Understanding of the Healthcare environment including government legislation with regards to mandatory generic substitution.
- A developed switch strategy from innovator to generic
- A point of difference to the innovator eg a slightly different and patentable superior method of manufacture
- A basket of products
- A healthy pipeline to prevent margin trap

***2. Which launch do you see as having been most successful?***

Two respondents answered Adco-Simvastatin, and the remaining two responded Cilift and Adco-Amoclav BD.

***3. Why was this launch successful?***

The reasons for these products being successful included:

- The increased promotion, by a sales and marketing that were interested and motivated, incentivised and trained in preparation of this launch.
- Being the first generic statin in a chronic disease area and the price advantage to the innovator enable managed care buy in.
- The use of a prefix “Adco” increases brand awareness.
- Television advertising and out of the box thinking.
- Ability to use the evidence base of the innovator product.

***4. Are there any other factors that could have impacted on this as a successful launch?***

Additional factors included:

- Timing is important in terms of getting the drug on formulary, since you need to get the switch at launch and driven by the formulary
- Pricing that is not overly aggressive at launch

***5. Which launch/launches did not work and were not a success?***

Amiodarone, Sertraline, Bisoprolol, Propranolol SR, and Diclofenac generics.

***6. Why do you think is the case?***

Reasons for unsuccessful launches included:

- Launches in specialized generics and lack of understanding of the therapeutic area
- An inability to develop a relationship with specialists and funders
- Use of a commodity strategy
- Need for differentiation- at some point price ceases to be an issue
- Launch outside of 1$^{st}$ three to market

***7. If you were the Marketing manager preparing for the launch of a new product, what factors would you personally think were important?***

Factors cited included:

- Supply and supply chain and distribution and ensuring there is stock on hand nd differentiation in distribution
- A communication strategy to Managed Health Care, funders, pharmacists etc.
- Product should be available as soon as patent expiry.
- The 4 P's of Marketing- Product, Price, Place and Promotion.
- Market preparation

***8. Rating Exercise (Some People consider the following factors to be important. Please rate them in terms of importance from 1-5, with 1 being least important and 5 being most important. )***

The results of the respondents are tabulated below:

**1 (Least important)** **5 (Most Important)**

| Factor | Rating | Rating | Rating | Rating |
|---|---|---|---|---|
| The price of the generic relative to the innovator | **1** | **5** | **4** | **5** |
| | | | | |
| Being the first generic to market | **5** | **5** | **4** | **5** |
| | | | | |
| A company's product portfolio and therapeutic expertise | **4** | **3** | **4** | **4** |
| | | | | |
| Advertising and Brand name | **3** | **2** | **3** | **3** |
| | | | | |
| Sales Force Size , Structure and Alignment | **2** | **5** | **4** | **4** |
| | | | | |

Three of the four respondents rated the factors, while one ranked them. This will ensure that the instructions in the quantitative questionnaire are clearly spelt out.

***9. Are the factors clear and understandable?***

All four respondents answered “Yes”.

***10. To what extent do you see them as important?***

All four Respondents stated that being first to market as the most important.

Three of the four respondents were adamant that the price relative to the innovator was extremely important, however the fourth respondent believed that despite this factor being important it was the least important of the five factors.

The size of the sales force was seen as less important, but the structure and ability to influence prescribers to switch was more important.

Advertising and brand name were less important, than other factors cited, however the company’s portfolio and product expertise was seen as highly important.

***11. What factors would you consider as important to ensure the growth of a product <u>after</u> a successful launch?***

- To keep the attention top of mind, and ensuring sustained interest from the field force.
- Continued promotional investment.
- Different dosage forms, line extensions, new formulations and even DTC advertising.
- Trying to improve patient compliance in chronic disease areas.
- Launch of parallel brands and co-marketing agreements.
- After sales service.

## Appendix C

### Quantitative Questionnaire

### Overview of the Research

The aim of the research is to identify the key success factors of generic pharmaceutical launches.

