Gordon Institute of Business Science
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The changing competitive landscape in procurement of scheduled medicines in the private pharmaceutical industry of South Africa.

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ABSTRACT

The private pharmaceutical industry of South Africa consists of various players such as buyers, suppliers and intermediaries in the procurement system who constitute the domestic part of a global pharmaceutical value chain. An interesting fluctuation of power dynamics between various players in the procurement system was observed as the players competed for power with the intent to capture maximum profit margin relative to their position in the value chain.

The purpose of this research study is to explore the potential causes that explain the changing competitive landscape in procurement of scheduled medicine in the private pharmaceutical industry of South Africa. Furthermore, the research aims to establish if and how the current state of competition between players in the procurement system are expected to change in the context of national health insurance and centralised procurement. The research study made use of a qualitive research methodology and data was collected through eleven interviews with leaders of businesses across the procurement system of the private pharmaceutical industry of South Africa. Participants were selected with the use of a purposive sampling strategy.

The study found that that NHI will drive the SA government to engage in a contractual arrangement with players in the procurement system of the private pharma industry in SA namely: distributors, wholesalers, and pharmacies. The purpose of the contractual arrangement will be to reach an agreement with the players in the procurement system whereby they open-up their distribution and dispensing services to all members of NHI with the objective of achieving universal health coverage for the broader population and work towards bringing the economic segregation between public and private patients to an end. That the power that medical aids currently wield in the selection of the specific type of product that the patient receives at the point of dispensing will diminish significantly. That the role of medical aids could potentially be limited to serving the SA government as business administrators for the NHI. Also, that large corporate pharmacy groups are anticipated to wield significant bargaining power in the context of NHI and centralised procurement as, although government will look to exert institutional power on the corporate pharmacy groups, the reality is that their vast distribution infrastructure, and prolific number of stores positions the corporate pharmacy groups as an integral

part and vital conduit for government to achieve improved geographical access to affordable medicine in outlying areas.

KEYWORDS

Competition, Power Dynamics, Procurement, Global Value Chain, Pharmaceutical.

DECLARATION

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

Full Name: Jacques Maritz Ackerman Date: 21 December 2022

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CHAPTER 1 PROBLEM DEFINITON AND PURPOSE

1.1 Introduction

The research problem of this study relates to the private pharmaceutical (pharma) industry in South Africa (SA), and the changing competitive landscape in procurement of scheduled medicines therein. According to (Mondliwa et al., 2021) competition and the presence of power dynamics between players in a particular part of a global value chain (GVC) is inextricably intertwined. Thus, the exploration of the competitive landscape focuses on the phenomenon that there is an explicit and implicit battle for power present between various players in the procurement system of the private pharma industry in SA. Furthermore, the complexity of the potentially changing power dynamics is exacerbated by industry regulation by government and thus, the influence of multiple forms of institutional power (Ponte et al., 2019) arising from government intervention.

The adaptive evolution of the strategies and tactics of the players in the industry's procurement system is under investigation. Both suppliers and buyers in the procurement system of scheduled medicines compete for a limited cohort of patients in the private pharma market. More specifically, the research study is aimed at understanding how various players in the procurement system behave over time, to achieve dominant power or influence in terms of who "owns" the patient. Thus meaning, which player has the majority say in terms of the specific brand of product the patient receives at the point of dispensing, and how and why did the power dynamics shift to cause the change. The process of negotiating terms and buying goods, services, or other works from a third party is known as procurement (Wouters et al., 2019).

1.2 Background to research problem

According to (Adebisi et al., 2022) Africa accounts for 11% of the world's population, which carries 24% of the world's disease burden, however, it only accounts for 3% of the world's pharma manufacturing and production. Thus, most African countries, including SA, import 70% - 90% of their pharma supplies. The SA pharma market is currently the most developed in sub-Saharan Africa (Fitch Solutions, 2022).Total spend on pharma products constituted 12.2% of total healthcare spend in 2021 and is expected to increase from ZAR 63.8 billion (Bn) in 2021 to ZAR 68.5 Bn in 2022, which means

that the pharma market will grow 7.4% year-on-year for this period. Scheduled medicines made up 89.1% (ZAR 56.8 Bn) of the total spend on pharma products in 2021 and is expected to grow at a compounded annual growth rate (CAGR) of 8.5% over the next 10 years. Thus, SA is expected to remain a key market for pharma companies due to its size and expected growth opportunities on the medium-to-long term. The total industry also expected to grow at a (CAGR) of 7.8% until 2026. This already significant total industry growth rate is expected to accelerate to a CAGR of 8.3% after 2026 and the total pharma market is estimated to be worth ZAR 141 Rn by 2031 (Fitch Solutions, 2022).

This fiscal year (April 2022 – March 2023) budgeted government spend on healthcare increased with 1.1% to ZAR 269 Bn (National Treasury, 2022). Total healthcare spend in SA was ZAR 522 Bn in 2021 of which private healthcare spend was ZAR 265 Bn and government spend was ZAR 257 Bn, and although healthcare spend in SA is almost evenly distributed between the private sector and the public sector, inequality of healthcare remains a major concern for healthcare in SA (Dela Christmals & Aidam, 2020). According to (Statista, 2022) only 16.1% of South Africans were contracted to medical aids of which 77.7% was white, 45.1% was Indian/Asian, 19.9% was coloured and 9.3% was black Africans.

According to Fitch Solutions (2022), value growth of patented pharma products is expected to be significantly lower compared to the value growth of generic medicines. It is estimated that generic pharma products will have a volume market share of 73.7% by 2025 which would constitute a massive 13% market share increase from 2020 (MarketLine Industry Report, 2021). Furthermore, Naidoo & Suleman (2021) highlights the potential impact of increased Industry exposure to regulation such as the Single Exit Pricing (SEP) policy on the behaviour of buyers, suppliers, and intermediaries in the procurement system in the private pharma industry of SA. In addition Moodley & Suleman (2020) asserts that regulation that allowed for the opening-up of pharmacy ownership potentially have draconian impacts on the power dynamics between various players in the private pharma industry if SA. Thus, it is strongly suggested from both relevant industry reports and academic literature that there have been significant changes to the power dynamics between players in the procurement system of the private pharma industry in SA and that these arise from policy and regulatory change.

In addition, the aim of the mooted National Health Insurance (NHI) act, first published in 2003, is to provide Universal Health Coverage (UHC) for all South Africans (Department of Health, 2017). Accordingly, the Department of Health (DOH) plans to pool all NHI funds and have a central procurement strategy for purchasing healthcare and pharmaceutical (pharma) goods/services. This means that both buyers and sellers in the private pharma industry will be subjected to the government's strategic procurement process in the presence of NHI. (Department of Health, 2017). Katuu (2018), asserts that NHI is expected to potentially have significant future impacts on the competitive landscape in procurement of scheduled medicines in the private pharma industry in SA.

Finally, it is explicitly understood from literature by Dallas et al. (2019) that the topic of understanding power dynamics in global value chains is significantly under-researched, and the need for theory building to understand the phenomenon across various industries is highlighted by the author's agenda for further research. More recently, De Marchi & Alford (2022) acknowledges a significant need for researching the role of government regulation on GVC's on both a macro and micro-level.

1.3 Problem Definition

Since the democratisation of SA in 1994, the private SA pharma industry has been significantly impacted by increased industry exposure to regulation (Katuu, 2018). Players in the procurement system of scheduled pharma products have been pushed to adapt to new rules in the game, which placed tremendous pressure on the profit margins for many suppliers and buyers in the pharma industry (Naidoo & Suleman, 2021).

The procurement system of the SA private pharma industry is a domestic section of the global pharmaceutical value chain and is in most cases the end part of the GVC which entails the distribution, buying-and-selling, marketing end on the GVC (Kano et al., 2020). Since SA imports most of its pharma products (Fitch Solutions, 2022). As the rules of the game changed due to increased industry exposure to regulation over time, it has become progressively more challenging for buyers and suppliers to maintain high profit margins in their place of the procurement system. What followed was a change in the competitive landscape in the procurement system of the private pharma industry in SA over time.

Access to affordable quality healthcare remains a key challenge for the majority of South Africans. This despite efforts by the SA government to drive down the cost of scheduled medicine and bring dispensaries closer to home for people who live in outlying rural areas (Moodley & Suleman, 2020). The SA government plans to achieve their goal of UHC for all through the implementation of a National Health Insurance system (Vogler et al., 2022) which will be characterised by a centralised procurement system that extends the public sector tender-type centralised procurement system into the domain of the private sector (Tripathi et al., 2019).

NHI is potentially expected to have further impacts on the power dynamics between suppliers, buyers, and intermediaries in the private pharma industry in SA (Pauw, 2022), and it is not entirely clear what the potential outcomes could be for the state of business of buyers, suppliers and intermediaries in the private pharma industry of SA. This uncertainty about the future competitive landscape is of importance to all stakeholders in the industry, and specifically to business scholars and practitioners interested in healthcare in SA.

1.4 Significance of the research

Prior research acknowledges that the influence of policy and regulation matters in GVC's (De Marchi & Alford, 2022), furthermore, it is alluded that the state intends to deploy strategies that help facilitate the participation of various players the GVC with the intent to create and capture value. The state applies various regulatory mechanisms to further their agenda towards economic, social, and environmental prosperity. However, it appears that there is significant tension between the desired outcome of implemented regulation, whether economic, social, or environmental, specifically in terms of where the benefit of the regulation ultimately lands and who stands to benefit versus who in the industry bears the cost.

It has also been found that regulation has unintended consequences that furthers the competitive edge of some players and takes away the power to compete from others (Dallas et al., 2019). Furthermore, Dallas et al. (2019) proposes a framework that shows the different types of power in GVCs and pertinently cites the need to build on the understanding of changing power dynamics in GVCs. It is also suggested by Kano et al. (2020) that future research be done on the dynamics of GVC arrangements. Finally it is

asserted by (De Marchi & Alford, 2022) that few studies examined the state's role as the buyer in relation to the GVC. With this research, it is intended that the researcher will add to the academic discussion on the changes in power dynamics and the competitive behaviour of suppliers, buyers, and intermediaries in GVC's in response to increased industry regulation by government.

The private pharma industry in SA, plays a vital role in ensuring continued medical supplies to SA. In addition to acting as an autonomously functioning supply mechanism of scheduled products into SA, the private pharma industry remains financially attractive to multinational pharma companies, thereby enabling and furthering the eligibility for SA to receive new innovative life-saving medicine. Considering the fact that increased industry regulations since 1994 intentionally aimed to drive down the cost of scheduled medicine in SA, the private pharma industry has also attracted numerous generic pharma companies who further the SA government's objective of providing access to quality affordable medicines (Tripathi et al., 2019).

From a procurement infrastructure perspective, the SA private pharma industry has a widespread, robust supply chain network of distributors, wholesaler, pharmacies who ensure the timeous and effective distribution of scheduled products throughout the country (Barnard, 2019). The researcher asserts that more investigation is required on account of how the players in the procurement system of the private pharma industry of SA compete for power, particularly in response to changes in their business environment on account of increased regulation, such as NHI. Furthermore, the business significance of the research will be to potentially inform on business practices of players in the procurement system of the private pharma industry about what the implications could be for their organisational position in the context of NHI and centralised procurement.

1.5 Conclusion

The purpose of this chapter was to present an introduction to the research paper. The problem of a changing competitive landscape in procurement of scheduled medicines presents an opportunity for the researcher to interrogate how and why the power dynamics between players in the procurement system of the private pharma industry changes over time. The aim of this is to understand what the business implications was

for players in the procurement system, and potentially illuminate what future business implications can arise. With NHI expected to be implemented in the near future (Pauw, 2022), it is the ideal time for the researcher to reflect on how the industry's exposure to regulation advanced the successes of some players in the SA part of the pharmaceutical global value chain, and to understand why. Furthermore, the researcher intends to add to the conversation of global value chain theory by exploring the influence of government policy (De Marchi & Alford, 2022) on the power dynamics between various players in the GVC (Dallas et al., 2019).

CHAPTER 2 LITERATURE REVIEW.

2.1 Introduction

The main objective of the research was to identify and explain the forces that are driving a potential change in the competitive dynamics between players in the procurement system of scheduled medicines in the private pharma industry of SA. Furthermore, the research also sought to establish if and how the implementation of centralised procurement and NHI would affect the competitive dynamics in the procurement system in SA. As illustrated in Figure 1 below: Porter's Generic Value Chain (Shyama, 2020), a value chain (VC) represents a comprehensive series of activities that add value in the creation process to the point where the product is being used in the end (Ponte et al., 2019). Furthermore, according to Mondliwa et al (2021) Global Value Chain (GVC) refers to the entire host of cross-border, spatially separated value-added actions that employees and a number of companies perform to bring a product/service to market from beginning to end (Kano et al., 2020).

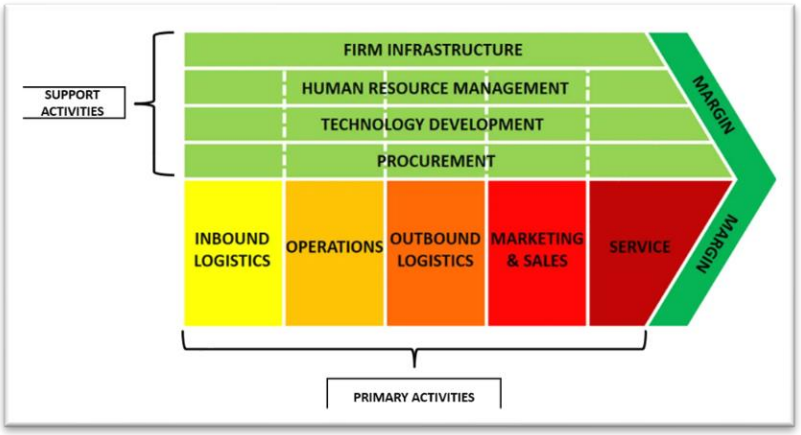

Figure 1: Porter's Generic Value Chain (Shyama, 2020)

As illustrated in figure 2 below, the procurement system of the private pharma industry in SA forms part of a global value chain (Horner, 2022) that consists of four key players namely suppliers or manufacturers of scheduled pharma products, distributors/wholesalers, medical aid insurers (funders) and pharmacies who are the final point of dispensing for pharma products where patients collect their medications as prescribed by medical doctors (Tripathi et al., 2019).

