

**The Economic Significance of the Pharmaceutical Wholesaler in South
Africa's Health Care Industry**

Research Report

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DECLARATION

“I declare that *The Economic Significance of the Pharmaceutical Wholesaler in South Africa’s Health Care Industry* is my original work and that all the sources I have used or quoted have been indicated and acknowledged as complete references. I also declare that the above-mentioned work has not been submitted for degree purposes previously.”

Dawid Gerber

Date

Executive Summary

The purpose of this research paper is to examine and evaluate the economic significance of the pharmaceutical wholesaler in South Africa's health care industry.

The pharmaceutical wholesaler experienced several challenges over the last decade. These challenges originated from changes in the competitive environment of the industry and more recent changes in the regulatory environment brought on by the State in its attempts to make medicine more accessible to the South African public. The wholesaler was forced by these changes to adapt its business model drastically in order to remain competitive. Historically the wholesaler made its profits by purchasing bulk at a discount, passing a fraction of the discount to its customers and adding a mark-up to the purchase price. It was now forced to abandon the discount and mark-up scheme and distribute medicines by negotiating a fee for the services it renders. Wholesalers now not only have to compete between themselves but also with distributors on the same basis - by negotiating logistics fees with pharmaceutical manufacturers. Operating efficiency and customer service have become essential ingredients for the wholesaler in its quest to remain competitive.

Research questions focused on value adding activities, services rendered and the extent to which value is added by the wholesaler. Two questionnaires were developed, one to be distributed to pharmaceutical manufacturers and the other to pharmaceutical wholesalers. The questions asked in these questionnaires covered the percentages of manufacturers' sales to wholesalers, the value adding services that are being rendered by wholesalers to manufacturers and to customers, and operational efficiencies wholesalers exploit to add value in the supply chain.

The sample for this study consisted of all registered and licensed pharmaceutical manufacturers and wholesalers for which e-mail addresses could be obtained. Questionnaires were sent to 85 pharmaceutical manufacturers and 69 pharmaceutical wholesalers. Only four questionnaires from each of these two groups were relevant to the study and used for analysis. In addition to the questionnaires three wholesalers and a community pharmacist were interviewed.

The findings revealed that a high percentage of pharmaceutical manufacturers' total sales are to wholesalers. Manufacturers in this study mainly produce ethical medicines and most of them use their own distribution agencies to sell medicines to wholesalers. Wholesalers reported a 58% increase in sales from these manufacturers since the introduction of pricing regulations. There has also been a 30% increase in sales to wholesalers through manufacturers' exclusive distributors. Wholesalers' sales in generic medicines have also increased with 10%.

Manufacturers cannot afford to deal directly with the great numbers of small retailers because the quantities purchased and the resulting manufacturer profits are too small. Manufacturers find it impossible and uneconomical to supply the retail trade with small quantities of medicine on a daily basis, even when using their own exclusive distribution agencies.

The results of the study showed that the wholesaler provides value adding services to its suppliers and buyers throughout the supply chain. The wholesaler also indirectly contributes to making medicines more accessible in terms of geographic location by distributing it to those places which would not otherwise have had access to medicines without the services of the wholesaler. Judging from the value the wholesaler adds in the supply chain of pharmaceuticals it was concluded that the wholesaler does play an economically significant role in South Africa's health care industry.

Foreword

The subject of this study originated from interest in the reasons for the existence of the pharmaceutical wholesaler. The regulatory and competitive environments of the industry affected the pharmaceutical wholesaler to such an extent that it was forced to adapt its business model to remain competitive. The justification of the wholesaler's existence can best be understood by investigating its activities. In theory the wholesaler exists because of the dedicated functions it performs in aid of its suppliers and buyers. The question whether the wholesaler adds value to the supply chain of pharmaceuticals within the health care industry needed further investigation.

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Table of contents

Chapter 1	1
Hypothesis and Method of Investigation	1
1.1 Hypothesis	1
1.2 Method of investigation	9
Chapter 2	10
Literature Review	10
2.1 Introduction	10
2.2 Health care defined	11
2.3 Pharmaceuticals defined	11
2.4 The role of pharmaceuticals in health care.....	12
2.5 The value chain	14
2.6 The pharmaceutical value chain.....	19
2.7 Health care and regulatory developments.....	21
2.8 The value chain players	30
2.9 Producers: the pharmaceutical manufacturer.....	31
2.10 Buyers: retail pharmacies, dispensing doctors and private hospitals ..	39
2.11 Purchasers: wholesalers and distributors.....	43
Chapter 3	61
Research Methodology and Data Analysis	61
3.1 Introduction	61
3.2 Sampling	61
3.3 Research design	62
3.4. Data collection.....	73
3.5 Data analysis.....	76

3.6	Limitations of the study.....	79
	Chapter 4	81
	Findings and Recommendations.....	81
4.1.	Introduction	81
4.2	Findings.....	81
4.3	Conclusions.....	91
4.4	Recommendations	96
	References.....	98
	Appendix 1	107

List of tables

Table 4.1	Percentage sales of wholesalers to customers.....	82
Table 4.2	Percentage sales of manufacturers.....	82
Table 4.3	The percentage sales from manufacturers through different channels of distribution.....	83
Table 4.4	Wholesalers' indication of the percentage purchases from manufacturers for each of the categories of medicines through each of the distribution channels combined into an average.....	84
Table 4.5	Answers provided by manufacturers on Questions 5 to 9 and 13.....	85
Table 4.6	Answers provided by manufacturers and wholesalers on similar questions regarding services rendered and information shared by wholesalers.....	86
Table 4.7	Percentage sales of wholesalers to each of the following customers in terms of the categories of medicine.....	87
Table 4.8	Questions to wholesalers relating to the services rendered to their customers.....	88

List of figures

Figure 1.1	The Pharmaceutical Value Chain.....	19
Figure 1.2	Porter's Five Forces Framework.....	20

Chapter 1

Hypothesis and Method of Investigation

1.1 Hypothesis

The objective of this research paper is to examine and evaluate the economic significance of the pharmaceutical wholesaler in the supply of medicines to the health care industry of South Africa.

South Africa's health care is to a large extent a remnant of the legacy of the previous political dispensation, in terms of which access to health care and the ownership of health care facilities were inequitable; and a vast majority of South Africans hardly had access to such care.

With the advent of the new government in 1994, the health care industry has been subjected to a range of new regulations attempting to address the inequitable access to health care of the previously disadvantaged part of the population.

The health care system presently consists of two sectors, the public health care sector and the private health care sector. The public health care sector provides services to approximately 70% to 80% of the population. The cost of health care services in the public sector accounts for 30% of the total health care expenditure of the country. The private health care sector has been ranked among the best in the world while the public sector ranked among the worst.

The objective of the Department of Health is that all South Africans should have access to affordable, high quality health care. A National Drug Policy was formulated to ensure adequate and reliable supply of safe, cost effective medicine of acceptable quality to all citizens. A variety of regulations were

systematically introduced to deal with the inequities in access to health care. The pharmaceutical sector came under increased pressure from government to reduce the cost of medicines.

Government attempted to cut the price of medicines and regulate the mark-up of players in the supply chain with a view to improve the public's access to medicine. The regulations were specifically aimed at the private health care sector addressing the whole value chain from the manufacturer to the final provider of medicines. The strategies employed in order to make medicines more affordable involved parallel importation of drugs to promote price competition, generic substitution by which prescribers and dispensers were to substitute brand name or ethical drugs with cheaper generic drugs and the establishment of a pricing committee to develop a transparent pricing system from the manufacturer to the consumer. The transparent pricing system involves a Single Exit Price (SEP) originally based on 50% off the 2003 list price of medicine sold to any person other than the State. To put an end to the high mark-ups charged by players in the supply chain of medicines the regulations prohibits all forms of discounts, bonuses, rebates or other incentive in the supply chain. The transparent pricing system also regulates the Logistics Fee, which is incorporated in the Single Exit Price, for wholesalers and distributors to distribute drugs. The fee has to be negotiated between the manufacturer and the wholesaler.

The supply chain of pharmaceuticals consists of the producers, which are the manufacturers; the buyers, wholesalers and distributors buying from the manufacturer for resale; and the ultimate providers, which are the retail pharmacies, dispensing doctors and hospitals. The financial intermediaries in the form of the medical schemes are the health insurers of the consumer and act as the intermediary between the retailer and the consumer.

In theory the wholesaler plays a vital role in channelling goods from the manufacturer to the retailer. The wholesaler's sourcing, purchasing and supply function is shaped by the extended economic process of supply and demand,

bridging the time and space gap between the period and place of production and consumption. Key aspects in the business of the wholesaler, namely cooperation and coordination with the supplier (the manufacturer) and the buyer (the retail pharmacy, dispensing doctor and private hospital), timing and optimising costs are all embedded in and part of the modern purchasing, sourcing and supply management philosophy. The wholesaler supervises demand across a large number of small buyers. The wholesaler accumulates goods of several manufacturers of a single location and is the main holder of inventory rather than the manufacturer or customer. The wholesaler then sorts the goods to fill orders from the retailers (or manufacturers who further transform the products). This process allows manufacturers to ship products in large batches by "breaking lots". The efficiency of a wholesaler's operation in bulk breaking would be difficult for a manufacturer to do. The distribution system adjusts the optimum lot size of the manufacturer to the customer's far smaller lot-size requirement. The wholesaler therefore serves as a purchasing agent for the retailer.

The wholesaler act as an intermediary to meet customer wants (small quantities of many different products) and manufacturer needs (producing large quantities of a few products). A main function of the manufacturer is to supply a steady flow of products. The retailer orders an allotment of merchandise from the wholesaler, consisting of a variety of volumes of different products of different product ranges. The wholesaler thus assists the manufacturer to reach a host of small retailers at low cost. This activity reduces the number of transactions and the movement of goods for the manufacturer. The wholesaler adds value for both the manufacturer, by taking over the sales function for a large volume of contracts, and for the retailer, by largely eliminating or simplifying the buying function. The manufacturer cannot afford to deal directly with the large number of small retailers because the quantities purchased and the mark-up to the manufacturer would be too small. The wholesaler function can be ascribed to the fact that it performs the distribution activities in a more cost effective way than would any alternative.

The pharmaceutical wholesaler is a specialist trading agent, pushing medicines from the manufacturer or importer to the retailer or ultimate consumer in need of health care. The supply chain from the manufacturer or distribution agent to the ultimate consumer involves mainly transportation and dedicated packaging. The functions include buying and selling, marketing, negotiating, warehousing, risk bearing, financing, transportation and assistance to clients. The wholesaler “pushes” the product by means of marketing and advertising campaigns towards the customer. The aim is not to achieve the lowest cost but to increase product sales. The wholesaler made a profit by purchasing from the manufacturer at a discount off the list price, passing some of the discount to the retailer. The discounts are also used as a means of competing for market share. Wholesalers cannot compete with each other on the basis of product differentiation of their merchandise. They are thus forced to compete on price and customer service. Competition to satisfy customer needs is the key to their competitive advantage.

The original distribution route from the manufacturer to the retailer consisted mainly of wholesalers who acquire ownership of products before it was sold to retailers. Pharmaceutical wholesalers were the sole distributors of medicines to pharmacies and dispensing doctors. Wholesalers based their activities on economies of scale, which could not be realized by manufacturers considering their captured volumes.

Due to inefficiencies in the wholesale model and increasing cost pressures on manufacturers, some manufacturers decided to distribute medicine directly by using third party logistics providers. In the 1990's some manufacturers joined together and formed their own exclusive distribution companies. The agency distributors were established by groups of pharmaceutical companies as joint distribution ventures to supply medication at low cost to retailers living on economies of scale.

Three major agency distributors were formed to render a distribution service to their principals as well as an agency service to other pharmaceutical

manufacturers. Unlike the wholesaler, the agency distributor levies a distribution fee for their service without taking ownership of the goods. The establishment of agency distributors by manufacturers were based on the assumption that agency distributors could meet their needs at a lower cost. The distributor offered its clients, the manufacturers, cost effective logistical and warehousing support and distribution services. The clients are charged a fee for these services. The distributor does not take ownership of the inventory, operating on behalf of and on instruction from its clients. The distributor is not a party to pricing issues and the setting of pricing and trading policies falls in the ambit of the manufacturers. The dispenser ordering from the distributor is effectively trading with the manufacturer.

One of the reasons for manufacturers using direct distribution through their own distribution companies is that manufacturers prefer to have control over customers and therefore use direct sales for branded products. Manufacturers do not want wholesalers to have the ability to influence or switch branded purchases by customers. They also want to inhibit cross-referencing of their products and comparison-shopping with competitor's offerings by retail customers. The other reasons for the establishment of their own distribution channels, apart from control over customers, was that wholesalers were running too close to the edge, having too high fixed costs, decreasing volumes and cut-throat discounting policies. The manufacturers doubted wholesaler's ability to invest in improved quality controls, required for the safe distribution of medicine. Initiatives to control their own distribution were also based on arguments that it will bring manufacturers closer to customers, allowing more control over the grey market and improve service levels. It was also argued that the control over distribution provide manufacturers with matching benefits in margins as well.

Manufacturers increasingly believed that wholesalers were not able to fully comply with their needs for secure distribution and improved service levels for managed care organisations, private hospitals, group practices and medical aids.

Wholesalers who wanted to purchase products from manufacturers who used exclusive distributor agencies had to purchase products at the same price as the retailers from the distributors. The establishment of exclusive agency distributors by the manufacturers deprived the wholesaler of access to the manufacturer's products at the same discount as which they were purchased before. This problem has led to conflict of interests between agency distributors and wholesalers. With more and more manufacturers moving to single channel or agency distributors less products were available for wholesalers to sell-on at the same margin as they did before. Some wholesalers experienced lower productivity and were exposed to theft of their products. In addition to this wholesalers experienced a downward thrust in volumes and margins. A group of wholesalers lodged a complaint at the South African Competition Commission claiming that they were not able to make a profit from this agreement. The Competition Tribunal ruled that these wholesalers were able to make a profit by taking advantage of bulk discounts.

Wholesalers having been significantly involved in "deep discounting" until the entrance of the new distribution channels, now had to compete in an environment where winning market share came at the expense of competitors and in which value-adding activities were being compensated on a fee-for-service basis. Wholesalers endeavoured to keep costs down and prices in check, otherwise they would lose out to a number of competitive therapeutic equivalents or generic equivalents available. They were now in competition with themselves as well with the agency distributors. The growth of the single channel distributor, which distributes from the manufacturer to the retailer or dispensing doctor, inevitably led to a decline in the number of wholesalers. In 2004 it was estimated that approximately 70% of the distribution market belonged to three exclusive agency distributors.

The Department of Health is of the view that the pharmaceutical wholesaler's importance in the supply chain of medicine is no longer the same as a decade or three ago. The advent of more efficient business models driving business

forward through improved service levels are the order of the day. The Department is of the opinion that if the wholesaler disappears it will be replaced by other businesses capable of enhancing drug delivery at lower costs. The Department was outspoken in its view of eliminating business models driving up price without adding real value. The implication was that the traditional wholesaler model had to be replaced by a “fee-for-service” model as with distributors.

The introduction of the regulations providing for a more transparent pricing system and the Single Exit Price came as a major blow to the traditional wholesaler, making a living mainly by purchasing and selling medicines to retail pharmacies, dispensing doctors and hospitals. The pricing regulations of 4 May 2004 prohibit bonuses, rebates and other incentives by pharmaceutical companies or wholesalers to pharmacies or doctors. Free sampling or supply of medicines by manufacturers and wholesalers to any medical practitioner – other than for the purpose of clinical trials, donations of medicines to the State, tendering to the State and to quality control inspectors is prohibited. This means that volume and trade discounts, bonus deals, settlement discounts, formulary-listing fees, fees for shelf space, discounts for bulk purchasing are illegal.

These regulations provided for a Logistics Fee for the distribution of medicine to be determined by agreement between the manufacturer or importer; and the distributor or wholesaler. The traditional wholesaler model was thus replaced by a “fee-for-service” model, which should improve operating efficiency hence medicine at lower cost to the public.

The customer base of the wholesaler and distributor consists mainly of retail pharmacies, dispensing doctors and hospitals. This base has become smaller as many small community retail pharmacies closed being replaced by larger retail and chain pharmacies. The small pharmacy struggled to survive in the wake of the lift of the ban on ownership of pharmacies by non-pharmacists, which lead to the establishment of large retail pharmacy outlets and retail

corporate stores with dispensing outlets like Clicks. These pharmacies were opened in shopping malls and replaced the smaller retail pharmacy.

As part of the regulations of Section 22G of the Act, the Medicines and Related Substances Act (Act 101) of 1965, a dispensing fee is to be charged by persons dispensing medicines. No mark-ups are allowed on medicines and a professional fee has to be charged in the form of the dispensing fee. Since the introduction of the dispensing fee community pharmacists complained that the fee would render them unprofitable. It was stated that the closure of the small pharmacy would lead to a decline in the availability of medicine. Several pharmacists charged an additional administration fee to keep business going. Others diversified into selling other commodities such as magazines, clothing and cold drinks. According to the Pharmaceutical Society of South Africa 64 pharmacies closed down between January and August 2004. A number of smaller pharmacies in the small towns and rural areas have also closed down due to their inability to survive with the dispensing fee while large retailer pharmacies have applied for licenses in big urban centres. The small community pharmacies, not being allowed a mark up of the medicines they sell, would seem not to be able to survive only on a dispensing fee.

In 2003 approximately 64% of drug sales to the private sector went through the retail pharmacies, 17% to dispensing doctors and 19% to private hospitals and ethical drugs also called brand name or proprietary drugs, held a 95% share of the retail pharmacy sales. Ethical medicines mainly produced by multinational companies hold an 80% market share. Multinationals primarily cater for the private market, as their ethical or branded medicines are often unaffordable to people who are dependant on the public sector. Only those who can afford medical aid, i.e. those in the private sector counting only seven million out of 45 million South Africans, have access to ethical drugs. Multinationals make use of the three exclusive distributor agencies for the distribution of their products, which accounts for approximately 70% of the distribution market leaving only 30% for other third party logistics distributors and wholesalers.

The prohibition of bonuses and incentives compelled the pharmaceutical wholesaler to reconsider its business model. The wholesaler will have to operate on a “fee-for-service” basis since the adding of a mark-up to its products is not allowed. The logistics fee is now the only payment instrument that can be used to distribute the product to the retail pharmacy, dispensing doctor, hospital or other health care provider.

1.2 Method of investigation

As stated under the hypothesis, the objective of this study is to examine the economic significance of the pharmaceutical wholesaler in South Africa’s health care industry.

In examining and evaluating the phenomena involved in coming to a conclusion as to the significance of the wholesaler in the distribution of medicine is mainly made of the case study method of research involving firstly, a study of the relevant literature followed by a more in-depth examination of the variables and relationships observed with the aid of questionnaires and interviewing of people knowledgeable about the industry. This aspect is examined in more detail in chapter 3 dealing with data analysis.



Chapter 2

Literature Review

2.1 Introduction

The objective of this chapter is to examine the literature relating to the economic significance of the pharmaceutical wholesaler in South Africa's health care industry. The role of each player in the supply chain and the competitive forces at work in the pharmaceutical industry are described with the aid of the "value chain" theory and "Porter's Five Forces" theory of competition. Specific reference is made to the legislative changes brought about by the State in its aim to make health care more accessible to the South African citizen. The changes brought on by government regulations have an effect on the pharmaceutical wholesaler as an intermediary in the value chain.

Literature regarding the pharmaceutical industry and the country's health care industry came from pharmaceutical journals and publications. Most of the literature consisted of media reports on the players in the pharmaceutical industry in their response to the State's regulations.

As a starting point, the definitions of health care and pharmaceuticals are examined. The concept "value chain" and the five forces of competition in the industry are also examined. The South African health care system and the State's policy perspective and role in the provision of affordable health care for a broad spectrum of the South African population are discussed.

The pharmaceutical value chain is discussed with specific reference to the changes within the industry due to regulation by the State.

2.2 Health care defined

“Health care” is defined as those resources society use to cure or to care for people with ill health. In addition to the curing and caring for people who become ill, health care also includes activities aspiring to prevent people to become ill in the first place (Dolan & Olsen, 2002).