**Demographics : Please circle the appropriate category**

**Working experience in the pharmaceutical industry**

| | |
|---|---|
| 0-3yrs | 1 |
| 4-7yrs | 2 |
| 8-11yrs | 3 |
| 12+ yrs | 4 |

**Department you work in**

| | |
|---|---|
| Sales | 1 |
| Marketing | 2 |
| Medical/Regulatory | 3 |
| General Management | 4 |
| Other | 5 |

**Are you employed by a company which supplies**

| | |
|---|---|
| Original/Innovative medicines | 1 |
| Generic medicines | 2 |
| Both | 3 |

**1 Please rate <u>each</u> of the factors using a scale of 1 to 5 (1=not at all important, 5=extremely important) in terms of their contribution to a successful generic launch? Please mark a cross (X) in the appropriate box.**

| Factor | Not at All Important 1 | 2 | 3 | 4 | Extremely Important 5 |
|---|---|---|---|---|---|
| The price of the generic relative to the innovator | | | | | |
| Being the first generic to market | | | | | |
| A company's product portfolio and therapeutic expertise | | | | | |
| Relationship with specialists | | | | | |
| Relationship with funders | | | | | |
| Advertising to patients | | | | | |
| Advertising to healthcare professionals | | | | | |
| Respected brand name | | | | | |
| Well known brand name | | | | | |
| Sales force size | | | | | |
| Sales force structure and alignment | | | | | |
| Sales force enthusiasm | | | | | |
| Re-imbursement | | | | | |
| Differentiation to innovator in dosage forms or line extensions | | | | | |
| Stock Availability | | | | | |
| Aggressive marketing | | | | | |
| Effective Distribution | | | | | |
| Continued Promotion | | | | | |
| Price differential to other generics | | | | | |
| Pre-launch activity | | | | | |
| Other : please specify | | | | | |

**2a Which generic launch do you see as having been <u>most</u> successful?**
**2b What made it successful?**

| Successful launch | Reasons |
|---|---|
| | |
| | |
| | |

**3a Are there any other factors that could have impacted on this as a successful launch?**
**Yes 1**
**No 2**

**3b If yes, what are these factors?**

| | |
|---|---|
| | |
| | |

**4 If you were preparing for the launch of a new product, what <u>THREE</u> main factors would you personally think were the most important?**

| |
|---|
| 1. |
| 2. |
| 3. |

**5 Please rate the following factors in terms of their importance to ensure the growth of a product <u>after</u> a successful launch <u>(1= not at all important,5 = extremely important)</u>. Please mark a cross (X) in the appropriate box.**

| Factor | Not at All Important 1 | 2 | 3 | 4 | Extremely Important 5 |
|---|---|---|---|---|---|
| The price of the generic relative to the innovator | | | | | |
| Being the first generic to market | | | | | |
| A company's product portfolio and therapeutic expertise | | | | | |
| Relationship with specialists | | | | | |
| Relationship with funders | | | | | |
| Advertising to patients | | | | | |
| Advertising to healthcare professionals | | | | | |
| Respected brand name | | | | | |
| Well known brand name | | | | | |
| Sales force size | | | | | |
| Sales force structure and alignment | | | | | |
| Sales force enthusiasm | | | | | |
| Re-imbursement | | | | | |
| Differentiation to innovator in dosage forms or line extensions | | | | | |
| Stock Availability | | | | | |
| Aggressive marketing | | | | | |
| Effective Distribution | | | | | |
| Continued Promotion | | | | | |
| Price differential to other generics | | | | | |
| Pre-launch activity | | | | | |
| Other : please specify | | | | | |

