Strategic considerations for South African based generic pharmaceutical companies conducting business in Sub-Saharan Africa

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ABSTRACT

The evolution of Africa as a business destination following the global financial crisis in 2008 has attracted the attention of many global companies. The changing global landscape has positioned South Africa as the ‘gateway to Africa.’ Pharmaceutical companies are drawn to the rest of the continent particularly due to the number of individuals not having access to affordable medicines. Sub-Saharan Africa represents 65.9% of the global burden of disease yet only accounts for 3% of the global pharmaceutical market. With South Africa being the ‘gateway to Africa’, the focus of this research was South African based generic pharmaceutical companies as opposed to multinational companies.

A cross-sectional qualitative research design approach was adopted for the purposes of this study and generic purposive sampling was used. A sample size of nine participants was selected. A guided semi-structured interview format was used and the data collected analysed by content analysis. The first research question aimed to identify the internal and external challenges experienced in sub-Saharan Africa while the second research question aimed to identify the strategic aspects that were considered most crucial to success in sub-Saharan Africa. In addition, the contribution that these companies make to alleviating the burden of disease and identifying with the concept of shared value was also investigated.

The results of the research indicated that respondents identified the external challenges as being infrastructure, regulations, corruption, patents, counterfeit products, cultural differences, corporate governance, patient affordability, competition and the lack of data. Internal challenges were identified as financial, management commitment, skilled personnel, cost, time investment and the product portfolio. Internal challenges were highlighted as having a greater impact than external challenges although it was agreed that external challenges were significant contributors to the internal challenges experienced.

The key aspects that were highlighted as critical to the strategy formation process were the continuous strategy review process, the business model, financial aspects, the product portfolio, the market and disease prevalence, the regulatory

framework of the market, competitors and the skills required. It was also found that distribution agreements were favoured over joint ventures and that preference was generally given to importing products from South Africa as opposed to manufacturing in any of the sub-Saharan African countries. The research also indicated that products specifically developed for the South African burden of disease were generally used to penetrate the sub-Saharan African region as opposed to being specifically developed for the targeted region.

Over 78% of respondents identified with the concept of shared value but also agreed that their current company strategy did not address the burden of disease and that this was compensated for by donations and funding.

The key message that this research aims to deliver is that while the African continent presents many business opportunities for South African based generic pharmaceutical companies, rigid defining, planning and execution of a companies' strategy is still required as well as innovative solutions to the challenges posed.

DECLARATION

I, Nisha Anand Ramsuran, declare that this research report is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

(Nisha Anand Ramsuran)

Signed at ……………………………………………………

On the …………………………….. day of ………………………… 20…..

DEDICATION

Dedicated to my parents,

Anand and Manpathie Ramsuran

My sisters,

Praveena and Raksha Ramsuran

My Beautiful Niece

Simran Singh

And the memory of my grandfather

ACKNOWLEDGEMENTS

I would like to thank my parents for their overwhelming support not only for the duration of my academic studies but in each and every aspect of my life. Thank you for being my pillars of strength always.

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Thank you to the participants of this study and each of the pharmaceutical companies that allowed me access to their experiences and provided insight of immeasurable value.

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CHAPTER 1. INTRODUCTION

1.1 Purpose of the study

The purpose of this study is to identify key strategic aspects that should be considered during strategy formation, for South African based generic pharmaceutical companies, when conducting business in Sub-Saharan Africa. The study will exclude North African and South African markets. The research will aim to identify the challenges that hinder the success of South African generic pharmaceutical companies in achieving their goals and will aim to identify strategies to overcome these challenges. In addition it will aim to find the balance between profitability and addressing the burden of disease as a means of creating economic social value during strategy formulation.

1.2 Context of the study

Prasnikar (2006) defined generic pharmaceutical products as products that enter the pool of available substances, when its originator loses its exclusivity through the expiry of a patent. Generic pharmaceutical companies tend to improve their market positions when a patent expires by being first to market (Prasnikar & Skerlj, 2006). The increasing costs of medicines has resulted in a number of individuals in developing countries not having access to essential drugs (Henry & Lexchin, 2002). Sub-Saharan Africa represents 65.9 percent of the global burden of disease (Murray & Lopez, 1997) while Africa only accounts for 3 percent of the global pharmaceutical market by value (Kudlinski, 2013). While many global pharmaceutical companies have used South Africa as the gateway to access the rest of the African market, South African based generic pharmaceutical companies have been faced with many challenges in accessing the African market. Some of these include the strict regulation, the lag in product registration by the concerned regulatory bodies, the barrier of patent laws, production capacity constraints and not being awarded tenders because of cost competitiveness from local manufacturers. Competition from low cost countries such as China and India has also posed an additional challenge in penetrating the African market.

One of the key challenges when doing business in sub-Saharan African countries is that these types of emerging economies are extremely volatile because of changes in the macro-economy, the industry structure and frequent changes in institutions (Meyer & Tran, 2006). Many factors influence a company's success on the continent. These factors may be externalities relating to the political, economic, social, technological, legal or environmental requirements. They may also be internal factors relating to the company's capabilities, core competencies and product mix.

South African based generic pharmaceutical companies need to formulate strategies that identify the challenges within the African markets while addressing the burden of disease. A sustainable competitive advantage may require launching new strategic initiatives and creating a portfolio of advantages that will result in success (McGrath, 2013). The question then arises as to how these companies intend to work together through strategic partnerships with the World Health Organisation (WHO) and other concerned bodies to address the burden of disease while ensuring a sustainable competitive business strategy. Operational capabilities to improve distribution may require partnering, licensing agreements, joint ventures or strategic collaborations with African based companies.

1.3 Problem statement

1.3.1 *Main problem*

The main problem identified is the inability of South African based generic pharmaceutical companies to timeously identify and overcome the hindrances that prevent success in sub-Saharan Africa and that make further penetration of the growing African market difficult. It is therefore compelling for key strategic aspects to be identified at the very initial stages of strategy formation in order to achieve a sustainable strategy that offers a competitive advantage as well as mitigates risks posed by both internal and external factors.

1.3.2 *Sub-problems*

The first sub-problem is to identify the failure of the current strategies in light of the challenges encountered. It will include identifying the internal and external challenges faced as well as identifying the competitive environment that has hindered the success of South African based generic pharmaceutical companies.

The second sub-problem is to identify the key strategic aspects during strategy formation that would be most beneficial in penetrating the African market as well as alleviating the burden of disease experienced on the continent.

1.4 Significance of the study

The study will provide strategic guidance to South African based generic pharmaceutical companies conducting business within the sub-Saharan African region. It will provide guidance on the partnerships that need to be formed and strategic considerations in order to address the ethical dilemma with regard to alleviating the burden of disease and providing safe, efficacious and quality drugs while still being cost effective and driving a sustainable strategy. This study may add value in acting as a starting point for these companies by helping them to identify core challenges in the African market and providing key strategic aspects that will form the backbone of strategy formulation. While many studies have focused on addressing the pharmaceutical industries challenges in Africa, it has been analysed from a multinational company's point of view. This study will aim to look at the industry through the perspective of South African based companies. Many organisations have failed to define market-tailored and effective business strategies for each market segment and defining appropriate timelines (Buente et al, 2013). This study will assess if South African based generic pharmaceutical companies are in agreement with the view of multinational companies.

1.5 Delimitations of the study

The study will focus on:

- South African based generic pharmaceutical companies
- The sub-Saharan African region with the exception of South Africa
- Multinational pharmaceutical companies operating in Africa will be excluded from the study as the focus will be primarily on South Africa based companies
- Current business strategies for the sub-Saharan Africa regions
- Current challenges experienced
- Internal and external factors affecting the pharmaceutical sector
- Identifying key strategic aspects during strategy formation
- The sample will be taken from individuals directly involved in the strategy formation process

1.6 Definition of terms

The research report may contain the following terminology:

WHO- World Health Organisation

FDA- US Food and Drug Administration

FDI- Foreign Direct Investment

GDP- Gross Domestic Product

IMS- Intercontinental Marketing Services

OTC- Over the counter

SA-South Africa

1.7 Assumptions

It is assumed that all participants:

- have been involved in strategy formation for Africa
- have had extensive experience in doing business in Africa
- are willing to share their lessons learnt from their experiences
- have contributed to improving their current strategy
- are committed to providing affordable healthcare to the African market
- realise the ethical and moral dilemmas associated with the pharmaceutical industry
- are willing to contribute to the greater good of society

CHAPTER 2. LITERATURE REVIEW

2.1 Introduction

The extensive literature review discussed in this chapter was used as the basis for deriving the research questions and is sub-divided into sections so as to highlight the links between the pharmaceutical sector in Africa and the role it plays in eliminating the burden of disease. An overview of Africa as the next big economy will be described, followed by the position of the pharmaceutical industry in Africa. Background on the burden of disease experienced and the concept of shared value will also be discussed followed by a description of possible strategies in emerging economies. This will then lead to the description of each of the research questions that will be answered during the course of this research.

2.2 Background discussion

2.2.1 *The evolution of Africa as a business destination*

From the year 2000, when The Economist ran the cover story entitled “The Hopeless Continent” to the year 2013 that featured the article entitled “Africa Rising” and “The Hopeful Continent”, Africa as a business destination has experienced a major turnaround. Africa was never perceived to be the continent that had much potential in comparison to its Western counterparts.

However, following the global financial crisis in 2008, the landscape of opportunity offered by the African continent has since been redefined. Seven of the fastest growing economies in the world come from the African continent (Berman & Balde, 2013). The emergence of a “white collar middle class” and an increase in the purchasing power of consumers in Africa has been a major driver for growth on the continent (Berman & Balde, 2013).

Africa is home to a population of almost 1 billion people with an increase in foreign direct investment of 27 percent from 2010 to 2011 (Redvers, 2012). Figure 1 is an indication of the foreign direct investment (FDI) flows into Africa showing that during 2008 foreign direct investment peaked at just under $60 billion and by 2012 foreign direct investment was around $45 billion.

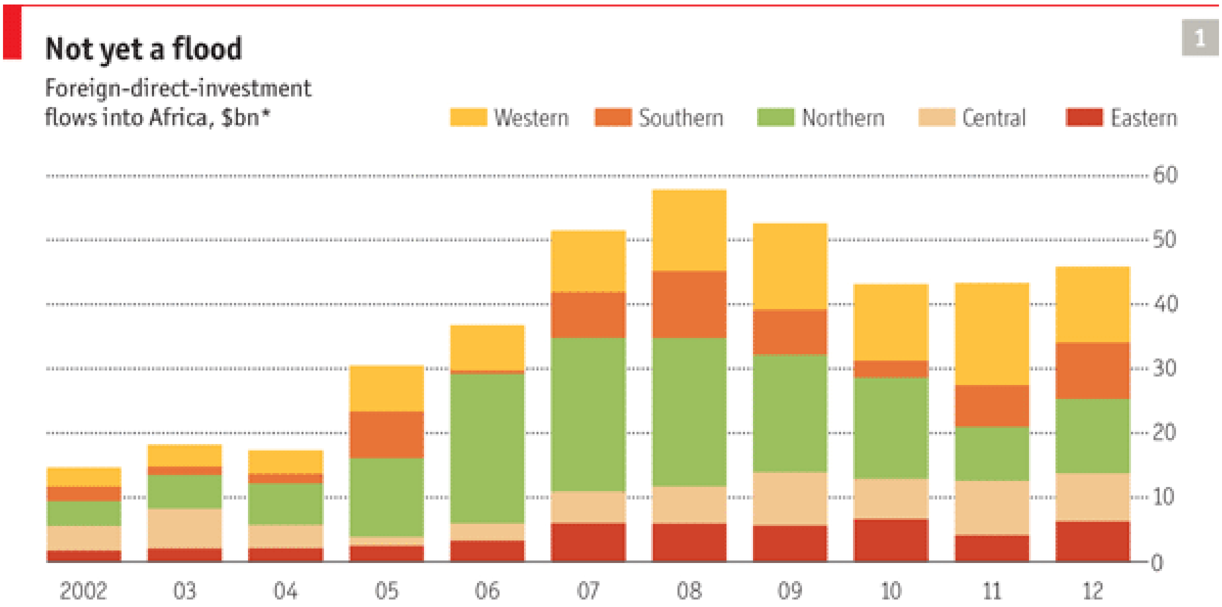

Figure 1: Foreign direct investment in Africa (August, 2013)

Figure 2 indicates the percentage change in gross domestic product (GDP) of several countries in Africa. Between 2002 and 2012, countries in Africa such as Ghana, Nigeria, Ethiopia and many more experienced a percentage GDP change of greater than 6 percent. South Sudan and Zimbabwe were the only countries with a GDP change of less than 0 percent.