“Cure” is concerned with improvement in health, which means that in the case of people suffering from an illness, a cure may either fully restore that patients health, improve their health, though not completely, or limit the extent to which their life deteriorates. Such care not only improves health but also provide dignity to sick people (Dolan & Olsen, 2002).

“Prevention” includes those resources used to reduce the probability of illness or premature death (Dolan & Olsen, 2002).

2.3 Pharmaceuticals defined

According to the Webster’s Online Dictionary the word “pharmaceutical” is defined as a noun for a drug or medicine that is prepared or dispensed in pharmacies and used in medical treatment. The word “drug” is defined as a noun for a substance that is used in medicine or a narcotic. The word “medicine” is used as a noun for something that treats or prevents or alleviates the symptoms of disease (Parker, 2006).

A “medication” is a drug or substance taken to reduce symptoms or cure an illness or medical condition. Medications are generally divided into two groups – “over-the-counter” (OTC) medications, which are available in pharmacies and supermarkets without a prescription, and “prescription-only” medication, which must be prescribed by a doctor. Most over-the-counter medications are generally considered to be safe. The average person will not be harmed extensively by not taking it as instructed (Parker, 2006).

Pharmaceutical companies typically produce medications. The medication may be patented by the company, through which the company demonstrates that it has created a novel compound and holds the sole rights to the production or licensing of that compound for a limited period of time (usually 20 years). Medications that are not patented are called “generic drugs” (Parker, 2006).

Act 101 of 1965 and The World Health Organisation (WHO) defines a drug or pharmaceutical preparation (a medicine) as: “any substance or mixture of substances manufactured, sold, offered for sale, or represented for use in ... the diagnosis, treatment, mitigation, or prevention of disease, abnormal physical state or the symptoms thereof in man or animal; {and for use in} ... restoring, correcting or modifying organic functions in man or animal” (National Economic Development and Labour Council, 2000: 4).

In literature the concepts, “drug”, “pharmaceutical”, “medicine” or “medication” are used alternatively and has the same meaning.

2.4 The role of pharmaceuticals in health care

The contribution of pharmaceuticals to health improvement has increased greatly, especially since the Second World War. Over the years pharmaceuticals have played a major part in restraining health care costs. Before the 1950's the first “modern” drug “Salvarsan” was discovered. This drug killed off organisms associated with syphilis without harming the host. In 1935 sulphanilamide was identified as an anti-microbial in the dye Prontosil. Penicillin was only manufactured in 1942 even though it was discovered in 1928. Streptomycin an active agent against TB, was formulated in 1943 and the first broad-spectrum antibiotic, chloramphenicol, followed in 1949. The late 1950's and 1960's saw the development of anti-hypertension preparations facilitating the control of high blood pressure and effective psychotropic medicines, which included tranquillisers. In the 1970's medicines for treating

ulcers and new generation antibiotics were introduced. By the 1980's sophisticated antidepressants and ACE inhibitors were made available and in the 1990's protease inhibitors for treatment of AIDS were released (Reekie, 2004).

Pharmaceutical companies developed these products and as a consequence these companies grew into multinational corporations. South Africa has been in the market at the cutting edge of the pharmaceutical process. The anti-TB drug isoniazid was discovered in 1951. Roche in South Africa launched this drug in 1952. Clinical research was done on the product by issuing 15000 of these tablets to patients in the King George Hospital in Durban and the Springhill TB Hospital in Johannesburg. Clinical research is still encouraged and stimulated half a century later. Hibiter, an infant vaccine for the prevention of haemophilus influenza type B, was discovered and introduced by Wyeth. Clinical research with this product was done at the Red Cross Children's Hospital in Cape Town with a success rate close to 100%. The study revealed that the economic impact in terms of lives saved, sickness avoided in later years of life and treatment costs was significant (Reekie, 2004).

The industry has moved into its third half century and its future looks bright. The first five decades created expectancy for a promising future, the second five decades provided a host of life saving, life improving, cost effective discoveries. It is expected that these achievements will be surpassed in the near future, with genetic and molecular biological advances changing the nature of pharmaceutical research. In the past empirical screening of thousands of compounds has taken place to find "one successful one". Tailor making molecules for specific human body cell receptors is now replacing this process. A century ago the term "magic bullet" was used and now it is finally achieving its meaning (Reekie, 2004).

South Africa is well placed as a generic provider to the rest of Africa. At the same time South Africa's advanced market will continue to provide a research "test-bed" for new innovations in medicine. Fewer diseases remain to be

conquered and more attention is given to drugs that will improve life styles. In terms of the technology and research available in the 21st century manufacturers remain confident that the future holds good promise (Reekie, 2004).

2.5 The value chain

Michael Porter, renowned economist of the Harvard Business School, first described the 'value chain'. He popularised the value chain, describing it as the entire chain of production from the raw material as an input to the final product consumed by the end user (Porter, 1985). The chain is called a "value chain", because of the value each link in the chain adds to the original inputs (Burns et al, 2002).

In reality two value chains exist. The first value chain concerns the productive activities, performed to manufacture a specific product or to render a service within a particular firm. The firm acquires inputs (labour, materials, capital and so on), integrates and process them in the stage of throughput and then produces its outputs (Burns et al, 2002). Using another example the value chain can be explained as follows: Production of most items occurs in several stages. One stage is the production of raw materials. At the second stage raw materials are shipped to a plant for manufacturing which involves combining these ingredients to make a final product. The difference in value between what the manufacturer pays for the intermediate good and what it receives for the finished product is called the firm's "value added" (Brookstone, 2002).

The second value chain concerns the stream of activities across firms. A firm has suppliers for its inputs, industry competitors, distributors and end customers. Analysis of the value created within the firm helps to identify the value created along the inter-firm supply chain (Burns et al, 2002).

The concept of “value” can be approached from a diversity of perspectives, building on the fields of economics, strategy, organisational behaviour and other fields. The economic influence can be seen in the works of marketers who state that consumers allocate their income to maximise the satisfaction they get from products and services (Laric & Pita, 2004).

The service value chain is more complex in that it may comprise several possible value chains, thereby forming a network of relationships, rather than the sequence customarily associated with the value chain. These relationships comprise a value network (Laric & Pita, 2004).

The term “supply chain”, is used more frequently by industry than the term “value chain”. The difference is that the supply chain refers to the virtual network of movement of a product from the earliest point of production, through packaging and distribution and ultimately to the point where the product is consumed. It describes the path travelled by the product and each stop in the path defines a link in the supply chain (Burns et al, 2002).

Supply chain networks may operate and use strategies to both “push” manufactured products through the chain using sales forces and promotional campaigns and “pull” products through the chain to continually replenish retailer’s inventories and meet customer demand. In the “push” model manufacturers promote and sell as much products as possible through the chain to customers. In the “pull” model customers demand products from the preceding link in the chain. Sellers of the products then become responsible for managing the customer’s inventories (Burns et al, 2002). According to The Global Supply Chain Forum’s definition of Supply Chain Management “Supply Chain Management” is defined as the integration of key business processes from end user through to the original supplier that provides products, services and information that add value for customers and other stakeholders (Cooper, Lambert & Pagh, 1998).

The question arises why these value chains or supply chains exist in the first place. There are two reasons for the existence of value chains originating from industrial organisational theory and organisational theory (Burns et al, 2002).

First, supply chains exist because of little or no vertical integration of manufacturers into the distribution of their products to the end user or customer. These manufacturers believe that the cost of transacting with the marketplace for distribution is less costly than attempting to distribute these products in-house and to co-ordinate these exchanges using hierarchical means. It is cheaper for manufacturers to “purchase” these services from the marketplace for distribution and delivery than the cost the firm would incur by attempting to “make” distribution services in-house. The manufacturing firms consequently choose not to enter into the distribution business but rather let specialist firms produce these services for them (Burns et al, 2002). This underlying concept of specialisation can be traced to Adam Smith’s theory of specialisation as described in his work “The Wealth of Nations” published in 1776. The notion of both the division of labour and its specialisation have led to mega profits generated by today’s large companies (Brookstone, 2002).

The second reason for the existence of the value chain is due to the fact that manufacturers, having left the distribution services to others, are interdependent on these external firms over whom they have no hierarchical or managerial control. They thus need to develop contractual or strategic alliance relationships with these specialist firms in order to get their products to the end consumer. Supply chains exist to coordinate and manage the exchanges of firms that are interdependent (Burns et al, 2002).

Having firms engaged in trading relationships, a value chain is concerned with several theorised objectives which are:

- The optimisation of all activities of the cooperating firms to create bundles of goods and services;

- The managing and coordination of the entire chain from the raw material suppliers to the end customers, rather than maximising the interests of one player;
- Developing highly competitive chains and positive outcomes for all firms involved;
- Establishing a portfolio approach to working with suppliers and customers; deciding on which players should be working together most closely and the establishment of processes and information technology (IT) infrastructure to support these relationships.

The value chains are collaborative partnerships between adjacent players engaged in economic exchange. This requires coordinated production and distribution efforts in order to meet customer needs on a just-in-time basis and to reduce inventory levels and delays in product availability. These partnerships are designed to create the lowest total cost solution for all players in the chain from the end customer to the manufacturer (Burns et al, 2002)

The lowest total cost is achieved through demand planning which relies heavily on the information gathered from the customer that “pulls” products through the supply chain. Demand planning works backwards from the customer to the manufacturers and further back to the suppliers of manufacturers (Burns et al, 2002).

In contrast to this the “traditional supply chain management” starts with the manufacturer that “pushes” the product through the use of marketing and advertising campaigns, working forward towards the customer. The manufacturer’s aim is not to achieve the lowest cost but to increase product sales, optimal product differentiation and lowest delivered cost (Burns et al, 2002).

Everard (2000: 2) defines “supply chain management” as the “intervention of supply chain links and players in determining costs and value of exactly when and how a product moves, in what quantities it is moved, who moves it and how

it is moved, who stores it and how it is stored, and when and how it is made available to those who consume or use it. Everything that happens to a product as it moves through the chain either adds cost or reduces cost. It either adds value or reduces value. The ultimate goal for any product moving through the chain is to reduce cost and add value at the same time" (Everard, 2000). Value chains are also supposed to develop as strategies of competitive advantage in which one set of trading partners seeks to create more value than a rival set of trading partners. More value can be added to the chain for example higher quality and lower cost products and services (Burns et al, 2002).

There are three essential ingredients for success in value chain alliances. The first key ingredient is dedicated asset investment in one's supply chain partner in order to increase productivity. A second key ingredient is effective knowledge management and flow of information among trading partners. The third key ingredient is trust among trading partners. This lowers the necessity for contract enforcement and surveillance and reduces transaction costs (Burns et al, 2002).

There are three critical flows requiring attention in the value chain. The three flows are: products, money and information. Players in the supply chain compete for access to and control over these three flows (Burns et al, 2002).

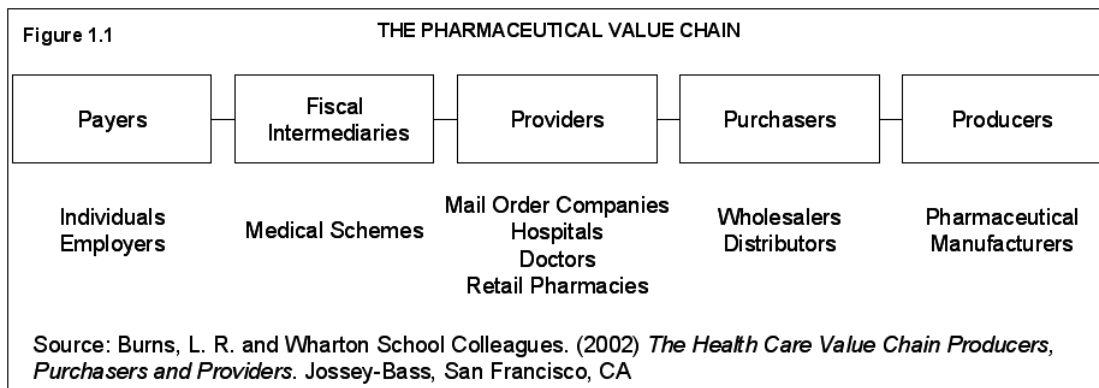
Marketing channels are defined as "vertical value adding chains that create competitive advantage" (Coughlan, El Ansary & Stern, 1996: 1). The marketing channel is defined as a "set of interdependent organisations involved in the process of making a product or service available for consumption or use" (Coughlan, El Ansary & Stern, 1996). Companies use specialised channels to provide value-added functions such as technical or scientific expertise (Gorchels, Marien & West, 2004).

2.6 The pharmaceutical value chain

The role of each of the major players in the pharmaceutical value chain is discussed in the context of the industry and the competitive environment and changes brought on by regulatory measures imposed by the State. The pharmaceutical wholesaler as intermediate in the middle of the chain will be discussed last with specific reference to the effect the industry dynamics had on the wholesaler. The aim is to show how regulatory, industry and competitive forces have influenced the pharmaceutical wholesaler's role in the chain. The changes in the competitive environment of the industry have brought new requirements for wholesalers to stay competitive. The wholesaler can only survive by adding economic value in the chain.

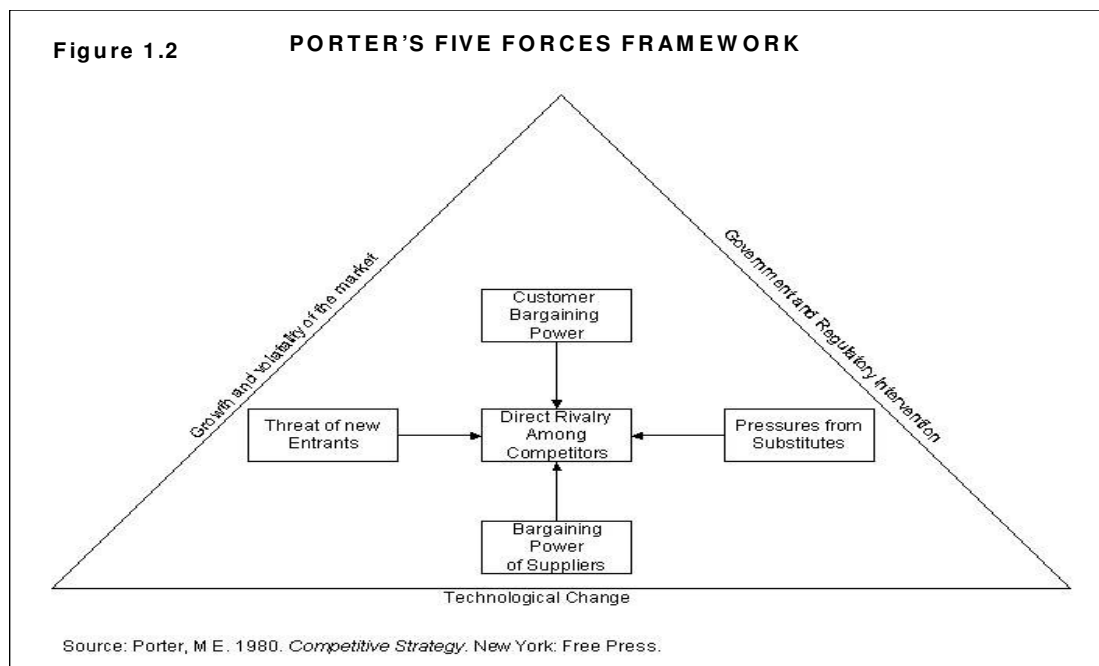
The pharmaceutical value chain as part of the health care industry consists of different groups of activities performed by different company or entity groupings, each having its own value chain internally and each forming a shackle in the value chain.

These activities, illustrated in Figure 1.1, can be grouped into companies or entities involved in the following: producers of pharmaceuticals which are the pharmaceutical manufacturers; the purchasers of these pharmaceuticals which are the wholesaler and distributors; the providers of these pharmaceuticals which are retailers, doctors, pharmacies, hospitals; fiscal intermediaries which are medical schemes, insurers; and payers which are individuals and employers (Burns et al, 2002).



Analysis of the pharmaceutical value chain requires not only the consideration of both types of value chains described above but also the analysis of the competitive forces within the industry (Burns et al, 2002).

Porter's five forces framework can be used to analyse the different competitive forces within the industry. The five forces framework emphasises competitive rivalry among existing firms in order to determine the competitive leaders of a given industry, the interplay among supplier and customer bargaining power, the threat of product or service substitutes and the threat of new entrants to the industry. The external environment has an effect on these competitive forces within the industry. The external factors affecting the competitive forces are government and regulatory intervention, growth and volatility in market demand as well as technological changes (Porter, 1980). The five forces framework is illustrated in Figure 1.2.



The pharmaceutical value chain and the competitive forces will be discussed after a brief background discussion of the health care system of South Africa and the development of regulations affecting the health care industry.

2.7 Health care and regulatory developments

The South African health care market consists mainly of two sectors namely the public sector, or constitutional sector, and the private health care sector.

The public health care sector provides for the health care needs of approximately 70% of the population. The cost of providing these services is in the region of 30% of total health care expenditure of the country, as far as medicine is concerned (Competition Law Solutions, 2004; Reekie, 2004).

The South African health care sector faces large discrepancies between the private and public segments in terms of both facilities and funding (Focus Reports, 2006a). According to Monitor, a global consulting firm, South Africa's private health care sector is rated fourth best in the world (Business Monitor International Ltd., 2004). In contrast, the public health care system ranks among the lowest according to the World Health Organisation (WHO) (Focus Reports, 2006a).

The two markets differ significantly (Competition Law Solutions, 2004). Health care services rendered to patients in the public sector are essentially free of charge while patients in the private sector belong to medical schemes and are reimbursed by these for health care services rendered (Competition Law Solutions, 2004; Reekie, 2004).

Contributions to private medical schemes came to R 37 billion in 2001, which was 3.7% of GDP. Approximately 16% of the population had private medical aid during that time and these groups had access to health care systems comparable to the worlds' best (Blecher & Van As, 2003).

The public health care system delivers services through the State hospitals, clinics and district surgeons. Private individuals (professionals) and private institutions (private hospitals and day clinics) provide private health care to the

private sector. Health care professionals in the public health sector are employed by the State (Competition Law Solutions, 2004).

In the public sector medicines are purchased by way of the public tender system and prices charged by the various pharmaceutical manufacturers are lower than those charged to private hospitals or pharmaceutical wholesalers or retailers in the private sector (Competition Law Solutions, 2004). Manufacturers supply drugs to government agencies through the Central National Tender System, COMED. COMED prices for medicines in 2004 were 11% lower than any lowest price source anywhere in the world (Reekie, 2004). Some prices charged to the public sector in the past have been five to ten times cheaper than those charged to intermediaries in the private sector. A large percentage of medicines in the public sector are generic equivalents (medicines of which the patents have expired and which are copied by other manufacturers) (Competition Law Solutions, 2004).

Prices charged to the Private Sector on the other hand are in average higher than those charged to the Public Sector reflecting the differential abilities to pay. This causes a degree of cross subsidisation and spontaneous redistribution between the two sectors (Reekie, 2004).

Government's view of the health care market has been impacted by the significant social and political changes experienced in South Africa over the last decade. The vision of the Department of Health is that all South Africans should have access to affordable, good quality health care (Luiz & Wessels, 2003). Government in its efforts for more affordable and safer health care has targeted different players in the private health care sector (Costly Drugs, 2004).

Pharmaceutical companies came under increased pressure from government to reduce the cost of medicine. Government has put pressure on pharmaceuticals through different legislative policies (Costly Drugs, 2004).

Government introduced a National Drug Policy in 1996 to systematically deal with the inequitable access to health care. The goal of the National Drug Policy (NDP) is to ensure an adequate and reliable supply of safe, cost effective drugs of acceptable quality for all the citizens of South Africa and the rational use of drugs by prescribers, dispensers and consumers (Burton & Futter, 1999).

The NDP has three objectives, Health Objectives, Economic Objectives and National Development Objectives (Burton & Futter, 1999).

The Health objectives are;

- to ensure the availability and accessibility of essential drugs to all citizens,
- to ensure the safety, efficacy and quality of drugs,
- to ensure good dispensing and prescribing practices,
- to promote the rational use of drugs by prescribing doctors, dispensers and patients through the provision of the necessary training, education and information; and
- the promotion of the concept of individual responsibility for health, preventive care and informed decision making (Burton & Futter, 1999).