**6 Please indicate which brands you associate with each of the attributes. You may associate one, two, none or all if you feel it is appropriate. Please mark a cross/es (X) in the appropriate box/es.**

| | Adco-Simvastatin | Coxflam | Cilift | Adco-Amoclav BD | Prexum | Lansoloc | Zetomax Co | Dicloflam Dispers Tabs | Amlosyn | Sandoz-Glimepiride |
|---|---|---|---|---|---|---|---|---|---|---|
| Had good pre-launch activity | | | | | | | | | | |
| Had an excellent launch | | | | | | | | | | |
| Is well priced | | | | | | | | | | |
| Has good clinical back up | | | | | | | | | | |
| Has an enthusiastic marketing team | | | | | | | | | | |
| Has an enthusiastic sales force | | | | | | | | | | |
| Has a sizeable sales force | | | | | | | | | | |
| Has opinion leader support | | | | | | | | | | |
| Has good relationship with funders | | | | | | | | | | |
| Has good relationship with doctors | | | | | | | | | | |
| Has good relationship with pharmacists | | | | | | | | | | |
| Has good relationship with specialists | | | | | | | | | | |
| No problems with distribution | | | | | | | | | | |
| Is well branded | | | | | | | | | | |
| Is a quality product | | | | | | | | | | |
| Has a good price | | | | | | | | | | |
| Is well advertised | | | | | | | | | | |
| Has good visibility in the press | | | | | | | | | | |

**7a Is there anything else that you would like to add that has not been covered?**

Yes 1
No 2

**7b If yes, what?**

| | |
|---|---|
| | |
| | |

## APPENDIX D

## Distribution Fitting Algorithm

### Observed Frequencies

| | Response A | Response B | Response C | Response D | Response E | Total |
|---|---|---|---|---|---|---|
| **Q1-1** | 0 | 3 | 16 | 42 | 89 | 150 |
| **Q1-2** | 2 | 3 | 13 | 29 | 103 | 150 |
| **Q1-3** | 2 | 7 | 37 | 58 | 46 | 150 |
| **Q1-4** | 7 | 32 | 33 | 38 | 40 | 150 |
| **Q1-5** | 1 | 10 | 23 | 41 | 75 | 150 |
| **Q1-6** | 8 | 31 | 55 | 39 | 17 | 150 |
| **Q1-7** | 0 | 10 | 40 | 60 | 40 | 150 |
| **Q1-8** | 3 | 7 | 28 | 52 | 60 | 150 |
| **Q1-9** | 2 | 8 | 30 | 59 | 50 | 149 |
| **Q1-10** | 2 | 16 | 54 | 50 | 28 | 150 |
| **Q1-11** | 2 | 18 | 42 | 49 | 38 | 149 |
| **Q1-12** | 0 | 10 | 19 | 48 | 73 | 150 |
| **Q1-13** | 2 | 5 | 9 | 42 | 91 | 149 |
| **Q1-14** | 18 | 32 | 44 | 40 | 16 | 150 |
| **Q1-15** | 2 | 0 | 7 | 43 | 98 | 150 |
| **Q1-16** | 1 | 9 | 27 | 60 | 53 | 150 |
| **Q1-17** | 0 | 2 | 11 | 54 | 83 | 150 |
| **Q1-18** | 1 | 13 | 32 | 69 | 35 | 150 |
| **Q1-19** | 2 | 10 | 33 | 62 | 43 | 150 |
| **Q1-20** | 9 | 26 | 38 | 48 | 29 | 150 |
| **Q5-1** | 0 | 4 | 22 | 58 | 66 | 150 |
| **Q5-2** | 4 | 13 | 29 | 36 | 66 | 148 |
| **Q5-3** | 2 | 9 | 34 | 68 | 36 | 149 |
| **Q5-4** | 2 | 17 | 36 | 53 | 41 | 149 |
| **Q5-5** | 1 | 3 | 19 | 41 | 85 | 149 |
| **Q5-6** | 11 | 24 | 38 | 46 | 30 | 149 |
| **Q5-7** | 0 | 12 | 28 | 64 | 45 | 149 |
| **Q5-8** | 2 | 9 | 15 | 63 | 59 | 148 |
| **Q5-9** | 3 | 7 | 19 | 60 | 60 | 149 |
| **Q5-10** | 1 | 15 | 48 | 58 | 27 | 149 |
| **Q5-11** | 3 | 11 | 46 | 49 | 40 | 149 |
| **Q5-12** | 0 | 7 | 23 | 47 | 72 | 149 |
| **Q5-13** | 1 | 3 | 7 | 45 | 93 | 149 |
| **Q5-14** | 8 | 29 | 42 | 47 | 23 | 149 |
| **Q5-15** | 0 | 1 | 6 | 34 | 108 | 149 |
| **Q5-16** | 0 | 8 | 31 | 61 | 49 | 149 |
| **Q5-17** | 0 | 0 | 13 | 49 | 87 | 149 |
| **Q5-18** | 0 | 7 | 34 | 62 | 46 | 149 |
| **Q5-19** | 2 | 7 | 26 | 58 | 56 | 149 |
| **Q5-20** | 41 | 33 | 22 | 28 | 25 | 149 |