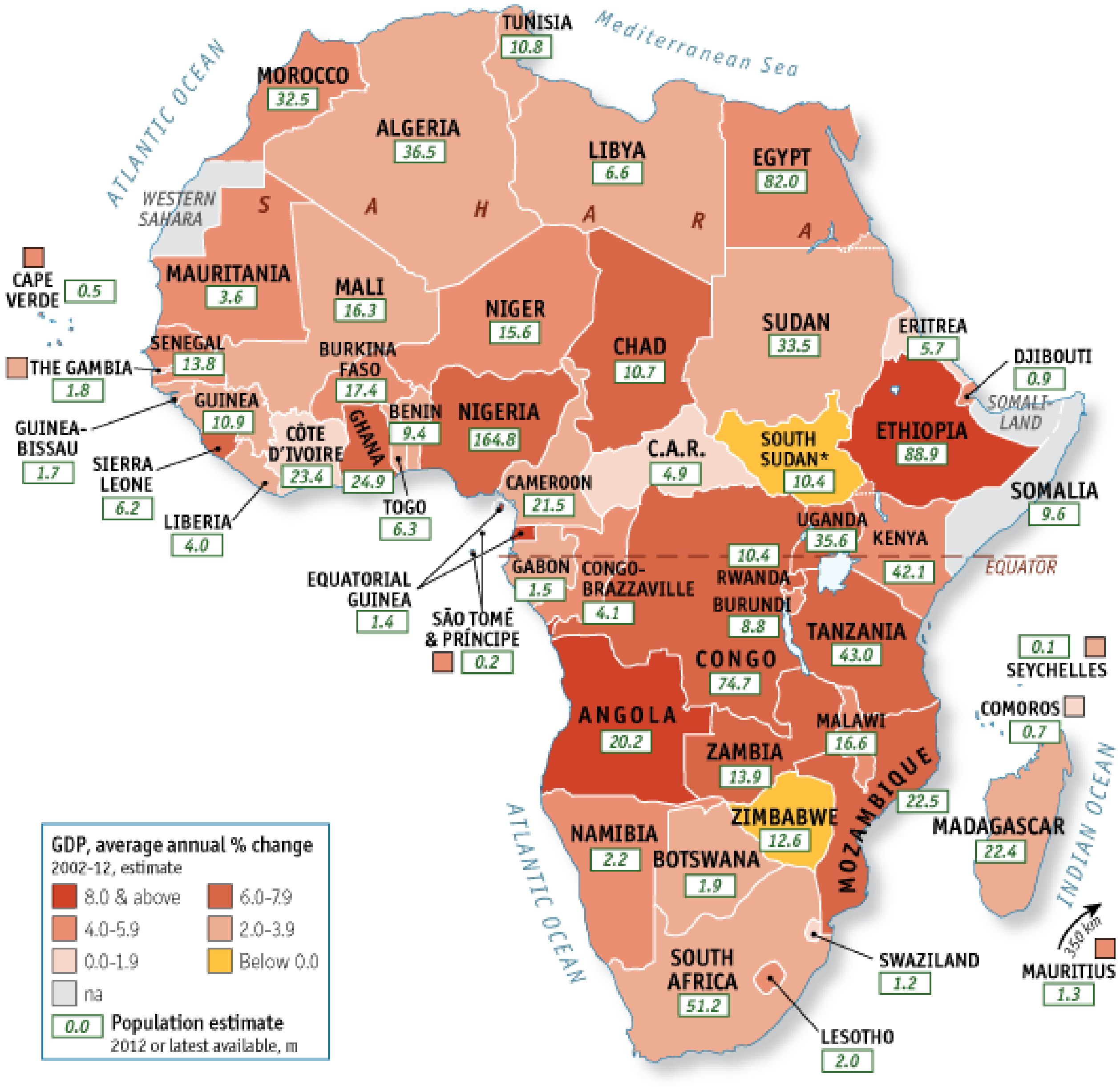

Figure 2: Percentage GDP change in countries in Africa (August, 2013)

2.2.2 *The pharmaceutical industry*

Intercontinental Marketing Services (IMS) estimated total global spending on pharmaceutical products to be 1 trillion US dollars by 2014 and 1.2 trillion US dollars by 2017 (IMS, 2013). Africa contributes only 3 percent of the global pharmaceutical market by value (Kudlinski, 2013). Pharmaceutical companies may not necessarily be described as substantial in terms of their revenues but they are very profitable primarily due to the focus of their products being low volume and high margin type models.

The rising costs of essential pharmaceutical drugs has resulted in millions of individuals in poorly developed countries not having access to essential medicines (Henry & Lexchin, 2002). The elevated cost of pharmaceutical products can be attributed to the high costs of research and development associated with the rigorous testing of a newly discovered molecule. This testing regimen, referred to as a clinical trial, assesses the safety, the quality and the efficacy of the newly discovered molecule. Successful clinical trials result in what is called a patented drug. A common understanding of a patented pharmaceutical drug is one in which the intellectual property of the innovator is protected and no other pharmaceutical drug having the same composition or indications may be sold in the market. This gives the innovator exclusive access to the market for a specified period of time. Until such time that the patent is in place, no generic alternative may be manufactured or marketed. The repercussions of these patents being in place is the elevated cost of essential medicines primarily due to the fact that the innovator is in a similar position with the newly discovered drug as is a company that runs a monopoly.

The poor availability of essential medicines has prompted pharmaceutical companies to donate pharmaceutical products to emerging economies. While some donations and programmes have been successful, some have been met with much criticism. The development and manufacture of generic pharmaceutical products is a less costly and much more sustainable avenue of supplying essential drugs to emerging markets rather than donations (Guilloux & Moon, 2001). Government intervention is much needed in African countries primarily due to market failure (Henry & Lexchin, 2002) in the form of high costs of drugs.

Chittoor and Ray (2007) defined many different levels at which pharmaceutical companies are classified. The low end of the value chain in the pharmaceutical industry would be defined as suppliers of active pharmaceutical ingredients (API's) whereas the high end of the pharmaceutical industry would be defined as companies involved in the discovery and development of new chemical entities. Figure 3 is a schematic of the levels of the value chain that pharmaceutical companies can be classified into.

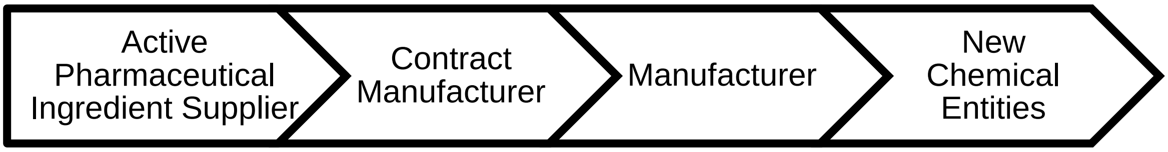

Figure 3: Value chain categorisation of pharmaceutical companies

Prasnikar and Skerlj (2006) explained the new product development process for generic pharmaceutical companies as shown in figure 4. Prasnikar and Skerlj (2006) identified five phases of product development in generic pharmaceutical companies. Phase zero was described as the stage at which ideas were generated. Phase 1 was considered the feasibility stage that involved only preliminary assessment that was completed on paper. Phase 2 involved the actual development stage of the drug and assessing the stability and manufacturability of the drug. Phase 3 involved the preparation of registration documents and clinical trials and the production of three registration batches. Phase 4 is the application for registration of the drug and is completed once registration from the regulatory authorities is obtained. Phase 5 is the launch phase and involves the actual commercialisation of the drug.

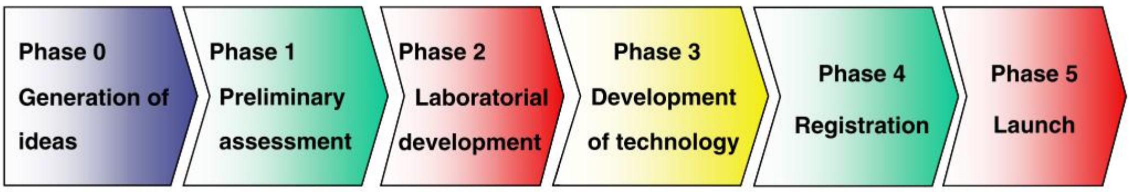

Figure 4: New product development process of generic pharmaceutical companies (Prasnikar & Skerlj, 2006)

Figure 4 is therefore a schematic of the entire process for pharmaceutical development for generic pharmaceutical companies and in itself is a long and tedious process.

2.3 Challenges experienced by the pharmaceutical industry

Games (2004) described the key challenge for doing business in Africa in the 21st century as being capable of developing an enabling environment. Challenges encountered in creating this enabling environment include both external and internal factors. When discussing challenges as being either stimulated by internal factors or external factors, there exists much overlap between the two as some internal factors are an indirect consequence of external factors. External factors would also include factors related to regulations and legislation and generally affect all companies while internal factors are specific to the organisation.

2.3.1 *External challenges*

Berman (2013) referred to poor road infrastructure in many African countries as a major contributor to distribution challenges. These distribution challenges can prove to be costly and the cause of delays. Eifert and Gelb (2008) were in agreement with Games (2004) and confirmed that indirect costs such as infrastructure and services accounted for a high share of an organisations costs when doing business in African countries. Games (2004) also added that many South African organisations referred to their investment in Africa as long term. Games (2004) indicated that some of the greatest challenges faced on the continent are still related to:

- the high political and fiscal risk
- strong government presence in the economy and a weak private sector
- high business costs related to infrastructure and the lack of basic services
- corruption and poor governance
- institutional constraints

While these challenges are overarching and would apply to all industries, there are unique challenges that the pharmaceutical industry faces. Henry (2002) explained that the high costs of pharmaceutical products in emerging economies were due to high taxes, mark-ups and dispensing fees in addition to poor distribution and purchasing channels as well as uncertainty in terms of product quality following the emergence of counterfeit drugs. Henry (2002) also included the following challenges:

- Poor distribution channels
- Counterfeit medication
- Institutional barriers
- Patent protection
- Inadequate raw material supply and the high cost of imports making it difficult to compete with emerging economies such as India and China

2.3.2 *Internal challenges*

Internal challenges experienced by organisations are sometimes stimulated by external factors. The cost of doing business, to an organisation, can be considered as an internal factor. However, Eifert and Gelb (2008) described these costs as indirect costs to a company as a result of external factors such as infrastructure and services. This means organisations are required to invest more in African countries as opposed to developed countries that already have these basic services in place. Internal challenges can be described as:

- Poor quality medication as a results of poor quality management systems
- Lack of data and information available to the company
- Inadequate supply chains functions relating to the design of organisational structure
- Limited local production

In 2012, the Mail & Guardian ran a report on Africa titled ‘No longer the hopeless continent.’ The article highlighted that although Africa’s growth was impressive, there are still many hurdles to overcome and experts still caution against corruption, inequality and poor governance and that it cannot simply be ignored (Redvers, 2012). The Africa progress panel at the World Economic Forum said that “the extreme pessimism surrounding Africa a decade ago was unwarranted” but so is “the current wave of blinkered optimism” (Redvers, 2012).

2.3.3 *Research Question 1*

What are the internal and external challenges that South African based generic pharmaceutical companies' experience that result in the failure of the companies' current strategy when conducting business in sub-Saharan Africa?