The economic objectives of the NDP are;

- to lower the cost of drugs in both the private and the public sectors;
- to promote the cost-effective and rational use of drugs;
- to establish a complementary partnership between government bodies and private sector providers in the pharmaceutical sector; and
- to optimise the use of scarce resources through cooperation with international and regional agencies (Burton & Futter, 1999).

The National Development objectives of the NDP are:

- to improve the knowledge, efficiency and management skills of pharmaceutical personnel;
- to reinstate medical, paramedical and pharmaceutical education towards the principles underlying the NDP;

- to support the development of the local pharmaceutical industry and the local production of essential drugs; and
- to promote the acquisition, documentation and sharing of knowledge and experience through the establishment of advisory groups in rational drug use, pharmacoeconomics and other areas of the pharmaceutical sector (Burton & Futter, 1999).

Government implemented the following strategies in order to make medicines more affordable: parallel importation, generic substitution of patented medicines, the establishment of a pricing committee and the introduction of an affordable pricing system for all medicines sold in South Africa (Bester & Hamman, 2005).

Parallel importation, which is the import of a product through channels other than arranged by the manufacturer of the product and its authorised distributors, generally is considered to promote price competition in the market (Love, 1997). The regulations prescribe the conditions upon which medicines that are identical to medicines, which are already registered in South Africa, may be imported, provided that these medicines originate from the original manufacturer thereof (Bell Dewar Hall, 2003). The State promoted parallel importation and promoted generic substitution with the purpose of facilitating aggressive marketplace competition. Parallel importers find those national markets where goods are cheapest and import these goods to countries where prices are higher for these goods, selling it at a lower price than which is asked by its competitors (Love, 1997)

The Medicines and Related Substances Act (Act 90 of 1959) as amended promotes affordability and accessibility to health care through generic substitution (Saad, 2004). Generic medicines are copies of branded (original) medicines that are produced and sold at lower cost once the originator's patent protection period of 20 years, has lapsed (Mc Donald, 2004). In order to promote the use of generic drugs pharmacists are required to inform their prescription customers of the benefits of using a generic instead of the

prescribed medicine. The dispensing of a generic drug is required instead of the prescribed medicine unless the patient forbids the pharmacist to do so or when the person prescribing the medicine indicated that the medicine should not be substituted with a generic (Bell Dewar Hall, 2003). A report of Business Monitor International of 2004 indicated that Generics account for almost 50% of the total market in volume terms and 20% in value (Business Monitor International Ltd., 2004)

The Regulations Relating to a Transparent Pricing System for Medicines and Scheduled Substances under the Medicines and Related Substances Control Act, Act 101 of 1965, was published on 2 May 2004. The aim of these regulations is to ensure that all South Africans have access to affordable, good quality medicine and to specify the processes and mechanisms that will give effect to the provisions of Section 22G of the Act. The medicine pricing regulations as provided in the mentioned Section 22G attempted to take on the challenges in the following ways (Bester & Hamman, 2005):

- The introduction of a transparent pricing system for all medicines and scheduled substances sold in South Africa. Manufacturers and importers were required to set a price, the Single Exit Price at which a particular medicine has to be sold to any person other than the State.
- The regulations set a maximum dispensing fee to be charged by persons dispensing medicines, which may be a pharmacist or a licensed person in terms of Section 22(1)(a) of the Act.
- It regulates the wholesalers' and distributors' fee indirectly by incorporating it into the Single Exit Price.
- It scrapped and prohibited all discounts, rebates and other incentives (Bester & Hamman, 2005).

As from May 2004 bonuses, rebates and other incentives by pharmaceutical companies or wholesalers to pharmacies or doctors were prohibited. Pharmacies are also not able to give discounts to their customers. As of from May 2003 the free sampling or supply of medicines by manufacturers and

wholesalers to any medical practitioner – other than for the purpose of clinical trials, donations of medicines to the State, tendering to the State and quality control by inspectors, - is prohibited (Bell Dewar Hall, 2003).

Before the implementation of these regulations the formally listed Manufacturer Net Price (MNP) of medicines was inflated to allow for a complex system of rebates, bonuses and other incentive schemes. This system allowed large suppliers and hospitals to obtain medicines at prices at approximately 50% below the listed MNP. Different customers were charged different prices and not all medicine providers were eligible for discounts. The benefits were seldom passed on to the consumers but were retained by the supplier of the service (Bester & Hamman, 2005).

South Africa's drug manufacturer prices in 2000 were among the lowest in the world. The retailer's mark-ups however were among the highest. Just over half the price of drugs (net of tax) goes to the manufacturer, wholesalers' margins add approximately 11 percent and retailers 34 percent. By comparison, the manufacturer's price was 65 percent in Germany and 88 percent in Sweden (Reekie, 2000).

The Pricing Committee was established to ensure that the pricing structure of medicines, from the manufacturer to the consumer, is absolutely transparent and able to be audited. The committee may not dictate prices of medicines and the committee need to advise the Minister of Health on appropriate fees for wholesalers and pharmacists. The other responsibilities of the committee include determining the final cost of medicine to the consumer and the responsibility to benchmark the cost of medicines in South Africa against overseas markets (Bester & Hamman, 2005).

An established ceiling price for the Single Exit Price may only be increased once a year, while it may be reduced any number of times for the purposes of competition. The Single Exit Price was calculated through a formula as set out in the regulations and may only change after consultation with the Department

of Health. The formula at which it is calculated takes into account the average sales, discounts and volumes sold over a period, as well as relative prices in other countries, the inflation rate, foreign exchange rates and the overall affordability of the medicine. The SEP need to be printed on all containers dispensed. This allows consumers to know how much they are paying for a medicine and how much they are paying for the dispensing fee (Bester & Hamman, 2005).

Before the promulgation of the dispensing fee dispensers of medicine received a percentage mark-up on medications – which provided an incentive to use more expensive medicines in order to maximise profit margins (Mc Donald, 2004).

Persons dispensing medicines is not allowed to add a mark-up to the SEP, but have to charge a professional service fee or dispensing fee instead. A maximum level for this fee was set depending on the schedule and the provider speciality (Bester & Hamman, 2005).

Private medical schemes have been legally obliged by the government to offer low-cost insurance packages to low-income earners in the hope that this will encourage greater take-up of private-sector health insurance and thus relieve the pressure on the government's coffers (World Markets Research Centre, 2002). Government hopes to use buying power of the Government Employees Medical Scheme (GEMS), created in 2005, to temper the cost of medical schemes. The GEMS plan to cover approximately 400 000 public servants who are currently members of 68 other existing schemes and plans to become the largest medical scheme in the country (Focus Reports, 2006a). Government also plans to introduce Social Health Insurance (SHI), which should be funded by a mandatory tax levied on all employed residents in South Africa. A first step in the implementation of SHI would be the implementation of a Risk Evaluation Fund starting in 2007 (Focus Reports, 2006a). It will aim to equalise the cost of providing prescribed minimum benefits (PMB) which are set by law. The higher portion of younger and healthier members will pay money into the fund, which

then will be distributed to schemes with older, less healthy members (Focus Reports, 2006a). A survey has also been launched by government to study the relevancy of a Low Income Medical Scheme (LIMS), targeted at low income households with the aim of mapping potential coverage and pricing.

The regulations, which came into effect on 2 May 2004, also included the rescheduling of scheduled substances and by whom and how they may be sold. According to these regulations Schedule 0 substances may be sold in an open shop. Schedule 1 to 6 substances may be sold by pharmacists; manufacturers and wholesalers, veterinarians and medical practitioners, dentists, and some of them by practitioners, nurses and other persons registered under the Health Professions Act and if they hold a license referred to below. Only Schedule 2 substances may be sold by pharmacists without prescription (Bell Dewar Hall, 2003). Schedule 3, 4, 5 and 6 substances can be dispensed by a pharmacist on an oral instruction by an authorised prescriber, but not more than 7 days supply, and only if the oral instruction is confirmed in writing within 7 days. A prescription will only be valid if it is presented for dispensing within 30 days of it being issued. An authorised prescriber is a medical practitioner, dentist, veterinarian, practitioner or nurse registered under the Health Professions Act, 1974. Schedule 2 to 4 substances may only be repeated if indicated on the prescription, and then for not longer than 6 months. Schedule 5 substances may only be repeated if the number of times they may be dispensed and the intervals are specified by the prescriber and for not more than 6 months. Schedule 6 substances may not be repeated without a new prescription being issued. The sale of Schedule 5 and 6 substances by a manufacturer or wholesaler must be recorded in a register and must indicate the quantity for every Schedule 5 and Schedule 6 substance remaining in stock on the last day of March, June, September and December of each year (Bell Dewar Hall, 2003).

According to the regulations of 2 May 2004 the Director-General may issue a permit to any organization or person performing a health service to acquire, possess, supply or use any specified schedule 1 to schedule 5 substance. The

Director General may issue a license to a dentist, medical practitioner, nurse, a person registered under the Health Professions Act ("practitioner") or other person registered under the Health Professions Act on application, after having successfully completed a supplementary course prescribed under the Pharmacy Act, and after the payment of the prescribed fee, to compound and dispense medicines (Bell Dewar Hall, 2003).

Manufacturers, wholesalers and distributors may, on application to the Medicines Control Council (MCC) and payment of a prescribed fee, manufacture, act as a wholesaler of, or distribute a particular medicine or medical device, on condition that acceptable quality assurance principles and good manufacturing (GMP) and distribution practices (GDP), as prescribed by the MCC, are followed. Manufacturers, wholesalers and distributors may not act as wholesalers of, or distribute, whichever the case, any medicine or medical device unless he or she is a holder of such a license. The requirement that a license be obtained in order to dispense, compound, manufacture and distribute medicines, whichever of these, came into operation on 2 May 2004. In considering an application for a license by a medical person entitled to make such application, the Director-General considers the existence of other licensed health facilities in the surrounding area of the premises from where the compounding and dispensing of medicines are intended to be carried out. The representations by other interested persons, demographic considerations, the geographic area to be served by the applicant and the number of health care users in such geographic area, disease patterns and health status of the users to be served and any other information he or she deems necessary is taken in consideration. The applicant is also required to inform of his or her intent for application to apply for a license in the local newspapers. A medical person's license expires after three years. A manufacturer, wholesaler or distributor's license expires after five years. An application for the renewal of a license must be made at least 90 days before expiry of the existing license (Bell Dewar Hall, 2003).

Government intervention is concerned with the private sector, which includes the medicine-pricing regulation, registration of dispensing doctors, regulation of professionals through professional councils, aspects relating to medical schemes such as minimum benefits, among others. These regulations have influenced the competitiveness of several firms in the private health care sector (Competition Law Solutions, 2004).

The pricing regulations constitute the biggest changes in the private health care sector and are in line with regulations in other countries in the European Union and Australia where the State is involved in price fixing and profit taking in the distribution chain. These regulations aim to eradicate unfairly high profits traditionally earned by most corporations operating in this sector, to reduce the annual increase in medicine prices and contain medical inflation which has been prevalent over most of the 1990's. Before the introduction of these regulations bulk discounts have seldom been passed on to the consumer which allowed some players in the channel to make unreasonable profits on the sale of medicine (Tsabalala-Msimang, 2005).

2.8 The value chain players

The role of each of the value chain players is discussed in order to clarify their role in the value chain as well as to illustrate the impact of the regulations on competition between them. The discussion starts of with the producers, manufacturers of pharmaceutical products, after which the providers, namely the retailers are discussed. Health insurance or medical aid having an influence on many of the players will be discussed together with the mentioned value chain players.

The role of wholesalers and distributors as purchasers are discussed last since these players are the intermediates between the producer and the provider of pharmaceuticals in the value chain.

2.9 Producers: the pharmaceutical manufacturer

The pharmaceutical manufacturer as producer of pharmaceuticals is discussed in this section starting of with the definition of pharmaceutical manufacturing.

The Medicines Control Council defines the act to “manufacture” as “all operations including purchasing of material, processing, production, packaging, releasing, storage and shipment of medicines and related substances in accordance with quality assurance and related controls” (Medicines Control Council, 2004b: 3).

The following three steps: research, testing and production defined the pharmaceutical manufacturing industry value chain for hundreds of years (Champion, 2001).

Pills and serums are the end products of a long, complex discovery process: The drug research and development process begins with the identification of genes involved in a particular disease. The next step is to identify and validate the proteins – or targets – that different genes produce in different parts of the body. These targets are the cause of malfunctions in cells that become diseases. Small molecules need to be identified that will attach to the target protein and prevent it from causing the disease. After identifying the molecule leads also called new molecular entities (NME's), it is the testing phase. Leads are tested first on animals and then on humans. Finally ways have to be found to economically manufacture the drugs on a large scale and marketing them successfully to doctors and patients (Champion, 2001).

The research process is expensive and innovators are likely to conduct research in countries where there is the least risk to the process (An Expensive Road to Safe Therapies, 2004).

The pharmaceutical industry includes a broad range of companies of very different sizes and technological capacity. Three kinds of drug producers exist:

- Integrated corporations are multinational companies engaged in all stages of production, able to generate NME's and distribute medical chemicals through subsidiaries and licensees. There are only a few multinational companies of this kind South Africa (The World Bank, 2005).
- Innovative companies typically produce patent expired drugs. These companies may also be capable of discovering and developing NME's (The World Bank, 2005).
- Reproductive firms lack any in-house research capability. Active ingredients are sourced from international tenders or from the original innovator. These manufacturers sell medicines either under brand names or international non-proprietary names (INN's) as generics (The World Bank, 2005).

Multinational pharmaceutical manufacturers usually have a wide range of products in their development and commercial portfolios. It does not make business sense for these companies to retain all the steps in the manufacturing process. Some companies prefer to outsource early stages of the synthesis while retaining the final steps in-house. Other companies outsource the manufacturing of the Active Pharmaceutical Ingredients (API's), which are biological active compounds in a drug formulation that imparts the desired therapeutic effect. Pharmaceutical companies usually own the intellectual property but endeavour to minimise capital expenditure and to develop its supply base in the shortest possible time frame (The World Bank, 2005).

Generic product companies may expect the API supplier to take full responsibility for process development, validation and registration of the API. They require that an API is suitable for formulations, of satisfactory quality and of a competitive price. Strategic partnerships are often agreed in advance of patent expiry (The World Bank, 2005).

In order for pharmaceutical manufacturers to obtain and hold a manufacturing licence they should comply with Good Manufacturing Practices (GMP) which

involve the following: Management of quality and quality assurance measures, staff management, maintenance of hygiene programmes, maintenance of premises, have (a) system(s) for documenting all process specifications of various operations and batch documentation management, keep records and samples of starting materials and finished products, ensuring of good contract management, have complaints review systems and regular self inspections (Medicines Control Council, 2004b).

The pharmaceutical market is unstable in terms of maintaining a lead position due to the rate of innovation. Studies on the ranking of companies in terms of sales and revenue showed that only one out of 20 top companies were able to retain its original ranking. Four of the international leading firms of 1997 did not even appear in the top 20 in 1988. The top company in 1997 was ranked ninth in 1988. The second ranked firm in 1988 had fallen to ninth place in 1997. New products are constantly introduced to the market and companies wanting to hold their positions need to innovate on a continuous basis. Another ten-year study showed that out of the top 20 products only four retained their positions under the top 20 in 1997. The other sixteen were replaced with new and more superior products (Reekie, 2004).

Drug development is time consuming and expensive. A typical drug takes about 15 years and approximately R 8 billion before it can be marketed (Champion, 2001 & & Financial Mail, 2004b). A drug trial takes on average six to seven years to complete and because patents are registered at the start of phase 1 trials, the longer a company spends in a clinical trial, the less time it have to recoup its investment (An Expensive Road to Safe Therapies, 2004).

With an average cost of R 8 billion to bring a new drug to the market multinational companies subsidise their losses on creating new drugs for the developing world through selling blockbuster drugs to richer markets in the developed world (Costly Drugs, 2004).

Pharmaceutical companies are under increased financial pressure due to legislation forcing more affordable and accessible medicine. Though forcing these companies for providing more affordable medicine, government also wants drug companies to invest in new drug development to treat major diseases, such as malaria and tuberculosis. Pharmaceutical firms on the other hand need to generate returns on investment in developing new drugs (Costly Drugs, 2004).

Manufacturers have patent rights on medicine granting them the right to control the use of the invention for a period of 20 years. Patent holders can license the use of the invention to others, or produce and sell the invention without competition. The patent allows the patent holder to benefit from any commercial opportunities that derive from the invention. At the end of the period the innovation is no longer protected and can be used by anyone. The need to protect patents in order to encourage the creation of new pharmaceutical products is clear. Pharmaceuticals are expensive to invent and develop but cheap to copy and manufacture. New drug development requires a massive amount of capital. Without patents, or another form of protection, every drug would be copied by rival companies, which do not need to spend millions on drug development. The result of price competition would make it impossible to recoup the research investment. Without patent protection manufacturers will be unwilling to invest the hundreds of millions of dollars required for the development of new drugs (University of Toronto, Centre for Innovation Law and Policy, 2005).

In some cases the period of 20 years for the patent is significantly reduced, as extensive safety testing is done before marketing the new medicine. Once the patent has lapsed, producers of generic drugs are able to manufacture generic copies of the drug. These are invariably sold for a much lower price, bringing about a saving for the consumer (Mc Donald, 2004).

South Africa presents a small market for major drug producers, accounting for less than 1% of global sales (Tren, 2004). Globally the pharmaceutical industry

has undergone a period of unprecedented restructuring over the last decade. The most evident of this are the large number of mergers between research-based multinationals like between Glaxo and Wellcome and between Sandoz and Ciba Geigy forming Novartis. One later major merger was between Glaxo Wellcome and Smitkline Beecham forming GSK. These mergers have been driven largely due to the need to cut the costs of product research and development, marketing and production and to replenish deleted product pipelines and maintain growth and profitability (National Economic Development and Labour Council, 2000).

Domestic production in South Africa meets only 60% of the total demand. A small amount of prescription medicines are produced locally. The South African industry has virtually no manufacturing of Active Pharmaceutical Ingredients (API's), except for one single company (part of the Aspen Group) with a limited range of products. The formulation of medicines is well established, however it is often plagued by an under-utilised production within most formulation plants in South Africa operating at only 50% of capacity or lower (Focus Reports, 2006c). The industry lacks economies of scale in production and production runs are short. Higher cost per unit can only be counteracted by higher outputs (The World Bank, 2005). South Africa has also had little success in Foreign Direct Investment (Focus Reports, 2006c & Tren, 2004). Manufacturing operations has been scaled down and according to the Manufacturers Association 34 multinational manufacturing sites were closed between 1994 and 2004, some due to mergers and others due to the growing trend of manufacturing in centres of excellence around the world (Tren, 2004 & Focus Reports, 2006c). The closing down of these sites resulted in a large number of job losses locally. The main reasons for the closing down of these production facilities were the operating cost involved, barriers to entry and that it has become more economic to import drugs than to produce it in South Africa (Focus Reports, 2006c).

In 2002 the leading domestic players included Adcock Ingram Ltd, the generics firm Aspen Pharmacare and South African Druggists LTD., GlaxoSmithKline

(UK), Bristol-Myers Squibb (US), Hoechst (France) and Johnson & Johnson (US). All these companies have operations in the country, mostly for sales, but some are pursuing possible production as well. None of the firms dominates the South African market (World Markets Research Centre, 2002).

Drug companies have been able to make acceptable profits in the country by price discrimination, selling drugs at good profit to the private sector while ensuring very low prices to the State (Tren, 2004). Local pharmaceutical companies had to adapt to the transforming pharmaceutical market environment. Global restructuring in the industry and the changes in the local legislative environment brought transformation in the local market. Manufacturers experienced increased competition with imports partially due to the total removal of tariff protection on pharmaceutical products early in the 1990's (National Economic Development and Labour Council, 2000).