## Expected Frequencies

| | Response A | Response B | Response C | Response D | Response E |
|---|---|---|---|---|---|
| **Q1-1** | 0.35 | 3.31 | 14.41 | 43.46 | 88.46 |
| **Q1-2** | 1.48 | 4.89 | 12.22 | 28.59 | 102.82 |
| **Q1-3** | 1.39 | 10.53 | 32.94 | 59.81 | 45.34 |
| **Q1-4** | 11.57 | 23.39 | 35.23 | 42.95 | 36.87 |
| **Q1-5** | 2.23 | 8.75 | 21.65 | 43.32 | 74.06 |
| **Q1-6** | 8.80 | 30.93 | 49.81 | 45.45 | 15.01 |
| **Q1-7** | 1.04 | 10.31 | 36.07 | 64.13 | 38.45 |
| **Q1-8** | 2.07 | 10.15 | 26.82 | 50.75 | 60.22 |
| **Q1-9** | 1.35 | 9.66 | 30.11 | 57.39 | 50.48 |
| **Q1-10** | 2.64 | 17.87 | 45.37 | 58.99 | 25.14 |
| **Q1-11** | 3.58 | 16.79 | 38.07 | 54.53 | 36.03 |
| **Q1-12** | 1.50 | 7.66 | 21.82 | 46.63 | 72.39 |
| **Q1-13** | 1.14 | 5.23 | 15.13 | 36.53 | 90.97 |
| **Q1-14** | 17.12 | 34.20 | 43.47 | 38.48 | 16.73 |
| **Q1-15** | 0.76 | 4.14 | 13.39 | 35.51 | 96.20 |
| **Q1-16** | 1.01 | 8.36 | 28.70 | 58.61 | 53.31 |
| **Q1-17** | 0.05 | 1.49 | 12.50 | 52.80 | 83.15 |
| **Q1-18** | 1.11 | 10.96 | 37.56 | 64.34 | 36.03 |
| **Q1-19** | 1.46 | 10.98 | 33.87 | 60.06 | 43.62 |
| **Q1-20** | 9.22 | 24.71 | 40.22 | 46.60 | 29.25 |
| **Q5-1** | 0.28 | 4.07 | 21.07 | 58.95 | 65.63 |
| **Q5-2** | 4.97 | 12.81 | 24.66 | 41.07 | 64.49 |
| **Q5-3** | 1.11 | 10.67 | 36.40 | 63.42 | 37.40 |
| **Q5-4** | 3.14 | 15.16 | 35.86 | 54.63 | 40.21 |
| **Q5-5** | 0.76 | 4.87 | 16.58 | 42.37 | 84.42 |
| **Q5-6** | 10.53 | 24.85 | 38.53 | 44.61 | 30.49 |
| **Q5-7** | 1.10 | 9.54 | 32.28 | 60.91 | 45.17 |
| **Q5-8** | 1.13 | 7.87 | 25.41 | 53.50 | 60.08 |
| **Q5-9** | 1.56 | 8.87 | 25.66 | 51.47 | 61.44 |
| **Q5-10** | 1.71 | 15.05 | 44.50 | 62.15 | 25.59 |
| **Q5-11** | 2.80 | 15.09 | 37.23 | 56.26 | 37.62 |
| **Q5-12** | 1.02 | 6.58 | 21.39 | 48.88 | 71.14 |
| **Q5-13** | 0.38 | 3.18 | 13.10 | 39.52 | 92.82 |
| **Q5-14** | 8.78 | 26.75 | 43.90 | 46.81 | 22.76 |
| **Q5-15** | 0.04 | 0.79 | 6.53 | 33.63 | 108.02 |
| **Q5-16** | 0.71 | 7.65 | 29.90 | 62.36 | 48.37 |
| **Q5-17** | 0.04 | 1.28 | 11.26 | 50.26 | 86.15 |
| **Q5-18** | 0.60 | 7.44 | 31.14 | 64.87 | 44.94 |
| **Q5-19** | 1.24 | 8.61 | 27.25 | 55.17 | 56.73 |
| **Q5-20** | 41.60 | 28.61 | 27.76 | 26.37 | 24.66 |