2.4 Strategy

2.4.1 *The burden of disease*

Henry (2002) stated that the process of drug development is failing to address the needs of individuals in less-developed countries. The technical expertise and knowledge offered by multi-national pharmaceutical companies is a way to guarantee the quality and use of drugs (Henry & Lexchin, 2002). Africa faces the heavy burden of communicable and non-communicable diseases (Kirigia & Barry, 2008). In 2005, of the 58 million people that died globally, 18.8 percent were from the African continent (Kirigia & Barry, 2008). 19 percent of deaths were related to HIV/ AIDS, 10 percent to lower respiratory infections, 8 percent to malaria, and 7% to diarrhoeal diseases (Kirigia & Barry, 2008). It is believed that access to effective public health care could have prevented majority of the deaths if challenges related to leadership and governance, healthcare workers, access to medical products and vaccines could have been addressed (Kirigia & Barry, 2008). At a conference held in 2007 in Geneva, the WHO acknowledged the unreliable medical supply systems, unaffordable prices, wide variance in quality and safety, irrational drug use and the rampant corruption in medical products as serious challenges in Africa in eliminating the burden of disease experienced (WHO, 2007). It is these challenges that has contributed to the lack of essential medicines to most of the population that is in need of treatment (Kirigia & Wambebe, 2006). The World Health Organisation (WHO, 2005) defined its heath related millennium development goals (MDG) for Africa as:

MDG 1: Eradicate extreme hunger and poverty

MDG 4: Reduce child mortality

MDG 5: Improve maternal health

MDG 6: Combat HIV/ AIDS, Malaria and other diseases

MDG 7: Ensure environmental sustainability

MDG 8: Develop a global partnership for development

Generic pharmaceutical companies would be most concerned with MDG 6 that strives to combat HIV/AIDS, Malaria and other diseases and it would be in their best interest to partner with the World Health Organisation to help achieve these goals.

2.4.2 *Shared value*

Following the introduction of the global burden of disease, it seems only appropriate to discuss Porter and Kramer's strategic theory on shared value. Porter and Kramer (2011) suggested that all companies should look at strategic decisions and opportunities using the concept of shared value . The concept of shared value focusses on the relationship between societal and economic progress (Porter & Kramer, 2011). It is perceived that companies have been prospering at the expense of the greater community and that their approach to value creation has resulted in companies being short-sighted (Porter & Kramer, 2011). Porter and Kramer (2011) argued that businesses must reconnect company success and societal progress and should focus on creating value by addressing the needs and challenges of society. Zenger (2013) stated that companies should be less focussed on creating a competitive advantage and should focus more on growth that creates economic social value.

Porter and Kramer (2011) defined three distinct ways in which shared value can be created and that these ways were part of a cycle whereby creating value in one area gives rise to creating opportunities in other areas. These distinct ways were:

- **By reconceiving products and markets**- involves companies actively identifying the benefits, disadvantages and societal needs that are associated with a company's products. This will lead to the discovery of new opportunities, differentiation and repositioning in new and traditional markets (Porter & Kramer, 2011).

- **Redefining productivity in the value chain**- the concept of redefining the value chain stems from the numerous societal issues such as working conditions, health and safety, access to natural resources and water use. Porter and Kramer (2011) suggested that many externalities are the cause of internal costs within a company and these externalities stem from societal problems that affect the company's value chain. Some of the most important factors that Porter and Kramer (2011) highlighted as effective ways of creating shared value by addressing the value chain are:
    - Energy use and logistics
    - Resource use
    - Procurement
    - Distribution
    - Employee productivity
    - Location

- **Building supportive industry clusters at the company's location**- the productivity and innovation of a firm is related to the geographic concentration of the firm, referred to as clusters (Porter & Kramer, 2011). The cluster involves suppliers, businesses, service providers and infrastructure within a particular field (Porter & Kramer, 2011).The concept of cluster development relates to building relationships and collaborating with both related businesses as well as with academic institutions and organisations that encompass the surrounding community.

Shared value is therefore the next wave related to business innovation and growth (Porter & Kramer, 2011). In essence it can be defined as "policies and operating practices that enhance the competitiveness of a company while simultaneously advancing the economic and social conditions in the communities in which it operates" (Porter & Kramer, 2011).

2.4.3 *Strategy in emerging economies*

Henry (2002) implied that better access to essential drugs is possible through voluntary licensing agreements between multi-national pharmaceutical companies and manufacturers in developing countries. The greatest barriers to entry as described by Porter (2008) and which serve as advantages to many innovator organisations are drug patents. Generic pharmaceutical manufacturers in contrast do not enjoy the same luxury that is enjoyed by innovator companies. The generic pharmaceutical market landscape is challenging and is driven by cost competitiveness. The competitive advantage of generic pharmaceutical companies lies in being “first to market.” Any generic product launched after the first generic product is susceptible to price constraints and has a weaker brand identity.

When expanding businesses across borders, value chains are spread across countries (Ghemawat, 2007). A global integration strategy was described by Ghemawat (2007) and called the triple A model. The model discussed global integration strategies relating to:

- **Adaptation**- to attain local relevance while aiming to achieve economies of scale (Ghemawat, 2007)
- **Aggregation**- to achieve scale and scope through international standardisation (Ghemawat, 2007)
- **Arbitrage**- to achieve absolute economies through international specializations (Ghemawat, 2007)

Pharmaceutical companies have shifted many of their core activities from the discovery and development of new molecules and innovative drugs to marketing of products that ensure a maximum profit in high-income countries (Henry & Lexchin, 2002). Chittoor and Ray (2007) described the global strategy of Indian pharmaceutical organisations as following one of four strategies:

- **Exploration**- companies with high research and development intensity with respect to new products and new markets
- **Exploitation**-companies that have focussed on exploiting their existing skills
- **Outsourcing**-companies that have started out as active pharmaceutical ingredient suppliers to multi-national companies and formed an outsourcing partnership with these companies
- **Emerging Globals**- companies that are driven to acquire all round capabilities so as to emerge as international players
- **Globals**- companies where more than 70% of its revenue is from foreign markets

Strategies should be formulated so as to define the environment of the enterprise as opposed to letting the environment define the enterprise (Kim & Mauborgne, 2009). Some of the most important aspects of strategy formulation involve:

- **The value proposition**- aims at attracting buyers (Kim & Mauborgne, 2009)
- **The profit proposition**- ensures that the company is profitable from the value proposition (Kim & Mauborgne, 2009)
- **The people proposition**- aims to motivate individuals to work with the company to execute its strategy (Kim & Mauborgne, 2009)

Kim and Mauborgne (2009) defined two strategic approaches using the value proposition, the profit proposition and the people proposition. The approaches were called either the structuralist approach or the reconstructionist approach. The structuralist approach makes use of all three value propositions in pursuit of either differentiation or cost (Kim & Mauborgne, 2009). The reconstructionist approach in contrast aims to align all three propositions in pursuit of both differentiation and cost (Kim & Mauborgne, 2009).

Running a business and competing in an overcrowded industry is by no means a way of sustaining high performance (Kim & Mauborgne, 2004). The Blue Oceans strategy as defined by Kim and Mauborgne (2004) is one in which demand is created rather than fought over and provides sufficient opportunity for business growth that is rapid as well as profitable. Strategies might be ideal on paper but the greatest failure of well written strategies is execution. Guillen and Garcia-Canal (2012) described organisations that grow in emerging economies as successful organisations because of their focus on execution, their flexibility to expand with abandon and their ability to embrace chaos.

McGrath (2013) advised that the age of a sustainable competitive advantage has now moved to an arena that is called transient advantage. McGrath (2013) stated that organisations that intend to create a portfolio that encourages a transient advantage should focus on a combination of customer segments rather than an industry and set broad themes that allow for experimentation within a company. The concept of transient advantage incorporate metrics that encourage entrepreneurial growth and refocuses the business on experiences and solutions to problems (McGrath, 2013). The strengthening of relationships and networks, the promotion of healthy disengagement and the avoidance of harsh restructuring also formed the basis of McGrath (2013) definition of transient advantage in addition to driving premature stages of innovation and being willing to experiment and learn.

Strategies of generic pharmaceutical companies that intend to penetrate the sub-Saharan African market, would no doubt to some extent, have to be centred around the disease profiles that exist on the continent. The high prevalence of HIV, TB and waterborne diseases would ultimately be the focus of any generic pharmaceutical company intending to penetrate sub-Saharan Africa. Cohen and Lybecker (2005) discussed the strategies of emerging South American economies and essentially the need for lower drug prices when dealing with the HIV/AIDS crisis. Cohen and Lybecker (2005) concluded that that Brazil’s success as an emerging economy in dealing with the HIV/AIDS crisis was related to its strong government support and the promotion of local manufacturers thereby reducing costs and improving distribution.

2.4.4 *Research Question 2*

What are the key strategic aspects during strategy formation that should be included when attempting to penetrate the sub-Saharan African generic pharmaceutical market as well as alleviate the burden of disease experienced on the continent?

2.5 Conclusion of Literature Review

In conclusion to the extensive literature, one can quite safely say that Africa as a business destination has evolved since the last decade and following the global financial crisis in 2008, it has most definitely become a highly sought after destination for foreign direct investment. With GDP's exceeding 6 percent in most African countries and FDI at just below $50 billion, it is no surprise that businesses are taking their African expansion strategies more seriously. But as the Africa progress panel at the World Economic Forum warned that "the extreme pessimism surrounding Africa a decade ago was unwarranted" but so is "the current wave of blinkered optimism" (Redvers, 2012). Challenges for doing business in Africa still remain a major hurdle to success. The generic pharmaceutical industry is no exception in this regard; in that despite the need for essential medical products within Africa, many barriers still exist that inhibit market penetration. Africa only makes up 3 percent of the global pharmaceutical market by value but represents 69.5 percent of the global burden of disease. Generic pharmaceutical manufacturers face the harsh reality of patent laws that limits market entry and therefore innovator companies benefit from the high cost of essential medicines. However this limits access of these essential medicines to many of the poorest individuals that need it the most.

In addition to these patent laws, generic pharmaceutical manufacturers are faced with a number of external and internal challenges that further inhibit their success on the African continent. Some of these challenges include infrastructure, distribution, access to basic services, institutional barriers and high costs. The WHO has set core millennium development goals to address the burden of disease. This also provides an opportunity for generic pharmaceutical companies in South Africa to partner with the WHO to address both the burden of disease as well as expand its business into Africa. This partnership strategy would allow generic pharmaceutical companies to align themselves with the concept of shared value that improves society. Many strategies exist for entering and penetrating the African market, but central to it, is the ability of companies to be flexible and identify the need for market specific strategies when expanding into Africa. Ghemawat (2007) triple A model is an attempt to identify aspects that are essential to successful business expansion across borders.

From the literature review, it was noticed that strategies for generic pharmaceutical companies conducting business in sub-Saharan Africa involve a number of complex issues ranging from patent laws to poor infrastructure to the burden of disease and to creating shared value. It is also important to realise that the wealth of information presented in the literature review was derived from the perspective of multinational companies and generic pharmaceutical companies based in emerging economies such as India. The unique perspective of viewing the generic pharmaceutical industry through the eyes of South African based organisations has been given little attention in academic research and very little established research exists on the topic. This research therefore aims to highlight key aspects for South African based generic pharmaceutical companies that should be considered during strategy formation when expanding their business into sub-Saharan Africa. The research will aim to answer the research questions below.

2.5.1 *Research Question 1:*

What are the internal and external challenges that South African based generic pharmaceutical companies' experience that result in the failure of the companies' current strategy when conducting business in sub-Saharan Africa?

2.5.2 *Research Question 2:*

What are the key strategic aspects during strategy formation that should be considered when attempting to penetrate the sub-Saharan African generic pharmaceutical market as well as alleviate the burden of disease experienced on the continent?

CHAPTER 3. RESEARCH METHODOLOGY

This chapter aims to describe the research methodology and the research design that was adopted for conducting this study. The population and sampling techniques that were used are explained in addition to the research instrument and the procedures for data collection, data analysis and data interpretation. This chapter will also identify limitations of the study and describe the validity and reliability related to the study.

3.1 Research methodology / paradigm

A qualitative research paradigm was used as the basis for this research. Creswell (2014, p. 183) referred to qualitative research methods as methods that rely on text and image data. Qualitative research makes use of unique steps in data analysis and draws on diverse designs (Creswell, 2014). Qualitative research is a research strategy that places emphasis on words in the collection and analysis of data as opposed to quantification (Bryman, 2012, p. 380). Creswell (2014, p. 4) explained qualitative research as an approach to understanding the meaning that individuals or groups attribute to a social or to a human problem.