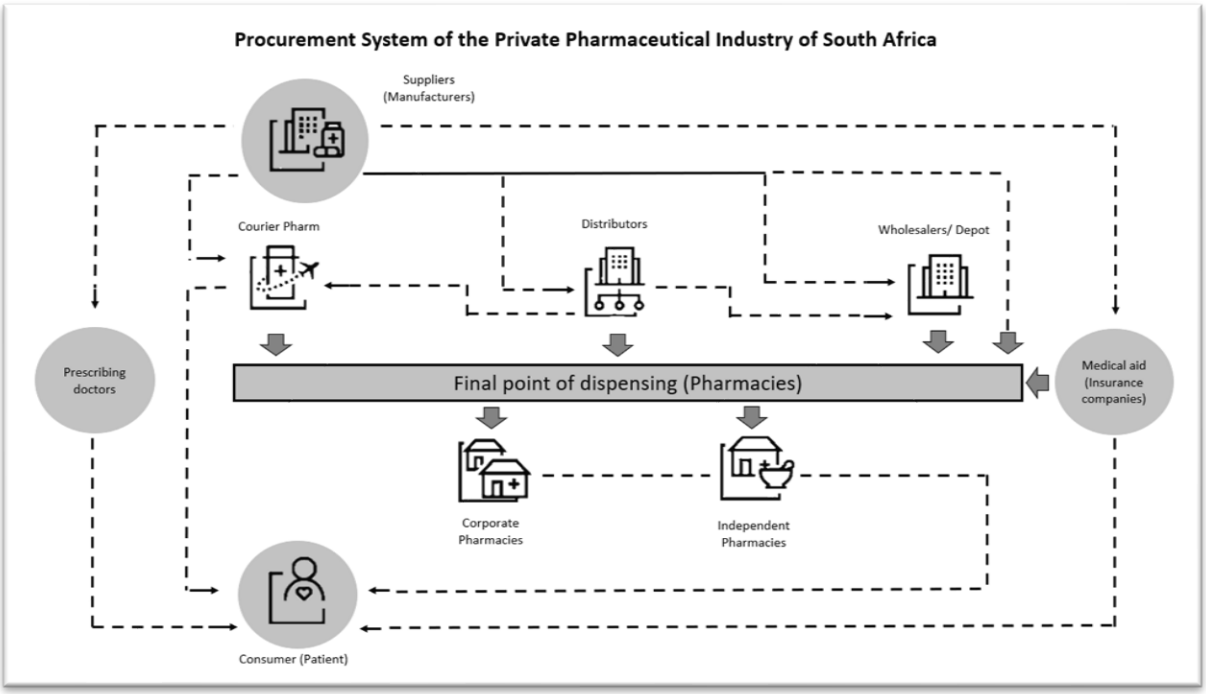

Figure 2: Procurement System of the Private Pharmaceutical Industry in SA (Source: Researcher).

In order to critically analyse the competitive dynamics between the various players in the procurement system of the private pharma industry in SA, the researcher started the literature review with an interrogation of the types of power in global value chains to help identify and crystallise the phenomenon of potentially shifting power dynamics in the South African private pharma procurement system (Mondliwa et al., 2021).

The private pharma industry in SA is highly regulated (Fatti & du Toit, 2013), thereby increasing the complexity of the multi-player procurement system (Tsujimoto et al., 2018). According to Isabelle et al. (2020) the world has entered a time of increased industry regulation. This same phenomenon has been observed in the private pharma industry in SA, where the impact of various increased regulatory initiatives by government can be observed over time, especially since 1994 when apartheid was abolished and access to healthcare for the majority of South Africans was prioritised as part of the African National Congresses' (ANC) manifesto (*anc1912.org.za*, 2022). One example of such regulation includes government legislation around single exit pricing (SEP), which was implemented in 2004 with the intent to provide transparency on the pricing of all scheduled medicines, reduce the price of prescription medication and so

doing improve accessibility of scheduled medication to a broader cohort of patients (Naidoo & Suleman, 2021). It was observed by Moodley & Suleman (2019) that expenditure on pharmaceutical products declined by 22% in the year 2005 versus the same period 2004. This statistic illustrates the potential impact of industry regulation on the procurement system of the private pharma industry in SA.

Thus, to adequately contextualise the competitive dynamics in the procurement system of the private pharma industry in SA, the researcher has also undertaken the literature review with a discussion around industry exposure to regulation which will provide important background knowledge around the historical influence of government rules and regulations that is required to explain the competitive behaviour of, and power dynamics between the various players in the procurement system under study. The scope of the study does not include the role of government as a current player in the procurement process, but rather as a maker of policy and regulation. Furthermore, the focus of government's role in the study will be limited to the components of policy and regulation that addresses increased competitive intensity and changing power dynamics in the private sector (De Marchi & Alford, 2022).

After the types of power in GVC's and industry exposure to regulation has been crystallised, the researcher will set the scene for the part of the literature review which characterises the procurement system and the landscape of players that are under investigation. The researcher has synthesised information from academic theory, relevant/updated South African government gazettes and pertinent industry reports to construct a theoretical foundation for arguments to aid the comprehension of the key characteristics of the potentially changing competitive landscape in the procurement of scheduled medicine in the private pharma industry of SA.

2.2 Power Dynamics in Global Value Chains

Introduction

According to Dallas et al. (2019), power dynamics in GVC has become increasingly complex, particularly due to the expanding realm of players that impact on how power exertion unfolds in a GVC. To this point, it is important note that while the GVC remains the focus of interrogation, the exploration into how power dynamics unfold in GVCs requires the understanding that the GVC is exposed to many externalities that impact

the on the power dynamics therein. Thus, to assist with understanding the phenomenon of a potentially changing competitive landscape in procurement of scheduled medicine in the private pharma industry in SA, we will interrogate each of the various types of power in GVC, as presented in the framework by Dallas et al. (2019). The four types of power are not mutually exclusive, and are identified as:

- bargaining power
- demonstrative power
- constitutive power, and
- institutional power

However, characterising the differences between various types of power is an essential enabling first step which allows for a systematic analysis for the purposes of this study of how the power dynamics between various players in the procurement system evolved over time.

Dyadic, collective, direct, or diffuse power dynamics:

Furthermore, scholars Dallas et al. (2019) state that the two dimensions of power are 1) the field/landscape of players, and 2) transferral instruments (transmission mechanisms). The transferral instruments provide an indication of how power is transferred from one player to another. The landscape of players classifies the various parties who are involved within the realm the powerplay. The landscape of players can be classified as either dyadic or collective, meaning that the power play either occurs between, or because of the actions/decisions of two players (dyadic), or the power play occurs between multiple players, or because of the actions/decisions of various players (collective). The two ways in which power can be imposed from one player to another in the realm of the competitive sphere of GVC can be classified as either direct or diffuse. Although to distinguish between the two differences can be challenging to observe, and both transmission mechanisms can be present at a particular point in time, it is important to characterise direct and diffuse power for the purposes of plotting the potential changes in power shifts (Dallas et al., 2019).

Firstly, direct power means that the player who is exerting power unto a less dominant player in the value chain is easily identifiable and can be characterised as follows: the

acts of the players are intentional/goal oriented, and the source of power represents the domain of the player, thus it is assumed that the intentions are representative of the decisions of the organisation as whole and not subdivisions or individuals in the organisation. These players have specific measurement criteria in place to measure whether the desired outcomes are achieved because of the power that that have purposefully exerted.

The emergence of diffuse power is a relative new topic in the field of power dynamics in GVCs and so far, it is understood that the phenomenon of diffuse power is not explicit, and it can arise from the sudden availability of technology that enables a shift in power dynamics along the GVC (Oliveira et al., 2021). Furthermore, diffuse power can arise over a period of time in the form of a power where the relevant players who are driving the agenda are not easily identifiable. Sometimes the results of diffuse power being exerted are discovered in the form of unintended consequences, and it can be that the player(s) exerting diffuse power do not intend on transferring power for a particular purpose.

This means that the players may benefit from their unintended powerplay and not actually be aware that it's their actions resulting in the windfall. In the case of diffuse power, there aren't always clearly defined measurements for the outcome of the powerplay. Diffuse power can manifest in network effects, such as Uber, whereby the status quo is accepted as best practice by most participants. Furthermore, diffuse power can potentially leave participants paralysed for any possible resistance towards the status quo. In some cases, a significant number of participants change the way they operate so that a new state of existence becomes the norm (Dauvergne, 2018). In such a scenario of diffuse power, the locus of control does not sit with a single participant, yet the majority of players behave in the same way.

Finally, the power framework described above (Dallas et al., 2019) allows us to critically analyse four types of power through the combination of the dual types of transferral mechanisms (direct/diffuse) and landscape of players (dyadic collective)

Bargaining Power (Dyadic and Direct)

The basis of bargaining power hinges on the ability of one party to influence another party to behave in a particular way that it would not normally choose to do. In the case

of bargaining power between a buyer and a supplier (dyadic), it can be characterised as the extent which either a buyer or supplier has resources that the other one is more dependent on. Furthermore, bargaining is the act whereby either the buyer or supplier leverage their access to potentially unique resources that are in high-demand, to extract a bigger profit margin from their role in the value chain, by exploiting their relationship with another player in the chain (Grabs & Ponte, 2019).

The increase in margin can come as the result of many forms of compulsion such as the push from the supplier for additional volume purchases that exceeds normal quantities, or in the form of discounting or push for lower prices from the buyer (Tommasi, 2019). If the supplier is selling a product/service that is in high demand, they may ask higher prices from the seller. A buyer can leverage their retail position with a captive market to coerce a supplier into spending more on marketing in their particular retail channel in exchange for shelf space (Reisi et al., 2019). As such the benefits of the power transferred in the transaction is measurable, and directly because of the deal.

Power of experts/prescribing doctors in the pharma field:

At this intersection, it is important to extend the thinking on bargaining power by considering the impact of expert power on opportunistic behaviour by buyers and sellers as they compete for increased margins in a GVC. In the context of our study, it is important to note that prescribing doctors have expert power (Håvold & Håvold, 2019), which can be defined as opinion leadership based on their unique educational skills, knowledge and capabilities (Al Harrasi et al., 2020). To this point, it is important to note that according to Pournader et al. (2020), the expert power of a particular stakeholder in a GVC reduce opportunistic bargaining power between buyers and sellers. However, it is also understood that when rewards and legitimate power is dominant in a GVC, it increases the opportunistic bargaining power between buyers and sellers as the conversation takes the shape of a more commercial negotiation. Finally, according to Kwak & Kim (2020), increased buyer concentration is correlated to reduced supplier bargaining power and reduced supplier profitability as a result.

Demonstrative Power (Dyadic and Diffuse)

Demonstrative power refers to when a supplier decides to make unsolicited upgrades to their product/service. The result of this, is that it compels other suppliers to follow suit

unless they want to be left behind, thus the supplier exerts power unto suppliers to upgrade their features. However it also means that the suppliers who can offer the improved product/service will be likely to continue capturing competitor market share until such time that its competitors are able to innovate and surpass their offering (Ponte et al., 2019). Thus, the type of power originates from potential technological advancement, while it is not clear to all players what the exact source of the power is and the transactional improvement happens between two players namely the buyer and supplier, although it has ripple effects across the industry competition. Such an example blurs the lines between collective and dyadic power, as the landscape of players that are impacted by the power shift, could potential be more than one (Dallas et al., 2019).

Institutional Power (Collective and Direct)

Institutional power (Friel et al., 2021) resembles direct regulatory influence from government or other institutionalised organisations (Dauvergne, 2018). The objective of institutional power is to drive a particular overarching agenda with the intent to manage and regulate certain elements of bargaining in a particular industry or value chain (Dallas et al., 2019). Institutional power has to do with law making, thus, usually impacts various players of a GVC as a collective, and the intent of the institution is to shape the way in which a particular system works, normally with the intent to produce a positive outcome for certain participants in/or consumers of products/services in the value chain. However, sometimes the transmission mechanism can be diffuse from the point of view that the imposed regulatory impositions may potentially have unintended consequences for certain players in the GVC, and or the regulating institution itself (Kano et al., 2020). Furthermore, according to scholars De Marchi & Alford (2022), some firms, usually larger firms benefit more from policy implementation and institutional power, than smaller firms in the GVC.

Constitutive Power (Collective and Diffuse)

Constitutive power resembles a power that pushes the envelope and novel approach to redefining the consumption and use of product/service and could result in the creation of a new market segment. Constitutive power is closely correlated with demonstrative power, however constitutive power inflicts fundamental changes of how a collective of individuals behave (Ponte et al., 2019). From a GVC perspective constitutive power can permanently alter the mechanics of an industry so that it establishes and redefines a

new environment for itself to exist in. The transmission mechanism for constitutive power is opaque, and the results achieved by the initiating player could potentially have unintended consequences for themselves and the competing players in the GVC.

2.3 Industry Exposure to Regulation

In this section we will discuss elements of the private pharmaceutical industry's exposure to regulation, which comes in the form of institutional power (Dallas et al., 2019) that is exerted by government on the industry. The researcher aims to clarify particular details of institutional power in order to explain a potential change in power dynamics of the competitive landscape in procurement of scheduled medicines in the private pharmaceutical industry of SA.

The Medicines and Related Substances Control Act of 1965, hereafter also referred to as "the medicines act" was amended in 1997 (Act 90 of 1997), to amongst other: prevent cheaper parallel imports of originator products from entering South Africa, to help provide a pricing framework which will assist with the supply of more affordable medicines to improve access to affordable products, stop deals (bonussing and discounting/sampling) of prescriptions drugs, promote the substitution of high cost innovator medicine to lower-cost alternative generic products and to control how wholesalers purchase and sell medicines. The legislation was challenged by thirty-nine pharmaceutical manufacturers in early 1998 (Mayne, 2001) which resulted in a delay of the policy implementation until 2003 when the legal challenge was withdrawn and the generics substitution policy was implemented (Horner, 2022).

It is important to note that within this legal framework pharma companies may not market or sell scheduled medications directly to patients (consumers), and as such they drive sales and marketing of their products through information selling at doctors and other final points of dispensing such as pharmacies (Government, 1965). Prior to 1994, the private pharma industry in SA was mainly characterised by the presence of American and European pharmaceutical suppliers (Horner, 2022).

The fact that SA was still under apartheid rule pre-1994, meant that public healthcare was of high-quality standards, but only catered for the white minority (Rattan et al., 2019); apartheid as a system heinously excluded black South Africans from access to public healthcare (Coovadia et al., 2009). Medical aid membership had increased 20%

for the period 1994-2006 although the number of registered medical aids declined from 170 to 124 for the period (Doherty Jane & McLeod Heather, 2007). In a more recent study by Omotoso & Koch (2017), it was found that medical aid membership steadily declined by 0.2% annually for the period 2004-2014. The council for medical schemes latest annual report indicates that medical aid membership increased for the period 2021 vs 2020 (CMS, 2021). Pre-1994 also saw a period of dominance by foreign multinational pharma companies (suppliers) in the private pharma industry of SA (Horner, 2022). It is concluded that SA pharma market only had a few suppliers operating locally (Te Naudé & Luiz, 2013).

Generics substitution policy

According to Horner (2022), the generics substitution policy was implemented in 2003. The policy is a pro-generic policy that intends to promote awareness of generic products at the final point of dispensing to improve access to affordable medication. The policy dictates that dispensing doctors, pharmacists and pharmacy assistants who are patient-facing at the final point of dispensing are obliged to offer a patient the generic equivalent where a generic product is available. According to the (MarketLine Industry Report, 2021), generic product volume market share in the private pharma market in SA increased from 58% in 2016 to 67% in 2021.