## Distribution Parameters

| | $\mu$ | $\sigma$ | $\sigma^2$ | Confidence | $LCL_\mu$ | $UCL_\mu$ | $LCL_\sigma$ | $UCL_\sigma$ |
|---|---|---|---|---|---|---|---|---|
| **Q1-1** | 0.54 | 0.88 | 0.77 | **level** | 0.40 | 0.68 | 0.57 | 0.99 |
| **Q1-2** | 0.93 | 1.23 | 1.52 | 95% | 0.74 | 1.13 | 1.11 | 1.39 |
| **Q1-3** | -0.07 | 0.79 | 0.63 | | -0.20 | 0.06 | 0.71 | 0.89 |
| **Q1-4** | -0.40 | 1.08 | 1.16 | | -0.57 | -0.23 | 0.97 | 1.22 |
| **Q1-5** | 0.32 | 1.04 | 1.08 | | 0.16 | 0.49 | 0.93 | 1.17 |
| **Q1-6** | -0.69 | 0.80 | 0.64 | | -0.81 | -0.56 | 0.72 | 0.90 |
| **Q1-7** | -0.14 | 0.73 | 0.53 | | -0.26 | -0.02 | 0.66 | 0.82 |
| **Q1-8** | 0.11 | 0.93 | 0.86 | | -0.04 | 0.26 | 0.83 | 1.05 |
| **Q1-9** | 0.00 | 0.82 | 0.67 | | -0.13 | 0.13 | 0.74 | 0.92 |
| **Q1-10** | -0.38 | 0.74 | 0.55 | | -0.49 | -0.26 | 0.67 | 0.84 |
| **Q1-11** | -0.26 | 0.85 | 0.72 | | -0.39 | -0.12 | 0.76 | 0.96 |
| **Q1-12** | 0.30 | 0.96 | 0.92 | | 0.14 | 0.45 | 0.86 | 1.08 |
| **Q1-13** | 0.64 | 1.06 | 1.13 | | 0.47 | 0.81 | 0.95 | 1.20 |
| **Q1-14** | -0.81 | 0.94 | 0.88 | | -0.96 | -0.66 | 0.84 | 1.06 |
| **Q1-15** | 0.71 | 1.03 | 1.06 | | 0.55 | 0.88 | 0.93 | 1.16 |
| **Q1-16** | 0.04 | 0.80 | 0.64 | | -0.09 | 0.17 | 0.72 | 0.90 |
| **Q1-17** | 0.43 | 0.70 | 0.49 | | 0.32 | 0.55 | 0.63 | 0.79 |
| **Q1-18** | -0.17 | 0.72 | 0.52 | | -0.29 | -0.06 | 0.65 | 0.82 |
| **Q1-19** | -0.10 | 0.79 | 0.62 | | -0.22 | 0.03 | 0.71 | 0.89 |
| **Q1-20** | -0.48 | 0.95 | 0.90 | | -0.63 | -0.32 | 0.85 | 1.07 |