Several authors have described the characteristics of qualitative research, but there is common agreement on some aspects. Creswell (2014, p. 185) described those commonalities as:

- **The natural setting**- the information gathered is by interacting with individuals directly in their context and is a major characteristic of qualitative research.
- **The researcher as the key instrument**- researchers are directly involved in the data gathering process through interviews and do not rely on instruments developed by other researchers.
- **Multiple sources of data**- the researcher collects information through various forms and organizes it into themes

- **An inductive and deductive process**- involves the researcher identifying themes and then determining if more evidence is required to support the theme identified
- **Emergent design**- focuses on learning about the problem from participants and therefore the initial plan for the research is not tightly prescribed
- **Holistic approach-** the researcher aims to identify aspects of the research by looking at the bigger picture

So while qualitative research involves the systematic collection, organisation and interpretation of textual material (Malterud, 2001), it doesn't come without critique. Qualitative research has been described as being too subjective and relies too heavily on the researcher's interpretation of what is significant (Bryman, 2012, p. 405). It has also come under criticism for being difficult to replicate, lacking transparency and having the problem of generalization that cannot be representative of the entire population (Bryman, 2012, p. 406).

Having considered both the advantages and disadvantages of the qualitative research paradigm; it was still deemed to be the most appropriate means of conducting this research. Africa as a business destination for many companies is still in its infancy and while much has been written about it, South African based companies in the generic pharmaceutical sector still form a very small percentage of the global pharmaceutical sector. South African based generic pharmaceutical companies are still novices in the pharmaceutical industry in sub-Saharan Africa with fairly little experience in comparison to their multinational counterparts. It was for this reason that the qualitative research paradigm was seen as appropriate as opposed to a quantitative research paradigm.

3.2 Research Design

The methodological approach that was used to conduct this study will be a cross-sectional design approach. The cross-sectional design approach involves the collection of information at a single point in time in order to collect data that is analysed to identify patterns (Bryman, 2012, p. 58). The cross sectional design approach was identified as being the most suitable approach for the study as it aimed to define the results for the entire population of generic pharmaceutical companies based in South Africa but conducting business in sub-Saharan Africa using South Africa as the gateway to the rest of Africa. The advantage of the cross-sectional design approach is that it assesses the situation at a single point in time for the population selected. Disadvantages is that it may lead to bias in interpretation of the results in that the information gathered may have been affected by recent events that the participants may have encountered prior to the interview being conducted. This may cause distortion in the results and may be influenced by that particular event as opposed to being a completely objective view.

Chittoor and Ray (2007) conducted a study that focussed on the Indian pharmaceutical industry and the internationalisation strategies of these Indian pharmaceutical companies. Chittoor and Ray (2007) used a strategic group analysis approach for the purposes of their study as well as mixed research methods combining both qualitative and quantitative methods. However, for the purposes of this study, a purely qualitative method was selected as the South African pharmaceutical industry is significantly smaller in size than the Indian pharmaceutical industry.

3.3 Population and sample

3.3.1 *Population*

The population that was selected for the study included three of the largest generic pharmaceutical companies based in South Africa and conducting business in sub-Saharan Africa. The three pharmaceutical companies chosen collectively hold a 60 percent market share within the South African generic pharmaceutical market. The research involved identifying challenges experienced in sub-Saharan Africa and strategic considerations that should be taken into account when formulating a strategy for doing business in sub-Saharan Africa. It was for this reason that individuals involved with the strategy making process were selected. This included Senior Management and

Strategists familiar with the company's operations in sub-Saharan Africa and also individuals that actively participated in the process of strategy formation.

3.3.2 *Sample and sampling method*

The sampling method used for the purposes of this study was generic purposive sampling. The key considerations behind generic purposive sampling were the research questions. Generic purposive sampling is conducted purposively but not necessarily with the intention of generating theory and theoretical categories (Bryman, 2012, p. 422).

The total sample size was nine individuals at either a senior management level or strategic level within the organisation and responsible for, or involved with the company's strategy formulation process for sub-Saharan Africa.

Table 1: Profile of respondents

Description of respondents	Number sampled
Senior Manager/ Strategist (Pharmaceutical company 1)	3
Senior Manager/ Strategist (Pharmaceutical company 2)	3
Senior Manager/ Strategist (Pharmaceutical company 3)	3

3.4 The research instrument

A guided semi-structured interview format was used as the research instrument for the purposes of this study. The first part of the interview schedule focused on the challenges that generic pharmaceutical company's experience when conducting business in sub-Saharan Africa. The second part of the interview schedule aimed to identify key aspects that the interviewees considered critical during the process of strategy formulation. The interview schedule was compiled so as to ensure that all questions were open-ended and that additional insight into the research questions could be gained. Appendix A is a representation of the format of the semi-structured interview schedule that was adopted.

3.5 Procedure for data collection

Semi-structured interviews were used to collect data in an attempt to answer each of the research questions. Respondents were asked to avail themselves for a minimum of one hour to ensure sufficient time to conduct the interview. Detailed notes of interviews were taken.

3.6 Data analysis and interpretation

Following the interviews, the data was analysed using content analysis. Hsieh and Shannon (2005) defined qualitative content analysis as a research method for the interpretation of text data through systematic classification of identifying themes or patterns.

Bryman (2012) discussed the advantages of content analysis as being:

- Transparency that allows content analysis to be an objective method of analysis
- Flexibility that makes it applicable to a wide range of unstructured textual information
- Accessibility to groups that it may be difficult to gain access to

Content analysis has also been criticised for being too subjective and only as good as the documents are. Documents should be assessed for authenticity, credibility and representativeness (Bryman, 2012).

Based on the research design and research instrument, content analysis was selected as the most appropriate analysis tool to answer the research questions.

3.7 Limitations of the study

Some of the limitations of the study were:

- The researcher was from the pharmaceutical industry and information might not be readily forthcoming as the researcher could be viewed as a competitor
- The researcher had to be as objective as possible without any personal bias based on the researchers experience in the industry
- The opinions of all interviewees may distort the companies' actual stance on the topic due to individual bias

3.8 Validity and reliability

Much has been written about validity in qualitative research and while many definitions exist, there seems to be general consensus that qualitative researchers must demonstrate that their research is credible (Creswell & Miller, 2000). Schwandt (2007) defined validity as to how accurately the account represents individual participants realities of social phenomena and how credible it is to these social phenomena.

3.8.1 *External validity*

The population and sample chosen were selected with the intention of representing the entire population of South African based generic pharmaceutical companies. Considering that the three pharmaceutical companies that were selected for the research collectively hold a market share of more than 60 percent of the South African market and that the data collected is representative of the company as opposed to the individual's views, the study should be replicable. The time between interviews was also minimised as far as possible to prevent any external events that may occur during the course of the research from affecting the results.

3.8.2 *Internal validity*

A common understanding of internal validity is the researcher's view of how likely the findings of the study are related to reality. The researcher in this study was well seasoned in the pharmaceutical industry and was likely able to evaluate any discrepancies found. The study with the use of content analysis was completely transparent to allow external analysis and interpretation if necessary.

3.8.3 *Reliability*

By using a cross-sectional research design, it was assumed that the results will apply to the entire population of generic pharmaceutical companies; however this assumption cannot be readily made without considering if all generic pharmaceutical companies based in South Africa are targeting the same market segment. The diversity of the pharmaceutical industry as a whole has seen that not all pharmaceutical companies are significant contributors in all sectors. The diversity of the over-the-counter (OTC) market, prescription market and hospital product market does not see all companies featuring well in all sectors. However the interview schedule was structured in such a way so as ensure that questions are open ended and not restrictive.

CHAPTER 4. PRESENTATION OF RESULTS

4.1 Introduction

This chapter will present the results obtained using the research methodology explained in Chapter 3. The results obtained by using the actual research instrument as indicated in Appendix A and the data collection technique of guided semi-structured interviews will be presented in this chapter. The data collected was analysed using content analysis and themes were identified that were relevant to either research question 1 or research question 2. This chapter is divided into two sections. The first section relates to research question 1 that aims to determine the internal and external challenges that South African based generic pharmaceutical companies encounter when conducting business in the Sub-Saharan African region. This section is separately divided into the external challenges, internal challenges and the challenges that have a greater impact on these generic pharmaceutical companies. The second section of this chapter relates to research question 2 and aims to determine the strategic aspects that should be considered during strategy formation for these generic pharmaceutical companies. Research question 2 is addressed by first presenting the results related to strategy formation and thereafter presenting the results related to supply chain operations. The burden of disease, the concept of shared value and their relationship to strategy formation is also presented as an aspect of research question 2. The presentation of results chapter ends with a summary of all results.

4.2 Results pertaining to Research Question 1

What are the internal and external challenges that South African based generic pharmaceutical companies' experience that result in the failure of the companies' current strategy when conducting business in sub-Saharan Africa?

4.2.1 *External Challenges*

The external challenges that emerged from respondents that were interviewed were categorised into broad themes and the frequency of these themes amongst respondents were assessed. Table 2 represents the frequency of specific themes that were identified as external challenges. Figure 5 is a graphical representation of the frequency of specific themes identified as external challenges.

Table 2: Frequency of specific themes that were identified as external challenges

Themes	N (9)	%
Infrastructure	9	100
Regulations	9	100
Corruption	6	67
Patents	6	67
Counterfeit Products	6	67
Cultural Differences	4	44
Corporate Governance	2	22
Patient Affordability	2	22
Competition	2	22
Lack of Data	2	22

From table 2 it can be seen that the broad themes that were identified as external challenges to South African based generic pharmaceutical companies when conducting business in sub-Saharan Africa were infrastructure, regulations, corruption, patents, counterfeit products, cultural differences, corporate governance, patient affordability, competition and the lack of data.

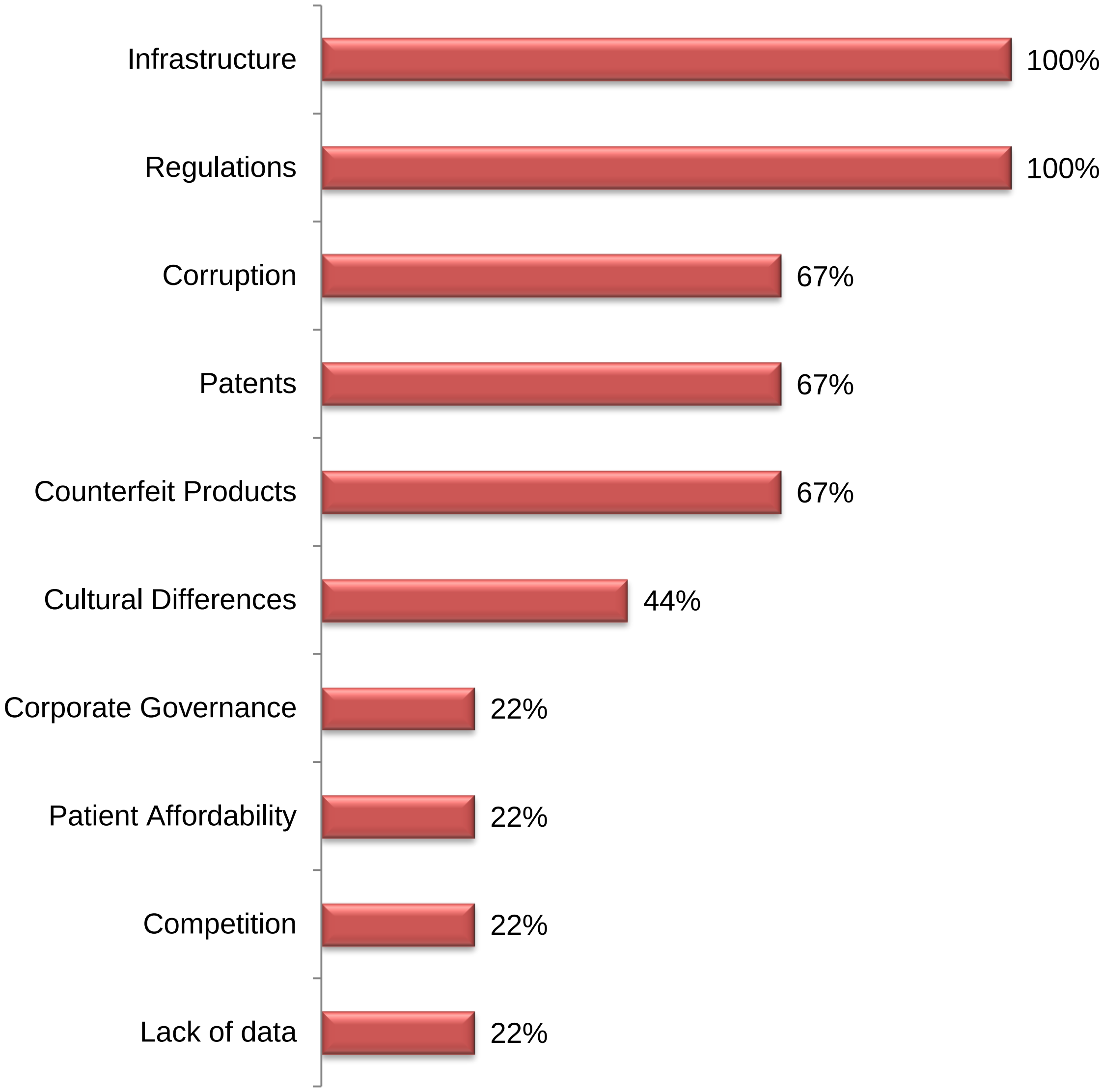

Figure 5: Graphical representation of the frequency of specific themes that were identified as external challenges

It can be clearly seen from figure 5 that the frequency for infrastructure and regulations was the highest at 100%. This was significant as it indicated that all nine of the respondents interviewed had identified infrastructure and regulations as an external challenge. The frequency of corruption, patents and counterfeit products were 67% respectively and were representative of six out of nine respondents. Cultural differences had a frequency of 44% that was representative of four out of nine respondents. Corporate governance, patient affordability, competition and the lack of data were at comparative frequencies of 22% respectively that were representative of two out of nine respondents.