Multinational Companies are represented by the Pharmaceutical Manufacturers Association (PMA) and consists of 23 pharmaceutical companies (Focus Reports, 2006a). These multinational companies, which controlled 80% of the market in 2003, has their margins impacted and sales stagnating with by the government's favourable position towards generics (Focus Reports, 2006d). The multinational companies, represented by the Pharmaceutical Manufacturers Association (PMA) (Blaauw, Gray, Gilson, Matsebula & Schneider, 2002), would only be able to expand their base of product consumers when patients are covered by private health care insurance (Focus Reports, 2006d). Multinationals mainly cater for the private market, as their ethical products, or branded medicines, are often unaffordable for those which depends on health services of the public sector. Only those who are able to afford a medical aid have access to the private sector. It is estimated that only seven million out of 45 million South Africans have access to ethical drugs (Focus Reports, 2006d). Stakeholders in the pharmaceutical industry are trying to find solutions to shift the number of patients from the public health care system to the private health care system. This will alleviate the burden on the public sector and double the target market for ethical drugs (Focus Reports,

2006d). The PMA has contributed in the investigation into the development of a Low-Income Medical Scheme (LIMS) initiated by the Ministerial Task Team on Social Health Insurance (SHI) (Pharmaceutical Manufacturers' Association of South Africa, 2005).

The importance of non-research based companies, focusing on off-patent or generic drugs has also been playing an increasingly significant role in the pharmaceutical markets. The large numbers of blockbuster drugs, which come off patent, provide a wider range of products which these companies can supply (National Economic Development and Labour Council, 2000). The National Association of Pharmaceutical Manufacturing (NAPM) is a trade association focusing on the supply of generic medicines with consideration of the environmental needs of the country and its members. The NAPM has assisted government in its endeavours with policies for more affordable and accessible medicines. Members to the NAPM consist mainly of manufacturers and suppliers of generic drugs in South Africa (National Association of Pharmaceutical Manufacturers, 2005).

The use of generic medicines in South Africa is expected to increase significantly as a result of the amendment to Act 90, requiring pharmacists and doctors to inform the patient about the viability of lower priced generic alternatives (Louw, 2004). There has been extensive growth over the last few years in the production of generic medicines. In 2003 the R2.6 billion generics market grew by 22%. This increase was three times faster than that of the patented medicines segment. South Africa has the third largest consumption of generic medicines in the world, after the UK and Germany. Smaller businesses take advantage of the growth in generic medicines. A large number of drugs will be losing patent protection in the next three years and the South African generic companies will be in competition to win early development rights (A boom for manufacturers, 2004). Generic medicines offer an affordable and effective treatment. These medicines can be brought to the market at a lower price after the patent on the original product has expired. The development and marketing costs of generic medicines are thus far lower than that of the original

product (Louw, 2004). A study that compared South African generic prices with several developed and developing countries found that South African specific generic prices lower than the seven-country average for these medicines. Although these prices are much lower, in 2004 it was found to only account for 20% of the market (Louw, 2004).

Market share of generic drugs increased with 23.5% in value from 2003 to 2006. Due to public awareness campaigns and advantages given by the government as the implementation of a mandatory generic substitution regulation in May 2003 the generic market is booming (Focus Reports, 2006d).

Another advantage given by government is the amendment to the SA Patents Act of January 2003, legalising the pre-patent expiry “reverse engineering” research in order to enable early entry of locally manufactured generic copies almost directly after patent expiry. This allows research and development work to be undertaken at an early stage for medicine registration. The manufacture of commercial quantities and imports of generic copies before patent expiry are not allowed. Generic sales can also be expected to increase with the expiry of a number of HIV/AIDS drug patents (Focus Reports, 2006d).

With government’s favourable position towards generics and falling prices could deter further foreign investment from multinational companies. Multinational companies controlled 80% of the pharmaceutical market in 2003 but their margins have considerably been impacted with stagnating sales (Focus Reports, 2006d).

Since 2003 government’s policy focus has been on reducing costs and prices were frozen in 2003. The new Transparent Pricing Regulation which involves the Single Exit Price (SEP) was challenged in court in 2004 and multinational companies threatened to leave the country after government’s suggested a cut in prices by 50% (Costly Drugs, 2004; Focus Reports, 2006d). The pharmaceutical industry chose to settle with government through consultation and they managed to scale down prices through cutting down individual

manufacturer's cost structures (Costly Drugs, 2004). After the first phase of government's drug pricing regulations a near 20% drop in drug prices were reported between January and August 2004 (Business Monitor International Ltd., 2004; Bester & Hamman, 2005). From 2003 to 2006 a 21% reduction in prices has been achieved (Focus Reports, 2006d). The SEP was the first stage of a three stage pricing regulation. The second stage is to do international benchmarking against a selected basket of countries. The second stage will not affect the industry as much since a survey previously done showed that prices are on average 15% lower than in five other countries in which it a price comparison was done. In another study the selling prices of generics medicines were also compared with several other countries. In most cases generic prices were lower than those prices charged in the other countries included in the study (Focus Reports, 2006d).

2.10 Buyers: retail pharmacies, dispensing doctors and private hospitals

Private drug sales are conducted through four primary outlets, namely retail pharmacies, dispensing doctors, private hospitals and supermarkets (non-pharmacy retail). In 2000 retail pharmacies accounted for the majority, 65% of purchases, with an increase in sales through supermarket and dispensing doctors (Schoemaker, 2000).

In the Annual Report of the Council for Medical Schemes for 2003 to 2004, the breakdown for medicine expenditure showed that 86.8% of the expenditure was paid to pharmacists, 12,8% by the dispensing doctors and 0,5% to allied and support professionals (Council for Medical Schemes, 2004). The large number of pharmacies and prescribing doctors is a significant factor influencing logistical demands and affecting costs (National Economic Development and Labour Council, 2000).

In 2003 approximately 64% of total drug sales to the private sector went through retail pharmacies, 17% to dispensing doctors and 19% to private

hospitals. Ethical drugs, also called brand name drugs, held a 95% share of the retail pharmacy sales (Pharmaceutical Manufacturers' Association of South Africa, 2003). According to statistics of 2006 there are 2523 community pharmacies registered at the South African Pharmacy Council. Gauteng Province has the highest number, 890 of these pharmacies and Western Cape Province the second highest, with 462 (South African Pharmacy Council, 2006).

Two types of products are traditionally sold by retail pharmacies – the one type “front shop products” which consists of toiletries, health products, lifestyle products and beauty products. The other type is called “dispensary products” which is scheduled and unscheduled medicines (Competition Tribunal, 2003).

Pharmacy customers traditionally claimed directly from medical aids and paid their pharmacy account when reimbursed. This resulted in pharmacies having a large number of accounts for customers. Technological developments allowed for the direct claiming by pharmacies on behalf of their customers. With the advancement of medicines and the increase in prices additional pressure was put on pharmacists to contain costs. Medical aids demanded discounts which put pressure on margins. Small pharmacies were no longer profitable and had to close down. Doctors also felt pressures on their profits and started to dispense. This contributed to increased competition in the dispensing market (Luiz & Wessels, 2003).

During the 1990's there was a decrease in the number of retail pharmacies as more and more pharmacies had to close down due to changing demographics, increased competition and declining margins. Big shopping malls drew clients to regional centres which created economies of scale and the establishment of large pharmaceutical chain stores possible. These discount pharmacies were able to offer better prices and did not allow accounts. The discount pharmacies aimed at reclaiming product areas such as toiletries that had been lost to supermarkets and discount chain stores. In 2003 South Africa had 2693 retail pharmacies (Luiz & Wessels, 2003).

In 2003 the ban of ownership of pharmacies by non-pharmacists was lifted by the Pharmacy Amendment Act 1997 which came into effect on 2 April 2003 (World Markets Research Centre, 2002). According to the act the Department of Health has the responsibility for licensing of pharmacies, while the South African Pharmacy Council have responsibility for registration of pharmacists. The South African Pharmacy Council ensure maintaining of acceptable standards in pharmaceutical education and pharmacy practice. With the licensing of pharmacies the Department hoped to obtain a more rational distribution of pharmacies in terms of location (Deeny, 2003). The lift on the ban of ownership of pharmacies by non-pharmacists allowed corporate entities to own pharmacies, subject to the provision that the pharmacy is supervised or managed by a registered pharmacist (Competition Tribunal, 2003).

The Clicks Organisation, a subsidiary of the New Clicks subsidiary acquired four pharmaceutical firms in 2003. These four pharmaceutical firms own 83 pharmacies countrywide. New Clicks also acquired New United Pharmaceutical Distributors (Clicks is a Strong Contender in Retail Pharmacy Industry, 2003). The United South African Pharmacies representing two thirds of independent community pharmacies in South Africa expressed concern for retail firms like Clicks entering the pharmacy sector. It suggested that large retailers should only be allowed to open pharmacies in areas that do not currently have pharmaceutical services (Deeny, 2003).

As part of the regulations of Section 22G of the Act (Medicines and Related Substances Act (Act 101) of 1965), a dispensing fee is to be charged by persons dispensing medicines. No mark-ups are allowed on medicines and a professional fee has to be charged in the form of the dispensing fee, the level charged depending on the schedule medicine and provider speciality (Bester & Hamman, 2005).

With the introduction of the dispensing fee there has been several complaints from community pharmacists fearing that the fee will make them unprofitable. It was indicated that closure of pharmacies could lead to unavailability of

medicines (Towards tomorrow together, 2004). Since the introduction of the Single Exit Price, requiring pharmacies to ask a dispensing fee, several pharmacists charged an additional administration fee to keep business going. Others diversified into selling other commodities such as magazines, clothing and cold drinks. According to the Pharmaceutical Society of South Africa 64 pharmacies closed down between January and August 2004 and several planned to close down in 2005. The reason for this as indicated by the PSSA was that different types of pharmacies, retail-, large store- and hospital-pharmacies have different overhead structures. Hospital pharmacies have a 24-hour service and stock expensive drugs. These hospitals could shift costs which smaller pharmacies could not do. Large store pharmacies might not have to stock expensive drugs all the time and had the advantage of high volume sales. Smaller pharmacies in comparison did not have high volume sales which could help with the shifting of costs (CKS – Computer Kit Systems, 2005). A number of smaller pharmacies in small towns and rural areas have closed down due to their inability to survive with the new dispensing fee while large retailer pharmacies have applied for licenses in big urban centres (Keeton, 2005). Small community pharmacies are not able to survive with only a dispensing fee and not being allowed to add a mark up to the medicines they sell (PSSA Perspectives, 2005).

Another problem experienced is that licenses are issued to corporate pharmacies in close proximity to existing community pharmacies. Licenses granted to corporate pharmacies in shopping malls affect the small independent pharmacies adversely. It seems that these corporate stores are given preferential rental agreements and the smaller pharmacies are not able to compete with the corporate pharmacy, making the closing down of the smaller pharmacy inevitable (PSSA Perspectives, 2005).

2.11 Purchasers: wholesalers and distributors

The Oxford Advanced dictionary defines “wholesaling” as “the selling of goods, especially in large quantities to shopkeepers for them to sell to the public” (Oxford Advanced Learner’s Dictionary, 1995: 1362). The noun for a company involved in wholesale is defined as a wholesaler (Oxford Advanced Learner’s Dictionary, 1995). According to Kotler (2000) wholesalers are consolidators in the supply channel, selling more than half of its purchases to other business organisations and pushing manufactured products through the supply channel to users, or pulling products from the manufacturers in response to the end users for industrial, institutional and commercial purposes (Kotler, 2000). Burns et al (2002) describes the wholesaler as a firm that resell products to another intermediary, thus a wholesaler purchases products from the manufacturer, take ownership, and then resells it to a pharmacy which in turn sells it to an end customer (Burns et al, 2002).

Distributors are firms that resell the product to the end customer directly and do not take ownership of the products (Burns et al, 2002). The product still belongs to the original manufacturers, and there are no intermediaries adding margins or bringing costs into the system (Focus Reports, 2006b).

The Medicines Control Council (MCC) of South Africa defines a pharmaceutical wholesaler as “a dealer or trader who acquires medicine or a medical device from a manufacturer and sells or distributes it to the retail sector” (Medicines Control Council, 2004a: 3). The Medicines Control Council does not make a distinction between distributor or wholesaler and license both as a “wholesaler”. Until November 2005 there were 92 companies licensed as wholesaler at the Medicines Control Council (Medicines Control Council, 2006).

The justification of wholesaler’s existence can be understood by investigating their activities. A wholesaler exists because of the dedicated function it performs for the suppliers of goods and the buyers or customers it serves,

including buying and selling, negotiating, warehousing, risk bearing, financing, transportation and assistance to clients (Brown, El Ansary & Stern, 1989).

The ultimate objective of wholesaling is to place the product in the hands of the consumer, meaning the organisation of efficient channels of product dispersion. The volume needs of customers require a number of tasks to be fulfilled by wholesaler firms. Because of the geographic concentration of manufacturers and the wide dispersion of consumers, the distribution system decentralise the manufacturer's products, reducing the delivery time of goods to the consumer. The wholesaler as distributor adjusts the optimum lot size of the manufacturer to the customer's much smaller lot size requirements (Phillips, 2000a).

The two main functions performed by wholesalers, which are firstly, to satisfy customer's needs and secondly, to match supply and demand (Burns et al, 2002).

Wholesalers:

- Combine demand across a large number of small buyers (Burns et al, 2002). The wholesaler therefore serves as a purchasing agent for retailers (Ferrell & Pride, 2003);
- Allow manufacturers to produce steady quantities of products (Burns et al, 2002);
- Act as go-between to customer wants (small quantities of many different products) and manufacturer needs (produce large quantities of a few products) (Burns et al, 2002). Retailers order an allotment of merchandise from the wholesaler, consisting of a vast variety of volumes of different products of different product ranges (Bamossy & Semenik, 1998). In this way wholesalers help manufacturers to reach many small retailers at a low cost (Kotler, 2000). Wholesalers accumulate goods of several manufacturers to a single location. From thereon they re-sort the goods to fill orders from retailers (or manufacturers who further transform the products). This activity reduces the number of transactions and the movement of goods for manufacturers (Bamossy & Semenik, 1998).

Wholesalers hereby add value for both the manufacturer, by taking over the sales function for the volume of contracts, and for the retailer, by largely eliminating or simplifying the buying function (Hoover, 1990). Manufacturers cannot afford to deal directly with the great numbers of small retailers because the quantities purchased and the resulting manufacturer profits are too small (Hair, Lamb & Mc Daniel, 2002). The existence and development of wholesalers can be ascribed by the fact that they perform the needed activities in a more cost effective way than any available alternative (Hoover, 1990);

- Simplify product, payment and information flows between manufacturer and customer (reduce the number of purchase orders and shipments manufacturers have to process and provide product availability and usage information of the customer) (Burns et al, 2002);
- Simplify credit issues for manufacturers in dealing with small and local customers (Burns et al, 2002);
- Allow manufacturers to ship products in large batches by “breaking lots”. (Burns et al, 2002) The efficiency of a wholesaler’s operation in bulk breaking would be difficult for a manufacturer to match (Kotler, 2000). The distribution system adapt the optimum lot size of the manufacturer to the customer’s far smaller lot-size requirements (An industry in transit, 2001);
- Permit regional distribution networks to service the majority of locations to which products are shipped. The geographic concentration of manufacturers and the wide dispersion of consumers necessitates a distribution system that can decentralise the manufacturer’s products to reduce the delivery time of goods to the consumer (An industry in transit, 2001);
- Holds inventory rather than the manufacturer or customer hold it. (Burns et al, 2002);
- Protect the quality and integrity of the product through proper storage and handling (Burns et al, 2002). This includes the bearing of risk associated with taking ownership of products that can deteriorate or become obsolete bearing the cost of thefts and all the costs involved in safeguarding the merchandise (Kotler, 2000);

- Provide an off-site customer service department for the manufacturer (Burns et al, 2002); and
- Serve as part of the manufacturer's push strategy to move products to the customers (Burns et al, 2002).

The customers of wholesalers are manufacturers as well as retailers. Both these groups benefit from the value adding services rendered by wholesalers described above (Role of the Wholesaler, 2002).

The Medicines Control Council (MCC) regulating medicines for human and animal use requires all wholesalers or distributors of medicines to apply for a license to act as a wholesaler or distributor. All activities consisting of procuring, holding, supplying, or exporting medicinal products, apart from supplying these products to the public are wholesale distribution. Wholesalers and distributors should comply to a range of requirements to obtain a license, which include the retaining of documents necessary to facilitate the withdrawal or recall of medicinal products and the appointment of a responsible pharmacist under whom all activities takes place. Products may only be obtained from licensed manufacturers. The MCC provides a set of Good Wholesale Practices (GWP) which includes a set of requirements for the control and monitoring of storage and transit temperatures (Medicines Control Council, 2004a).

The organisational structure of the pharmaceutical wholesaler can be segmented into four main operational units namely, purchasing, sales (marketing), administration and distribution. One of the crucial functions performed requiring a dedicated procurement team is the intelligent purchase of stock. Full line wholesalers routinely carry 14000 to 16000 line items, comprising of many categories ranging from specialised ethical medicines to veterinary medicines, agency lines and patents. Specialised knowledge of the goods, sound negotiation skills and stock control expertise is a requirement of the purchasing department. Extensive knowledge is required of suppliers and the prices of their products. Purchasing extends to the understanding of the best ways to place orders to different suppliers, early knowledge of new and

discontinued products, pack changes and price adjustments by manufacturers. Stock control management is a vital purchasing responsibility where optimum stock levels need to be maintained. Clearly defined lead times are identified to avoid stock-outs. The buying team should understand the financial implications which the above-mentioned issues could have on the business (Phillips, 2000b).

The sales force operates more like public relations, leaving the choice of placing orders for their large product range to their customers to their customers. Customer relationships, service excellence, and the maintenance of customer loyalty are important (Phillips, 2000b).

Wholesalers are dependent on time saving and efficient systems to generate orders through dedicated computer links between wholesalers and their numerous community pharmacists. Using these systems orders are generated automatically without any human interference. Through technology wholesalers offer a flexible scope for customers by routing orders through the internet which are not yet as fully utilised as other sales channels. Dispensing doctors still rely mainly on facsimile as their favourite means of purchasing (Phillips, 2000b).

Wholesaler warehousing involves the receiving and distribution functions. Goods are transferred for distribution and electronically captured and labelled for batch tracking and correct shelf positioning. Goods are allocated to shelves in product categories to facilitate picking, packing and stock taking activities. Manual drawn orders are removed from shelves using either a picking slip or invoice. Some larger wholesalers have automated picking lines where "A" frames or similar automated picking machines greatly improve picking speed and accuracy. This technology is expensive to install. Many wholesalers have a goods flow manager responsible for ensuring that products are always on the shelves ready for picking. Orders are checked during picking and are subjected to a security check before moving to dispatch for shipping (Phillips, 2000b).

Customers in near or main cosmopolitan areas receive two to four deliveries a day while third party couriers are commonly used for one or two deliveries for out of town customers. The frequency of delivery differs according to the geographic position of the customer, wholesaler and customer demand (Phillips, 2000b).

Information Technology is an essential part in modern wholesaling and is responsible for the installation of hardware and software, maintenance and programme development. Wholesalers do not use standard programmes but programmes specially customised for their purposes (Phillips, 2000b).

As wholesalers do not compete with each other by way of product differentiation of their merchandise they are forced to compete on price and customer service. Competition to satisfy customer needs is the key to a competitive advantage (Phillips, 2000b).

There are trends shaping the distribution industry. These include outsourcing by other value chain players, rise of generics, horizontal consolidation, vertical integration, and product diversification (Burns et al, 2002).

The original distribution route from the manufacturer to the retailer consisted only of wholesalers who took ownership of products before it was sold to retailers. Pharmaceutical wholesalers were the sole distributors of medicines to pharmacies and dispensing doctors (Enter Pharmaceutical Distribution Chains – Exit Wholesalers?, 1999). Wholesalers based their activities on economies of scale which could not be realized by manufacturers considering their captured volumes. These wholesalers made their profit purchasing from manufacturers at a discount off the list price, passing some discount on by selling to retailers. The discounts were also used as a means of competing for market share (Fernandez & Howe, 2003).

Wholesalers have fragmented over the last two decades and have been replaced with a range of additional distribution routes from the manufacturer to

the retailer to the consumer. From the 1970's through to the 1990's with an increase in the use of generic products, there was an increased sensitivity to price by multinational manufacturers. A diminishing knowledge gap existed between the manufacturer and the consumer and the steady stream of patent-protected truly differentiated products also became smaller. The preference for less expensive generics escalated and research based companies was found having excess capacity and declining margins. These companies, due to these factors also had to cut back on their research and development spending. The research-based manufacturers entered an era of lower earning ratios and reduced mark-ups. For these manufacturers "new" business models were at the order of the day, but profits remained the most important factor (Enter Pharmaceutical Distribution Chains – Exit Wholesalers?, 1999).