| **Q5-1** | 0.22 | 0.74 | 0.55 | | 0.10 | 0.34 | 0.67 | 0.84 |
| **Q5-2** | 0.15 | 1.14 | 1.31 | | -0.03 | 0.34 | 1.03 | 1.29 |
| **Q5-3** | -0.15 | 0.73 | 0.54 | | -0.27 | -0.04 | 0.66 | 0.83 |
| **Q5-4** | -0.19 | 0.86 | 0.74 | | -0.33 | -0.05 | 0.77 | 0.97 |
| **Q5-5** | 0.50 | 0.95 | 0.90 | | 0.35 | 0.65 | 0.85 | 1.07 |
| **Q5-6** | -0.48 | 0.99 | 0.98 | | -0.64 | -0.32 | 0.89 | 1.12 |
| **Q5-7** | -0.06 | 0.77 | 0.59 | | -0.18 | 0.07 | 0.69 | 0.87 |
| **Q5-8** | 0.14 | 0.86 | 0.73 | | 0.00 | 0.27 | 0.77 | 0.97 |
| **Q5-9** | 0.14 | 0.90 | 0.81 | | 0.00 | 0.28 | 0.81 | 1.02 |
| **Q5-10** | -0.33 | 0.71 | 0.50 | | -0.44 | -0.22 | 0.63 | 0.80 |
| **Q5-11** | -0.21 | 0.83 | 0.69 | | -0.35 | -0.08 | 0.74 | 0.94 |
| **Q5-12** | 0.29 | 0.90 | 0.81 | | 0.14 | 0.43 | 0.81 | 1.02 |
| **Q5-13** | 0.63 | 0.92 | 0.84 | | 0.48 | 0.77 | 0.82 | 1.03 |
| **Q5-14** | -0.56 | 0.88 | 0.77 | | -0.70 | -0.42 | 0.79 | 0.99 |
| **Q5-15** | 0.81 | 0.79 | 0.62 | | 0.68 | 0.94 | 0.71 | 0.89 |
| **Q5-16** | 0.00 | 0.75 | 0.56 | | -0.12 | 0.12 | 0.67 | 0.84 |
| **Q5-17** | 0.48 | 0.70 | 0.49 | | 0.36 | 0.59 | 0.63 | 0.79 |
| **Q5-18** | -0.03 | 0.72 | 0.52 | | -0.15 | 0.08 | 0.64 | 0.81 |
| **Q5-19** | 0.08 | 0.84 | 0.71 | | -0.05 | 0.22 | 0.76 | 0.95 |
| **Q5-20** | -1.08 | 1.46 | 2.14 | **Total** | -1.32 | -0.85 | 1.31 | 1.65 |
| **Mean** | 0.00 | 0.83 | 0.80 | **variance** | | | | |
| $\sigma^2_\mu =$ | 0.20 | | | 1.00 | | | | |
| $\chi^2 =$ | 80.00 | | | | | | | |
| **p value =** | 1.0000 | | | | | | | |