Pharmacy ownership rule

To improve geographical dispersion of pharmacies across SA in order to increase access to medicine, the SA government amended legislation in 2003 which related to the licensing and ownership of pharmacies. The intention was to promote the establishment of pharmacies in the rural, previously underserviced areas across SA. According to (Moodley & Suleman, 2020) government removed ownership restrictions which meant that any person or legal entity can apply for and obtain a pharmacy license, and this person does not need to be a registered/qualified pharmacist.

Single Exit Pricing (SEP)

The policy around SEP which was first implemented in 2004 has three main parts that impact on the industry's power dynamics. Firstly, suppliers are required to apply for an SEP from the Department of Health (DOH) for any existing or newly launched scheduled medicine, once the SEP has been approved, an industry wide notification is sent via

email and the product's price also becomes transparent for the public on various websites including the South African medicines price registry (MPR) (The South African Medicines Price Registry, 2022).

Suppliers may not sell their scheduled products at any other price than SEP to any player in the SA market, except for the SA government. Suppliers may not increase their SEP at any time that they wish and are subject to a capped annual price increase as determined by the South African government. The capped annual price increase is calculated as a % of whatever the current SEP is of a scheduled product. Suppliers may choose to take the capped annual price increase %, or they may choose to remain at their current price. Suppliers may however apply for a permanent price reduction at any time, and suppliers may also apply for a temporary price reduction of a product whenever they choose (National Department of Health, 2020).

Secondly, it is imperative to note that the SEP is the price at which wholesalers purchase scheduled medicines from suppliers and it is also the price at which wholesalers are required to sell prescription drugs to pharmacies and other final points of dispensing (dispensaries). If a supplier has their own distribution centre in South Africa, the SEP is the price at which they will sell to pharmacies/dispensaries. Pharmacies will purchase scheduled medicines at SEP and are capped in terms of the margin (dispensing fee) that they may add to the SEP of the prescription drugs to patients (National Department of Health, 2020).

Tier	Lower Part of Range: SEP Ex VAT	Highest Part of the range: SEP ExcVAT	Part 1: Fixed amount dispensing fee	Part 2: % of SEP Ex Vat	Total Margin	Total % Margin at Highest Part of the Range
1	R -	R 113,71	R 15,95	46%	R 68,26	60%
2	R 113,72	R 303,31	R 29,07	33%	R 129,16	43%
3	R 303,32	R 1 061,61	R 82,77	15%	R 242,01	23%
4	R 1 061,62	R 1 000 000,00	R 190,68	5%	R 243,76	0,024%

Table 1: Pharmacy dispensing fee structure (National Department of Health, 2020)

The third part of the SEP legislation meant that pharmacies were subject to a capped dispensing fee system based on price. As can be seen in table 1 above, the allowed dispensing fee for pharmacies have two parts, both of which depend on the SEP excluding value added tax (SEP Ex VAT) of the scheduled medicine. Part one is a fixed amount while part two is calculated as a percentage of the SEP Ex VAT. For scheduled

drugs in tier 1 of which the SEP Ex VAT range between R 0 and R 113.71, the pharmacist may charge a combined maximum dispensing fee of 60% or R 68.26 assuming the cost of the product is at the highest end of the range. For scheduled drugs which SEP Ex VAT is within the range of R 113.72 and R 303.31 in tier two, the fixed dispensing fee increase to R 29.07, but the variable part of the dispensing falls from 46% in tier one to 33% now in tier two. As such the total margin falls to 43% in tier two assuming the cost of the item dispensed is at the highest end of the tier (National Department of Health, 2020).

In tier three, for products with SEP Ex VAT ranging between R 303.32 and R 1061.61 the total margin falls by a further 20% to 23%, assuming the product dispensed is at the highest end of the range. Even though the fixed component increases to R 82.77, the variable component of the dispensing fee reduces by more than 50% to 15% of the SEP Ex VAT. Finally tier four represents scheduled products with a SEP Ex VAT of R 1061.62 and above. For these products the fixed dispensing fee that a pharmacy may charge increases to R 190.68 from R 82.77 in tier three. However, the variable component of the dispensing fee drops to only 5 % of SEP Ex VAT from 15% of SEP Ex VAT in tier three. In table one above it can be seen that the assumption was made in tier four that the highest end of the tier is for a product with a SEP Ex VAT R 1 million, in which case the Total % Margin would be 0.024% of the SEP Ex VAT for the pharmacy.

Of crucial importance, this calculation clearly illustrates the diminishing returns for a pharmacist when stocking and dispensing high cost scheduled medicines. Finally, it is critical to note that a pharmacy is not obliged to charge a dispensing fee. Dispensaries reserve the right to forego one or both parts of the dispensing fee completely. In conclusion, a dispensary who chooses to reduce or forego the dispensing fee in essence reduces the actual cost to the patient (National Department of Health, 2020). The SEP illustrates the way in which the SA government's progressive policy intervention directly shapes the competitive landscape of procurement as it relates to scheduled medicines, as it under investigation in this study.

Wholesaler legislation

According to the Government Gazette of 1998, wholesalers may only purchase scheduled medicines directly from a supplier or from a supplier's designated

manufacturer in South Africa. Wholesalers may not sell or buy prescription drugs to and from one another and wholesalers may only sell scheduled medicines to final points of dispensing in the private pharmaceutical industry.

The formation of SAHPRA

The Medicines and Related Substances Control Act has been further amended recently and triggered the formation of the South African Health Products Regulatory Authority (SAHPRA). The amendment to the act meant that the scope of the newly founded national regulatory authority (NRA) was broadened to include oversight of medical devices and complementary medicines. It also paved the way for the NRA to collaborate with any other regulatory institutions and authorities (Keyter, Banoo, et al., 2018).

SAHPRA has replaced the Medicines Control Council (MCC) as SA's as of February 2018 and has subsequently been split from the National Department of Health to act as a separate juristic person (Keyter et al., 2018). The role of SAHPRA is to ensure the safety, quality, and efficacy of medical products. According to Keyter et al. (2018), the MCC was struggling to keep up with new product registration applications, which resulted in a massive backlog of applications, and that although the MCC received around 4700 applications per year, it was only able to process 2550 registrations per annum. This meant that SAHPRA inherited a backlog of around 16000 applications for new product registrations that were submitted prior to 31 January 2018. One of the key agendas which prompted the establishment of SAHPRA was to improve the efficiency of the NRA. More specifically with regard to clearing the existing back log of new product applications and ensuring that the lead time between application and registration of a new product is shortened so that access to affordable medicine is promoted through increased number of competitor products in the market. According to (Keyter et al., 2018) SAHPRA planned to clear the backlog of 16000 applications within two years, starting 1 February 2018.

Starting in February 2018, SAHPRA intended to apply various strategies to speed up the registration process of new applications. One key aspect will be the implementation of the reliance route for new product registrations (Keyter et al., 2021). The reliance pathway for new product registration means that SAHPRA will not conduct a full clinical review for all new product registrations. Instead, SAHPRA seeks to conduct an in-depth

review of the clinical trials and comparative studies that have already been done by other trusted and/or similar sized NRA's such as the European Medicines Agency (EMA), the United States of America's Food and Drug Administration (FDA) or the Australian Therapeutic Goods Administration (TGA). This is understood to provide the opportunity to reduce the lead time potentially significantly from application to registration of new products (Keyter et al., 2022)

2.4 NHI and centralised procurement

The aim of the mooted National Health Insurance (NHI) act, first published in 2003, is to provide Universal Health Coverage (UHC) for all South Africans (Department of Health, 2017). Accordingly, the Department of Health (DOH) plans to pool all NHI funds and have a centralised procurement strategy for purchasing healthcare and pharmaceutical goods/services. Centralised procurement of healthcare goods and services by government, is a system in which the government manages the purchasing of healthcare goods and services for the entire country (Vogler et al., 2022). According to Katuu (2018), we are currently in the third and final phase of the SA government's NHI roll-out plan. This final phase stretches over the period 2022-2025.

The SA government plans to leverage a centralised procurement, tender type process as mechanism to reduce the cost of healthcare goods & services, and improve access to quality healthcare, so that all South Africans receive the same level of healthcare regardless of their socio-economic circumstances (Girdwood et al., 2019). The funding for the NHIF is intended to come in the form of an income tax that can be managed by employers, similar to pay-as-you-earn tax. According to the South African Department of Health, the plan will not be for NHI to manage the pharmaceutical distribution network, hospitals, or healthcare professionals (doctors and pharmacists), instead NHI plans to leverage perceived additional available service capacity in the private sector, and engage in contractual arrangements with healthcare professionals, buyers, sellers, and intermediaries in the procurement system of the private pharma industry in SA.

The contractual arrangement is expected to be in return for access to healthcare service for all public and private patients. For the purposes of the study, we will focus on the impact that NHI and centralised procurement could potentially have on the competitive landscape in procurement of scheduled medicine in the private pharma industry in SA.

According Vogler et al. (2022) no clear positive impact on the reduction of medicine prices was observed with the implementation of a centralised procurement system for healthcare goods, instead out-of-stocks and an increased prevalence of lengthy processes characterised the supply of healthcare products. However, Yang et al. (2022) observed a significant uptake in generic substitution and a substantial decrease in the price of prescription drugs as a result of centralised procurement. It is understood that supplier profit margins come under immense pressure under a tender type centralised procurement system, according to Chebolu-Subramanian & Sundarraj (2021) suppliers in India make only a 3% - 4% profit margin on tender products. This phenomenon is furthermore confirmed by Hasnida et al. (2021) who asserts that the low cost of medicine under a tender type process places massive pressure on profit margins.

2.5 The Procurement System of the Private Pharma Industry in SA

The players in the procurement system compete for power to influence the patient's product (brand) selection at the final point of dispensing. With reference to figure 2 above, the researcher will clarify the roles and the context of each of the players the procurement system in the following section. We will refer to the pharma companies as suppliers, while wholesalers and pharmacies will represent sellers. Medical aids, distributors and prescribing doctors are seen as intermediaries.

Suppliers

Suppliers compete against one another for a share of a particular market. In scheduled medicines, the market is typically defined by molecule class as a differentiator. The main reason for this is because molecules represent existing markets, have the same therapeutic indication, and can be quantified in value and units with the use of available industry data. Another reason is that pharmacies may substitute between various supplier brands so long as it is the same molecule.

According to Yahoo Finance (2022), there are 129 pharma companies in SA. Pharma companies typically has a commercial division that focused on enabling the organisation to market and sell their products. To achieve the organisation's commercial goals and objectives, commercial divisions are divided into separate organisational departments as illustrated in figure 3 below. The suppliers (pharma companies) compete against each other for sales revenue through marketing and selling their products across all buyers in

the procurement system. The scope of our study mainly necessitates an understanding of the sales and marketing part of the GVC of pharma companies (suppliers) who supply scheduled pharmaceutical products in South Africa. The reason for this is because or focus revolves around the competitive dynamics of the supplier firm within the domestic procurement system of scheduled medicines in the private pharma industry in SA. Thus, although we will allude to upstream primary and support activities for suppliers our core focus will be on crystallising the commercial division of a pharma company in this section.

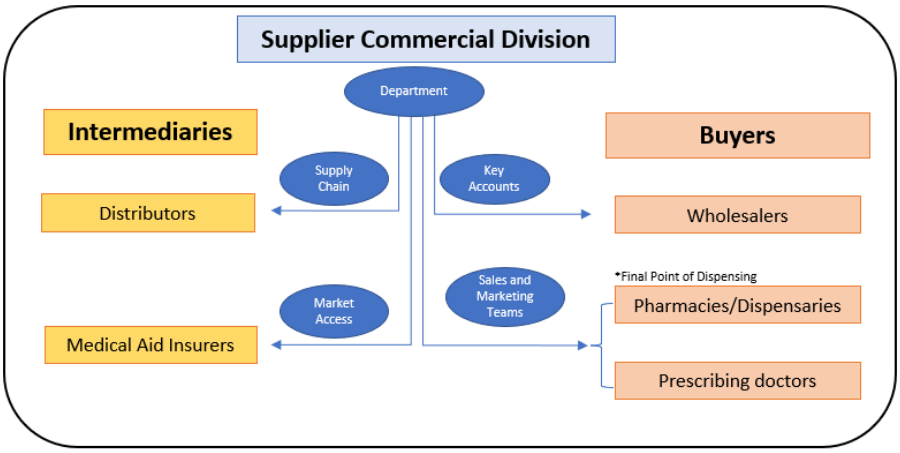

Figure 3: Supplier Commercial Division (Source: Researcher)

Pharma companies can be bifurcated in two different spheres namely originator and generic companies (Tripathi et al., 2019). Originator companies determine and execute their sales and marketing strategies around unique selling points that are associated with the innovation/invention of new molecules that are treatment specific (Smit, 2013). These are products that are researched and developed to be first in its class for a specific therapeutic treatment. Originator companies have patent protection for a certain number of years, depending on the date of registration and relevant patent laws (Lakdawalla, 2018). In many ways originator pharma companies make use of demonstrative power (Dallas et al., 2019) which means they innovate and make upgrades to their products to generate revenues by inducing the prescriber support of medical doctors.

Generic pharma companies are focussed on scientifically reverse engineering molecules that originator companies have researched, developed, and brought to

market. The scientific reverse engineering process is much less cost, resource, and time intensive than researching and developing a new chemical entity from the start. As such, generic pharma companies can provide a more cost-effective product to the market, which is identical to the originator (Tripathi et al., 2019).

Most generic pharma companies support the quality, efficacy and safety profiles of their drugs with comparative studies versus the originator with data such as bioequivalence studies which examines and compares the concentration of the active product ingredient in the blood stream of a patient over time of that of the generic drug versus that of the originator drug (Miranda et al., 2018). The cost of substitution (changing) a patient from an originator drug is zero for pharmacies, doctors, wholesalers, and distributors. There is also most likely a saving for patients and/or medical aids, when substitution occurs, because generic drugs are usually more cost effective. Generic pharma companies would typically make use of bargaining power (Grabs & Ponte, 2019) to generate revenues and gain pharmacy support by inducing pharmacies and doctors to switch to their products for cost-benefit.

Supply Chain

The supply chain department is responsible for ensuring continuous supply of products, managing stock levels, and maintaining the company's relationship with the company's distribution partner (Tripathi et al., 2019). Where suppliers have their own distribution infrastructure, the supply chain and operations team will naturally be larger, and have a much broader scope of work considering the scale of operations that is required for a supplier to manage its own distribution of products to wholesalers and final other points of dispensing such as pharmacies.

From a supply chain/procurement perspective, pharma companies will mostly import their products, or manufacture products locally after which their bulk manufactured products will be stored at a distribution warehouses (Horner, 2022). However, most pharma companies in SA contracts a local distributor, who acts as a third-party logistics manager for the company which distributes their products to wholesalers in the private market in return for a distribution fee from the pharma company the distribution fee is usually calculated as a percentage of sales (Zhao et al., 2012). The sales from distributor to wholesalers are known as primary sales, while sales from wholesaler to pharmacies

are known as secondary sales. The final step in the sale of pharma products to patient/consumer is dispensed sales, which is where the patient receives their medicine from a pharmacy dispensary.