Agency distributors also called exclusive distribution agencies (EDAs) were established by groups of pharmaceutical companies as joint distribution ventures to supply medication at low cost to retailers using economies of scale. Three major agency distributors were formed to render a distribution service to their principals as well as an agency service for other pharmaceutical manufacturers. Unlike wholesalers, these agency distributors levy a distribution fee for their service without taking full ownership of the goods. The establishment of agency distributors by manufacturers were based on the assumption that agency distributors could meet their needs at lower cost. (Fernandez & Howe, 2003)

According to the Pharmaceutical Manufacturers Association (PMA) the exclusive distribution concept in South Africa has been developed against the background of, and embodies the principles of, the National Health Policy (1996) as enacted in the Medicines and Related Substances Act (Act 90 of 1997). The objective of the Act is to provide a cost effective, efficient and transparent distribution channel for the pharmaceutical manufacturers' products in the South African market.

The benefits of exclusive distribution versus wholesaling were set out by these manufacturers as the following:

- Inventory and Production Planning – The exclusive distributor, as agent, provide the manufacturer with complete information of the inventories within the distribution channel, enabling the manufacturer to do better production and inventory planning and allows lower inventory levels with the same service level. The working capital requirements are lower and ensure better stock availability within the market place. Wholesalers do not readily provide this information. The distributor does not own the inventories whereas the wholesalers would buy and own the inventories (Pharmaceutical Manufacturers' Association of South Africa, 2003).
- Warehousing – Manufacturers can ship production output into a single warehouse of the exclusive distributor. These products are stored on behalf of the manufacturer until required in the market. The manufacturers do not have to have a warehouse for the storage of their finished goods. Information is coordinated for the distribution of these products to the Distribution Centres in the different geographical areas. This brings about better stock availability and cost savings for the manufacturer. With wholesaling several warehouses are utilised, and without the co-ordination of inventories results in increased stockholding and cost (Pharmaceutical Manufacturers' Association of South Africa, 2003).
- Pricing – The exclusive distributor allows a manufacturer to update its pricing at one single point, whilst with wholesalers all the wholesalers need to be informed of any price changes. The exclusive distributor has no interest in pricing and building up of stock. Wholesalers build up stock in anticipation of price increases to make a “stock profit” (Pharmaceutical Manufacturers' Association of South Africa, 2003).
- Customer order processing – The manufacturer using information supplied by the exclusive distributor, knows exactly who bought the product, in what quantities, when it was sold and at what price. This information is important for directing the marketing efforts of the manufacturer. Pharmaceutical

wholesalers cannot readily provide this information (Pharmaceutical Manufacturers' Association of South Africa, 2003).

- **Receivables and Credit Management**– Using the services of an exclusive distributor, the manufacturer contracts directly with the final seller or dispenser of his product. The distributor manages its debtors and collections and the manufacturer does not need to have a credit control department. Economies of scale allow the credit management process to be efficient and effective. With wholesalers on the other hand, the credit management process is decentralised leading to inefficiencies. An exclusive distributor managing its principals' debtor book simplifies the auditing requirements of an important company asset. With a decentralisation of a debtor book, such an audit would be very difficult (Pharmaceutical Manufacturers' Association of South Africa, 2003).
- **Customer Returns** – In case of the necessary for customers to return stock to the manufacturer, due to e.g. expired or defective stock, the customer knows exactly where the stock was bought making the return process simpler than when the goods were bought from a manufacturer. The exclusive distributor knows the requirements of the manufacturer in terms of goods returned from the market. Customer returns from the pharmacy, via a wholesaler, to the manufacturer is a cumbersome process and inefficient involving more transactions, i.e. the wholesaler credit his customer in the first instance, then return the products to the manufacturer for credit. The process leads to additional cost and delays (Pharmaceutical Manufacturers' Association of South Africa, 2003).
- **Information** – An exclusive distributor allows the manufacturer to have daily information about all transactions involving his company. Information downloads from a centralised source provides valuable information to the manufacturer on sales, customers, stock movements, orders completed and pending, back-orders, debtors. The manufacturers are in a better position to manage their businesses. Pharmaceutical wholesalers cannot provide this information on a timely basis (Pharmaceutical Manufacturers' Association of South Africa, 2003).

- Good Distribution Practices - The manufacturer has control over how their products are stored and transported to the final seller or dispenser through periodic Quality Assurance Audits of the exclusive distributor's facilities. This task will take a lot of time and effort with a multiple of wholesalers. With the standards set by the Medicines Control Council and manufacturers for the distribution of pharmaceuticals, some of the wholesalers would have difficulty to achieve these standards (Pharmaceutical Manufacturers' Association of South Africa, 2003).
- Batch tracking and Product/Batch Recall - Only an exclusive distributor can provide batch tracking to the final seller. Pharmaceutical manufactures spends billions of dollars to record batch history of products they manufacture in order to ensure the safety of the patient. All of this is worthless when the product is distributed through a multiple of wholesalers. Apart from safety aspects, a batch tracking system also allows for product/batch recalls of defective products and to restrain the scourge of stolen pharmaceuticals, a widespread problem in the South African market. The complete distribution history of a batch is thus readily available from an exclusive distributor throughout the chain from the manufacturing to the final dispenser of the medicine. An exclusive distributor has all the information (product, batch number, quantity, when sold, to whom it was sold etc.) to effect a product or batch recall. If a batch is split to multiple wholesalers it will be a cumbersome task and will take longer to remove a defective product from the market as pharmaceutical wholesalers do not use batch tracking (Pharmaceutical Manufacturers' Association of South Africa, 2003).
- Destruction of Stock - There are in many cases a large amount of pharmaceuticals returned from trade for various reasons. The destruction process under controlled conditions is required by the Act. An exclusive distributor can destroy its principals' products in a cost-effective way due to the increased economies of scale. This task could not be economically done by individual wholesalers, or manufacturers (Pharmaceutical Manufacturers' Association of South Africa, 2003).
- Insurance of Stock - The requirements for insurance of stock, if necessary, is less complex and less expensive with an exclusive distributor than with

multiple distributors or wholesalers (Pharmaceutical Manufacturers' Association of South Africa, 2003).

- Insurance of Debtors – Similarly, the requirements for the insurance of debtors, if required, are less complicated and more economical (Pharmaceutical Manufacturers' Association of South Africa, 2003).
- Quality Assurance – Manufacturers can ship products in quarantine to their exclusive distributor and in a controlled way release it for sale when approved. Using multiple distributors and or wholesalers, this process would be more cumbersome. This service is of particular importance as it helps to replenish the market quicker when a product has been out of stock (Pharmaceutical Manufacturers' Association of South Africa, 2003).
- Inventory Control – The manufacturers have all information required for inventory control and audit purposes from an exclusive distributor. Using multiple distributors and or wholesalers, information would have to be collated making it more difficult (Pharmaceutical Manufacturers' Association of South Africa, 2003).

The above benefits/advantages offered by an exclusive distributor to its principals is evident from the rapid growth of exclusive distributors in South Africa. It is more cost effective than the traditional wholesaling operations and has established a world-class standard for the distribution of pharmaceuticals (Pharmaceutical Manufacturers' Association of South Africa, 2003).

The benefits of using exclusive distribution from the customers' or retailer's viewpoints are:

- Ease of Ordering – An exclusive distributor has control over all the manufacturer's stock in the distribution chain. If an order is placed and the product is in short supply, or out of stock, an exclusive distributor can locate supplies from either one of the other distribution centres, or from another customer who may have stocks of the required product (Pharmaceutical Manufacturers' Association of South Africa, 2003).
- Customer Returns – Should a customer require to return a product to the distributor or wholesaler, the exclusive distributor has the customers sales history and would be able to credit the customer in the most expedient way (Pharmaceutical Manufacturers' Association of South Africa, 2003).

- Pricing – With an exclusive distributor the customer buys directly from the manufacturer. This ensures that the customer will get the best price for the required product. Pricing is consistent and the customer do not have to shop around for a better price (Pharmaceutical Manufacturers' Association of South Africa, 2003).
- Buying patterns – An exclusive distributor can provide the customer with a complete history of his previous product purchases. This enables the customer to do better planning and manages his business more efficiently (Pharmaceutical Manufacturers' Association of South Africa, 2003).
- Emergency deliveries – As an exclusive or sole distributor of its principals' products, these distributors (at least IHD) offers a 24x7 emergency service for life savings drugs to its customers, which is without equal in the distribution chain in South Africa. The pharmaceutical wholesalers do not normally provide this service (Pharmaceutical Manufacturers' Association of South Africa, 2003).

With the (exclusive) distribution concept the manufacturers have become much closer to the final sellers or dispensers of their products and understand their businesses much better, arguably offering better services to customers (Pharmaceutical Manufacturers' Association of South Africa, 2003).

In the 1990's, some manufacturers grouped together and created their own distribution companies with the objective to shape a secure multi-channel and non-exclusive distribution mechanism designed to serve the State, private, and emerging markets (Enter Pharmaceutical Distribution Chains – Exit Wholesalers?, 1999). The first of these companies was IHD, which was jointly owned by 11 major multinationals and established in 1993 (An industry in transit, 2001). The multinationals owning this distribution agency was Abbott Laboratories, Aventis, Bayer, Boehringer Ingelheim, Bristol Myers Squibb, Eli Lilly, MSD, Novartis, Roche, Schering and Wyeth (An industry in transit, 2001). The distributor offered its clients, the manufacturers, a cost effective logistical and warehousing support and distribution services. The clients are charged a fee for these services. The distributor does not take ownership of the inventory, operating on behalf of and on instruction from its clients. The distributor is not

party to pricing issues and the setting of pricing and trading policies falls in the ambit of the manufacturers. The dispenser ordering from the distributor is effectively trading with the manufacturer (An industry in transit, 2001).

In 2000 another major wholesaling group, Druggists Distributors converted itself to a similar operation named Kinesis. Operations of these distributors includes batch tracking of products from the manufacturer to the end dispenser, air conditioned warehousing, cold chain maintenance and the development of fast track ordering systems. Securing data detailing to who a product was sold to, where the customer is and at what price the product was sold during the previous 24 hour period is downloaded on a daily basis. The ability to track a specific invoice and customer is critical in the event of product recalls and countering the growing trade in stolen stock. The efforts made by these companies to introduce stock security and handling controls means that health-care professionals can dispense a product supplied by these distributors with the knowledge that it is not counterfeit products and that it has been stored and handled according to the requirements for the product (An industry in transit, 2001).

One reason for direct distribution through their own distribution companies is that manufacturers prefer to have control over customers and therefore use direct sales for branded products. Manufacturers do not want wholesalers to have the ability to influence or switch branded purchases by customers. They want to inhibit cross-referencing of their products and comparison-shopping with competitor's offerings by customers (Burns et al, 2002). The other reasons for the establishment of their own distribution channels, beyond control over customers, was that wholesalers were running too close to the edge, having too high fixed costs, decreasing volumes and cut-throat discounting policies. The manufacturers doubted wholesaler's ability to invest in improved quality controls, IT and the much-needed Year 2000 systems required at that time. Initiatives to control their own distribution were also based on arguments that it will bring manufacturers closer to customers, allowing greater control over the grey market and improve service levels. It was also argued that the control of

own distribution provided manufacturers with matching benefits in margins as well. According to these manufacturers, wholesalers were not able to fully comply with their needs for secure distribution, improved service levels for managed care organisations, private hospitals, group practices and medical aids (Enter Pharmaceutical Distribution Chains – Exit Wholesalers?, 1999).

In the year 2000 with the opening of the third large agency distributor, Pharmaceutical Health Distributors (PHD) (Fernandez & Howe, 2003), it was estimated that approximately 60% of medicines would be controlled by these distribution companies. At that time direct distribution involved 30% of the market (Schoemaker, 2000).

Manufacturers started sending drugs directly to wholesalers, doctors or pharmacies, mail order companies, run by pharmacy benefit managers or hospital networks. The consequence for wholesalers was an eroding market share and shrinking margins (Enter Pharmaceutical Distribution Chains – Exit Wholesalers?, 1999; Parker, 2006).

Wholesalers, which have been significantly involved in “deep discounting” until the entrance of the new distribution channels, now had to compete in an environment where winning market share come at the expense of competitors. These companies now had to try and keep costs down and prices in check, otherwise they would lose out to a number of competitive therapeutic equivalents or generic equivalents available (Enter Pharmaceutical Distribution Chains – Exit Wholesalers?, 1999).

With the establishment of one of the exclusive agency distributors, Kinesis, wholesalers had to purchase products of manufacturers from Kinesis for the same price as pharmacies and other retailers. In 2000, a group of wholesalers, among other stakeholders in the distribution chain, lodged a complaint with the South African Competition Commission concerning this agreement. Wholesalers claimed that they could not add a margin on sale of the purchased products bought from Kinesis and therefore they were unable to operate

profitably. The Competition Tribunal found that wholesalers were able to operate profitably in the distributors products by taking advantage of bulk discounts (Fernandez & Howe, 2003). As more manufacturers moved to single channel distribution, fewer products were available to wholesalers (An industry in transit, 2001).

Since the entrance of agency distributors, wholesalers had to compete in an environment in which value-adding activities were being compensated on a fee-for-service basis (Enter Pharmaceutical Distribution Chains – Exit Wholesalers?, 1999; The Power of One, 2000). Wholesalers were experiencing changes of rising costs as well as growing competition among themselves and agency distributors. Some wholesalers also experienced low productivity and were exposed to theft. In addition to this wholesalers experienced a downward thrust in volumes and margins due to what they felt to be inequitable access to products from manufacturers using agency distributors. The growth of single channel distributors from the manufacturer to the retailer or dispensing doctor inevitably lead to a decline in the number of wholesalers (Phillips, 2000a). In 2004 it was estimated that approximately 70% of the distribution market belonged to the three exclusive agency distributors (Health Systems Trust, 2004).

Prior to the coming of the single channel distributors in 1993 the wholesalers had been competing for a given number of customers and service and price were the only differentiating factors. Those who survived after the advent of the single channel distributors could only do so by improved efficient business units promoting themselves not only to the end sellers, but also backward recognising the supplier as an important client by additional services such as consignment stock and distribution for a negotiated fee (Phillips, 2000a).

In the view of the Department of Health, pharmaceutical wholesalers (those that purchase for resale) play an important role in the supply chain of medicines and that wholesalers need to become more efficient. The Department implied that in case pharmaceutical wholesalers disappear it will be replaced by another

business equally capable to enhance drug delivery and availability. The department was clear about the importance of eliminating any business models driving up the price of pharmaceuticals without adding value. The importance of driving value through to the consumer is an important factor (Role of the Wholesaler, 2002).

Pharmaceutical wholesalers were advised to develop more efficient business models in order to drive business forward through improved service and levels of competition (Role of the Wholesaler, 2002). The traditional wholesaler model had to be replaced by a “fee-for-service” model (Role of the Wholesaler, 2002).

Wholesalers engage in two types of innovation; namely cost reduction and added value by developing new services for customers and suppliers. Process and service innovation in drug wholesaling has mainly been caused by exogenous developments in the computing and communications technologies. Drug wholesalers had attempted to match the services and business processes of rivals. Employee costs in warehousing and transportation have been the single largest cost after product acquisition costs. Process innovation has focused on improving personnel productivity to reduce costs of operations (Fein, 1998).

With the new pricing regulations of May 2004 came the prohibition of bonuses, rebates and other incentives by pharmaceutical companies or wholesalers to pharmacies or doctors. The free sampling or supply of medicines by manufacturers and wholesalers to any medical practitioner – other than for the purpose of clinical trials, donations of medicines to the State, tendering to the State and quality control by inspectors, was also prohibited. This means that volume and trade discounts, bonus deals, settlement discounts, formulary-listing fees, fees for shelf space, discounts for bulk purchasing are illegal (Bell Dewar Hall, 2003).

These regulations provided for a logistics fee for the distribution of medicines to be determined by agreement between the manufacturer or importer and the

distributor or wholesaler (Reekie, 2000). The traditional wholesaler model now has been replaced with a “fee-for-service” model to improve operating efficiencies (Towards tomorrow together, 2004).

The National Association for Pharmaceutical Wholesalers (NAPW) felt that there should be a difference in fees negotiated for bulk distribution which amounts to an average of 2% and fine distribution services with an average of 9% (CKS – Computer Kit Systems, 2005). Regulations regarding the capping of mark-ups on distributors and retailers may mean that selling drugs in rural or in poor areas will no longer be financially viable. This means that drugs may become less accessible to these communities (Tren, 2004). The downside of the SEP is that any discounting of the factory-exit price will not be allowed. This will eliminate the volume based discounting; a function of free markets the world over. Large pharmacy stores will no longer be able to use their size and bulk capacity to negotiate better wholesale prices than their smaller competitors (Tsabalala-Msimang, 2005).

Generics substitution will drive volumes where drug purchases are discretionary. With margins being squeezed, due to the Single Exit Price, large retailers will carry minimal inventory. This will require retail pharmacies to place more frequent but smaller orders to wholesalers. Wholesalers and distributors will be forced to carry inventory to ensure adequate customer service (Accenture, 2005).

These expected growth challenge in the industry will have to be met with efficient supply chain networks in which effective strategic sourcing of supplies and improved internal efficiency will determine the competitive advantage. Integrated and collaborative supply chain networks for optimised fulfilment will overcome the challenge. Improved customer relationship management to meet service challenges of new and demanding customers will also be required. It can be expected that supply side companies may need to go one step further by merging or acquiring other companies to reduce supply chain costs as a percentage of revenue. Vertical acquisition will be a means to achieve tight

integration in the supply chain, while horizontal acquisition will offer the benefits of economies of scale by leveraging a shared supply chain (Accenture, 2005).



Chapter 3

Research Methodology and Data Analysis

3.1 Introduction

The objective of this chapter is to discuss the methodology of research applied, how the sample was drawn, how the questionnaires were developed and designed, the processes followed during data collection, how the obtained data was analysed and the limitations to the study.

3.2 Sampling

The target population for the study consisted of all pharmaceutical manufacturers and wholesalers or distributors within South Africa which are registered at the South African Pharmacy Council (SAPC) and licensed at the Medicines Control Council (MCC).

The MCC issues wholesaler licences to wholesalers as well as to distributors and do not make a distinction between a wholesaler and distributor. A true wholesaler takes ownership of the products it purchases and then sells and distributes it. A distributor does not take ownership of the products it distributes. For this reason the sample had to include all wholesalers registered at the SAPC and licensed at the MCC.

Questionnaires had to be sent to all pharmaceutical manufacturers and wholesalers via e-mail, therefore the sample size was determined by the number of registered and licensed pharmaceutical wholesalers and manufacturers in South Africa for which e-mail addresses could be obtained.

A list of pharmaceutical companies licensed by the MCC up to 20 November 2005 was obtained from the Medicines Control Council's website. This list had 182 companies licensed as pharmaceutical manufacturers, importers, exporters and laboratories and 92 companies licensed as pharmaceutical wholesalers. The name of each company, postal and physical address and the name of the responsible pharmacist is indicated on the list. Companies licensed as pharmaceutical importers were to be included in the sample for the reason that some multinational manufacturing companies do not produce medicines locally but imports medicines from abroad. These companies then have to use the services of a wholesaler for the distribution of its medicines.

The list of the MCC did not contain any e-mail addresses and therefore a list was obtained from the South African Pharmacy Council (SAPC). The SAPC list contains e-mail addresses of 291 companies registered as pharmaceutical wholesalers and 151 companies registered as pharmaceutical manufacturers.

Both these lists, the one obtained from the MCC and the other from the Pharmacy Council, were used to compare and identify companies which are both registered at the SAPC and licensed by the MCC as either a pharmaceutical wholesaler, pharmaceutical manufacturer or importer. The final sample from these lists consisted of 85 pharmaceutical manufacturers and 69 pharmaceutical wholesalers for which e-mail addresses were available.