4.2.2 *Internal Challenges*

Table 3 is an indication of the frequency of respondents that identified specific themes as internal challenges experienced by these South African based generic pharmaceutical companies. Figure 6 is a graphical representation of the frequency of themes identified as internal challenges.

Table 3: Frequency of specific themes identified as internal challenges

Themes	N (9)	%
Financial	9	100
Management Commitment	7	78
Skilled Personnel	6	67
Cost	3	33
Time Investment	3	33
Product Portfolio	2	22

From table 3 it can be seen that the themes that were identified in assessing the internal challenges were financial, management commitment, skilled personnel, cost, time investment and the product portfolio.

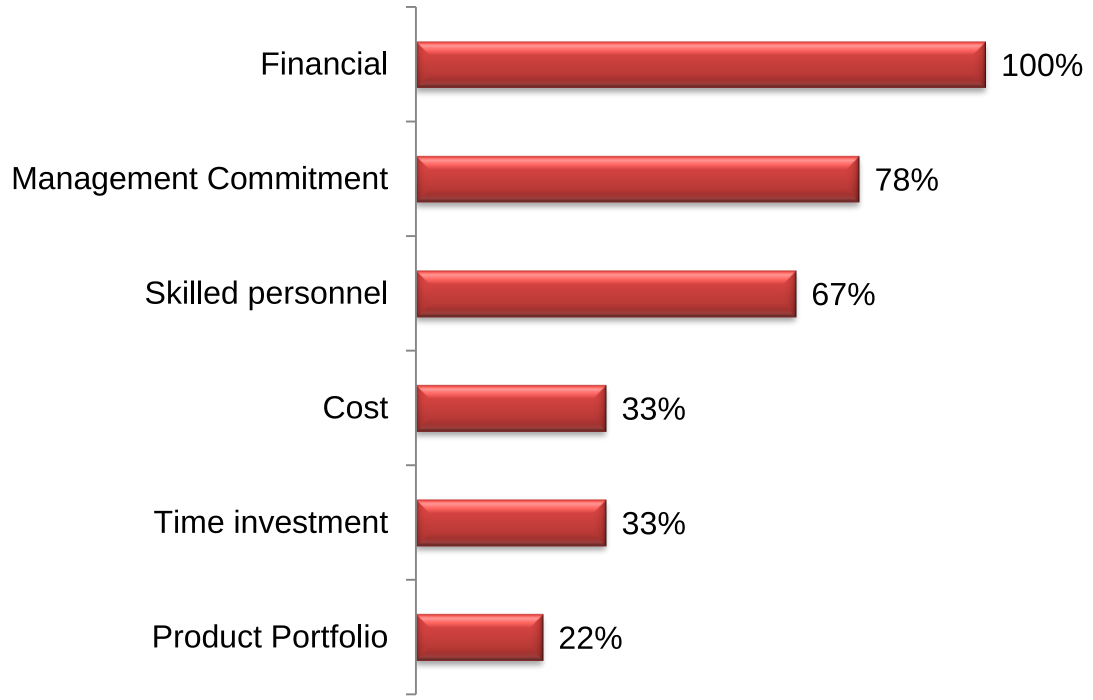

Figure 6: Graphical representation of the frequency of specific themes identified as internal challenges

With reference to figure 6, financial aspects were identified as a crucial theme with all nine out of nine respondents identifying financial aspects as an internal challenge. Therefore a 100% frequency was identified. Management commitment and skilled personnel represented a frequency of 78% and 67% respectively, with cost, time investment and the product portfolio representing a frequency of 33%, 33% and 22% respectively.

4.2.3 *Impact of challenges*

Following the identification of external and internal challenges, it was important to assess which of these challenges had the greater impact. Table 4 is a representation of the frequency of respondents that identified the impact of internal and external challenges. Figure 7 is a graphical representation of the frequency of respondents that identified the impact of internal challenges and external challenges.

Table 4: Frequency of respondents that identified the impact of internal challenges and external challenges

Themes	N (9)	%
Internal Challenges	7	78
External Challenges	2	22

Based on the results presented in table 4, the frequency of internal challenges being the greater of the two challenges was evident since seven out of nine respondents identified internal challenges as being greater than external challenges. Two out of nine respondents identified external challenges as being greater than internal challenges.

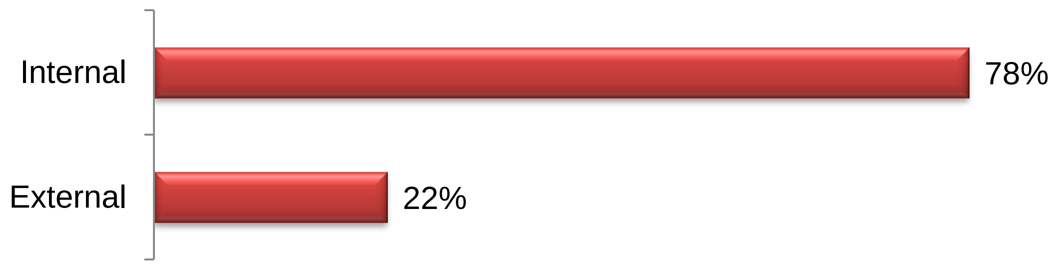

Figure 7: Graphical representation of the frequency of respondents that identified the impact of internal challenges and external challenges.

Based on the results presented in figure 7, 78% of respondents identified the impact of internal challenges as being greater than external challenges as opposed to 22% of respondents that identified the impact of external challenges as being greater than internal challenges.

4.3 Results pertaining to Research Question 2

What are the key strategic aspects during strategy formation that should be considered when attempting to penetrate the sub-Saharan African generic pharmaceutical market as well as alleviate the burden of disease experienced on the continent?

4.3.1 *Key strategic aspects to be considered during strategy formation*

Table 5 is an indication of the frequency of respondents that identified broad themes that should be considered during the strategy formation process. Figure 8 is a graphical representation of the frequency of themes identified during the strategy formation process.

Table 5: Frequency of specific themes identified during the strategy formation process

Themes	N (9)	%
Continuous strategy review	9	100
Business Model	8	89
Financial	7	78
Product Portfolio	6	67
Market and Disease Prevalence	5	56
Regulatory Framework of market	4	44
Competitors	3	33
Skills required	2	22

Based on the results presented in table 5, the themes that were identified as being crucial to the strategy formation process when conducting business in sub-Saharan Africa were continuous strategy review, identifying the type of business model, financial aspects, the product portfolio, identifying and market and disease prevalence, the regulatory framework of the market, the competitive landscape and identifying the skills required.

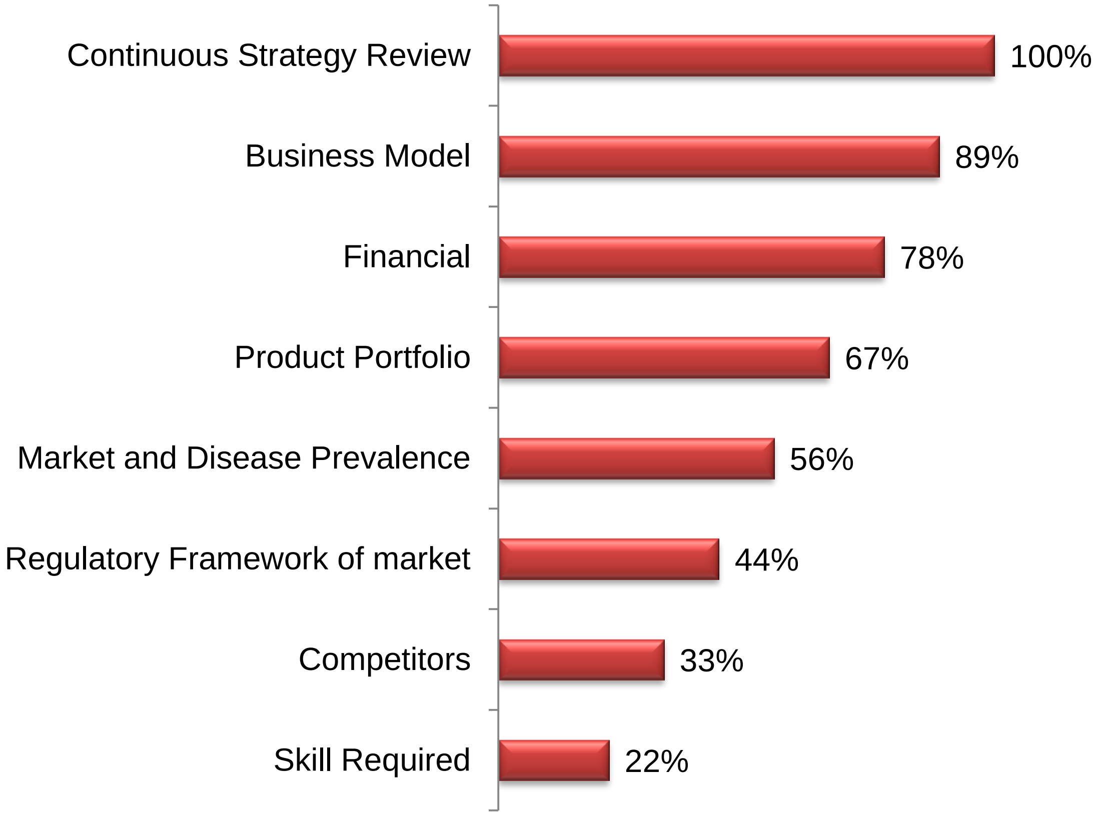

Figure 8: Graphical representation of the frequency of specific themes identified during the strategy formation process

The frequency of themes identified in figure 8 indicated that 100% of respondents identified the continuous strategy review process as an important aspect to address when conducting business in sub-Saharan Africa. The type of business model, the financial aspects and the product portfolio represented a frequency of 89%, 78% and 67% respectively. Other aspects that were identified were the market and disease prevalence, the regulatory framework of the market concerned, the competitive landscape and the skills required at a frequency of 56%, 44%, 33% and 22% respectively.

4.3.2 *Supply Chain Operations*

Table 6 is an indication of the frequency of respondents that identified specific themes related to supply chain operations. Figure 9 is a graphical representation of the frequency of themes identified related to supply chain operations.

Table 6: Frequency of specific themes identified with regard to supply chain operations

Themes	N (9)	%
Distribution Agreements	7	78
Products developed for SA used to penetrate African market	7	78
Preference to importing from SA	5	56
Joint Ventures	2	22

From table 6 it can be seen that the themes that emerged from supply chain operations were distribution agreements, joint ventures, the prevalence of the South African product portfolio being used to penetrate the African market and preference being given to importing products directly from South Africa as opposed to manufacturing in alternate countries in Africa.