Key Accounts

The key account department has Key Account Management (KAM) personnel working in the department. KAMs are focused on managing the company's relationships with wholesaler key accounts on a business to business (B2B) level (Mahlamäki et al., 2019). KAMs negotiate logistic fee contracts with pharmaceutical wholesalers (Kumar et al., 2019). The logistic fees are payable from the supplier to the wholesaler in return for the wholesaler listings (stocking of the supplier's products) and delivering the supplier's products to the final points of dispensing such as pharmacies and dispensing doctors. As companies competed historically, a main focus for large corporate pharmacy groups was vertical integration between wholesalers and their pharmacy retailer outlets (Dischem, 2022). As such, the role of the KAM has evolved to directly influence the supplier's accessibility downstream into the vertically integrated retail sphere of the wholesaler key account (Holdford, 2018).

Marketing

In the pharmaceutical industry, it is standard practice to use diverse marketing methods to cultivate demand and increase drug sales. According to Hailu et al. (2021), 84% of pharmaceutical marketing efforts are aimed towards prescribing doctors because, from the pharma company's point of view, physicians are the gatekeepers or decision-makers in medication sales. Therefore, pharmaceutical marketing efforts focus on physicians. As a result, it is argued that most pharmaceutical manufacturing and distribution businesses invest significant time and money in the market to persuade medical professionals to prescribe their products (Hailu et al., 2021). However, this matter remains highly contested, as some academics such as Duh & Diniso (2020) argue that the generic substitution rule has shifted the focus of pharmaceutical marketers more towards pharmacies and the final points of dispensing. The idea with this marketing strategy is to capture increased market share at the point of dispensing. The reason for the prevalence of this plan is because pharmacists are able to intercept and switch a doctor's prescription away from one supplier to another (Mansilla et al., 2017), this

opportunity is further exploitable by generic pharma companies in SA, due to the fact that pharmacists are compelled to offer the generic equivalent, in the case where a generic equivalent is available for a particular molecule (Fitch Solutions, 2022).

Sales

Pharma companies have sales representatives (reps) who are the company resource which is responsible for representing the organisation and its products at doctors and pharmacies (healthcare professionals–- HCPs) (Vasan, 2018). Their function is to create awareness around the therapeutic and/or pharmacoeconomic benefits of their company's products at doctors and pharmacies (Horner, 2022). Pharmacoeconomics entails the analyses of cost-benefit, cost-effectiveness, cost-minimisation, cost-of-illness, and cost-utility of medicine (Serritella et al., 2020), which can be defined as the subfield of economics that compares pharma products and treatment strategies based on their relative costs and benefits. The reps work as direct sales teams who are focused on business to business selling to final points of dispensing such as pharmacies and dispensing doctors (Duh & Diniso, 2020).

Market Access

Most pharma companies have dedicated market access managers who focus on their relationship with medical insurance companies/medical aids (Leone et al., 2021). The reason for this is that medical aids determine the consumer benefits that their members have based on the member's level of subscription to the medical aid. Some pharma products/services are subject to a prescribed minimum benefit rule (PMB), which means that the member is eligible for receipt of the product/service without having to pay an additional co-payment, regardless of the member's level of subscription (*Council For Medical Schemes*, 2022).

Furthermore, most medical aids have brand specific formularies, whereby the funder specify a limited number of product brands in a specific molecule that the member is eligible for without an additional co-payment by the member (Discovery, 2022). Considering this, the medical aids potentially have a significant influence on the product that the patient/member is eligible for. Especially considering that the medical aids are the de facto payers of the product that members receive at the final point of dispensing. As a result, market access managers will be focused on pursuing maximum funder

support of their products across as many as possible subscription levels (Runfola et al., 2021). Finally, the market access manager is focused on ensuring that the company's products are endorsed by as many medical aids as possible.

Buyers

The pharmaceutical industry in terms of scheduled drugs takes place in a business to business (B2B) environment between pharmaceutical companies, prescribing doctors, pharmacies, and wholesalers (Klimanov et al., 2021). Thus, in the case of the scheduled medicines, the buyers of scheduled pharmaceutical products are not the consumers of the product, but rather those who are involved in the decision making around what specific molecule is the appropriate treatment for the patient, or those who play a commercially active role along the value chain of the scheduled drug.

Wholesalers

Wholesalers exist to facilitate the purchasing of products from pharma companies and to deliver these products to a base of supporting pharmacies/final points of dispensing who purchase pharma products from them on a regular basis, known as a wholesaler channel of pharmacies (Barnard, 2019). Pharma companies usually have dedicated human resources, called KAMs, who are focused on their relationship with wholesalers. Pharma companies will enter into a logistics fee agreement with wholesalers, which is calculated as a percentage of sales. The logistics fee paid to wholesalers is in return for delivery of the pharma company's products to pharmacies who choose to buy their products from the wholesaler. Some wholesalers have vertically integrated (Luco & Marshall, 2020), which means that one organisation owns the wholesaler and the majority of pharmacies who buy from the organisation's own wholesaler. Considering the fact that many corporate pharmacy groups have vertically integrated, they too make use of bargaining power (Grabs & Ponte, 2019) to press suppliers for marketing spend in their respective wholesale and pharmacy channels, thereby extracting additional margins from the GVC due to their gatekeeper type position between supplier and the patient (Moodley & Suleman, 2020).

Pharmacies

Pharmacies represent the final point of dispensing, and it is the last stop for the schedule drug before the patient receive their medication. For the purposes of the study, the term

pharmacy represents any final point of dispensing in the value chain. Pharmacies in the private pharma industry can be bifurcated into two main segments namely corporate and independent pharmacies (Barnard, 2019). Corporate pharmacies are those who have been vertically integrated (Moodley & Suleman, 2020) into large wholesaler groups such as Clicks and Dischem, while independent pharmacies are standalone owner-managed pharmacy businesses.

As previously clarified, pharmacists/pharmacy assistants are duty-bound to offer the patient a generic equivalent, if a specific molecule has a generic available on the market. The business dynamic in large corporate pharmacy groups such as Dischem and Clicks in SA assimilate what is seen in by Boots pharmacy group in the United Kingdom. Boots is a large corporate retail pharmacy chain that plays a pivotal role in the dispensing medication on behalf of the UK's national health service (Logan, 2022).

Prescribing Doctors

Doctors are interested in providing the best possible treatment for their patients while they are potentially limited by patient affordability for treatment which is regulated by the medical aid or the income level of the patient. Therefore, suppliers will engage in a clinical discussion with prescribing doctors to convince the doctor to prescribe its products based on their product's clinical benefits in terms of safety, efficacy, and tolerability profiles (Hailu et al., 2021). Assuming that the doctor is aware of the patient's possible affordability limitations, the suppliers, especially generic pharma companies will also allude to the potential pharmacoeconomic benefit (Runfola et al., 2021) attached to prescribing their products. While the doctors depend on innovator companies to invent new molecules which enables them to improve patient outcomes, they also depend on generic pharma companies to improve broad-based patient outcomes by making treatment in the form of quality medication accessible to more patients (Saha & Roberts, 2020). In the period prior to the amendment of the medicines act, Doctors were permitted to accept samples.

According to Zhou et al. (2019) prescribing doctors did not prescribe government formulary products preferentially, and asserts that deep tensions exist where doctors are forced to adhere to product formularies. Despite this phenomenon the institutional power exerted by government who dictated a specific brand of product remained

resolute in determining the specific type of product that the patient receives at the point of dispensing in the context of a centralised procurement NHI type system.

Intermediaries

The intermediaries who are relevant to the study of the changing competitive landscape in procurement of scheduled medicine in the private pharma industry in SA are distributors and medical aids. Distributors serve as a link between suppliers & wholesalers (Saha & Roberts, 2020), and medical serve as the link between the supplier, pharmacy/doctor, and patient (consumer).

Distributors

Depending on how the supplier's distribution model is structured, distributors usually play the primary role of receiving supplier's inventory, either from the supplier's local manufacturing facility or, after the supplier's products have been imported from their global manufacturing site. The distributor warehouses the supplier's stock until it is sold to wholesalers (Tripathi et al., 2019). Some distributors sell directly to pharmacies, however, in most cases, they are not geared for fine-picking small quantities of products and are therefore mostly set up for delivering bulk orders to wholesalers, who on their part sell to pharmacies (Ding, 2018). It is important to remember that one wholesaler may not sell to another, which is also a key rean why manufacturers make use of distributors to achieve distribution across multiple wholesalers in a country (MCC, 2005). Suppliers record their primary sales as a function of sales out of distribution into wholesaler, where secondary sales are sales from wholesaler to pharmacy and then tertiary sales is dispensed sales from the pharmacy to patient. Clearly if the organization is a multinational pharma company, the player/holding company will record sales into the local affiliate's distribution centre as their first sale (Ding, 2018).

Medical Aids (Medical Insurance Companies)

Medical aids have a subscriber base who pay a fixed monthly subscription fee in return for medical insurance. The benefit of medical insurance is primarily to cover medically related expenses that individuals would not otherwise be able to afford in the case of a medical emergency. However, due to the most recent shared value business models associated with some medical aids, such as Discovery Health (Matuka, 2018) the level medical insurance a member receives depend highly on the level of medical aid

subscription that a particular member has (Xian et al., 2019). According to the (Council For Medical Schemes, 2022), the number of medical aids in SA decreased from 144 in 2000 to 76 in 2020. Of the 76 medical aids, 18 are open schemes while 58 are restricted schemes, 54% of the total medical aid memberships in SA belong to the 18 open medical schemes of which Discovery health is the largest in SA.

The medical schemes act 131 of 1998 was implemented with the purpose to amongst other; establish the council for medical schemes (CMS) as a juristic person and to consolidate the laws relating to medical schemes in South Africa. The medical schemes act also intended to protect the benefits of the members of medical schemes and to provide the platform for medical aids to coordinate (Republic of South Africa, 1998).

Following the institutionalisation of the CMS, one of the key objectives of medical aids are to drive down the cost of treatment including, driving down the price of scheduled medicine. Thus, they are interested in providing the most pharmacoeconomically beneficial treatment for their members. Therefore, medical aids maintain a formulary (Perumal-Pillay & Suleman, 2020) of products that they pay for, which is calculated based on pricing. If suppliers commit comply with price levels as guided by the medical aids pricing structures, they are rewarded with formulary inclusion. However, if suppliers select not to reduce their price to the formulary level, they are punished by omission from the medical aid formulary.

Furthermore, medical aids are at liberty to select certain points of dispensing (pharmacies) as designated service providers (DSPs). In addition, medical aids have a list of products which are categorised as prescribed minimum benefits (PMBs). When a patient collects their PMB medication from a pharmacy that is a DSP, there is no co-payment for the patient, however, when a patient collects their PMB medication from a non-DSP pharmacy, the patient is required to pay a co-payment. In order to become a DSP, a pharmacy is compelled to comply with certain requirements as set out by medical aids (M'bouaffou et al., 2022).

Clearly this is a form of constitutive power (Ponte et al., 2019) resulting from clearly aligned objectives between the SA government and the CMS to drive down the cost of medicine. This is to say that both medical schemes, and the government achieve their individual objectives through the implementation of formularies; 1) by reducing cost of

pay-outs on healthcare expenditure (which benefits medical schemes), and 2) lowering the cost of medicine to patient, thereby increasing access to affordable medicine (which is a key government objective post 1994).

2.6 Conclusion

The purpose of this chapter was to present an academically robust theoretical framework for the researcher to use as a lens for viewing the research problem. Furthermore, to discuss the background to the study by outlining the current competitive landscape and the respective roles of actors, regulations and policy or legislation in shaping the competitive landscape. As such, the purpose of the selected areas of academic literature that is covered in this chapter relates directly to the research problem, and/or is intended to provide context for the industry/environment in which the research is conducted.

The domains of literature that are covered in this section are; 1) power dynamics in global value chains (Dallas et al., 2019) along with a brief introduction into global value chain theory, 2) details of the type of industry exposure to policy and regulation that has bearing on, and could potentially explain the behaviour of the buyers, suppliers and intermediaries of the private pharma industry in SA from 1994-current, 3) an outline of what NHI is and, how the national health insurance system is expected to work (Girdwood et al., 2019), 4) a description of the buyers, suppliers, and intermediaries in the procurement system of the private pharma industry in SA. The researcher presents the literature review in this way so that the reader can understand the individual complex nature of each of the parts in order to form a collective view of the research study.

CHAPTER 3 RESEARCH QUESTIONS

3.1 Introduction

This chapter discusses and clarifies the research questions that formed the basis of this study. The questions are based on the literature review presented in chapter two. These research questions were formulated to generate insights into the cause and effect of industry regulation on power dynamics between the players in the procurement system of the private pharma industry of SA.

The lens that is applied to analyse the changing competitive landscape/changes in power dynamics in the procurement system of the private pharma industry in SA, is global value chain (GVC) theory. The reason for this is because the procurement system of the private pharma industry in SA, forms an important part of the global pharmaceutical value chain for South Africa. Furthermore, research questions are used because the academic literature on policy impact on power dynamics between players in a GVC is under-researched in academic literature (De Marchi & Alford, 2022), and the existing literature does not provide likely solutions to the objectives of the research.

3.2 Research Question 1

How has the competitive landscape in procurement of scheduled medicine in the private pharma industry in SA changed since 1994 and why?

The SA private pharma industry has become significantly more exposed to government policy and regulation since the inauguration of the ANC in 1994. This research question aims to uncover how the power dynamics (Dallas et al., 2019) in the procurement system of the private pharma industry in SA has changed over time, potentially as a result of increased industry exposure to policy and regulation (Tripathi et al., 2019).

3.3 Research Question 2

Will NHI and centralised procurement impact the competitive landscape in procurement of scheduled medicines in the private pharma industry in SA? If so, how, and why?

The NHI policy as proposed by the SA government has been identified as a potential threat, negatively impacting the profitability and market access, to all the players in the procurement system of the private pharma industry since the first time it was published in 2003 (Pauw, 2022). Therefore, this research question aims to establish if it is believed

that NHI and a centralised procurement decision making system is expected to impact the competitive dynamics between players in the procurement system of the private pharma industry in SA (Dallas et al., 2019). Finally, this question intends to uncover how and why the power dynamics changed because of increased industry exposure to regulation.

3.4 Conclusion

According to De Marchi & Alford (2022), an increasing number of research studies suggest that government policies are vital in the management of a GVC. However, these authors assert that the implications of policies sometimes have unintended consequences, which tend cause a shift of power to some players in a procurement system above others. With these research questions, we attempt to explain the phenomenon of a changing competitive landscape in procurement of scheduled medicines in the private pharma in SA. In addition, we intend to anticipate potential future changes to the competitive landscape in the procurement system, arising from further industry regulation in the form of NHI and centralised procurement.