3.3 Research design

In this section of the report the research methodology is discussed with specific reference to the design and development of questionnaires and interviews conducted

The study intended to examine the variables and investigate relationships by way of issuing questionnaires to; and interviewing people who have knowledge of the industry.

Two questionnaires were designed, one to be distributed to pharmaceutical manufacturers and one to be distributed to pharmaceutical wholesalers in the sample. A responsible pharmacist from each of these companies was used as reference to which a questionnaire had to be sent. The e-mail message sent during the distribution of the questionnaires, cover letter, confirmation letter from Unisa and the questionnaires used are attached as Appendix 1 to this report.

Questionnaires were sent to the sampled companies via e-mail with a request that it be returned by fax. This enabled the researcher to reach respondents which would otherwise be inaccessible due to their geographic dispersion. These pharmacists could be contacted through e-mail and the questionnaire could be completed and returned within a short time. Distributing these questionnaires through e-mail made it possible to reach a the entire sample of respondents at low cost. Fax facilities were obtained from a bookshop rendering a fax service. All returned questionnaires were obtained at a cost of R 1.00 each.

Questionnaires were used due to the ease at which specific information could be obtained. Certain screening questions were designed in order to distinguish between wholesalers, distributors and buying groups. Questions were designed to assess which of the two categories of medicines, generic medicines or ethical medicines, are mostly distributed by wholesalers and which manufacturers (ethical or generic medicines manufacturers) make use of the services of wholesalers. It also served to obtain information about the services rendered by the wholesaler to its suppliers and customers, the operations of the wholesaler, the geographic coverage of deliveries and the frequency at which these deliveries are made by the wholesaler. In addition it was used also to determine what other value adding activities are rendered by the wholesaler.

After the questionnaires were returned by respondents, several interviews were held with responsible pharmacists at wholesalers chosen from the sample. The information obtained from the completed questionnaires served as background

information to be used during interviews. Additional information and clarity on some issues which were not clear from the questionnaires could be obtained during the interviews. These interviews were informal and in the form of a discussion about questions contained in the questionnaire, such as the value adding role the wholesaler plays in the health care industry before and after the introduction of regulations abolishing bonuses and discounts, the implementation of the Single Exit Price and the negotiation for a logistics fee with manufacturers. Interviews included a site visit to the wholesaler's warehouse and questions were asked on the observations made during these visits. Other information about the industry, besides those answers relating to questions from the questionnaire, was also obtained during these interviews.

An interview was also conducted with a retail pharmacist about the services of wholesalers and the frequency at which deliveries are made. The pharmacist's needs for services rendered by the wholesaler was also discussed.

Two questionnaires were developed in order to compare answers provided by manufacturers with those provided by wholesalers. Similar answers allowed the researcher to make inferences in order to arrive at some conclusions. Answers to questions assists in judging the economic significance of the pharmaceutical wholesaler in the health care industry.

During the execution of this study it was realised that the Department of Health was also busy investigating the use of Logistics Fees. The Department distributed questionnaires to be completed by all pharmaceutical manufacturers and wholesalers. The possible sensitivity of the industry to any survey, especially in view of the interference by the Department of Health and its survey on the logistics fee, was considered during this study.

Questionnaires were designed in order to be completed within a short time of a few minutes, depending on the availability of the information to the respondent. These questionnaires were developed in consultation with the Director: Inspectorate and Law Enforcement of the Department of Health. The Director is

involved in the licensing of pharmaceutical companies and has extensive knowledge of; and experience in the pharmaceutical industry.

An e-mail message was developed and a cover letter was designed to be e-mailed as attachment together with each questionnaire. The e-mail contained a short message requesting assistance and referred to the cover letter and questionnaire attached. The cover letter was used to inform the respondent of the purpose and background of the research, contact details of the researcher and definitions of the terms “wholesaler”, “distributor”, “exclusive distributor agency”, “ethical medicines” and “generic medicines” found in the questionnaires. A letter of confirmation, proving that the researcher is a student at Unisa’s School of Business Leadership, was included with the cover letter. The cover letter also made it clear that although the questionnaire refers to the pharmaceutical wholesaler as singular, the manufacturer which would supply to more than one wholesaler should complete the questionnaire by referring to the collective of wholesalers in general. The respondent was also assured that information from the completed questionnaire will be treated as confidential (Appendix 1).

The questionnaires contained some questions based on those arguments multinational manufacturers used when they motivated for the establishment of their own exclusive distribution agencies during the 1990’s. Their arguments focused on the wholesaler’s lack of information and contact with the customer, lack of service delivery to the customer, inefficiencies and other operational inefficiencies that occurred when wholesalers were used by manufacturers. All these arguments implied that the wholesaler was not adding value in the supply of medicines and that it was adding to additional costs making medicines more expensive to the customers and final consumer.

The aim of the questionnaires was, therefore, to determine whether the wholesaler does provide the necessary value added services in the form of information to the manufacturers about its customers, whether those systems are in place which prevents inefficiencies and to determine which operational

activities of the wholesaler, in general, contributes to added value in the pharmaceutical supply chain.

The questionnaire sent to manufacturers of pharmaceutical products contained 23 questions and the questionnaire sent to wholesalers contained 31 questions.

In the first part of both questionnaires the respondent is asked to provide the name of the pharmaceutical company he/she represents. The name of the company is essential in order to keep record of which respondents have returned questionnaires and which respondents had to be reminded about the completion of the questionnaire.

In Question 1, manufacturers are requested to indicate the percentage of company sales for each of the categories of medicines: Ethical Medicines and Generic Medicines. The percentage allocated to each of these would determine the type of manufacturing the pharmaceutical manufacturer is involved in, whether it is mainly an Ethical Medicines manufacturer or a Generic Medicines manufacturer. The following three questions, questions 2 to 4, relates to the choice of distribution for the above-mentioned categories of medicines. Question 2 asks the manufacturer to indicate the percentage of total sales to the wholesaler for resale for each of the two categories of medicines. A percentage allocated to each of the two categories will imply the extent to which the manufacturer makes use of the wholesaler in distributing its products to customers. Question 3 asks the manufacturer to indicate the percentage of sales for each of the two categories of medicines that goes through direct distribution to the customer. The percentage allocated to each of the categories of medicines sold through the use of the manufacturers' own direct distribution service is indicated by the manufacturer. Question 4 asks the manufacturer to indicate what percentage of sales of each of the categories of medicines goes through an exclusive distributor. The allocation of percentages here will be an indication of the contribution of the exclusive distributor (EDA) in the sales of each of these categories of medicines.

In Question 1 of the Questionnaire to Pharmaceutical Wholesalers, the wholesaler is asked to provide the percentage of total product sales to your customers in terms of both of the categories of medicines, ethical medicines and generic medicines. This question aims to determine from which of the two major categories of medicines the wholesaler would generate most sales. It also implies which of the two types of manufacturers indicated above, are the wholesaler's main suppliers.

In Question 2 the wholesaler is requested to indicate the percentages of medicines for each of the two categories of medicines purchased through an exclusive distribution agency (EDA) of a manufacturer. The aim of this question is to determine how much of each of these categories medicines are purchased from manufacturers using their own distribution agencies.

Question 3 asks the wholesaler to indicate the percentage of purchases directly from manufacturers for each of the two classifications of medicines. This question aims to determine whether these product manufacturers make use of direct distribution from their warehouses and not using the services of exclusive distributor agencies of manufacturers.

From Questions 4 through to 8 respectively, in the Questionnaire to Pharmaceutical Wholesalers, the wholesaler is requested to indicate the percentages of sales for each of the categories of medicines to community pharmacies, medical practitioners, institutional pharmacies (hospitals) and other health care providers which need to be specified by the wholesaler.

In Question 5 of the Questionnaire to Manufacturers the manufacturer is asked whether bulk sales are offered at a lower price. This question determines whether wholesalers can still purchase bulk at a lower price than it normally would implying a discount for bulk purchases even though bulk discounting is being prohibited by the Act.

Question 6 is an extension of the previous question, asking the manufacturer whether bulk sales are discounted using the logistics fee, in other words, whether the discount on bulk purchases have been replaced by the logistics fee.

Question 7 asks the manufacturer whether the wholesaler purchases the manufacturer's products for resale. This question was used as screening question in order to determine whether the manufacturer is referring to a wholesaler in the answers given and not to a distributor which does not take ownership of the product it distributes.

In Question 8 the manufacturer is asked whether the wholesaler delivers a distribution/logistics service to the manufacturer. This question was used in order to determine whether the manufacturer considers the wholesaler as a distribution/logistics provider for the distribution of its products.

Question 9 asks the manufacturer whether it considers the wholesaler as a value adding distribution choice. The manufacturer has the opportunity to voice its reason/s for its answer to this question in the next question.

Question 10: Briefly explain the reasons for your previous answer? This question is an open ended question in which the manufacturer is requested to motivate and indicate its reasons for using the wholesaler. The answer provided may reveal the reasons to why the manufacturer uses or not uses the wholesaler as choice of distribution of its products to the extent indicated in the first part of the questionnaire.

Questions relating to the services rendered by the wholesaler to the manufacturer are asked in the Questionnaire to Pharmaceutical Manufacturers as well as in the Questionnaire to Pharmaceutical Wholesalers.

Question 11 to manufacturers and Question 8 to wholesalers asks the question whether the wholesaler conveys information to the manufacturer about its

inventory planning. The sharing of this information by the wholesaler with the manufacturer may allow manufacturers to do better production and inventory planning.

Question 12 to manufacturers is the same as Question 9 to wholesalers. The question is asked whether the wholesaler renders a warehousing service to manufacturer.

Question 13 to the manufacturers asks the manufacturer whether the wholesaler convey information about price changes effectively. The question aims to determine whether the manufacturer is satisfied with the way in which the wholesaler communicates price changes from its supplier through to the wholesaler's customers. With the new regulations pertaining to pricing it is not clear whether this question is relevant. This question was put in another form to wholesalers. In Question 31 to wholesalers they are asked to briefly describe how pricing information is conveyed to the customer.

Question 14 to manufacturers asks whether the wholesaler shares information about its customers (who bought the product, in what quantities, when it was sold and at what price). This question is put differently to wholesalers and is covered in four questions, Question 11 through to Question 14. Question 11 asks the wholesaler whether information is shared with the manufacturer on customers who purchased the product. Question 12 asks the same question relating to sharing of information regarding the quantities of a product sold, Question 13 regarding the period over which or date on which the products were sold and Question 14 regarding at which price the products were sold. The sharing of information enables manufacturers to plan their own production cycles and to draw up sales patterns and trends contributing to their production planning and efficiency.

Question 15 to manufacturers and Question 17 to wholesalers ask the respondents whether the wholesaler complies with Good Distribution Practices /Good Wholesale Practices/ (GDP/GWP). The manufacturer has the choice to

answer any of the following options “yes”, “no” or “don’t know”. It is important for the manufacturer, as supplier to the wholesaler, to know that its products are being stored and transported according to the prescribed conditions and the standards set by the Medicines Control Council (MCC). Complying to these practices and standards the wholesaler ensures product integrity, safety and quality while it is in the warehouse as well as when it is distributed.

Question 16 to manufacturers and Question 18 to wholesalers asks the respondent whether the wholesaler has a system in place for batch tracking and product/batch recall. The tracking of medicines is important in case medicines need to be recalled due to defects which may cause harm if it is consumed by patients.

Question 17 to manufacturers is also asked in Question 19 to wholesalers. This question asks whether the wholesaler has a system in place for the destruction of stock. According to the Medicines Act the destruction of stock needs to be done under controlled conditions and involves cost. Wholesalers with a system in place for the destruction of defective, contaminated, expired or damaged stock ensures that these medicines do not enter the market again.

Question 18 to manufacturers and Question 20 to wholesalers asks whether the wholesaler insures stock. Insurance of stock by the wholesaler saves the manufacturer the cost of insurance when it is warehoused at the wholesaler. This is added value for the manufacturer. The same principle applies for the retailer or customer of the wholesaler. The wholesaler takes the cost for insurance if stock is insured. Question 21 to wholesalers asks which of these, the wholesaler or the manufacturer, insures stock. In those cases where the questionnaire is completed by a distributor, the manufacturer most probably insures stock, since the distributor does not take ownership of stock. This question serves as a filter question to identify whether the respondent is a buying group, distributor or wholesaler. Wholesalers takes ownership of products and insure their own stock.

Question 19 to manufacturers asks whether the wholesaler insures its debtors. This question is posed as Question 22 to wholesalers. The insurance of debtors frees the manufacturer from the additional costs and effort associated with insurance.

Question 20 to manufacturers and Question 32 to wholesalers ask whether the wholesaler has a quality system in place. The answer will indicate whether the wholesaler ensures that quality of products is maintained throughout the process of getting its stock from its supplier to its customers within the standards set by GWP and GDP.

Question 21 to manufacturers and Question 10 to wholesalers ask whether the wholesaler has an information system that allows manufacturer to obtain information required for inventory control. Although such information will have to be collated by manufacturers using more than one wholesaler, it still is considered as a value adding service.

Question 22 to manufacturers and Question 15 to wholesalers ask whether the wholesaler manages customer/product returns in a cost effective manner. The wholesaler would not involve the manufacturer if the question is answered by the wholesaler since the wholesaler takes ownership of the products and manages product returns by itself. In Question 30 the wholesaler is asked to briefly describe the process followed with customer/product returns.

In Question 23 to manufacturers the manufacturer is asked to briefly indicate what other value adding activities the wholesaler provides to the manufacturer.

In Question 16 to wholesalers the wholesaler is asked whether it has a Wholesale License issued in terms of the Medicines and Regulated Substances Act, 1965. This question aims to confirm that the wholesaler is licensed as a wholesaler at the MCC.

Question 24 asks the wholesaler whether it uses a FIFO (First in first out) stock management system. This system contributes to quality in that the medicines purchased first is sold first which prevents these medicines from reaching their expiry date by not being stuck on the shelves for a too long period. This indicates that the wholesaler is committed to selling quality products and keeping up with standards and good stock keeping practices.

Question 25 to wholesalers asks whether an information system is in place to track the buying pattern of customers. This question is asked to determine whether the wholesaler is able to inform customers of previous purchases and purchasing patterns which enables the customer to better manage its business and make better future purchase decisions.

Question 26 to wholesalers asks whether the wholesaler can make emergency deliveries. This service is normally rendered on a 24 hour basis seven days per week for life saving drugs.

Question 27 to wholesalers consists of a table in which the wholesaler needs to indicate how frequently deliveries are made to the customer on average. This question aims to determine how frequent the wholesaler delivers to its customers on average. The more frequent the wholesaler delivers, the lower the cost for the customer to hold medicines. This creates added value for the customer.

Question 28 to wholesalers asks at what distances the above deliveries are made and the wholesaler is again provided a table with options for answering the question. This question aims to determine at which distance the wholesaler is able to deliver its products on the frequency indicated in the previous question.

Question 29 asks the wholesaler to indicate whether it is the customer or the wholesaler who initiates orders. This question aims to be an indication of the ease at which orders can be placed by the customer. If wholesalers initiates

orders it may be an indication that the wholesaler does not really have an ordering system in place.

3.4. Data collection

The process of data collection followed several phases. Each phase was met with certain limitations, which required additional measures to overcome.

Initially an e-mail was sent to all pharmaceutical manufacturers and wholesalers from the sample list. The respondents were given one week to complete the questionnaire and return it by fax.

One standard e-mail was compiled requesting assistance for business research. The first paragraph of the e-mail states the purpose and reason for the research. In the second paragraph of the e-mail the respondent is requested to assist in the research by reading the cover letter and by completing the questionnaire. In the third paragraph of the e-mail the respondent is requested to fax the completed questionnaire on or before a specified date. The respondent is also given the assurance that the information in the completed questionnaire will be treated as confidential and that it will be destroyed as soon as the research has been completed. In the third paragraph reference is made to the cover letter, the letter confirming the researcher's study at Unisa's School of Business Leadership and the questionnaire attached to the e-mail. The respondent is also informed that the cover letter contains definitions pertaining to the questionnaire. The fax number to which the questionnaire can be sent is also provided.

The first e-mail was sent to the sample drawn of 85 e-mail addresses of responsible pharmacists, each representing a pharmaceutical manufacturer and 69 e-mail addresses of responsible pharmacists, each representing a pharmaceutical wholesaler. Each respondent was given five working days to complete and return the questionnaire.

Of the 85 e-mails sent to manufacturers, 20 error messages were generated electronically by the e-mail system indicating that these 20 e-mails could not be delivered. Of the 69 e-mails sent to wholesalers one error message was returned by the system.

After one work week only two completed questionnaires were received back from pharmaceutical manufacturers.

Due to the problems experienced with undelivered e-mails and the non-response from the respondents, the sample list of pharmaceutical wholesalers and manufacturers containing telephone numbers and contact persons was used to contact these companies telephonically. Calls were made in order to confirm their correct e-mail addresses or fax numbers and to request their assistance to the study.

From a total of 56 telephone calls made to wholesalers, 20 e-mail addresses and 13 fax numbers could be confirmed to which questionnaires were sent. A total of 33 calls were made to pharmaceutical manufacturers and of these 19 e-mail addresses and 2 fax numbers were confirmed. A questionnaire were sent to each of these 21 manufacturers. The e-mail messages with attached cover letter were amended with a new due date at which these respondents had to return the completed questionnaires. All respondents were again given one work week to return the completed questionnaires.

Of the 33 pharmaceutical wholesalers to which e-mails and faxes were sent after calling these companies, only three responded by returning the completed questionnaires within a week. Of the 20 e-mails sent to wholesalers in this round, five error messages were returned by the e-mail system indicating that these five e-mails could not be delivered.

A third attempt was made to e-mail the questionnaire to the remaining 15 e-mail addresses for which no error messages were received during the last round. Of these 15 e-mails three respondents returned completed questionnaires.

Another e-mail was sent to 33 wholesalers one week after the due date of the last e-mail to wholesalers. These e-mail addresses included those from respondents who may already have returned a completed questionnaire. The cover letter and e-mail message were therefore amended to contain a new due date for the return of the questionnaire and a post-script informing those who have already responded to ignore this e-mail.

Two of these wholesalers returned an e-mail indicating that they are not true wholesalers and therefore were not able contribute to the survey. Five responded by returning the completed questionnaires. Eight of the 33 e-mails sent could not be delivered by the e-mail system.

In total 9 respondents returned the completed questionnaires from the sample of wholesalers.

Of the 21 manufacturers of which the e-mail addresses and fax numbers were confirmed and to which the questionnaire was sent only one returned the completed questionnaire within the work week given to respond. Four error messages were returned of the e-mails sent during this round, indicating that it could not be delivered.

Another set of 51 e-mails were sent to manufacturers which included some of those to which e-mails were sent to previously. These were again given one workweek to return the completed questionnaires. Of these 18 error messages were returned. One of the respondents returned an e-mail indicating that the company is a third party contractor manufacturer and does not distribute its products.

Another e-mail was sent to manufacturers on the third day of the same workweek. This time the 27 manufacturers were reminded about the request for assistance and to return the questionnaire before or on the last day of the week. Additional to these another 39 e-mails were sent. These 39 e-mails consisted of those manufacturers to which e-mails were sent to in the first two rounds. After the last round of e-mails sent to 66 manufacturers during the middle of the work week, only 6 error messages from the e-mail system were received. After the last round of e-mails sent 7 respondents returned e-mails and indicating that they were not in a position to assist in the research and 5 of the manufacturers returned completed questionnaires.

In total 9 completed questionnaires were received from pharmaceutical manufacturers and 9 completed questionnaires from pharmaceutical wholesalers. The response rate from the sample of 85 manufacturers was 11% and the response rate from the sample of 69 pharmaceutical wholesalers was 13%.

Interviews were arranged with responsible pharmacists of pharmaceutical wholesalers after the last due date for the return of questionnaires. Four pharmaceutical wholesalers within a radius of approximately 80 kilometres of the residence of the researcher were identified. These were chosen because they could be reached at the lowest cost to the researcher. All three wholesalers were interviewed within a period of a week. An informal interview was held with a community pharmacist near the residence of the researcher.

3.5 Data analysis

As indicated in Chapter 1 of this research report the investigation followed the case study method of investigation. This part of the report serves to describe how data obtained from questionnaires and interviews were analysed.