## Results

| Question 1 | $\mu$ | $LCL_{\mu}$ | $UCL_{\mu}$ | Question 5 | $\mu$ | $LCL_{\mu}$ | $UCL_{\mu}$ |
|---|---|---|---|---|---|---|---|
| Being the first generic to market | 0.93 | 0.74 | 1.13 | Stock Availability | 0.81 | 0.68 | 0.94 |
| Stock Availability | 0.71 | 0.55 | 0.88 | Re-imbursement | 0.63 | 0.48 | 0.77 |
| Re-imbursement | 0.64 | 0.47 | 0.81 | Relationship with funders | 0.50 | 0.35 | 0.65 |
| The price of the generic relative to the innovator | 0.54 | 0.40 | 0.68 | Effective Distribution | 0.48 | 0.36 | 0.59 |
| Effective Distribution | 0.43 | 0.32 | 0.55 | Sales force enthusiasm | 0.29 | 0.14 | 0.43 |
| Relationship with funders | 0.32 | 0.16 | 0.49 | The price of the generic relative to the innovator | 0.22 | 0.10 | 0.34 |
| Sales force enthusiasm | 0.30 | 0.14 | 0.45 | Being the first generic to market | 0.15 | -0.03 | 0.34 |
| Respected brand name | 0.11 | -0.04 | 0.26 | Well known brand name | 0.14 | 0.00 | 0.28 |
| Aggressive marketing | 0.04 | -0.09 | 0.17 | Respected brand name | 0.14 | 0.00 | 0.27 |
| Well known brand name | 0.00 | -0.13 | 0.13 | Price differential to other generics | 0.08 | -0.05 | 0.22 |
| A company's product portfolio and therapeutic expertise | -0.07 | -0.20 | 0.06 | Aggressive marketing | 0.00 | -0.12 | 0.12 |
| Price differential to other generics | -0.10 | -0.22 | 0.03 | Continued Promotion | -0.03 | -0.15 | 0.08 |
| Advertising to healthcare professionals | -0.14 | -0.26 | -0.02 | Advertising to healthcare professionals | -0.06 | -0.18 | 0.07 |
| Continued Promotion | -0.17 | -0.29 | -0.06 | A company's product portfolio and therapeutic expertise | -0.15 | -0.27 | -0.04 |
| Sales force structure and alignment | -0.26 | -0.39 | -0.12 | Relationship with specialists | -0.19 | -0.33 | -0.05 |
| Sales force size | -0.38 | -0.49 | -0.26 | Sales force structure and alignment | -0.21 | -0.35 | -0.08 |
| Relationship with specialists | -0.40 | -0.57 | -0.23 | Sales force size | -0.33 | -0.44 | -0.22 |
| Pre-launch activity | -0.48 | -0.63 | -0.32 | Advertising to patients | -0.48 | -0.64 | -0.32 |
| Advertising to patients | -0.69 | -0.81 | -0.56 | Differentiation to innovator in dosage forms or line extensions | -0.56 | -0.70 | -0.42 |
| Differentiation to innovator in dosage forms or line extensions | -0.81 | -0.96 | -0.66 | Pre-launch activity | -1.08 | -1.32 | -0.85 |

## Correspondence Analysis

### Attribute Scores

| | | 1 | 2 |
|---|---|---|---|
| 1 | Had Good Pre-launch Activity | 0.800 | 0.583 |
| 2 | Had an Excellent Launch | 0.642 | 0.745 |
| 3 | Is Well priced | 0.810 | 0.553 |
| 4 | Has Good Clinical Back Up | 0.482 | 0.844 |
| 5 | Has an Enthusiastic Marketing Team | 0.759 | 0.627 |
| 6 | Has an  Enthusiastic Sales Force | 0.782 | 0.600 |
| 7 | Has a Sizeable Sales Force | 0.766 | 0.590 |
| 8 | Has Opinion Leader Support | 0.590 | 0.787 |
| 9 | Has Good Relationships with Funders | 0.780 | 0.622 |
| 10 | Has Good Relationships with Doctors | 0.730 | 0.662 |
| 11 | Has Good Relationships with Pharmacists | 0.778 | 0.603 |
| 12 | Has Good Relationships with Specialists | 0.434 | 0.881 |
| 13 | No Problems with Distribution | 0.703 | 0.698 |
| 14 | Is Well Branded | 0.775 | 0.625 |
| 15 | Is a Quality Product | 0.539 | 0.813 |
| 16 | Has a Good Price | 0.792 | 0.603 |
| 17 | Is Well Advertised | 0.868 | 0.445 |
| 18 | Has Good Visibility in the Press | 0.891 | 0.406 |

## Product Scores

| | | 1 | 2 |
|---|---|---|---|
| 1 | Adco-Simvastatin | 0.950 | 0.415 |
| 2 | Coxflam | 0.133 | -0.309 |
| 3 | Cilift | -0.140 | 0.409 |
| 4 | Adco-Amoclav BD | 0.019 | 0.145 |
| 5 | Prexum | -0.535 | 0.612 |
| 6 | Lansoloc | 0.021 | -0.371 |
| 7 | Zetomax Co | -0.248 | 0.071 |
| 8 | Dicloflam Dispersable Tabs | -0.002 | -0.379 |
| 9 | Amlosyn | -0.068 | -0.385 |
| 10 | Sandoz-Glimepiride | -0.129 | -0.209 |