CHAPTER 4 RESEARCH METHODOLOGY

4.1 Introduction

To analyse the changing competitive landscape in procurement of scheduled medicines in the private pharmaceutical industry of SA, the researcher made use of a mono-method; qualitative research (Saunders & Lewis, 2017). Non-numerical data characterised the research design as the study aims to contextualise, interpret, and observe relevant matters. The reason why a qualitative research method was selected for the research study, was because the problem was not well understood (Rutberg & Bouikidis, 2018), and the researcher wanted to engender a conversation that can add valuable insights which enables researcher interpretation on the topic. Furthermore, with qualitative research, the researcher has the opportunity to pose a follow-on question to participants in real time with the intention of adding detail and texture to the findings and the discussion (Basias & Pollalis, 2018).

The intention was to develop theory on the topic, and to gain an insider perspective of the key role players in the private pharma industry who are involved in the procurement of scheduled drugs. The purpose of the study was exploratory to interrogate and research what the competitive landscape in procurement of scheduled medicines looked like historically from around 1994 compared to how it evolved over time and what it looks like today. Furthermore, the study aimed to research what the competitive landscape could potentially look like in the context of centralised procurement and NHI.

4.2 Philosophy

The research study followed an interpretivist philosophy, the reason for following an interpretivist philosophy is because the phenomenon that is being researched relates to business and management (Saunders & Lewis, 2017). The procurement system in the private pharma industry in SA, is a complex business system and the eleven participants in the study all held various managerial roles in the private pharma industry in SA. The researched study is also unique in the sense that it relates to various role players whose decisions and behaviours influence one another at a particular point in time. The study triangulated qualitative data from various sources across the procurement system to construct an understanding of the perceptions of business practitioners regarding the evolution of its competitive landscape (Farquhar et al., 2020)

4.3 Approach

The study followed an inductive approach with an exploratory objective. The complex nature of the procurement system in the private pharma industry in SA necessitated the researcher to analyse a rich amount of data collected from various players in the procurement system. The reason for this, is because the researcher offered detailed descriptions of the competitive landscape's characteristics at a particular point in time from around 1994 to current based on the data collected across the procurement system. Furthermore, the researcher presented the potential characteristics of a competitive landscape of the procurement system of the private pharma industry in the context of NHI, based on the data collected.

4.4 Research Strategy

The study followed a rich case study strategy, to study a complex issue as to understand what the changes in the competitive landscape in procurement of scheduled medicines were and are, how they had changed and why. An in-depth understanding across different cases provided the insights required to contextualise the findings at a particular point in time. Multiple sources of data from a wide variety of different players in the procurement system allowed the researcher to do a cross case analysis.

4.5 Time horizon

The researcher has conducted a cross sectional study of the phenomenon at a particular point in time. However, the study includes an historiographical analysis of the characteristics of the private pharma industry from around 1994 to current. Furthermore, the researcher presented a potential view of how the competitive landscape might change in the presence of centralised procurement and NHI.

4.6 Population

The researcher conducted eleven interviews with various leaders from across the procurement system and gained data saturation on different perceptions and intentions of these business practitioners. The average time of interview across the eleven interviews was 45 minutes and interviews ranged between half an hour to one hour each. Where interviews were shorter, the researcher augmented the shortcomings by doing additional interviews that were planned to be longer in duration.

4.7 Sample Method and Size

The study made use of purposive sampling with a homogenous sampling strategy. The specific criteria were the leaders of organisations in the procurement system i.e., leaders of medical aids, pharmaceutical suppliers, distributors/wholesalers, and dispensaries (pharmacies). The researcher conducted eleven interviews with semi-structured questionnaires, which allowed for open-ended questions. Description of the sample & details of participants is outlined in Table 2 below.

The reason for selecting a homogenous, purposive sampling method was because the researcher selected the specified subject for their ability to either illustrate or contradict the aim of the study. Therefore, besides conducting interviews with various leaders from organisations in the procurement system in private pharma industry in SA, a comprehensive academic orientated secondary data collection and analysis is shown as part of the research study's literature review. In addition, other multiple sources of other secondary data such as industry reports, journal articles, books and market/financial databases was considered to enable a thorough in-case and cross-case thematic analysis (Myres, 2022)

No.	Interviewee	Designation	Part of The Procurement System Represented	Qualification	Number of Years' experience in the industry
1	GJ	Business Unit Head	Pharmaceutical Supplier	Business Management Courses	24
2	AK	Director	Pharmaceutical Supplier	Business Management Courses	31
3	MK	Director	Pharmaceutical Supplier	Accountant/MBA	27
4	XM	Business Unit Head	Pharmaceutical Supplier	Medical Doctor/MBA	12
5	LF	Business Unit Head	Pharmaceutical Supplier	Business Management	29
6	TM	Managing Director	Wholesaler/ Distributor	BSc/MBA	19

7	ZG	Department Head	Wholesaler/ Distributor	BPharm	22
8	TW	Director	Medical aid	MBA	31
8	AF	Business Executive-Strategy	Medical aid	Business Management Courses	26
10	JT	Pharmacist	Pharmacy	BPharm	28
11	PR	Pharmacist	Pharmacy	BPharm	30

Table 2: Description of the sample & details of participants (Source: Researcher)

4.8 Unit of Analysis

The unit of analysis for this research study was the leaders of organisations in the procurement system of the private pharma industry in SA and their thoughts/insights about how the competitive landscape and power dynamics between players in the procurement system of scheduled medicine has changed and is potentially expected to change over time in the context of centralised procurement and NHI.

4.9 Measurement instrument

Narrative enquiry semi-structured interviews were conducted for this study. Digital interviews were used as the media for conducting interviews. Careful consideration was given to tone of voice and physical appearance during the interviews. The data gathered was content focused to ensure that it answers the relevant research question, but due to the complex nature of the study, questioning allowed for some digression, as long as the answers were related to the private pharma industry in SA. Therefore, careful consideration was given to developing the planned questions for the interviews. This was to ensure that the questionnaires are not obvious or contain closed-ended questions. The literature review in chapter 2 guided the interview questionnaire, which was intended to answer the research questions in chapter 3.

Questions were designed and developed to not lead the respondent towards a particular outcome, as this would have compromised the originality of the response. In addition, interview questions were broad/general to start the conversation. Finally, the format in which the interview questions was presented to the interviewee was two-page format to

ensure transparency and that the questions were easy to read and understand (P. K. Myres, 2022). Details regarding the research questions, and their alignment with research questionnaire can be seen in table 3 below.

Research Question 1:	Interview Questionnaire Section for Research Question 1
How has the competitive landscape in procurement of scheduled medicine in the private pharma industry in SA changed since 1994 and why?	1) In your view: what major changes in the private pharma industry landscape has taken place after 1994? 2) How would you describe the current power dynamics of the procurement ecosystem of the private pharma industry in SA? 3) How have the power dynamics of the procurement ecosystem of the private pharma industry in SA evolved since 1994? 4) What would you characterise as the most pertinent changes to the industry landscape? 5) In your view, within the current industry dynamics, which role player in the private pharma industry dictates the specific type of product that the patient receives at the point of dispensing? 6) How has this changed since 1994? 7) Describe the key characteristics of your current business model. 8) How have you innovated or observed business model innovation in your organisation since 1994?
Research Question 2:	Interview Questionnaire Section for Research Question 2:
Will NHI and centralised procurement impact the competitive landscape in procurement of scheduled medicines in the private pharma industry in SA? If so, how, and why?	1) Do you believe centralised procurement in the context of NHI would impact the private pharma industry in SA? 2) If yes, why? 3) How do you believe the private pharma industry landscape would change in the context of centralised procurement and NHI? 4) Which role player in the private pharma industry dictates the specific type of product that the patient receives at the point of dispensing, In the context of centralised procurement and NHI. 5) How would this power change in the context of centralised procurement and NHI?

	6) Do you believe centralised procurement and NHI would have an impact on your organisation? 7) If yes, how, and why? 8) Do you believe centralised procurement and NHI would have an impact on your current business model? 9) If yes, how? 10) Do you believe centralised procurement and NHI would create urgency towards business model innovation for your organisation? 11) If yes, why? 12) What major characteristics of your current business model, would require innovation in the context of centralised procurement and NHI?

Table 3: Research Questions alignment with research questionnaire (Source: Researcher)

4.10 Data collection process

Firstly the researcher gathered all other publicly available secondary information relating to the respondent and the company, which constituted text and non-text items(Saunders & Lewis, 2017). Then, the researcher gathered primary data through conducting interviews with study participants through the use of digital media such as Google meets and Microsoft Teams. The researcher was able to gain access to senior leaders across the procurement system in the private pharma industry in SA through reaching out to fellow colleagues in their network across the pharma industry in SA. The researcher first contacted potential participants via a text message/email. Then the researcher asked the participant whether they may give them a telephone call.

When granted permission to call the prospective participant, the researcher explained to the prospective participant that they have been identified to voluntarily participate in a research study. The researcher then asked the prospective participant whether they may email the prospective participant the required informed consent letters that contained extensive information regarding the research study. The researcher made themselves available to the prospective participant for any questions that they might have and ensured the prospective participant that participation in the study is entirely voluntary, and that the participant may withdrew at any time. Once the participant returned the signed informed consent letters, the researcher scheduled the digital interviews with prospective participants using the selected digital media interface (Google meets or Microsoft Teams). The participants were carefully selected using

purposive sampling as described in section 4.7. This process enabled the researcher to ensure that useful in-case, and cross case data triangulation is possible regarding each respondent's interview responses and secondary data information.

4.11 Data analysis approach

An inductive analysis was used for the study because the aim is to describe a phenomenon and build on theory. Therefore, the below mentioned 5-step approach was used as a framework to analyse the data that was collected:

4.1.1 Codes (word/short phrase that describes a theme) were identified from the transcript quotations.

4.1.2 Quotations into code categories (described the relevant characteristics) by identifying and discovering relationships, themes, and theory.

4.1.3 Quotations were sorted within code categories and sub-categories

4.1.4 A descriptive presentation of the process was developed that highlighting key themes.

4.1.5 Key themes/findings of the analytical outcomes were interpreted and discussed in following chapters of the research report.

The programme "Atlas ti" assisted with the coding vocabulary and develop a thematic analysis (Castleberry & Nolen, 2018). The reason for taking this 5-step approach is because it enabled both within and cross-case key thematic analysis. Furthermore, to achieve the goal of saturation, the rate at which new themes were created was monitored for a decline, thereby the researcher was able to successfully validate coding saturation. Finally, once emerging themes were identified, both cross-case and in-case, it enabled the synthesis of relevant themes. As such, an in-depth analysis of the data was used to synthesise the emerging themes to describe a phenomenon and build theory where existing research is limited. Figure 4 below: The qualitative analysis process provides a visual representation of the analysis approach which was applied by the researcher (Myres, 2022).

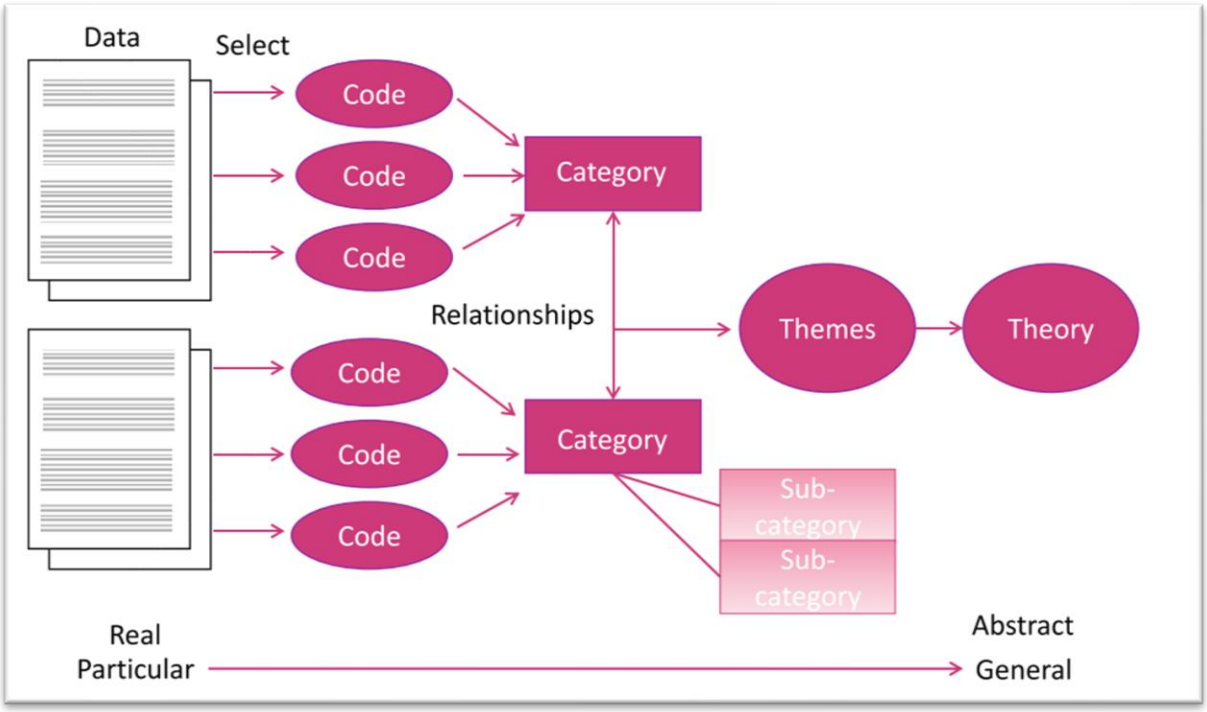

Figure 4: The Qualitative Analysis Process (Myres, 2022)

4.12 Quality Controls

The data that was collected and contents was focused on ensuring that it adhered to all four of the below-mentioned pillars of trustworthiness to ensure that the research study adhere to the highest standards of scientific rigour:

1. Credibility through triangulation to confirm internal validity.

2. Transferability of purposive sampling and providing a dense description to ensure that the content achieves external validity.

3. Dependability through creating an audit trail, doing triangulation, and documenting field notes and memos to ensure that the information is reliable.

4. Confirmability by recording interviews and ensuring accurate transcribing of the information, thorough triangulation and reflecting deeply, and documenting own thought processes upon reflection.

Further enhancements to the validity of the research project were achieved by being as descriptive as possible. To achieve this, the researcher ensured that all content is factual by keeping an audio recording of interview conversations, all transcripts, and field notes.

The researcher also maintained validity by ensuring that all the content is highly interpretive so that all participants can easily understand it. Furthermore, the researcher kept an audit trail and mostly used peer-reviewed data/information. The researcher ensured a strong theoretical fit to ensure that the collected data talks to the theory presented or researched. For this reason, the researcher ensured that a dense description of facts, events, and occurrences, along with triangulation, was achieved.

The researcher ensured that the findings from the study are generalisable and could be relevant beyond the scope of the study. This means that the study's value could explain what happens in real life and may apply to other industries, businesses, and countries. Furthermore, the researcher enhanced the reliability of the research contained in the study, by ensuring that the data collection techniques were standardised, and that all findings were documented on record and that notes of own analytical memos were demonstrated and documented along the way.