Relationships were drawn between responses to the questions from interviews held with wholesalers and the responses to questions of the questionnaires obtained from wholesalers and manufacturers. The answers given by these two groups were compared in order to make some inferences about the extent to which the wholesaler is being used and to determine what value adding activities it performs in the value chain of pharmaceuticals in the health care industry.

The answers provided by manufacturers in the first part of the completed questionnaires gave an indication whether or not they do sell their medicines to wholesalers or whether the manufacturer only uses direct distribution for the distribution of their medicines. Only those manufacturers which indicated that they do sell their medicines to wholesalers were used in the study.

Distributors or exclusive distribution agencies do not purchase medicines for resale and therefore are not true wholesalers. Answers to questions relating to whether the wholesaler does purchase the products for resale were used to confirm that the manufacturer in fact referred to a true wholesaler and not to a distributor.

The answer to Question 18 to manufacturers, whether the wholesaler insures its own stock were also used to assess whether the manufacturer was referring to a true wholesaler or not. In the case where the manufacturer referred to a distributor the answer would most likely be “No”, since in these cases stock are insured by the manufacturer rather than the distributor.

The Questionnaires to Pharmaceutical Wholesalers were firstly analysed with the aim to assess whether the questionnaire was completed by a true wholesaler or by a distributor or buying group. This was done by looking at answers to Question 21 in which it is asked whether the wholesaler ensures its own stock. If the stock is ensured by the manufacturer it may be an indication that the respondent may not be a true wholesaler. If the answer to question 21 would indicate that the stock is ensured by the wholesaler, the only other way

to make sure that it is a true wholesaler was to determine whether the respondent only sells to pharmacies. If it only sells to pharmacies the possibility exists that the respondent represents a buying group. In cases like these an internet search was conducted to determine the true nature of the respondent's business.

During the study the names of the responding companies were used to keep track of, and identify those companies which have returned the questionnaires, and those which have not. Company names were also used to distinguish between buying groups, distributors or exclusive distributor agencies and wholesalers by researching these companies on the internet, especially when answers provided in the questionnaires proved to be insufficient to properly identify the nature of the company which returned the questionnaire.

The questions in the first part of the Questionnaire to Manufacturers relates to the percentages of sales of the categories of medicines. This data was firstly used to determine which medicines are mainly produced by the manufacturer. This information provided an indication of the nature of the company. In cases where it mainly produces ethical medicines, the chances are good that it is a multinational pharmaceutical company. Secondly, the sales percentages of each of the categories of medicines to the wholesaler and the percentages of sales via other distribution channels to the customer were used to assess how much of each of the two categories of medicines is distributed by each of the distribution channels in the chain. These questions posed to the manufacturer were compared with those in the Questionnaire to Pharmaceutical Wholesalers relating to the percentages of categories of medicines which they sell and through which channels it was purchased from the manufacturer. The answers enabled the researcher to draw some inferences on the extent to which the manufacturer uses the wholesaler as a distribution choice. The percentages of sales of each category of medicine also enabled the researcher to conclude which types of manufacturers sell their medicines to the wholesaler for further distribution.

The question to manufacturers, whether the logistics fee is being used to discount bulk purchases was asked in order to determine whether the possibility exists that bulk discounts are offered on the purchase of medicines in the form of a higher logistics fee to the wholesaler from the manufacturer for the distribution of the manufacturers' products.

Wholesalers' and manufacturers' answers in response to the questionnaires were compared in order to make inferences regarding services provided by the wholesaler and operational efficiency employed by the wholesaler. These inferences eventually enabled the researcher to make conclusions regarding the economic contribution of the wholesaler in the supply chain of pharmaceuticals.

3.6 Limitations of the study

This section of this report aims to discuss the problems experienced during the implementation of the study as well as other limitations to the study.

The problem experienced during the execution of the study was that there was no other method to determine which of these licensed companies were true wholesalers and which of these companies were buying groups or distributors. The collection of data would have required less effort if there were a distinction between the three groups. The problem of not being able to identify true wholesalers from the list of licensed wholesalers made it difficult to determine representation of the sample.

Data collection was limited by the poor response rate. The possible reasons for this was that e-mails might not have reached the respondents due to wrong e-mail addresses provided in the sample list, technical problems with the e-mail system or a recent change of the respondent's e-mail address.

Another reason for poor response rate was the unwillingness of the respondents to complete the questionnaire. During this study respondents may have been too busy completing the compulsory Logistics Fee Questionnaire for the survey from the Department of Health. They may have felt unwilling to complete a non-compulsory questionnaire. One of the wholesalers interviewed confirmed that the questionnaire for this study was ignored for the reason that it was not compulsory.

Another limitation is that pharmacists, being customers of wholesalers at the other end of the supply chain, were not involved in this study. Only one pharmacist was interviewed.

Another possible limitation is that the total market share of those manufacturers which responded to the questionnaires were not considered in this study. If this information was available a better assessment could have been possible regarding the extent to which these manufacturers use wholesalers for distribution of their products and whether these manufacturers consider wholesalers as a value adding service.

Chapter 4

Findings and Recommendations

4.1. Introduction

As stated under the hypothesis the objective of this research paper is to examine and evaluate the economic significance of the pharmaceutical wholesaler in the supply of medicines to the health care industry of South Africa. This chapter's intent, firstly, is to present the findings from the research conducted, secondly, to present the conclusions made from these findings and thirdly, to make recommendations for further research.

4.2 Findings

The findings of the research are presented in this section of the report.

From the 18 completed questionnaires received, nine were from pharmaceutical manufacturers and nine from pharmaceutical wholesalers. Only six of the 18 questionnaires were found to be applicable to the study, four of these were from pharmaceutical manufacturers and two were from wholesalers.

From the nine questionnaires received from pharmaceutical manufacturers, only four referred to true wholesalers in their answers. From the remaining five questionnaires, one manufacturer referred to a distributor, one referred to the distribution of state orders, two referred to the use of an exclusive distributor and another indicated that it could not provide information since it operates as a contract packer for a manufacturer and does not have any responsibility for distribution of the product.

Only two of the nine completed questionnaires received from wholesalers were completed by true wholesalers. Of the seven remaining completed questionnaires which were not relevant to this study, three were completed by buying groups, one only supplied veterinary products and the remaining three were completed by distributors.

One of the two wholesalers who completed a questionnaire was interviewed. An additional two wholesalers were interviewed. A total of four wholesalers participated in this study.

Assurance was given to respondents that the information each of them provides will be kept confidential. The identities of respondents which participated in the study could therefore not be disclosed. The manufacturers which were involved in this study are henceforth represented as Manufacturer A, B, C and D and the wholesalers which participated in the study as Wholesaler A, B, C and D.

Findings from the questionnaires received, as well as from the interviews held, are presented in the following paragraphs.

Table 4.1 Percentage sales of wholesalers to customers.

Question 1	Indicate the percentage of total sales to your customers for each of the two categories of medicines	Wholesaler:	Questionnaire		Interview	
			A	B	C	D
		Ethical Medicines	55%	74%	58%	40%
		Generic Medicines	45%	26%	42%	60%

Table 4.1 illustrates that three of the wholesalers indicated that ethical medicines account for the largest percentage of total sales. Only one of the wholesalers interviewed, Wholesaler D, indicated that generic medicines account for the largest percentage of its total sales.

Table 4.2 Percentage sales of manufacturers.

Question 1	Indicate the percentage of your company's sales for these medicines:	Manufacturer:	A	B	C	D
		Ethical Medicines	90%	100%	65%	90%
		Generic Medicines	10%	0	35%	10%

In Table 4.2 above all four manufacturers indicated that ethical medicines account for the largest percentage of total sales.

Internet research was conducted to find out more about these manufacturers and it was found that:

- Manufacturer B only imports and sells ethical medicines. It uses one of the large wholesalers as a sole distributor of its products. One of the wholesalers interviewed was incidentally found to be the specific wholesaler which imports and sells Manufacturer B's products.
- Manufacturer A specialises in Oncology Medicines which mainly consists of high priced ethical medicines.
- Manufacturer C is a major multinational pharmaceutical company and a member of the Pharmaceutical Manufacturers Association (PMA). It mainly uses one of the exclusive distributors for the distribution of its products. This is illustrated in Table 3.
- Manufacturer D is a local manufacturer and a member of the National Association of Pharmaceutical Manufacturers (NAPM). Its largest percentage of total sales are in ethical medicines.

Table 4.3 The percentage sales from manufacturers through different channels of distribution.

Question Number	Question	Manufacturer:	A	B	C	D
2	What percentage of total sales goes to the wholesaler for resale?	Ethical Medicines	50%	100%	80%	75%
		Generic Medicines	2%	0	70%	0
3	What percentage of sales goes through direct distribution (not using a wholesaler Or an exclusive distributor)?	Ethical Medicines	50%	0	20%	25%
		Generic Medicines	98%	0	30%	100%
4	What percentage of sales goes through an exclusive distributor?	Ethical Medicines	0	0	100%	0
		Generic Medicines	0	0	100%	0

Table 4.3 illustrates that:

- Manufacturer A sells 50% of its ethical medicines through direct distribution and 50% to wholesalers. Only 2% of its generic medicines are sold to wholesalers and 98% through direct distribution.
- Manufacturer B imports its ethical medicines and a wholesaler manages 100% of its sales.

- Manufacturer C sells 100% of all its ethical medicines through its exclusive distribution agency. Thereafter 20% of these sales are distributed further by distributors and 80% are finally sold to wholesalers for resale. Of its generic medicines, 100% is distributed through the exclusive distributor after which 30% of these medicines are distributed further through other distributors and 70% is sold to the wholesaler.
- Manufacturer D sells 75% of its ethical medicines to the wholesaler while the remainder of its medicines are distributed through direct distribution. All of Manufacturer D's generic medicines are distributed through direct distribution.

Table 4. 4 Wholesalers' indication of the percentage purchases from manufacturers for each of the categories of medicines through each of the distribution channels combined into an average.

Question Number	Question	Questionnaire Wholesalers A & B	
			Average
3	Indicate the percentages of purchases directly from the manufacturer through direct distribution:	Ethical Medicines	45%
		Generic Medicines	55%
2	Indicate the percentages products purchased through an exclusive distribution agency of a manufacturer:	Ethical Medicines	73%
		Generic Medicines	27%

Table 4.4 above illustrates wholesalers' average percentage of purchases from manufacturers through each of the various channels of distribution. Of the total medicine purchases from manufacturers through direct distribution, 45% are ethical medicines and 55% are generic medicines. Medicine purchases from manufacturers using exclusive distribution agencies consists of an average of 73% ethical medicines and 27% generic medicines. The above table only illustrates data obtained from the two wholesalers which responded to the questionnaires and not from those wholesalers interviewed. Wholesalers interviewed reported that most of their ethical medicines are purchased through exclusive distributors (EDAs) and that most of their generic medicines are purchased from the manufacturer through direct distribution.

Table 4.5 Answers provided by manufacturers on Questions 5 to 9 and 13.

Question Number	Question	Manufacturer			
		A	B	C	D
5	Are bulk sales offered at a lower price?	N	N	N	N
6	Are bulk sales discounted by using the logistics fee?	N	N	N	N
7	Does the wholesaler purchase your products for resale?	Y	Y	Y	Y
8	Does the wholesaler deliver a distribution/logistics service to your company?	Y	Y	Y	Y
9	Is the wholesaler considered a value-adding distribution choice?	Y	Y	Y	Y
13	Does the wholesaler convey information about price changes effectively?	N/a	N	N	N

It is clear from the answers provide that no bulk sales or discounts are offered and that the logistics fee is not being used to negotiate discounts. Answers to Question 7 illustrates that wholesalers purchase the manufacturer's products for resale, in other words these manufacturers referred to true wholesalers. All four manufacturers agreed that the wholesaler offers a distribution service and that the wholesaler is considered a value adding distribution choice.

In Question 10 these manufacturers are asked to explain the reasons for their answer to Question 9. The following answers were given by each of these manufacturers:

- Manufacturer A: "With the new legislation prohibiting bonuses and discounting, dispensing doctors are reluctant to keep expensive oncology products on their shelves due to the potential financial losses in cases where they don't get reimbursed by medical aids. Due to this most of these doctors prefer to buy from the wholesaler."
- Manufacturer B: "The wholesaler imports, stores, sells, collect payment, credits when needed etc. We do no trading at all and everything is taken care of by the wholesaler we deal with."
- Manufacturer C did not refer to Question 9 but answered as if explaining Questions 5 and 6 regarding bulk sales at a lower price and discounts using the logistics fee. Manufacturer C answered as follows: "The introduction of the Single Exit Price prohibits the offering of discounts."
- Manufacturer D: "It is impossible and uneconomical for us to supply the retail trade with small quantities of medicine daily."

Three of the four manufacturers answered "No" to Question 13 with regard to the effective conveying of pricing information. The fourth indicated that the

conveying of pricing information is not applicable. This answer may be due to the fact that the Single Exit Price which is made known by the manufacturers to all players throughout the supply chain. Answers given by manufacturers to Question 13 could be read with the answers given by wholesalers on Question 31 which asks the wholesaler to briefly describe how pricing information is conveyed to the customer.

Answers to the remaining questions posed to manufacturers and wholesalers are presented in Table 4.6.

Table 4.6. Answers provided by manufacturers and wholesalers on similar questions regarding services rendered and information shared by wholesalers.

Question/s Number/s		Questions posed at both pharmaceutical manufacturers and pharmaceutical wholesalers	Yes (Y) AND No (N) and Don't know (DK) answers provided by:							
WS*	MF*		*Wholesaler				*Manufacturer			
			Interview							
			A	B	C	D	A	B	C	D
8	11	Does the wholesaler provide information on inventory planning?	N	Y	N	N	N	N	N	N
9	12	Does the wholesaler provide a warehousing service to the manufacturer?	Y	Y	Y	Y	Y	Y	Y	N
11 to 14	14	Does the wholesaler share information on its customers (e.g. who bought the product, in what quantities, when it was sold and at what price)?	Y	Y	Y	Y	Y	Y	Y	Y
16	-	Does the wholesaler have a Wholesale License issued in terms of the Medicines and Regulated Substances Act, 1965?	Y	Y	Y	Y	-	-	-	-
17	15	Does the wholesaler comply with Good Distribution/Wholesale Practices (GDP/GWP) and standards?	Y	Y	Y	Y	Y	Y	Y	Y
18	16	Does the wholesaler have a system in place for batch tracking and product or batch recall?	Y	Y	Y	Y	Y	Y	Y	Y
19	17	Does the wholesaler have a system in place for the destruction of stock?	Y	Y	Y	Y	Y	Y	Y	DK
20 21	18	Does the wholesaler insure it's stock?	Y	Y	Y	Y	DK	Y	Y	Y
22	19	Does the wholesaler insure debtors?	Y	Y	Y	N	DK	DK	Y	DK
23	20	Does the wholesaler have a quality control system in place?	Y	Y	Y	Y	Y	Y	Y	N
24	-	Is a FIFO (first in first out) stock management system used?	Y	Y	Y	Y	-	-	-	-
10	21	Does the wholesaler have an information system that manufacturers can access to obtain information required for inventory control?	Y	Y	Y	Y	Y	Y	Y	Y
25	-	Is an information system in place on the buying patterns of customers?	Y	Y	Y	Y	-	-	-	-
15	22	Does the wholesaler manage customer returns in a cost effective way?	Y	Y	Y	Y	NA	Y	Y	Y
Manufacturer A indicated that no product returns are allowed										

30	-	Briefly describe what process is followed with product returns?	All wholesalers manages customer returns without the involvement with manufacturers.	-	-	-	-
31	-	Briefly describe how pricing information is conveyed to the customer?	Through electronic online ordering systems, fax, e-mail or telesales	-	-	-	-

In the answers to Question 8 posed to wholesalers, only one wholesaler indicated that it provides information on inventory planning to manufacturers. However, manufacturers can obtain information on the sales of their products and the type of customers, quantities sold and period or time of sale as indicated in the answers to Questions 11 to 14 posed to wholesalers and Question 14 posed to manufacturers. In the answers to Question 10 posed to wholesalers, and Question 21 posed to manufacturers, it was indicated that the wholesaler does have an information system which can be accessed by the manufacturer to obtain information required for inventory control.

Table 4.7 Percentage sales of wholesalers to each of the following customers in terms of the categories of medicine:

Question Number	Customer	Category of Medicines	Questionnaire	
			Wholesaler:	
			A	B
4	Community Pharmacies	Ethical Medicines	70%	74%
		Generic Medicines	30%	26%
5	Medical Practitioners	Ethical Medicines	60%	60%
		Generic Medicines	40%	40%
6	Institutional Pharmacies (e.g. hospitals):	Ethical Medicines	50%	NA
		Generic Medicines	50%	NA
7	Other Health Care Providers (specify):	Ethical Medicines	80%	Dentists, veterinarians, physiotherapists NA
		Generic Medicines	20%	NA

Wholesaler C and D, both interviewed, indicated that their customers largely consist of Community Pharmacies and Medical Practitioners but could not provide the breakdown of percentage sales for each of these two categories of medicines. Wholesaler C indicated that sales are also made to private hospitals and clinics.

Table 4.8 Questions to wholesalers relating to the services rendered to their customers.					
Question Number	Question	Wholesaler			
		Questionnaire		Interview	
		A	B	C	D
26	Can emergency deliveries be made to customers?	Y	Y	N	N
27	How frequently are deliveries made on average?	Twice within 24 hrs	Twice within 24 hrs	Twice within 24 hrs	Twice within 24 hrs
28	At what distances are the above deliveries made?	-	More than 100 km	More than 100 km	More than 100 km
29	Most product orders are initiated by the customer (C) or the wholesaler (W)?	C	C	C	C

During interviews with Wholesalers C and D it was found that they do not make emergency deliveries. Deliveries are made twice per day or more frequent and their customers do not need an emergency deliver service. Wholesaler C once provided an emergency service but no orders were received for such a service proving the service to be uneconomical.

Manufacturers were requested in Question 23 to briefly indicate what other value adding activities the wholesaler provides. Manufacturer C responded that the wholesaler provides an excellent service to smaller customers and therefore has a wider distribution of the product.

Not all the findings from the interviews held with the three wholesalers are presented in the above section of this chapter. These findings are discussed in the following paragraphs.

All three wholesalers interviewed indicated that manufacturers can change their prices to any level lower than the Single Exit Price in order to generate demand. The price change only holds for a short period and then raised back equal to the original Single Exit Price.

Wholesalers C and D both indicated that there has been an increase in sales since the introduction of the Single Exit Price. Wholesaler D indicated a 10% sales growth in Generic Medicine during this time.

Wholesalers all agreed that most of their Ethical Medicines are provided by exclusive distributors (EDA's) owned by pharmaceutical manufacturers. Purchases through these distributors have grown with 30% since the introduction of the pricing regulations.

Wholesaler C indicated a 58% increase in sales since the introduction of pricing regulations. Although service delivery from exclusive distributors (EDA's) are poor, wholesalers still purchase their products. EDA's only make next day deliveries of their products on the day after which an order was placed while most wholesalers make deliveries twice per day or more frequent. Wholesalers interviewed are all in Gauteng and make deliveries twice per day anywhere in this province and neighbouring provinces. Deliveries to customers located in places further than the neighbouring provinces are made on the next day after an order has been placed. Wholesalers make use of third party distributors or logistics providers for these deliveries.

Wholesalers interviewed owns between 15 and 70 delivery vehicles. These vehicles are monitored for efficiency and security purposes via a satellite tracking system. Vehicles travel specified planned routes on a daily basis, These routes are well planned and coordinated travelling is required to ensure the highest level of efficiency. One of the wholesalers has an electronic picking system in its warehouse which improves picking speed and accuracy. All three wholesalers' picking and packing areas are designed to improve efficiency with fast moving and frequently ordered products nearest to the picking and packing area. All three wholesalers break bulk and are involved in fine distribution.

Wholesaler B, who also completed a questionnaire, indicated that in addition to medicines it also keeps other front shop products for sale to retail pharmacies. Wholesaler C indicated that besides medicines that make out the largest part of its sales, it also sells other medical products to hospitals and clinics.

All three these wholesalers' warehouses have tight security measures in place to prevent theft.