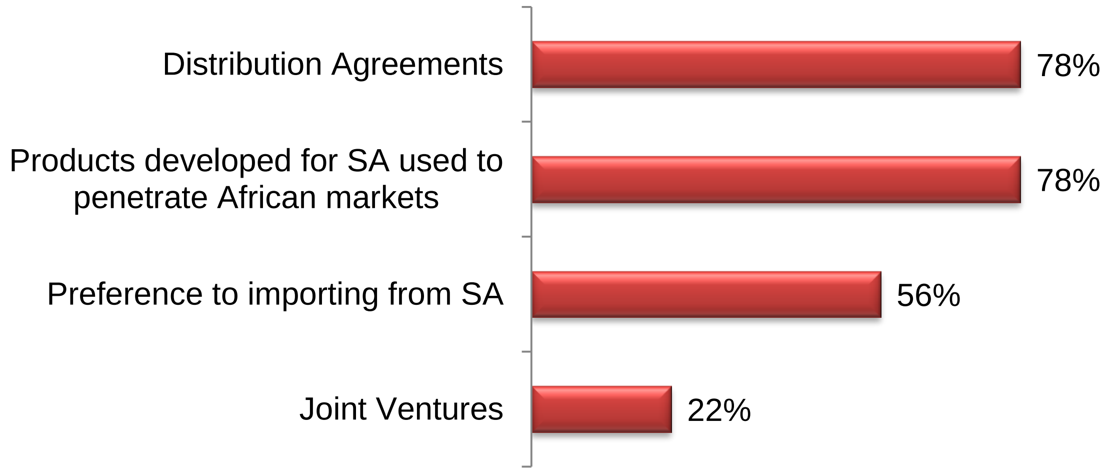

Figure 9: Graphical representation of the frequency of specific themes identified with regard to supply chain operations

The graphical representation shown in figure 9 indicates that 78% of respondents preferred distribution agreements when conducting business in sub-Saharan Africa. Joint ventures featured as a theme although only 22% of respondents preferred joint ventures over distribution agreements. 78% of respondents identified products developed specifically for South African markets as being used to penetrate African markets as opposed to being developed specifically as per the market requirements. 56% of respondents highlighted that in general preference was given to importing products directly from South Africa as opposed to manufacturing the product within the respective African countries.

4.3.3 *The Burden of Disease and Shared Value*

Table 7 represents the frequency of respondents that identified specific themes related to the burden of disease and the concept of shared value. Figure 10 is a graphical representation of the frequency of specific themes related to the burden of disease and the concept of shared value.

Table 7: Frequency of specific themes identified related to the burden of disease and shared value

Themes	N (9)	%
Strategy does not address the burden of disease	7	78
Strategy does address the burden of disease	2	22
Donations/ Funding	5	56
Identified with shared value concept	7	78

From table 7, the major themes that were identifed with regard to the burden of disease and shared value were the current company strategy in relation to the burden of disease, the occurrence of donations and funding and if respondents identified with the concept of shared value.

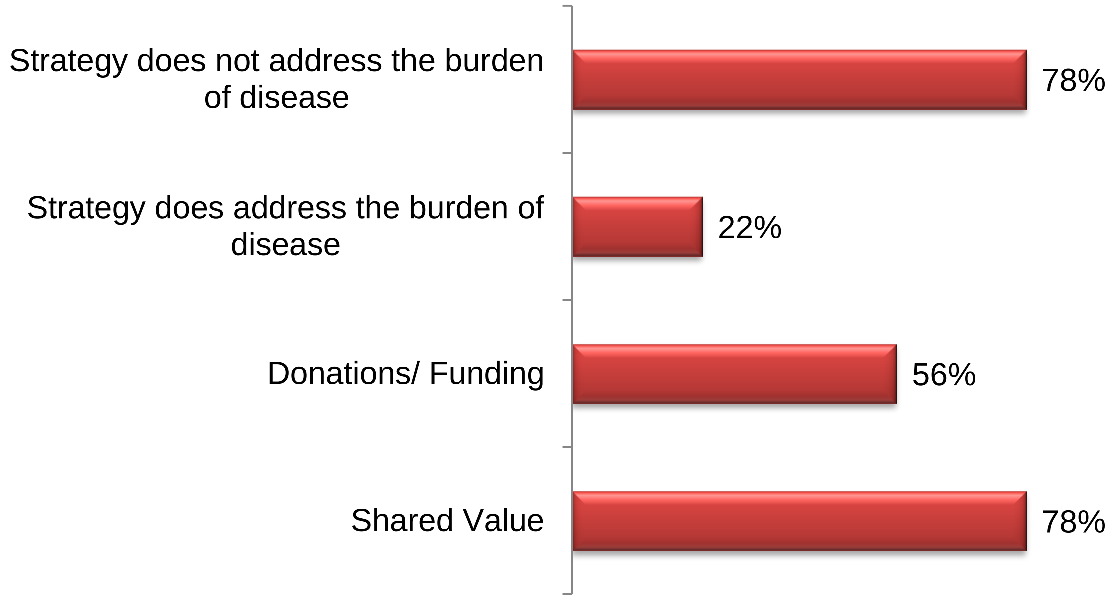

Figure 10: Graphical representation of the frequency of specific themes identified related to the burden of disease and shared value

Figure 10 indicates that 78% of respondents implied that their current company strategy does not address the burden of disease while only 22% agreed that their company strategy does address the burden of disease. 56% of respondents identified donations and funding as the company's responsibility towards the burden of disease. During the interview process, at least 78% of respondents identified with the social cause and identified with the concept of shared value.

4.4 Summary of the results

Based on the results presented for research question 1, external challenges were identified as being infrastructure, regulations, corruption, patents, counterfeit products, cultural differences, corporate governance, patient affordability, competition and the lack of data. Internal challenges were identified as being financial, management commitment, skilled personnel, cost, time investment and the product portfolio. In addition, 78% of respondents identified the impact of internal challenges as being greater than external challenges for South African based generic pharmaceutical companies when conducting business in Sub-Saharan Africa.

Based on the results presented for research question 2, key strategic aspects that need to be identified when conducting business in sub-Saharan Africa were concluded as being the continuous strategy review process, identification of the business model, financial aspects, the product portfolio, market and disease prevalence, the regulatory framework that exists within a market, the competitors and the skills required to perform adequately in sub-Saharan Africa. With particular focus on supply chain operations, themes that were identified were the preference for distribution agreements as opposed to joint ventures and the preference to importing products directly from South Africa as opposed to manufacturing directly in any of the African countries. It is also worth noting that products that were developed for the South African market were used to penetrate the African market as opposed to being specifically developed for a particular regions disease profile. 78% of respondents indicated that their company strategy did not address the burden of disease while only 22% indicated that their company strategy did address the burden of disease. Donations and funding were identified as a way that companies attempted to deal with the social cause and represented 56% of respondents. 78% of respondents identified with the concept of shared value and their social responsibility.

CHAPTER 5. DISCUSSION OF THE RESULTS

5.1 Introduction

This chapter is structured so as to explain and discuss the results presented in chapter 4 in detail. The chapter is divided into two sections. The first section discusses the results with respect to research question 1. The second section discusses the results with respect to research question 2. In interpreting the results presented in chapter 4, this chapter will aim to highlight the relationship between the results presented in chapter 4 and to the information available in the literature. It will discuss the link between the literature review and the actual data obtained. The reason for this link is to distinguish between any similarities and differences that were previously reported in literature.

5.2 Discussion pertaining to Research Question 1

What are the internal and external challenges that South African based generic pharmaceutical companies' experience that result in the failure of the companies' current strategy when conducting business in sub-Saharan Africa?

5.2.1 *External Challenges*

The issue of identifying external challenges was questioned broadly as part of the interview schedule so as to determine what aspects the respondents identified with first. Although there was a mixture of external and internal challenges identified, the questionnaire also directly prompted internal challenges so as to create a clear distinction between these elements. External challenges were defined as challenges that were generally out of the company's control, yet were significant factors resulting in the failure of a company's strategy. The external challenges identified were:

Infrastructure: Nine out of nine respondents identified access to basic services such as water, electricity, roads, transport and lack of government investment in basic services as an external challenge. This theme was in agreement with

Berman and Balde (2013) who referred to poor road infrastructure as a major contributor to distribution problems. Games (2004) also indicated that infrastructure and the lack of basic services in Africa contributed largely to business costs. Therefore the broad theme of infrastructure as an external challenge and identified by 100% of respondents is most definitely in agreement with findings widely reported in literature.

Regulations: Nine out of nine respondents identified regulations related to the government and the pharmaceutical industry to be an external challenge. These respondents highlighted that operating a generic pharmaceutical company from South Africa with the intention of registering ones products in more than one African country, posed many challenges with respect to the varying degree of registration guidelines between countries. There seemed to be no consistency between countries and the length of time required for product registration ranged from between 3 months in some countries to 5 years in other countries. Henry and Lexchin (2002) cited that government intervention is much needed in African countries primarily due to market failure in the form of high costs of drugs. Their reference to the high cost of drugs is to a large extent due to the long and tedious product registration process that results in companies losing revenue in the time that they are awaiting product registration and therefore this results in high medicine costs as companies try to recover the lost revenue.

Corruption: Six out of nine respondents identified corruption as an external challenge. While companies selected for this research excluded themselves from indulging in unethical behaviour, they believed that due to this moral standing they were at a disadvantage in relation to companies that did indulge in unethical behaviour. The extent of corruption was identified as ranging from government departments to import and export personnel to local auditors and eventually local registration bodies that often delayed processes if bribes were not given. This was in agreement with Games (2004) who stated that corruption and poor governance were some of the greatest challenges still experienced on the continent. This theme of corruption was therefore well identified with both from the research and the literature available.

Patents: Six out of nine respondents identified patents as an external challenge. Respondents believed that the high level of patents granted to multinational companies inhibited generic companies on the continent from developing similar medicines and therefore the government was forced to pay higher prices for these drugs. This in turn caused limited supply and a high prevalence of diseases in patients who could not afford these medicines. This was in agreement with Henry (2002) who stated that patent protection given to multinational corporations was one of the major contributing factors that hindered access to affordable medicines on the African continent.

Counterfeit products: Six out of nine respondents identified counterfeit products as an external challenge and as an issue beyond the control of the company. Respondents highlighted that the emergence of counterfeit products on the African continent led to high revenue losses for companies and due to the poor quality of these counterfeit drugs led to the integrity of the company being questioned. This theme was in agreement with Henry (2002) who also stated that counterfeit products were a major challenge on the African continent.

Cultural differences: Four out of nine respondents identified cultural differences between South Africans and the rest of the African continent as an external challenge. Respondents indicated that South Africans had a reputation on the continent for trying to 'South Africanise' everything. This reputation already created a perception and made any further negotiations difficult. Many local companies on the African continent also regarded South Africans as arrogant and generally weren't too keen on business relationships with South Africans although South Africa as a country is synonymous with excellent quality on the continent. This was in agreement with Ghemawat (2007) and the triple A model in which he defined global integration strategies. The reference to cultural differences relates to the aspect of the triple A model of adaptation and attaining local relevance as defined by Ghemawat (2007). Based on this concept, until South African companies are viewed as being in touch with the local markets, the challenge of cultural differences will always be a stumbling block.

Corporate governance: Two out of nine respondents identified corporate governance as an external challenge. Respondents referred to the lack of institutions responsible for the regulation of organisations compliance procedures, created challenges for South African companies that were regulated by the King Code in South Africa. Therefore in instances where acquisitions or partnerships were being considered, the lack of these corporate governance structures made further negotiations difficult. This was in agreement with Games (2004) that stated that poor governance structures were a major challenge when doing business in Africa.

Patient Affordability: Two out of nine respondents identified the costs of medication and the actual disposable income of patients as an external challenge. Respondents made reference to the difference between South African pack sizes that were generally supplied for monthly consumption as opposed to pack sizes in sub-Saharan African that were single dose components as opposed to monthly consumption packs sizes purely due to the lack of disposable income. This was a challenge for South African based companies as it would mean standardisation of packs sizes would not be possible across different countries and therefore it would prove costly to customise a pack size per country. This theme could be indirectly linked to Henry (2002) who identified poor distribution channels as a challenge. Quite rightly said, the incorrect pack sizes would lead to incorrect channels of accessing the market and this could either increase market penetration or decrease market penetration. Surely larger pack sizes could only be sold to wholesalers and not directly to the patient and therefore affected the distribution channel.