4.13 Assumptions and Limitations

It is assumed that centralised procurement and NHI are perceived as a possible threat by the players in the procurement system of the private pharma industry of SA. Therefore, the data collection, interpretation and analysis will be limited to, and focused on a homogenous sample of which the criteria was business leaders in the procurement system of the private pharma industry in SA (Saunders & Lewis, 2017). In this case, the assumption is made that prescribing doctor influence in terms of what specific brand the patient receives at the point of dispensing, has already significantly eroded. As such, the focus of the research study was on pharmacy owners, and senior business leaders of wholesalers/distribution businesses, medical aids, and pharmaceutical companies.

The explorative nature of the qualitative research method means that the results that were obtained by the data analysis are not necessarily generalisable (Carminati, 2018). The reason for this is because qualitative research contains much smaller sample sizes in comparison with quantitative research. The rich nature of the data, which was collected are context specific, which also limits the generalisability. The goal of qualitative research is however to achieve transferability (Carminati, 2018), meaning that the goal was to find an understanding of how the knowledge can be applied to similar settings and contexts. The reality however is that qualitative research can be

found to be subjective in nature as suggested by (Saunders & Lewis, 2017). However, the researcher of this study presented evidence for their findings, so doing limiting the impact of potential subjectivity.

4.14 Ethical considerations

Albeit that this specific research study focusses on the business practices and decisions between suppliers, buyers and intermediaries in the procurement system of a particular industry, the reality is that the pharmaceutical industry is embedded in the healthcare industry. Thus, in the case of this research study which focuses on the competitive landscape in procurement of scheduled medicine in the private pharma industry in SA. The researcher ensured that they obtain ethical clearance not only from the researcher's primary visiting institution; The Gordon Institute of Business Science (GIBS), but the researcher also went through great lengths to ensure that the research study has been ethically cleared by the University of Pretoria's Healthcare Ethics Committee (UP HEC).

The researcher ensured that informed consent was obtained and that a signed informed consent letter was received prior to each of the interviews. This meant that participants knew the purpose, benefits, risks, and funding behind the study before they agreed or declined to join the research study. The researcher made it clear that participation is voluntary and that participants are free at any point in time to opt in-or-out of the research study. In order to ensure confidentiality, the researcher made use pseudonyms (names different to the participants' real names) to ensure participant anonymity. The report is also presented in an aggregated format to ensure that patient confidentiality is adhered to. Furthermore, the researcher ensured that data was also saved without identifiers so that responds cannot be identified.

The researcher has considered whether there is risk for discomfort. Therefore, the researcher has reiterated to the participant that their participation is voluntary, and if they are uncomfortable about any question they do not have to answer. The researcher has reviewed their interview questions and do not foresee any discomfort for the participants in the study. The proposed questions are not intrusive or of a personal nature and is strictly aimed towards exploring the participant's views on the procurement system of the private pharmaceutical industry. The researcher has ensured that the potential for harm; physical, social, psychological and all other types of harm are kept to an absolute

minimum. The researcher has taken every effort, including constant perusal of the research report's plagiarism score by consulting results as presented by the Gordon Institute of Business Science's "Turnitin" system to ensure that the research report is free of plagiarism. Lastly the researcher used the "atlas ti" system to code their findings to ensure that the findings are presented as accurately as possible.

4.15 Conclusion

The purpose of this chapter was to provide details of the selected choice of methodology. The qualitative research method presented a dynamic approach to the exploration of the potentially changing competitive landscape in procurement of scheduled medicines in the private pharma industry in SA. The purpose of the research design, research philosophy, strategy and time horizon of the study was covered in this section. Furthermore, this chapter provided details on the unit of analysis, sampling method and size, measurement instrument, population, data gathering process and quality controls.

CHAPTER 5 PRESENTATION OF THE RESEARCH FINDINGS.

5.1 Introduction

This chapter presents the findings relating to the research questions that were presented in Chapter Three. The inductive nature of the typical qualitative content analysis method is the reason why the results are being shown in this manner. The semi-structured interview guide served as the basis for the interview questions that were asked of participants. These questions, in turn, were mapped to the overarching research questions that were derived from the literature review conducted in Chapter Two. After that, an inductive method was used to analyse the findings in order to generate codes, which were subsequently categorised. Following the development of the resulting categories, overarching themes were generated and will be utilised throughout this chapter to discuss the findings.

In order for emergent themes to be recorded and documented, an inductive approach was followed. The result of applying this approach, was that it enabled the phenomenon to be studied with a macro view. Themes were allowed to emerge, even though they were not necessarily perused or discovered during the course of the literature review. The inductive approach produced 426 unique codes across 11 interviews.

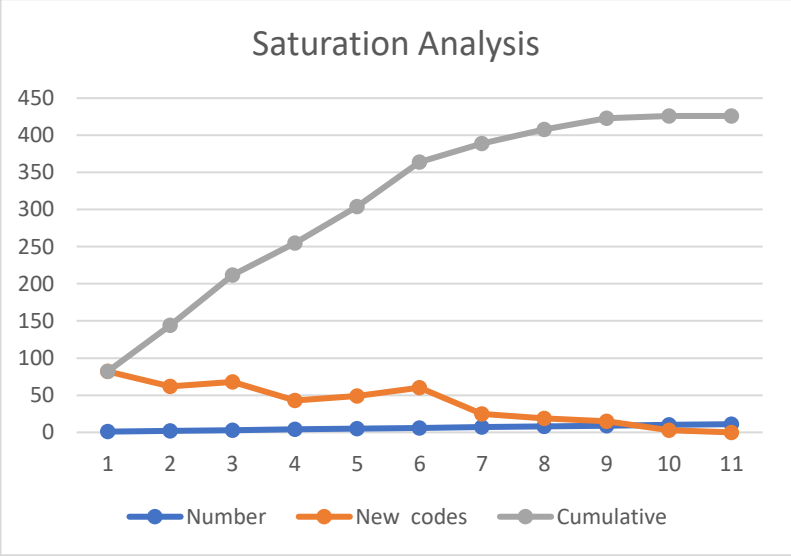

Figure 5: Saturation Analysis (Source: Researcher)

A short phrase or sentence that constitutes a single unit of meaning that captures the essence of a single message taken from a section of data has been referred to as a

code. There were no new codes produced after the 10th interview, and thus signalled saturation. The saturation analysis can be seen in Figure 5 above. Code Groups (categories) were derived from a cluster of related codes and the relationship was determined by interconnected topics of interest and theoretical concepts. A number of themes emerged from the existence of relationship between two or more categories.

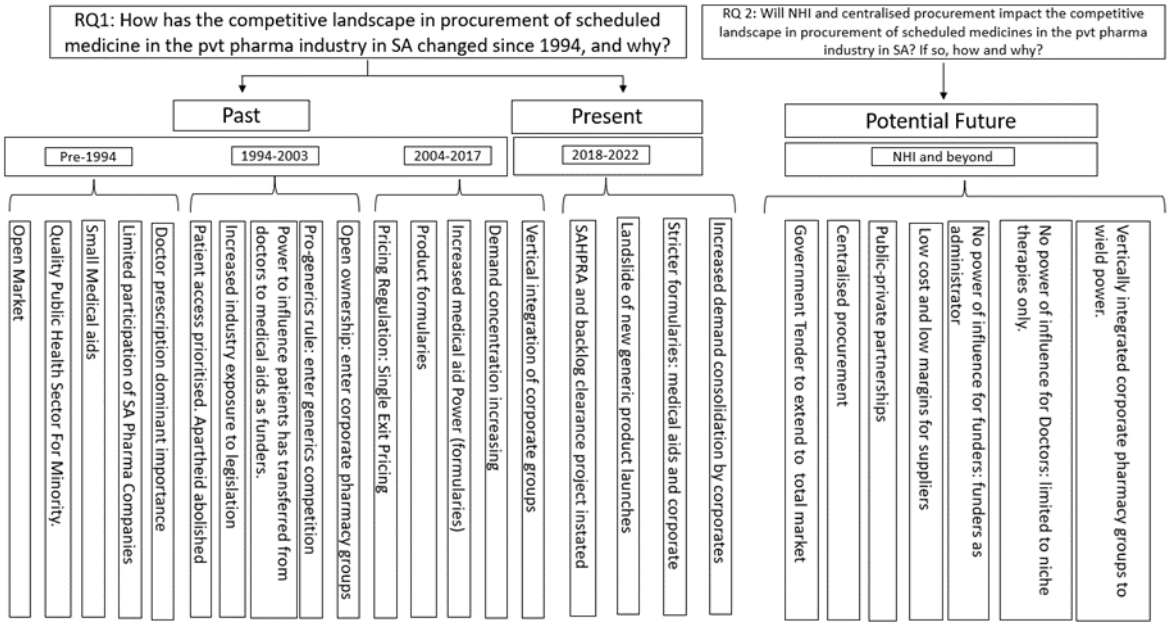

Figure 6: Overview of the findings for research question one and two

5.2 Findings for Research Question 1

How has the competitive landscape in procurement of scheduled medicine in the private pharma industry in SA changed since 1994 and why?

This research question aims to establish what changes took place that could potentially explain the phenomenon of a changing competitive landscape in private pharma industry in SA. Furthermore, it aims to establish how these changes potentially impacted on the shifts in power dynamics between players the procurement system. In order to structure the findings to appropriately, we will discuss the findings of what the competitive landscape in the private pharma industry looked like in four chronological parts: 1) pre-1994, 2) 1994-2003, 3) 2003-2017 and 4) 2018-2022

Period: Pre-1994

Pre-1994 apartheid SA was characterised by sanctions which also affected the pharma industry. There were only a few pharma companies and the most of these pharma companies in SA were mainly European, and American despite the sanctions. At that time there was also limited participation of SA pharma companies, which contrary to what we see today with SA pharma companies being the most dominant in SA.

> *LF: "Um, okay, so I think the first thing is that prior to 94, the number of pharmaceutical companies in South Africa were quite limited. If we think about it. South Africa was a country that was usually sanctioned. There were lots of multinational companies that were not interested in doing business with South Africa at all. So, they were reliant on countries that were almost supporting"*

From a regulatory perspective, the market was open for competition and much less regulated by government from a pricing perspective. Pharma companies could increase their prices at any point in time to a pricing level that they desired. Wholesalers and Pharmacies were allowed to add an unregulated percentage markup on scheduled medicines.

> *LF: "everybody that worked in the industry prior to that, you know, will tell you, it was absolutely a wheeling and dealing kind of industry. It was all about being able to provide samples to doctors and to pharmacies, to give to their patients to try it out. And unfortunately, as we know, it turned into a business of individuals using that to enrich themselves rather than passing it on to the patient."*

The public health system in SA was high quality, but only served a white South Africans which were a small number of the population. This also meant that fewer people subscribed to medical aids, because the majority of the population, which was black South Africans, were oppressed and could not afford medical aid insurance and the whites had a high-quality public health system which they could make use of. As such, medical aids were not as controlling and prescriptive.

> *AF:" I was born in a government hospital, I consult at a government hospital and in years gone by, public health infrastructure was exceptionally good. You think about Children's Hospital down in Cape Town, you think about what Chris*

Barnard did in a public hospital, Groote Schuur; the public health care infrastructure was exceptionally good."

Pharmacies were mainly standalone mom's and pop's type stores. There weren't big corporate pharmacy groups like Dischem and Clicks which meant that patients (consumers) had a lot of choice of where they could receive the medicine which the Doctor prescribed for them. Pharma companies also had a vast customer base to market and sell their products.

JT: "Well, in 1994, there was quite a lot of choice, and there was room for enough competitors to participate in the markets and have an honest market of a selection of products."

Prescribing Doctors had the majority influence in terms of what specific brand the patient received at the point of dispensing. This is because there were fewer pharmaceutical companies present in SA, and downstream there were not a lot of buyer consolidation in the form of big pharmacy groups. Pricing was much less regulated, and as such, pharmacies and wholesalers could add an unregulated markup on their products which meant that their profit margins not under much pressure. This also meant that patients/customers were significantly exploited from a pricing perspective, because none of the discounting that happened in the value chain was passed on to the patient.

TM:" I would say 60% was what came out a doctor's pen would be dispensed. And the pharmacy would still sit with 30% of the choice and the funders, 10%. They were just funding, they just paid."

ZG: "So the manufacturer would sell for R50 and giving the wholesaler 40% fee and pushing and bonus – and all of a sudden, he now had the power to make the R50 to R100.Ja. And no. 2, he could decide on a fee that he wanted to give. So manufacturers, at that time, not all of them, but those that were super-cautious made a lot of money. But the customer had to pay more than before – that was the challenge on some of the models."

Period: 1994-2003

In 1994 apartheid was abolished and the ANC became the controlling political party in SA. Part of the ANC's political manifesto was to prioritise access to affordable healthcare

for all with the aim to work towards universal health coverage (UHC). UHC means that all persons in SA should have access to the same level of healthcare, regardless of their level of income. Thus, the period between 1994 and 2004 saw a significant push for policy reform of the medicines and related substances act of 1965 as well the establishment of the medical schemes act in 1998.

The former part of the early 1990's post-apartheid (1994-1999) continued to see high margins for pharma companies, and exploitation of high prices for profiteering. While the SA government's agenda was clear that they wanted to use various mechanisms to drive down the cost of scheduled medicines and increase access to patients, legislation still needed to be passed. The pharma companies that were present in SA also did not take threat of profit erosion lying down and a legal battle further delayed the implementation of amendments to the medicines act that would drive down the cost of medicine in SA. This period also saw continued dominance by originator pharma companies, as generic drug companies were not yet well known in SA, and there was no mechanism present to promote the substitution to generic drugs.

> *TM: "And then there was a legal challenge because what it would have meant from a competition point of view, if you just take the top 10 companies then, which would have been a Pfizer, MSD and whatever, if you put those companies together, they would have represented more than 80% of the market because of the fact that generics were not so well entrenched in the market. So that is one of the first things that happened."*

The first real change was the introduction of the medical schemes act in 1998. The most significant change associated with the implementation of the medical schemes act, was that medical schemes were given more power to drive down the cost of medicine. The council of medical schemes was formed as an independent juristic person and was also aimed at protecting the interest of the members who belonged to medical schemes. A significant power shift in the competitive landscape of the procurement system of the private pharma industry followed the implementation of the act, and it was the beginning of medical aid formularies. The establishment of medical aid formularies meant that medical aids had the power to dictate what specific brand of product the patient receives at the point of dispensing.

TM: "Then the next change that came with regard to the medical schemes act and changes there, would give more power to the medical schemes. It then inadvertently extracted, I think if medical aids had 30% power, they sit with 80% of the power today – that would be my take, it was a dramatic, 180-degree swing from one player or stakeholder, from a group of stakeholders into the hands of one stakeholder. That is probably the best way that I can describe it, especially in the private market."

XM: "So as time goes and goes, the medical aids become more and more powerful and they take the power away from the doctors a lot, so I do think it has changed a lot. You know before it was the doctor, not it's not the doctor anymore."

The Medicines and Related Substances Control Act 101 of 1965 was amended in 1997 (Act 90 of 1997) to, among other, prevent lower cost parallel imports of originator products from entering South Africa. It was also aimed at helping to provide a pricing framework that would assist with the supply of more affordable medicines to improve access to affordable products. Another objective of the amendment to the act was to stop deals (bonussing and discounting/sampling) of prescriptions drugs and promote the substitution of high-cost innovator medicine to lower-cost generic drugs. Although amendments to the act was made in 1997, delays due to the legal battle between the big-pharma companies and the SA government meant that the changes to the medicines act could only be seen around the early 2000's.