These wholesalers' customers have access to electronic ordering systems. Some of them have more than one of these systems through which orders can be placed. In addition to these systems ordering is also done by telephone or fax. Service delivery to their customers and efficiency in delivering services are considered priority for achieving a competitive advantage.

Wholesaler B indicated that some manufacturers occasionally do inspections on their cold chain in order to ensure that their products are kept according to the required standards. All wholesalers interviewed reported to have good relationships with their suppliers.

These wholesalers all agreed that their fiercest competitors firstly are other large wholesalers and secondly exclusive distributors. Wholesaler D indicated that although EDA's can deliver products at a lower cost of 4% of the price of the product, they cannot generate such large volumes of sales as wholesalers can. These distributors only deliver once a day on the next day after an order has been placed by the customer.

One of the concerns to these wholesalers is the increase in buying groups. These groups takes up a large share of the wholesaler's market and are in direct conflict with wholesalers. Buying groups are formed when pharmacies group together to form a wholesaler which acts as a buying agent for the group. The group is registered as a wholesaler and purchases products from the manufacturers and selling it to the pharmacies belonging to the group. Wholesalers interviewed are all concerned about the fact that these groups are granted a wholesale license even though these groups do not sell products to other pharmacies or customers besides those pharmacies belonging to it.

Wholesaler D indicated that although it does not hold as much ethical medicines as generic medicines, it does have generic equivalents for most ethical medicines. It can provide any of these equivalents to a customer at a lower price than that of the ethical medicine.

The community pharmacist interviewed reported that it orders its medicines from four wholesalers and one exclusive distributor. Deliveries from wholesalers are made twice per day while deliveries from an EDA are made on the next day after an order is placed. The pharmacist indicated that he would rather keep one pack of expensive medicine rather than to buy large volumes and stand the risk of not being able to sell it. He can dispense half a pack of medicine to one customer and keep the other half for another customer. When the need arise he would order another pack from the wholesaler and dispense it on the same day. The pharmacist orders its stock as is needed without it taking up shelf space. Wholesaler D indicated that some pharmacies almost practically dispense their medicines directly from the wholesaler. The dispensing of generic medicines are on the increase and some medical aids would reimburse the full 100% for generic medicines while only a portion of ethical medicines are reimbursed.

4.3 Conclusions

The conclusions made from the findings of the study are discussed in this section of the report.

The wholesaler plays a significant economic role in terms of the value it adds within the health care industry considering the high percentage medicine purchases from manufacturers high percentage of sales to its customers.

Since the abolishment and prohibition of bulk discounts and bonuses wholesalers compete between themselves and with other distributors on a fee-for-service basis. Competition on product price has been eliminated by the regulations prohibiting bonuses and discounting for bulk purchases and the playing field has been levelled between competitors in the distribution chain. Competition to satisfy customer needs is the key to a competitive advantage. Operating efficiency to drive down costs and service delivery to customers that

promotes trust and loyalty are considered important to stay ahead of competitors.

Ethical medicines make out the largest part of sales for most of the manufacturers in the study and most of these medicines are sold to wholesalers for further distribution. Most of the wholesalers in the study indicated that ethical medicines account for the largest percentage of their total sales.

Wholesalers experienced a 58% increase in sales over the past few years. Sales by manufacturers through their exclusive distributors to wholesalers have also increased. Most of the principals of these distributors are multinational ethical medicines manufacturing companies. The increase in these sales may be due to the need for these manufacturers to push larger volumes through the channel due a drop in drug prices. From 2003 to 2006 the pricing regulations brought medicine prices down by 21%.

Another reason for pushing sales of ethical medicines is the increasing competition with a growing market for generic medicines. The market for these medicines apparently grew with 10% over the last few years. Growth in the generic medicines market can be ascribed to the requirements set by the Medicines and Related Substances Act (Act 90 of 1959), as amended, which promotes generic substitution. Pharmacists and doctors are required, in terms of the Act, to inform the patient about the viability of lower priced generic alternatives.

Manufacturers cannot afford to deal directly with the large number of small retailers because the quantities purchased and the resulting manufacturer profits are too small. Manufacturers participating in the study indicated that the wholesaler provides an excellent service to smaller customers and therefore has a wider distribution of the product. Manufacturers find it impossible and uneconomical to supply the retail trade with small quantities of medicine on a daily basis, even when using exclusive distributor agencies for distribution of

their medicines. The wholesaler acts as intermediate between customer wants, small quantities of a variety of products at frequent deliveries, and manufacturer needs, to produce large quantities of a smaller variety of products. The wholesaler adds value for both the manufacturer and the retailer. It takes over the sales function for the volume of contracts for the manufacturer and serves as a purchasing agent for the retailer by largely eliminating and simplifying the buying function.

Community pharmacists and dispensing doctors which makes out the largest part of wholesaler's customers cannot afford to keep large volumes of medicines in stock and stand the risk of not being able to sell it. Most dispensing doctors and pharmacists prefer to buy from the wholesaler which can deliver medication as the need arises. These retailers order an allotment of merchandise from the wholesaler, consisting of a vast variety of volumes of different products of different product ranges.

Orders are made by numerous pharmacies to wholesalers through efficient computer systems or via telephone. Computer technology offers flexibility to customers routing orders through the internet. Dispensing doctors rely mainly on facsimile as their favourite means of purchasing.

Orders for delivery of medicines are placed more frequently when required for dispensing. The wholesaler is better equipped to attend to the needs of these customers than the exclusive distributor, or manufacturer via its own distributor. The wholesaler frequently delivers small quantities of a variety of different medicines to a large number of customers at low cost. Exclusive distributors only do deliveries once on the next day after an order has been placed and it cannot address the needs of the customers in terms of frequency and timeliness of deliveries. Pharmacies almost practically dispense their medicines directly from the wholesaler. The wholesaler has a wide customer base consisting of large a number of small pharmacies and dispensing doctors.

The wholesaler delivers a warehousing service to manufacturers selling their medicines to the wholesaler. The wholesaler holds inventory saving the manufacturer and customer the cost of holding it. Wholesalers provides information access to manufacturers for inventory control. Coordination of inventories between manufacturers, exclusive distributors and wholesalers is possible. This reduces stockholding cost for manufacturers or distributors.

Wholesalers accumulate goods of several manufacturers to a single location. In this way the wholesaler assists manufacturers to reach many small retailers at low cost. The volume needs of customers require a number of tasks to be fulfilled by the wholesaler. The wholesaler adjusts the optimum lot size of the manufacturer to the customer's much smaller lot size requirements. Manufacturers sell their products to wholesalers in large batches either through exclusive distribution agencies or through direct distribution. Manufacturers ship their products in large batches to the wholesaler. The wholesaler breaks batches in order to do fine distribution to its large number of customers. The efficiency of a wholesaler's operations will be difficult for a manufacturer to match.

Because of the geographic concentration of manufacturers and the dispersion of customers, the wholesaler decentralises the manufacturer's products, reducing the delivery time of goods to the consumer. Wholesalers are able to form regional distribution networks in order to service the majority of locations to which products can be distributed. Deliveries are made twice per day to most locations within the boundaries of the province and neighbouring provinces in which these wholesalers are operating while deliveries to customers further than the neighbouring provinces are made once a day. The wholesaler provides a value adding service by delivering medicines to rural areas which would not normally have access to medicines. The wholesaler contributes to making medicines more accessible to patients in these areas.

Dedicated functions are performed by the wholesaler which include buying, selling, negotiating, warehousing, risk bearing, financing, transportation and

providing of assistance to clients. One of the manufacturers which took part in the study indicated that the wholesaler imports, stores, sells, collect payment and give credit when needed. Information is provided to manufacturers about buying patterns of customers on a daily basis. The manufacturer uses this information to determine who its customers are, the quantities bought, when it was sold and the price at which it was sold. This information assists the manufacturer in demand and production planning.

The wholesaler protects the quality and integrity of the products it keeps to sell through proper storage and handling. This includes the bearing of risk associated with taking of ownership of products that can deteriorate or become obsolete. It bears the cost of thefts and the costs involved in safeguarding its merchandise. The wholesaler insures its won stock saving the manufacturer from the associated cost of insuring stock. The insurance of debtors by the wholesaler also saves the manufacturer the effort, costs and inconvenience of dealing with debtor issues. The process of customer returns is in the hands of the wholesaler and does not involve the manufacturer. This saves the manufacturer from the inconvenience of having to deal with these additional transactions and costs.

In order to obtain a licence from the Medicines Control Council wholesalers have to comply to Good Wholesaler Practices (GWP) as well as Good Distribution Practices (GDP). This involves certain standards for storage conditions in which goods are kept and transported. By complying with these standards wholesalers are able to ensure product quality and integrity. Wholesalers comply with the requirements of GWP which involves quality assurance and batch tracking by which any product can be traced from the manufacturer through to the customer in case of product recall.

Destruction of stock is done in those cases where products are returned for various reasons. According to the Act wholesalers must have systems in place for the destruction of stock. The wholesaler saves the manufacturer the cost of destroying additional stock.

The wholesaler simplifies product, payment and information flows between the manufacturer and its customers (it reduces the number of purchase orders and shipments manufacturers have to process and provides the manufacturer of product availability and usage information of the customer).

4.4 Recommendations

In this section of the report recommendations are made for further research on the topic which was covered in this study.

There has been an increase in sales since the prohibition of bonuses and discounts and the implementation of the fee-for-service basis at which distribution has to be negotiated. The role of the wholesaler has merit due to its ability to purchase relative large volumes of a variety of products and distribute it in smaller volumes on a frequent basis to a large number of customers within a wide geographical area at a relatively low cost. The original role of the manufacturer's exclusive distributor may have become obsolete now that the "fee-for-service" model, in the form of the regulated logistics fee, has been introduced. These distributors were originally created in order to provide a more efficient distribution service. With the increase in sales from the agency distributors to the wholesalers a logistics fee is being charged by both these players while it could have only been charged by the wholesaler. The question can therefore be asked whether these exclusive distributors still add value in the distribution channel or do they merely add additional costs in the distribution chain.

Another issue which was not necessarily addressed in this study, but found to be a matter of concern to wholesalers and distributors is the increase in buying groups. These groups are formed by the grouping together of pharmacies. They perform the same functions as wholesalers with the difference being that it only services the group of pharmacies belonging to the group. It is therefore

recommended that the role of the buying group be investigated to determine whether these groups add value to the supply chain.

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Appendix 1

REQUEST FOR YOUR ASSISTANCE: BUSINESS RESEARCH QUESTIONNAIRE

Dear Sir/Madam

I am a final year student for the degree Master of Business Leadership at the Unisa School of Business Leadership (SBL). In order to fulfil the requirements of the degree I am conducting business research on the economic significance of pharmaceutical wholesalers in South Africa's health care industry.

It will be highly appreciated if you could assist me in the research project. Please read the attached cover letter and complete the questionnaire.

The completed questionnaire can be returned by fax before or on Friday, 18 August 2006. The questionnaire will be treated as confidential and the document will be destroyed as soon as the research has been completed.

The attachment to this e-mail include an Adobe Acrobat format document. The document contains a cover letter for the research, a confirmation letter from the SBL of my studies and a questionnaire which can be printed and then filled out. Definitions pertaining to the questionnaire can be found in the cover letter. The completed questionnaire can be faxed to 012 6542613.

Thank you in advance for your assistance in this regard.

Dawid Gerber
Cell: 082 3320073

Mr Dawid Gerber
Fax Number: 012 6542613
Cell Number: 0823320073
E-mail address: dawidgerber@gmail.com

Dear Sir/Madam,

**RESEARCH: THE ECONOMIC SIGNIFICANCE OF THE PHARMACEUTICAL
WHOLESALE IN SOUTH AFRICA'S HEALTH CARE INDUSTRY**

I conduct this research as partial requirement for the degree: Master of Business Leadership (MBL) at the University of South Africa School of Business Leadership (SBL). The research report is the only outstanding module for the completion of my studies for the degree. A letter of confirmation of my study at the SBL is attached.

The objective of the research is to examine and evaluate the economic significance of the pharmaceutical wholesaler (aggregate of wholesalers) in the supply of medicines to the health care industry of South Africa.

Over the last three decades the wholesaler has played a vital role in channelling goods from the manufacturer to the retailer. The pharmaceutical sector came under increased pressure from the regulatory environment and government's efforts to reduce the cost of medicines. Cost pressures resulted in pharmaceutical manufacturers choosing different alternatives to using the wholesaler to get their goods to the consumer. Competition in the pharmaceutical distribution sector was intensified with the establishment of Exclusive Distributor Agencies (EDA's). Regulatory influences like the Single Exit Price (SEP) and the prohibition of bulk discounts brought new challenges to distribution channel intermediaries especially the pharmaceutical wholesaler.

Two questionnaires are distributed, one among a sample of pharmaceutical manufacturers in order to obtain information on the economic role the wholesaler (as a group) plays in the distribution of their products. The other

questionnaire is distributed among a sample of pharmaceutical wholesalers/distributors in order to obtain information about the value adding services wholesalers render to manufacturers and customers.

Your company has been chosen from a sample of pharmaceutical companies and it will be appreciated if you could assist by completing the questionnaire accompanying this letter. **Please note that the information of the completed questionnaire will remain confidential and that the questionnaire will be destroyed after the data obtained has been analysed and the research report has been finalised.**

The completion of the questionnaire will take more or less 20 minutes.

The following definitions need to be clarified in order to complete the questionnaire:

- *Wholesaler:* A wholesaler purchases products from the manufacturer, takes ownership, and then resells it to another party which in turn sells it to an end user.
- *Distributor:* A distributor is a firm that resells the product to the end customer directly and does not take ownership of the product. The product still belongs to the original manufacturer.
- *Exclusive Distributor Agency:* An exclusive distributor is a firm that has been established by a group of pharmaceutical manufacturers and provides a distribution service for their products.
- *Ethical Medicines:* Medicines for which the manufacturer holds a patent.
- *Generic Medicines:* Medicines of which the patent has expired.

It will be appreciated if you could complete the questionnaire as soon as possible and fax it to number: 012 654 2613 before or on 31 August 2006.

Your assistance in this regard will be highly appreciated.

Thank you in advance.

Dawid Gerber

22 August 2006

Tel: 27 + 11 + 652 0253
Fax: 27 + 11 + 652 0299
E-mail: booyse@unisa.ac.za



2006-04-24

TO WHOM IT MAY CONCERN

This letter serves to confirm that Mr D Gerber (student number 3235-418-5) is a registered final year student at the Unisa Graduate School of Business Leadership, Midrand for 2006.

Sincerely

PROF AE BOOYSEN
Acting ACADEMIC DIRECTOR: MBL

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Research: The Economic significance of the Pharmaceutical Wholesaler in the South African Health Care Industry

QUESTIONNAIRE TO MANUFACTURERS OF PHARMACEUTICAL PRODUCTS

The completed questionnaire will remain confidential and will be destroyed after completion of the research report.

Please complete the following questions:

Name of your Pharmaceutical Company:			
For each of these two categories of medicine please provide the following information:		Ethical Medicines	Generic Medicines
1. Indicate the percentage of your company's sales for these medicines:		%	%
2. What percentage of total sales goes to the wholesaler for resale?		%	%
3. What percentage of sales goes through direct distribution (not using a wholesaler or an exclusive distributor)?		%	%
4. What percentage of sales goes through an exclusive distributor?		%	%
Mark your answer with X:			
5. Are bulk sales offered at a lower price?	YES	NO	
6. Are bulk sales discounted by using the logistics fee?	YES	NO	
7. Does the wholesaler purchase your products for resale?	YES	NO	
8. Does the wholesaler deliver a distribution/logistics service to your company?	YES	NO	
9. Is the wholesaler considered a value-adding distribution choice?	YES	NO	
10. Briefly explain the reason/s for your previous answer?			
The following questions refer to the wholesaler and the services it provides to the manufacturer in general:			
11. Does the wholesaler provide information on inventory planning?	YES	NO	
12. Does the wholesaler provide warehousing services?	YES	NO	
13. Does the wholesaler convey information about price changes effectively?	YES	NO	
14. Does the wholesaler share information on its customers (e.g. who bought the product, in what quantities, when it was sold and at what price)?	YES	NO	DON'T KNOW
15. Does the wholesaler comply with Good Distribution/Wholesale Practices (GDP/GWP) and standards?	YES	NO	DON'T KNOW
16. Does the wholesaler have a system in place for batch tracking and product or batch recall?	YES	NO	DON'T KNOW
17. Does the wholesaler have a system in place for the destruction of stock?	YES	NO	DON'T KNOW
18. Does the wholesaler insure it's own stock?	YES	NO	DON'T KNOW
19. Does the wholesaler insure debtors?	YES	NO	DON'T KNOW
20. Does the wholesaler have a quality control system in place?	YES	NO	
21. Does the wholesaler have an information system that manufacturers can access to obtain information required for inventory control?	YES	NO	
22. Does the wholesaler manage customer returns in a cost effective way?	YES	NO	
23. Briefly indicate what other value adding activities the wholesaler provides to the manufacturer?			
PLEASE FAX THE COMPLETED QUESTIONNAIRE TO: 012 6542613 Dawid Gerber: Cell 0823320073			

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Research: The Economic significance of the Pharmaceutical Wholesaler in the South African Health Care Industry

QUESTIONNAIRE TO PHARMACEUTICAL WHOLESALERS/DISTRIBUTORS

The completed questionnaire will remain confidential and will be destroyed after completion of the research report.

Please complete the following questions:

Name of your Pharmaceutical Company:							
For each of these two categories of medicine, please provide the following information:						Ethical Medicines	Generic Medicines
1. Indicate the percentage of total product sales to your customers:						%	%
2. Indicate the percentages products purchased through an exclusive distribution agency of a manufacturer:						%	%
3. Indicate the percentages of purchases directly from the manufacturer:						%	%
Please indicate the percentage of sales to each of the following customers in terms of the categories of medicine:						Ethical Medicines	Generic Medicines
4. Community Pharmacies:						%	%
5. Medical Practitioners:						%	%
6. Institutional Pharmacies (e.g. hospitals):						%	%
7. Other Health Care Providers (specify):						%	%
Choose your answer by marking with X:							
8. Is information on inventory planning made available to the manufacturer?						Yes	No
9. Is warehousing services rendered to the manufacturer?						Yes	No
10. Does the wholesaler have an information system that allows manufacturers to obtain information required for inventory control?						Yes	No
With regard to customers indicated in 4, 5, 6 and 7 above, is information shared with the manufacturer on:							
11. The customers who purchased the manufacturer's product?						Yes	No
12. The quantities of a product sold?						Yes	No
13. The period over which, or dates at which products were sold?						Yes	No
14. At what price products were sold?						Yes	No
The following questions relate to the wholesaler's / distributor's business:							
15. Are product returns managed in a cost effective manner?						Yes	No
16. Does the wholesaler have a Wholesale License issued in terms of the Medicines and Regulated Substances Act, 1965?						Yes	No
17. Does the wholesaler comply with Good Distribution/Wholesale Practices (GDP/GWP) and standards?						Yes	No
18. Is a system in place for Batch Tracking and Product/Batch Recall?						Yes	No
19. Is there a system in place for the destruction of stock?						Yes	No
20. Is stock insured?						Yes	No
21. Who insures stock, the manufacturer (M) or the wholesaler (W)?						M	W
22. Are debtors insured?						Yes	No
23. Do you have a quality control system in place?						Yes	No
24. Is a FIFO (first in first out) stock management system used?						Yes	No
25. Is an information system in place on the buying pattern of customers?						Yes	No
26. Can emergency deliveries be made to customers?						Yes	No
With regard to your customers (those in questions 4 to 7 above) mark your answer with X:							
27. How frequently are deliveries made on average?							
More frequent than twice in 24 hours		Within 24 hours		Per week			Less frequent than once a week
		Twice	Once	4 times	3 times	2 times	Once
28. At what distances are the above deliveries made?							
Less than 50 km		50 – 100 Km		More than 100 km		_____ Km	
29. Most product orders are initiated by the?						Customer	Wholesaler
30. Briefly describe what process is followed with customer returns?							
31. Briefly describe how pricing information is conveyed to the customer?							

PLEASE FAX THE COMPLETED QUESTIONNAIRE TO: 012 6542613 Dawid Gerber: Cell: 0823320073

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