Competition: Two out of nine respondents identified the large number of competitors as an external challenge. South African companies found it difficult to compete with Indian and Chinese companies that were much more price competitive and started conducting business on the continent many years ahead of South African companies. They had therefore formed stronger relationships with government authorities and local companies. This is in agreement with Chittoor and Ray (2007) who defined many different levels at which pharmaceutical companies in India are classified. It is because of this advantage of being either a pharmaceutical ingredient supplier or a contract manufacturer that the cost advantage is more pronounced because Indian companies can offer a wider range of services as opposed to South African based companies that offer only the final finished products.

Lack of data: Two out nine respondents identified the lack of data from African countries as an external challenge. Respondents believed that in cases in South Africa where data of the market size, product portfolios and regional sales were readily available, this was not so for the African countries. This resulted in the inability to forecast sales and therefore accurately implement strategies. This was in agreement with Eifert and Gelb (2008) who stated that companies were required to invest a lot more in African developing countries as opposed to developed countries that already had the basic services in place. With regard to collecting data, additional investment from companies would be necessary as they would have to create divisions to source market data.

As per a number of published journals, it was expected that infrastructure, regulations, patents and counterfeit products would feature broadly as themes within external challenges. However corruption at 67% was most definitely a surprise and as much as it is a topic of discussion, ethical behaviour seems to inhibit success on the continent to a large extent. A staggering 67% of respondents were quite passionate about this topic and also decided under no circumstances would they indulge in such behaviour. While corporate governance, patient affordability, competition and the lack of data represented a frequency of 22% respectively, it was worth mentioning these factors as they contribute collectively to the overall success of a company in sub-Saharan Africa.

5.2.2 *Internal Challenges*

As part of the interview schedule, internal challenges were questioned specifically with reference to challenges that were specific to the company and not necessarily country specific. As per the results presented in Chapter 4, the internal challenges were identified as:

Financial: Nine out of nine respondents identified financial constraints and the lack of financial investment as an internal challenge. Respondents believed that generally senior management were very conservative in allocating financial resources when conducting business beyond the borders of South Africa. The budget that was allocated was usually not sufficient to create strong brand awareness and was not enough to build a strong company image in these sub-Saharan African countries. Guillen and Garcia-Canal (2012) stated that companies were successful on the African continent primarily due to their focus on execution. The fact that South African companies are conservative about investing on the African continent suggests that this lack of investment is a direct contributor to ineffective strategy execution as it is the financial resources that provide the tools for strategy execution.

Management commitment: Seven out of nine respondents referred to the lack of management commitment as an internal challenge. Respondents highlighted that in general they were not given the support to grow their brands further and establish new relationships on the African continent due the lack of management support. This meant that distribution agreements, joint ventures and acquisitions were not usually supported by South African based companies' executive teams. In addition they added that due to the lack of data available from these African countries, further investment in Africa could not be justified to these executives. Porter and Kramer (2011) discuss the building of supportive clusters as a part of shared value and building relationships with organisations and institutions. The irony of the lack of management commitment is that these supportive clusters cannot be formed externally if they do not even exist internally in the company. This theme was therefore well identified with Porter and Kramer (2011).

Skilled personnel: Six out of nine respondents identified the lack of skilled personnel within these South African based organisations as an internal challenge. Respondents believed that skilled personnel were crucial to promote further growth in sub-Saharan Africa. Respondents indicated that the skills required to operate successfully in sub-Saharan African countries were lacking and that it was necessary to partner with local companies to get a better idea of the market. However, even these partnerships with local companies within sub-Saharan Africa generally represented unskilled personnel and required much investment with regard to training. Kim and Mauborgne (2009) described an aspect of strategy formulation as ‘the people proposition’ that aimed to motivate employees to execute the company strategy. Companies would therefore be in agreement with the element of ‘the people proposition’ by investing in training and promoting the investment in skilled personnel thereby enabling these individuals to effectively execute the company strategy.

Cost: Three out of nine respondents identified cost as an internal challenge. This was separated from financial aspects as financial aspects referred to the initial budget that was allocated but cost referred to the escalating expenses once products were successfully taken into the sub-Saharan African market. Eifert and Gelb (2008) described this escalation of costs as an internal challenge but emphasised their relationship to external challenges such as infrastructure. The challenges related to infrastructure such as the lack of basic services such as water, electricity, roads and distribution channels required companies to try and mitigate these external challenges at their own cost. Berman (2013) also indicated that the poor distribution channels also increased company costs.

Time investment: Three out of nine respondents identified time investment as an internal challenge. Respondents referred to executive’s impatience in return on investment as a challenge. They also indicated that generally South African based company’s expected immediate returns and did not allow enough time for long term investments in Africa. Also the financial metrics used as a measure in relation to the time that it takes companies to penetrate the market was not a true reflection of profitability. This management impatience was in agreement with McGrath (2013) and the concept of transient advantage as opposed to the era of a sustainable competitive advantage. The short timelines that management expects as an indicator of profitability suggests the change of mind-set from a long term competitive advantage to executing strategies that have transient advantages. This theme is therefore well identified with in terms of current strategic thinking of moving to an era of a transient advantage.

Product portfolio: Two out of nine respondents identified the product portfolio as an internal challenge. Respondents believed that their product portfolio taken into these sub-Saharan African countries did not serve the countries needs and therefore that was the reason that their portfolios were not successful. Respondents also indicated that this was partly due to the lack of data available for these countries and therefore their disease burdens could not be adequately assessed and therefore addressed. This theme is in agreement with Kim and Mauborgne (2009) with regard to their concept of 'the value proposition' and 'the profit proposition.' 'The value proposition' aims to attract buyers while 'the profit proposition' aims to ensure profitability from 'the value proposition.' However if the product portfolio does not address 'the value proposition' as is the case for these South African companies that do not address the disease burden of the region, then profitability is unlikely.

From these internal challenges that were identified, it was worth noting that, the external and internal challenges could not be isolated from each other as the impact of the external challenges contributed to the internal challenges and were in agreement with Eifert and Gelb (2008) who stated that external factors such as infrastructure added to the indirect costs of companies. It was surprising that South African based companies identified the lack of management commitment at 78%. This begs the question as to whether South African based pharmaceutical companies are being too conservative in their Africa strategies as opposed to multinational companies that have aggressively invested on the continent. This could possibly lead to South African based pharmaceutical companies' missing the opportunity to which they would have had initial access to.

5.2.3 *Greater impact of challenges*

Analysis of the results presented in Chapter 4, showed that 78% of respondents identified the impact of internal challenges as being greater than external challenges at 22%. This could be greatly due to the impact that external challenges actually have on the company. So while the lack of basic services and infrastructure constraints are significant, the impact it has on the cost related to the company are significant. It requires additional planning, resources and capital investment to mitigate these external challenges. This theory was also in agreement with Eifert and Gelb (2008) who stated that organisations were required to invest more in African countries as opposed to developed countries that already had the necessary infrastructure in place. Also the internal challenge of convincing management to invest further in sub-Saharan Africa without the necessary facts and figures required for investment is nearly impossible. The patience and commitment to long term investment in Africa also contributes to the internal challenges of unrealistic returns after short periods of time.

5.3 Discussion pertaining to Research Question 2

What are the key strategic aspects during strategy formation that should be included when attempting to penetrate the sub-Saharan African generic pharmaceutical market as well as alleviate the burden of disease experienced on the continent?

5.3.1 *Key strategic aspects to be considered during strategy formation*

From the results presented in Chapter 4, the key strategic aspects were identified as:

Continuous strategy review: Nine out of nine respondents identified the continuous strategy review process as one of the aspects to be considered during the strategy formation process. This is an indication that all respondents identified with McGrath's (2013) view that the age of a sustainable competitive advantage has now moved to an arena of transient advantage. Based on this theory, it's not surprising that companies are moving towards a continuous strategy review process.

Business Model: Eight out nine respondents indicated that deciding on the business model that will be used to penetrate the sub-Saharan African market is crucial during the strategy formation process. This was in agreement with Kim and Mauborgne (2009) who stated that strategies should be formulated in accordance with the value proposition, the profit proposition and the people proposition. These three propositions also make inference to the company's business model. Ghemawat (2007) also identified a business model when expanding businesses across borders as the Triple A model. The triple A model explains the concept of adaptation, arbitration and aggregation.

- **Adaptation-** to attain local relevance while aiming to achieve economies of scale (Ghemawat, 2007)
- **Aggregation**- to achieve scale and scope through international standardisation (Ghemawat, 2007)
- **Arbitrage**- to achieve absolute economies through international specializations (Ghemawat, 2007)

Financial: Seven out of nine respondents identified financial aspects as important during strategy formation. This involved determining the amount of financial resources and investment that will be allocated to sub-Saharan African projects as well as stipulating the expected returns and time periods. The allocation of financial resources can be regarded as the tools of strategy execution. Guillen and Garcia-Canal (2012) described successful companies as successful due to their focus on strategy execution. The allocation of financial resources is therefore an important element of strategy formation and may be the deciding factor between success and failure on the African continent.

Product portfolio: Six out of nine respondents identified the product portfolio as important considerations during the strategy formation process. Respondents indicated that identifying the disease prevalence of the country of interest informs the product portfolio. However South African based pharmaceutical companies' may not have similar products within their basket to fulfil the needs of the country's disease burden and will therefore either invest in developing a product or acquiring a product. This is in agreement with Porter and Kramer's (2011) views on shared value. In particular, reconceiving products and markets involves companies actively identifying the benefits, disadvantages and societal needs that are associated with a company's products. This will lead to the discovery of new opportunities, differentiation and repositioning in new and traditional markets (Porter & Kramer, 2011). This theme was therefore well identified with in literature.

Market and disease prevalence: Five out of nine respondents identified market and disease prevalence as important during the strategy formation process. As discussed above, market identification, disease prevalence and the product portfolio cannot be looked at independently. They are interconnected and together encompass the ideals of shared value as discussed by Porter and Kramer (2011).

Regulatory framework of market: Four out of nine respondents identified analysing the regulatory framework of the sub-Saharan African country of interest as important during the strategy formation process. Respondents believed that this was important as penetrating the market depended very much on whether the product could be easily registered in the country or not and that adequate timelines could be achieved. Also the status of patents within the country would be essential to avoid non-compliance which would result in a generic drug being registered while the patent is still enforced. This theme was in agreement with Porter and Kramer (2011) and their concept of shared value that defined building supportive industry clusters. Therefore forming relationships with regulatory departments and the need for supportive clusters with institutions and regulatory bodies is essential to success on the continent.

Competitors: Three out of nine respondents identified assessing the competitive landscape as essential to the strategy formation process. Respondents believed that a complete analysis of the competitor landscape would be an indication of the likelihood of success and profitability. This theme was in agreement with Kim and Mauborgne (2004) who stated that running a business and competing in an overcrowded industry is by no means a way of sustaining high performance The Blue Oceans strategy as defined by Kim and Mauborgne (2004) is one in which demand is created rather than fought over and provides sufficient opportunity for business growth that is rapid as well as profitable.

Skills required: Two out of nine respondents indicated that it is important during the strategy formation process to highlight the skills needed to successfully operate in sub-Saharan Africa. Respondents believed that the necessary investment in training and recruiting was essential during the strategy formation process and should most definitely be considered. This theme was in agreement with Guillen and Garcia-Canal (2012) who described organisations that grow in emerging economies as successful organisations because of their focus on execution, their flexibility to expand with abandon and their ability to embrace chaos. Planning for the execution stage during strategy formation is often overlooked and the skill required is a typical example of requirements for strategy execution.

While some elements that were results of this research were expected, there were many surprises as well and aspects of strategy formation such as the market and disease prevalence together with the product portfolio are unique aspects of the pharmaceutical industry. The high level of regulation of the industry does most definitely make the strategy formation process much more intense and requires a lot more groundwork.