AK: "Act 101 hit us in about 2004 and that was where a massive change in the landscape happened"

The year 2003 brought about two significant changes to the competitive landscape in procurement of scheduled medicines in the private pharma industry in SA. First, through legislation the pro-generics rule was implemented by which the offering of generic substitution became compulsory for pharmacists. This rule meant that a pharmacist is compelled to offer a cost effective generic to the patient at the point of dispensing, and thus opened the door for generic pharma companies to become serious role players in the SA pharma industry. Considering that the conversation around generics happens mostly on a pharmacy level, it also meant that the focus of generic pharma companies would be more pharmacy oriented, which indicated a further power shift away from

prescribing doctors. However, it was stated that not all patients would want to accept the generic, and some patients are prepared pay additional for the originator drug. The pro generics rule attracted a lot of interest from generic pharma companies and significantly increased the number of competitors in the market.

> *PR: "you know, it was an open field, and now we're squeezed into following a pricing, and giving out to the public generics based on their pricing."*
>
> *TM:" Because today the patients are more enlightened. They research the diseases and so on and they make a decision and when they stand in front of the pharmacist at least 5% of the decision will be based on what the patient is going to decide on. Okay, 'I am compelled to work with a generic, but I want to stick with the originator, and "ll pay the co-pay.'"*
>
> *MK: So you might find that you would have a lot of an influx of products from countries like India, like China–- which by the way, the"ve already started making imports in a big way into not just SA, but Africa in general."*

Secondly, in 2003, the change in pharmacy ownership rule gave birth to the corporate pharmacy groups in SA, such as Clicks and Dischem. The rule was initially intended to broaden the geographical dispersion of pharmacies into rural areas so that access to affordable medicine is promoted in outlying areas. The rule dictated that any person (natural or juristic) may apply for a pharmacy license to own a pharmacy, however, to operate the pharmacy on a daily basis, a pharmacist need to be present at all times while the store is open.

> *TM: "Then there was legislation that was passed in terms of ownership of pharmacies. So me as an own pharmacist, I could own a pharmacy from a business point of view, as long as "ve got a pharmacist that's running the business, a registered pharmacy and whatever, that is why you had the Clicks of this world and they decided that 'you know what "m going to buy UPD and am going to vertically integrate because I can do that so that I can get product to into my stores seamlessly - and quicker for that matter."*
>
> *PR: "The open ownership scenario was, as you know, intended to give access to health care, to those that were disadvantaged. However, it has backfired in a*

sense that the small independents, many of them have had to close because they couldn't compete with the corporates."

The pharmacy ownership rule meant that corporate pharmacy groups embarked on aggressive acquisition trails to acquire as many pharmacies as possible so that they can own a larger share of the market, which in turn will give them more power to influence the type of product that the patient receives at the point of dispensing. This also led to a lot of pharmaceutical wholesalers closing down in SA, due to the demand consolidation at a pharmacy level. Corporate pharmacy groups had vertically integrated following this rule, which meant that they own both the wholesaler and pharmacy. As such, the number of mom's and pop's type pharmacies significantly reduced the potential for pharmaceutical wholesalers to maintain or grow their business.

ZG:" One more big one for retail pharmacies was opening the licensing to anybody. So when I joined pharmacy, only a pharmacist could own shares in a pharmacy. And the other guys, I don't know what they tell you, but these are my observations, only pharmacists could own shares in a pharmacy; so you could be a manager, you can be a sister, a doctor or whatever – but you couldn't own shares. So pharmacists had control of their market. And then, anyone can open up a pharmacy and then open up the doors to the corporates. Yes, there are some positives, some negatives, but it hurt the independents very, very badly, where they had to go and close their door or be forced out or be pushed out in the areas where the corporates came in."

There was also legislation passed in 1998 which dictated the terms on which wholesalers are permitted to sell. This rule stated that wholesalers may only sell to the retail pharmacy sector, which meant that wholesalers were no longer allowed to buy or sell to/from one another, and that wholesalers may only purchase scheduled medicines directly from suppliers or the third-party logistics (3PL) distribution partner (distributor) of the supplier. It is believed that this further exacerbated the vertical integration of corporate pharmacy channels.

TM: "So pharmacies had to change their business model or look at the business model. There was a huge consolidation. I remember in 2003, pharmacies were saying, 'Well, what am I going to do, sell pumps, you know, the swimming pool

pumps.' So, you had consolidation in the pharmacy space. You had consolidation in the wholesale space, I don't know how long you've been in the industry, but we had over 300 odd wholesalers in the country - well, more than that, because I think now we're sitting with 300. There was a heck a lot more sitting in the country, but there was consolidation happening."

Period: 2004-2017

As the ANC's plans to improve access to affordable medicine started to gain legislative traction since the start of their rule in 1994. The year 2004 saw legislation being passed on single exit pricing (SEP). This legislation meant that 1) suppliers were subject to a capped annual price increase for scheduled medicines as dictated by government, 3) a capped dispensing fee system for pharmacies and, 3) it also meant that wholesalers were compelled to sell scheduled medicines to pharmacies at the same single exit price excluding VAT (SEP Ex VAT) that suppliers had registered with the department of health (DOH).

The impact of this was found to be significant on profit margins across the procurement system of the private pharma industry in SA. It meant that suppliers may not increase their prices whenever they wanted to, although they were allowed to reduce the price their scheduled medicines at any time. It meant that wholesalers were now dependent on supplier logistics fees as fairly isolated revenue stream for scheduled medicines, as they could no longer add a profit margin on the products that they sell to pharmacies. Finally, it also meant that pharmacies were not allowed to decide what percentage markup they wanted to add on scheduled medicines. The pharmacist's markup is in essence based on a tiered dispensing fee system which yields diminishing returns. As the SEP price of the scheduled medicine increase, the permitted percentage mark-up component of the dispensing fee falls, while the fixed component of the dispensing fee only increases marginally as the SEP price of the scheduled medicine increases.

ZG: "So that was one of the big landmarks in our business, where pharmacies actually closed down, wholesalers closed down, a group like ours closed down branches. So they had to tighten their belts. They never retrenched but there were branches that were being supported by head office and growing and they said 'no, we have to worry about us, not the branches' so a couple of branches

got closed down because of SEP; the margins just fell flat. I wasn't in wholesale at the time, I was in retail, but from what I understand where we had bonus deals, fees, 40% discounts – all that fell away – logistic fee contracts with manufacturers and all of a sudden they said 'hey, we can give you 5%, or 3% or 10% on VRP' and that's where we were all of a sudden we found ourselves on the backfoot, where your profitability is just halved. Tomorrow DOA comes to you and says, 'Drop your SEP by 50%, we don't care what your cost is'"

ZG: "The other thing I noticed was in retail pharmacy when they had that coupling… what do you call it… dispensing fee. That was a big landmark in our market, where pharmacies got a big hiding. So, all of a sudden, a pharmacy is doing 200 grand turnover and he was making 30 or 40% or 50% because he is only doing 200 grand turnover, he is not doing a million turnover – and all of a sudden, his fee has dropped to R20 or R19 or R29 or whatever it was – and a lot of pharmacies closed their doors. So, SEP and dispensing fees were two big landmarks from 1994 to now."

Another indicator that the power dynamics had swung away from the prescribing doctors in favour of the pharmacist in this period, was the phenomenon of corporate pharmacy product formularies. Corporate pharmacy formularies are where the person dispensing to the patient (pharmacist/pharmacy assistant) is nudged (and potentially incentivised) to switch (change/substitute) the prescribed product from what has been prescribed by the doctor to the product that is preferred by the corporate pharmacy group.

The dispenser (pharmacist/pharmacy assistant) is made aware of what the preferred corporate product is, visually, by means of a by colour coded line item on the computer screen that he/ she is using when capturing transactional data while dispensing the product to a patient. The rule is that the pharmacist/pharmacy assistant may switch to any SAHPRA registered generic product, so long as the product/brand that is being dispensed is the exact same molecule and strength as that which the doctor prescribed. At that intersection, the opportunity is there for the dispenser to offer the corporate group's preferred alternative to the patient at a potentially lower cost than the product that the doctor initially prescribed for the patient.

"ZG: they will align with a certain manufacturer for their molecule and for that they will then give you a no. 1 or 2 listing. So that also dictates what the patient gets, because now a patient can say 'I want a molecule, but they will be one or two to offer and they will give them the one – and take it or leave it."

The root cause for the occurrence of this phenomenon is believed to be owing to 1) the change in pharmacy ownership rule which sees the majority of pharmacists as employees of corporate groups, and no longer as standalone business owners, 2) the pro-generic rule whereby a pharmacy is obliged to offer the patient a generic product where a generic equivalent exists, and 3) the prevalence of an increased available of generic equivalents (competition) in the market.

PR: "Yeah, there's BTX computer sys, Pro-Pharm, Easy Script. So yeah. Unfortunately, formularies are colour code now. I have the ability to actually say, okay, Sandoz, Adcock, Accord, whoever, so I'll colour code, whereas before you would buy based on your relationship with the rep. And so long as it was a fair price there was no regulation, in my opinion, from what I remember."

The findings signalled another significant change in terms of where medical aids demonstrated their increase in power to dictate their terms to retail pharmacies. Medical aids increased their strictness level in terms of their selection criteria for pharmacies to become designated service providers (DSPs). If a pharmacy did not meet the medical aid's criteria to be selected as a DSP, the patient needed to pay a co-payment on medication which fell under the medical aid's prescribed minimum benefit (PMB) list. This would ultimately urge pharmacies to be compliant with medial aid formularies and DSP selection criteria as laid out by the medical aids This is because they would lose patients to other DSP-compliant pharmacies if they were not able to provide PMB-listed scheduled drugs free of co-payment to medical aid members. The PMB list, is a list of medication that the medical aid member is entitled to receive free of a co-payment, regardless of the level of their membership on the medical aid.

JT: "Well, I think the medical aids are dictating, with what their formularies are dictating, which products they would like to approve, that has changed the variability, and its changed the amount of choice, the free choice that pharmacists have. Its actually been taken away completely actually. So as they have grown

and as they have become a monopoly–- and we know which one we're talking about and ja, as they become a monopoly, they have grand power. And it's actually resulted in unfair trade really, at the end of the day."

PR: "Well, I think the SEP's and the PMB's and the pricing from the medical aids, the formularies, have caused a huge impact, because before we weren't really… you know, it was an open field, and now we're squeezed into following a pricing, and giving out to the public generics based on their pricing."

Period: 2018-Current

A landslide of additional new generic product registrations, intensifying demand consolidation by corporate pharmacy groups, and stricter medical aid dictation has made for a rapid increase in competitor intensity of late. In February 2018 the medicines control council (MCC) was reformed to become the South African Health products regulatory Authority (SAHPRA) which is, amongst others, responsible for processing the registration of scheduled medicines and ensuring that they are safe and efficacious for patient consumption. By the time SAHPRA was formed, there was a tremendous backlog of thousands of new product registrations which it had inherited from the MCC. Part of the reason for the reform of the MCC into SAHPRA, was that the now separate juristic person (SAHPRA) would have the mandate to collaborate with other NRA's and update its registration infrastructure, and registration pathways to help with increasing competition in the private pharmaceutical market through speeding up the registration process of new registration applications.

Probably the most significant update to SAHPRA's assessment procedure of a new application for registration (registration pathway), is the reliance on the clinical findings from a reputable NRA, such as the US FDA or European EMA. In essence, this means that if a product has already passed the assessment criteria of a reputable NRA, SAHPRA does need to conduct full clinical testing on the product. Thus, in the case where a product has already been registered through the process of a reputable NRA, SAHPRA relies on the clinical data as presented by the NRA and a full clinical review by SAJPRA is not required prior to registration. The reliance pathway is intended to result in accelerated registration for products that fulfil the necessary reliance criteria. SAHPRA's first priority was to clear the backlog of new product registration applications

and then to implement continuous processes that would ensure a more efficient registration process.

> *AK: "over the last 18 months we have launched 60 new molecules. And we've depleted our sales team by about 12 people, like our full national sales team. And that's what we're doing. We just selling baskets, because a lot of the molecules you know, if you look at how the Department of Health's registration process went, it was done in Windows and baskets of products, so if you had your regulatory affairs up to date and you were getting on, you know, it sort of started with antiretrovirals, oncology, CNS, CVS etc. So, when you thought you were coming out with a new statin combination and you think ''oh, this is quite sexy. We're going to have a big go here, like we've seen that there are four other okes out on the market at the same time."*

The impact of the SAHPRA backlog clearance project meant that the market has seen a rapid increase in generic competition

> *JT: "the power dynamics – it's hectic! (laughs) it's hectic, it's hectic and it's boiling down to marketing fees, and really, its additional things that people can offer. The product itself is not really that important anymore."*

The corporate pharmacy retailers have intensified the implementation of their efforts to ensure formulary compliance by their stores. The corporate pharmacy groups have limited their formulary items for scheduled products to between 1-3 items, which means that there is intense restriction for entry into a particular retailer channel for supplier products that are not represented on formulary.

> *GJ: "if you look at one of the big retailers in South Africa, I think what's evolved where retailer 1 would have a formulary with four to five options, retailer 2 has done it better so you have only two now. Now the downstream impact is less options on your shelf, more shelf space, less variety, easier to understand for pharmacists.*
>
> *GJ:" I think it's like the perfect storm. I think we are moving quite quickly into a non-branded market, which is challenging for manufacturers and suppliers, because now it's becoming a commodity market"*

Further increased demand consolidation by corporate retail pharmacy groups has been accelerated by their aggressive acquisition strategies. The findings indicate that the two largest retail pharmacy groups (Clicks and Dischem) potentially own more than half of the total private pharma market potential for scheduled medicines.

> *MK: "So the big shift that came within the pharmaceutical industry, is where you have the two big groups, the independents, and the corporates. And this has become like a power game between the two organisations in the industry as you know. And I think that the corporates ultimately will get the upper hand - and why - because they conglomerate, they form groups, and that empowers them to have more buying power, to have more muscle, to be able to negotiate better deals, to be able to you know, just in terms of their display and their shelf pressure"*

Medical aids drive stricter compliance to their own set of formulary products. As mandated by the medical schemes act of 1998, the medical aids aggressively drive continuous strategies to drive down the cost of medicine that is dispensed to the patient, and this has actually become an insurmountable barrier to entry for suppliers who plan to market and sell high-cost scheduled medicines in SA.

> *MK: "Now when we talk about the Discovery's of this world, they are pretty strong, they actually wield probably the most power – more than anyone else."*

> *MK: "If the medical aid cannot fund the product, right, then the principal needs to find a way of saying, 'How do I get this product into the market and have it actually being consumed?' Right."*

Conclusion

This section summarises the top findings relating to research question one. During the pre-1994 era, the procurement system in the private pharma industry was characterised by an open market with a high-quality public health sector which mainly catered for the white minority. Medical aids had smaller membership counts and did not wield a significant amount of power in terms what specific brand of product a patient receives at the point of dispensing. There was limited participation by SA pharma companies and prescribing doctors had the bulk of the influence in terms of what specific brand a patient received at the point of dispensing.