5.3.2 *Supply Chain Operations*

While the interview schedule focussed on the strategy of South African based generic pharmaceutical companies conducting business in sub-Saharan Africa, particular focus was placed on the supply chain, the distribution agreements and the product portfolio. From the results presented in chapter 4, it could be seen that there was a particular preference for distribution agreements at 78%

as opposed to joint ventures at 22%. Also there was particular preference to using products that were developed for the South African market to penetrate the sub-Saharan African market. In addition there was also preference to importing products directly from South Africa as opposed to manufacturing in any of the sub-Saharan African countries.

Therefore based on this information, it then informs as to why distribution agreements is the more popular choice for South African based generic pharmaceutical companies. If products are manufactured in South Africa and only imported into the African countries then distribution agreements are most definitely the most feasible option as opposed to further investment in joint ventures that won't necessarily serve the purpose of these South African companies. This was also in agreement with Games (2004) and Berman (2013) who both referred to poor road infrastructure as a major challenge to distribution and as a major contributor to company costs. It would therefore make sense for South African companies to favour distribution agreements that enabled them to mitigate any additional costs caused by infrastructure constraints. It would also mean that these distributors with whom agreements were formed would be responsible for ensuring product delivery and they would also have more experience in finding alternate solutions to the infrastructure challenges.

5.3.3 *The Burden of Disease and Shared Value*

The interview schedule also aimed specifically to address the issue of the burden of disease and the concept of shared value. As presented in the results in chapter 4, 78% of respondents agreed that their current company strategy did not address the burden of disease as opposed to 22% who indicated that their company strategy did address the burden of disease. 56% of respondents indicated that their companies tried to address the burden of disease through donations and funding. This was contrary to Guilloux and Moon (2001) who stated that the development and manufacture of generic pharmaceutical products is a less costly and much more sustainable avenue of supplying essential drugs to emerging markets rather than donations

Also 78% of respondents were aware of their social responsibility and identified with the concept of shared value as defined by Porter and Kramer (2011). The concept of shared value focusses on the relationship between societal and economic progress (Porter & Kramer, 2011). Respondents showed mixed reactions towards the burden of disease versus financial performance. While respondents admitted that companies had a social responsibility to markets that they operate in, they also indicated that at the end of the financial year, it was profitability that counted and that no company runs at a loss just to address its social needs. It appeared that while most respondents were sympathetic to the situation, they were also helpless with regard to the lack of management commitment from South African based pharmaceutical company executives.

5.4 Conclusion

In conclusion, results obtained in an attempt to answer research question 1 and research question 2 exhibited a high level of validity as it was noticed that much saturation occurred between respondents content.

It can therefore be concluded with respect to research question 1 that the external challenges identified were infrastructure, regulations, corruption, patents, counterfeit products, cultural differences, corporate governance, patient affordability, competition and the lack of data. The internal challenges identified were financial, management commitment, skilled personnel, cost, time investment and the product portfolio. In addition, it was also found that respondents believed that internal challenges were greater than external challenges. Much of the data presented were well documented in literature and particular reference was made to the impact that external challenges have on internal challenges thereby enhancing these internal challenges.

With respect to research question 2, it was found that the key strategic aspects to be considered during strategy formation were a continuous strategy review process, identifying the business model, financial considerations, the product portfolio, market and disease prevalence, the regulatory framework of the market, the competitor landscape and the skills required. The continuous strategy review process was in agreement with literature and particularly McGrath (2013) and her approach to the era of transient advantage. With regard to supply chain operations, it was found that there was a particular preference for distribution agreements as opposed to joint ventures. There was also preference given to importing products directly from South Africa as opposed to manufacturing in these sub-Saharan African countries. It was also found that in general companies used the products developed for the South African burden of disease to penetrate the African market. Most respondents believed that their company's strategies did not address the sub-Saharan Africa burden of disease and that donations and funding were used to compensate for this. While many respondents identified with the concept of shared value, they indicated that financial gains were always put ahead of social responsibility and that the lack of management commitment was a major contributing factor that hindered further investment in helping to alleviate the burden of disease.

CHAPTER 6. CONCLUSIONS & RECOMMENDATIONS

6.1 Introduction

This chapter is structured so as to highlight the findings of the study and provide recommendations to the stakeholders identified in chapter 1. This is then followed by suggestions for further research related to this study.

6.2 Conclusions of the study

Sub-Saharan Africa represents 65.9% of the global burden of disease (Murray & Lopez, 1997). The context of the study was based on the need for affordable medicines in these regions. The uniqueness of this study targeted specifically South African based generic pharmaceutical companies as opposed to multinational pharmaceutical companies. The reason for choosing South African based generic pharmaceutical companies was based on Africa's evolution as a business destination. The African continent has caught the interest of many businesses post the 2008 financial crisis. It is seen as the next big business destination. Many global companies are entering the African continent through South Africa, better known as the 'gateway to Africa.' But this begs the question as to how successful is South African companies themselves in entering the sub-Saharan African market. The dual context of this study aimed to investigate the challenges these South African based pharmaceutical companies experience and the key aspects that they believe are most crucial to address during strategy formation when venturing into sub-Saharan Africa. At the same time, the study also aimed to answer the question of the social burden and the concept of shared value and how appropriately these companies address this issue.

The study was successfully conducted by the process of semi-structured interviews and analysed using content analysis. From the data obtained the major external challenges were found to be infrastructure, regulations, corruption, patents, counterfeit products, cultural differences, corporate governance, patient affordability, competition and lack of data. These findings were in agreement with much published data particularly Games (2004) and Berman and Balde (2013) who wrote that infrastructure added a large portion to the cost of doing business in Africa. Internal chalenges were found to be financial, management commitment, skilled personnel, cost, time investment and the product portfolio. Also, 78% of respondents considered the impact of internal challenges as being greater than external challenges.

The second part of the study focussed on key strategic aspects during strategy formation. These aspects were found to be continuous strategy review, the business model, financial, the product portfolio, market and disease prevalence, regulatory framework of the market, competitors and skills required. These findings were in agreement with McGrath's (2013) theory on transient advantage that highlights the ever changing landscape of the business environment that encourages a continuous review process. In addition the study also found that distribution agreements were favoured over joint ventures and that generally preference was given to importing products directly from South Africa. It was also found that the maket and disease burden was not necessarily considered when penentrating the sub-Saharan Africa market and that products that were developed for the South African disease burden were generally used to penetrate the sub-Saharan African market. This was expected as the costs implied by the research and development process might not necessarily be feasible for South African based generic pharmaceutical companies.

The social aspect of the study found that 78% of respondents agreed that their current company strategy did not address the sub-Saharan African region burden of disease and that this was compensated for by funding and donations. The need for companies to contribute to a social cause and the concept of shared value was identified with by 78% of respondents, however there was also agreement that social needs were not put ahead of financial success.

This study aimed to add value to various stakeholders by acting as a starting point for these companies by helping them to identify core challenges in the African market and providing key strategic aspects that will form the backbone of strategy formulation. This aim has been successfully fulfilled by this research. In addition it also aimed to provide guidance on the partnerships that need to be formed and strategic considerations for the sub-Saharan African region and it has succeeded in uncovering these aspects particularly in relation to distribution agreements. It was also quite surprising that no respondents mentioned partnerships with global bodies such as the World Health Organisation considering that the World Health Organisation is a major player in the global pharmaceutical industry.

6.3 Recommendations

The recommendations that are apparent from the research are that much caution must be applied when venturing into the sub-Saharan Africa region. The challenges experienced on the continent have been well documented in this study and are both external and internal and overcoming them requires thorough planning. It is also vital that businesses are thoroughly committed to their sub-Saharan Africa expansion strategies as success in the region requires commitment from stakeholders at all levels in the organisation.

Further recommendations are in agreement with McGrath (2013) and the approach to a continuous strategy review process. The strategy formation process should include both the hard and soft aspects of business management and not forget the human resource element and the need for skilled work forces especially in the pharmaceutical industry. It might be worth investing in a lavish training programme.

6.4 Suggestions for further research

The results of this study have beckoned the need for further research in areas of the pharmaceutical industry particularly on the African continent. An interesting addition to the study would be to investigate the dynamics of global pharmaceutical companies that have been successful in overcoming the challenges faced on the African continent and the unique strategies that they have implemented to achieve success.

Alternatively, the dynamics between the sub-Saharan African countries and the North African countries in the generic pharmaceutical sector would also add value to the industry.

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APPENDIX A

Actual Research Instrument

Name of Organisation: ____

Respondents Name: ____

Designation: ____

Date: ____

Time: ____

Interview Schedule

Part 1: Challenges experienced in Sub-Saharan Africa

1. What are challenges when doing business in Sub-Saharan Africa?

2. Are the challenges greater internal (company specific) or external (country specific)? What are the internal challenges and what are the external challenges?

3. How do these challenges prevent you from achieving your strategy?

Part 2: Key strategic aspects during strategy formation

1. What do you believe are the key aspects that should be considered during strategy formulation and how often are your sub-Saharan African strategies reviewed?

2. Supply chain- is preference given to importing directly from South Africa into African countries or partnership and distribution agreements considered? What type of partnerships do you recommend?

3. Product Mix - Do you think your products are specifically developed for the African market or are the products in SA used to penetrate the African market?

4. Burden of Disease- does your strategy address the burden of disease and if not, what does the company do to address this need?

5. How does the company find a balance between the Burden of disease and its financial performance?

6. How do patents affect your business?

APPENDIX B

Consistency matrix

Table 8: Consistency matrix

Research problem: What the keys challenges and aspects of strategy formation that South African based generic pharmaceutical companies consider as most important to achieving success in sub-Saharan Africa?					
Sub-problem	**Literature Review**	**Hypotheses or Propositions or Research questions**	**Source of data**	**Type of data**	**Analysis**
The first sub problem is to Identify the internal and external challenges faced by South African based generic pharmaceutical companies when doing business in Africa	Games (2004) Eifert and Gelb (2008) Berman (2013)	What are the internal and external challenges that South African based generic pharmaceutical company's experience that results in the failure of the company's current strategies when doing business in Africa?	Interview Schedule 1. What are challenges when doing business in Sub-Saharan Africa? 2. Are the challenges greater internal (company specific) or external (country specific)? What are the internal challenges and what are the external challenges? 3. How do these challenges prevent you from achieving your strategy?	Text	Content Analysis

Research problem: What the keys challenges and aspects of strategy formation that South African based generic pharmaceutical companies consider as most important to achieving success in sub-Saharan Africa?					
Sub-problem	**Literature Review**	**Hypotheses or Propositions or Research questions**	**Source of data**	**Type of data**	**Analysis**
The second sub-problem is to identify the key strategic aspects during strategy formulation that would be most beneficial in penetrating the sub-Saharan African generic pharmaceutical market as well as alleviating the burden of disease experienced on the continent.	Porter (2011) McGrath (2013) Chittoor & Ray (2007)	What are the key strategic aspects during strategy formation that should be considered when attempting to penetrate the African market as well as alleviate the burden the disease experienced on the continent?	**Interview Schedule** 1. What do you believe are the key aspects that should be considered during strategy formulation and how often are your sub-Saharan African strategies reviewed? 2. Supply chain- is preference given to importing directly from South Africa into African countries or partnership and distribution agreements considered? What type of partnerships do you recommend? 3. Product Mix - Do you think your products are specifically developed for the African market or are the products in SA used to penetrate the African market? 4. Burden of Disease- does your strategy address the burden of disease and if not, what does the company do to address this need?	Text	Content Analysis

Research problem: What the keys challenges and aspects of strategy formation that South African based generic pharmaceutical companies consider as most important to achieving success in sub-Saharan Africa?					
Sub-problem	**Literature Review**	**Hypotheses or Propositions or Research questions**	**Source of data**	**Type of data**	**Analysis**
The second sub-problem is to identify the key strategic aspects during strategy formulation that would be most beneficial in penetrating the sub-Saharan African generic pharmaceutical market as well as alleviating the burden of disease experienced on the continent.	Porter (2011) McGrath (2013) Chittoor & Ray (2007)	What are the key strategic aspects during strategy formation that should be considered when attempting to penetrate the African market as well as alleviate the burden the disease experienced on the continent?	**Interview Schedule** 5. How does the company find a balance between the Burden of disease and its financial performance? 6. How do patents affect your business?	Text	Content Analysis