After 1994 (1994-2003) the private pharma industry in SA was faced with increasing industry regulation and a gradual power shift occurred away from doctors to medical aids in terms which player had the most influence of what specific brand of medicine a patient receives at the point of dispensing. Between 2004-2017 the implementation of SEP pricing regulation, made a big impact on the industry. The collective impact of the new pricing regulation alongside the pharmacy open ownership and pro-generic rules intensified the power of medical aids as intermediaries in the procurement system.

The period 2018-current saw the establishment of SAHPRA and the prioritisation of a back-log clearance project of new product registration applications. A heap of new generic competitors entered the market while large vertically integrated corporate pharmacy groups and medical aids strengthened their intentions to enforce compliance on formulary products.

5.3 Findings for Research Question 2

Will NHI and centralised procurement impact the competitive landscape in procurement of scheduled medicines in the private pharma industry in SA? If so, how, and why?

Firstly, this research question aims to establish whether national health insurance (NHI) will have an impact on how players in the current procurement system compete with one another. Considering that the research sample comprised of senior leaders across the private pharma industry in SA (suppliers, wholesalers/distributors, pharmacies, and medical aids), a macro view of the perceptions of how NHI will impact themselves and other players in the procurement system will be presented in the findings for this question. We will start off this section by presenting key characteristics of what NHI could potentially look like. After that we will discuss the impacts that these possible characteristics may have across suppliers, buyers, and intermediaries in the private pharma industry in SA.

Key Characteristics of NHI

Leaders across the procurement system are unanimous in their view that NHI will significantly impact the current way in which players compete with one another. NHI will most probably make decisions of what scheduled products to buy from suppliers through a tender process, which will most likely select to procure the most cost-effective scheduled product on tender. Procurement decisions are most likely to be made

centrally, and a restricted formulary of one, perhaps two specific products in each molecule will be dictated to buyers for use. As such buyers will have no choice in terms of the specific type of brand they distribute, wholesale, dispense or consume. A significant number of participants highlighted that NHI is likely to increase the need for, and prevalence of public-private partnerships.

> *JT: "I think as a as a general concept. centralized procurement is not a bad idea, because it does allow for certain uniformity and a certain standard. and as long as long as that centralized procurement is discussed, and it is based on best product, best efficacy, best price and best value for the user at the end of the day, it simplifies things. It does make things very simple."*

> *MK: "We really need to set the standard, so whatever will continue evolving more to respond to the market needs and become key as well in the NHI space. Now we do have partnerships but not so much driving things but going forward partnerships will become key in that space."*

> *LF: "I cannot see that it is going to be successful without the help and the input and the support of the private sector."*

The impression is that NHI will potentially focus on chronic products first because it is the majority of the market. As such the forecasting and planning for inventory is easier compared to that of acute products. Acute products are products that are needed by the patient on-demand and is intended to be given as a treatment course over a short period of time. Acute products are not filled on repeat prescription. Chronic prescriptions, however, is filled monthly because the patient will usually take the treatment daily and will continue to take the treatment for a prolonged period of time.

> *GJ: "I'll give you an example: South African market is probably 38% acute, the rest is chronic. A chronic centralized procurement system is radically different to an acute type of process. An acute type of process, like I have tonsilitis, I want it now. To centralize the system to get it to me in 24 hours is difficult."*

From an infrastructure perspective, in addition to the existing public health infrastructure, the NHI will most likely make use of the existing private pharmacy and wholesaler

infrastructure as a type of plug-and-play system to improve access to medicine for a broader group of the SA population. As the

> *GJ:" But to answer your question directly, the pharmacy, the existing private pharmacy infrastructure is probably the biggest conduit to making an NHI work, so they will get more powerful and strong."*

Contributions to the National Health Insurance Fund (NHIF) will potentially be taxed on earnings, like the current PAYE (pay as you earn system) for salaried employees. Thus, from medical aid perspective, the expectation is that a lot of members will make not to continue with an additional financial contribution to their medical aid, because these members would automatically contribute to and become part of the NHI. Corruption with regard to the management of the NHIF was also highlighted as a potential risk to the success of NHI.

> *AF: Government to take over pooling of medical aid contributions into a central national fund. I don't know exactly how the mechanics will work of NHI; would it be a payroll deduction? Or would it be tax on companies? I'm not sure.*

> *TW: "and unfortunately, there's a lot of corruption. So, if you sometimes get into the government institution, it's almost saying, what did you really give into it? And then it's almost like saying, we don't think that you actually should be there. So you've got a double whammy, double fighting point perspective of what's actually happening."*

> *TW: "I definitely think it will. Like I said, financially, because people can only afford X-amount, so we're not going to have a pool of money that can go further. Money's going to be tighter. So, a lot of companies won't survive because, you know, the market share won't be there."*

> *JT: "In South Africa, particularly with the level of corruption, that could be quite an interesting landscape because depending on you know, the deals that are offered and the tenders that get awarded, that's what it would be based on."*

Supplier Impacts

The thought that government will procure scheduled medicines for the majority of the population based on a tendering system, will mean a significant change in the way pharmaceutical suppliers compete with one another in SA. In this case, neither the doctor, nor the pharmacist can influence the type of brand that the patient receives at the point of dispensing. The reason for this is that the tender based system will mean that there is maximum one or two available options in any particular molecule class for the doctor to prescribe and the pharmacist to dispense. In that case, it is anticipated that many doctors will only prescribe the molecule name and the pharmacist will dispense whichever brand they have in stock, that aligns with the NHI formulary.

> *AK: "First of all, there's no doubt that that will happen. No doubt. And so, one of the biggest impacts will be is that pharmaceutical manufacturers would have to work on almost a tender type system."*

> *AF" But even that scenario is going to impact on pharma because you really have one large player called NHI which is governmental; they will drive prices down, probably put more pressure on pharma companies in terms of drugs because they will go very big to generic drugs."*

This tender type of system is expected to impact significantly on supplier margin. The fact that cost will be a key player in deciding formulary products will mean that suppliers will compete with one another on price, this is expected to significantly drive down the price of medicine and as such, reduce the profit margin for suppliers. The fact that government will be the singular buyer and seller of scheduled medicines will also mean that pharma companies would not need large sales and marketing teams to cultivate demand and do direct selling at doctors and pharmacies.

> *GJ:" So, any company whose operating model has a high consumption of primary health care, will lose our generic numbers 30 to 40% of their net income, which means the downstream effect is you'll have to downsize; you have to be more efficient, smarter, it'll be very much system driven."*

This potentially means that suppliers will evolve to become a lot more key account focussed with the emphasis of managing relationships and stock levels of products that

are on formulary with wholesalers/depots. It also means that suppliers with bigger product baskets are most likely to dominate, as they will have the luxury of taking a win-some-lose-some approach with their tender bidding. Logically suppliers with broader product baskets also stand a bigger chance of winning more formularies across their portfolio.

> *AK: "And you will see dilution of human resource happening, there will be much less need for representatives and selling commercial structures, including like desk marketing, sales, etc, etc, it would be diluted dramatically."*

> *AK:" So it's going to be a basket offering, that's going to be key so you're going to have to have all the essential molecules and you're probably going to have to discard of resource and it's something that's been coming a long while, is this realignment in terms of marketing spend and heads."*

Considering the predisposition that there will be a significant emphasis on price and cost reduction, it is potentially expected that this would drive innovator pharma companies out of the country. This means that SA might not have access to potentially life-saving drugs, because there is limited incentive for innovator companies to compete and be present in a restricted market, such as NHI where they are unable to sell due to the likelihood of their formulary exclusion based on the high price of their products.

> *XM" So you end up with a situation where South African patients can't get access to a lot of drugs, innovative drugs, because it just doesn't make financial sense to launch those drugs in South Africa.*

Buyer Impacts

In this section we will discuss potential impacts that NHI might have across buyers that are involved in the procurement of scheduled medicines in the private pharma industry of SA, these are wholesalers/distributors, pharmacies, and medical aids. Considering that historically prescribing doctors had significant power in terms of what product gets dispensed to the patient. This power of influence appears to be waning according to most participants in the study. As such we will also cover how NHI could potentially impact prescribing doctors' influence from the view of the buyers in the procurement system.

XM: "Here there are like three or four molecules that the patients can use and the doctor can use, but I don't know if they do central procurement -will they have options? Will all those molecules be available?"

Many of the participants highlighted that public-private-partnerships are going to be crucial to make NHI work. As such, the expectation is that although product selection for the government formulary will be done centrally, there will be a heavy reliance on private sector infrastructure – distributors, wholesalers and pharmacies to enable optimal patient to reach to ensure rapidly accelerated and improved access to scheduled medicines for the broader population. Wholesalers will potentially be expected to manage regional buying in line with what the government formulary dictates, while existing retail pharmacies will probably serve as the final points of dispensing for both public and private patients. The fact that the corporate pharmacy groups in SA have already expanded their store footprint, and distribution capabilities tremendously, indicates that they would probably continue to wield a significant amount of power regardless of the implementation of NHI by SA government.

GJ:" But to answer your question directly, the pharmacy, the existing private pharmacy infrastructure is probably the biggest conduit to making an NHI work, so they will get more powerful and strong."

Doctors influence in terms of which scheduled medicine ultimately gets dispensed is expected to reduce further, due to the increased commoditisation of available generic products and the fact that government will in essence be the singular decider of what brand/product is placed on formulary for each molecule. This being said, it is assumed that speciality doctors who prescribe treatments for more uncommon diseases will continue to hold a significant amount of power for these niche type products. It was also noted that a potential skills shortage could potentially emerge i.e., number of doctors willing to work for the NHI.

AK:" Maybe have a sales team of specialist representatives bringing specialist products to market."

Medical aid Impacts

Most of the participants cited that medical aids have a significant amount of influence on the specific type of brand of scheduled medicine a patient receives at the final point of

dispensing. The reason provided for this phenomenon, is because there is a common goal between the SA government and medical aids – to drive down the cost of medicine to the patient. From a supplier perspective, in a commoditised generics market, it is important to monitor the pricing of competitors to ensure that you are similarly priced in terms of SEP.

The consequences of not being in line with competitor pricing, is that medical aids will over time exclude a non-complaint supplier product from their formulary, which will mean that the supplier does not have access to a specific cohort of the patients who subscribe to that medical aid. It is also important to note that suppliers may not offer more than one price (SEP) to the SA market, therefore, if a medical aid succeeds in driving down the cost of a particular medicine, it results in a saving for the entire market, hence the close alignment with government objectives.

In the context of centralised procurement and NHI, government will most likely be the sole selector, buyer and seller of scheduled medicine in SA. This is because it is assumed that the majority of the population who contribute to the NHIF, will not be able to afford a secondary payment for medical aid subscription on a monthly basis. Thus, medical aids are expected to potentially suffer huge subscriber attrition, which could lead to catastrophic income losses. There is not consensus among participants on whether medical aids will continue to coexist with NHI, or whether they will fall away.

> *TW: "But trust me, what you're paying as a member now, is what you're paying for private medical aid. No-one's going to be able to afford a top-up to say, well, primary care is covered. What I'm current paying, all the specialists on top-up."*

Many participants highlighted the possibility of one medical aid emerging as the general administrator for the NHI, and it would appear as if GEMS (Government employees' medical scheme) could be the most suitably poised for this role. However, this topic is expected to create major debate as the process unfolds. Another emerging theme is that medical aids could potentially exist as top-up medical insurance providers.

> *AF: "and they're going to have to use the private sector and that's why I believe, GEMS is the largest public sector medical scheme, they have the systems, they have the know-how, so GEMS will be used as a vehicle to introduce NHI."*

Conclusion

A summary of the key findings related to question two is what follows. NHI means that the SA government tender is expected to extend to the entire pharmaceutical market including the private sector. The decision making of what brands of medicines to buy will be managed through a centralised procurement system and public-private partnerships are going to be crucial in order to ensure the success of NHI and centralised procurement.

Most business players in the procurement system will potentially be forced to accept low prices and low margins on scheduled products, it is anticipated that pharmaceutical suppliers will be significantly impacted by this occurrence. NHI will cause a dramatic shift of power away from medical aids, this considering the assumption that the state will be the sole buyer/decision-maker of scheduled products. It is expected that large vertically integrated corporate pharmacy groups will wield the bulk of the bargaining power as they would be the owners of distribution and warehousing infrastructure that the state needs in order to further their objective of universal health coverage for all South Africans.

5.4 Summary of findings (question one and two)

The competitive landscape in procurement of scheduled medicine in the private pharma industry in SA has changed to become significantly more complex and competitive since 1994. The market has evolved to become cluttered with many competing suppliers and generic products, demand consolidation from buyers in the form of vertically integrated corporate pharmacy groups, and medical aids who have the power to viciously drive down the cost of scheduled medicines. Formularies from both medical aids and large corporate pharmacy groups appear to be main dictators of what specific brand patients receive at the final point of dispensing, and prescribing doctor power has waned over the years. Prescribing doctor power and dominance is still prevalent where niche scheduled products exists, with low competition and appears to be limited to speciality doctors.

NHI is expected to severely impact the changing competitive landscape in procurement of scheduled medicine in SA. NHI will potentially mean that government will be the sole buyer and seller of scheduled medicine for both the private and public healthcare sector

in SA. It is, however, highly likely that government will be dependent on the private market infrastructure, especially from a distribution, warehousing, and dispensing point of view. This could potentially mean that large vertically integrated corporate pharmacy groups will continue to wield a significant amount of power, and it also means that public-private-partnerships will form a prerequisite for making NHI work towards increase access to affordable medicine for the broader population.

The tender process is expected to further drive down product prices and margins for suppliers, meaning suppliers will have to significantly cut sales and marketing teams, with key account management that will play a pivotal role in supplier organisations. Considering a strong possibility that NHI will be funded in the form of an income tax on individuals, means that medical aids will suffer significant member attrition due to the probability that most individuals will cancel their medical aid membership due to affordability. This potentially means that medical aids will compete with one another to play an administrator role for NHI, in return for an administrative fee in an attempt to replace their loss of income due to membership attrition.

CHAPTER 6 DISCUSSION OF FINDINGS.

6.1 Introduction

In this chapter, the researcher will relate the findings of the research as presented in chapter five with literature reviewed in chapter two. The codification of emergent themes based on the semi-structured interviews conducted from eleven participants allowed the researcher to aggregate the findings in relation to the research questions as presented in chapter three. The findings as they are presented in chapter five, represent evidence from the data which was collected. In order to critically analyse the evidence from the findings in chapter five, the researcher will discuss the extent to which the each of the emergent themes either confirm, extend, or contradict the literature as presented in chapter two. To enable ease of reference for the examiner, the researcher includes another copy of the overview of the main themes in relation to the research questions as presented in chapter five in figure 7 below.

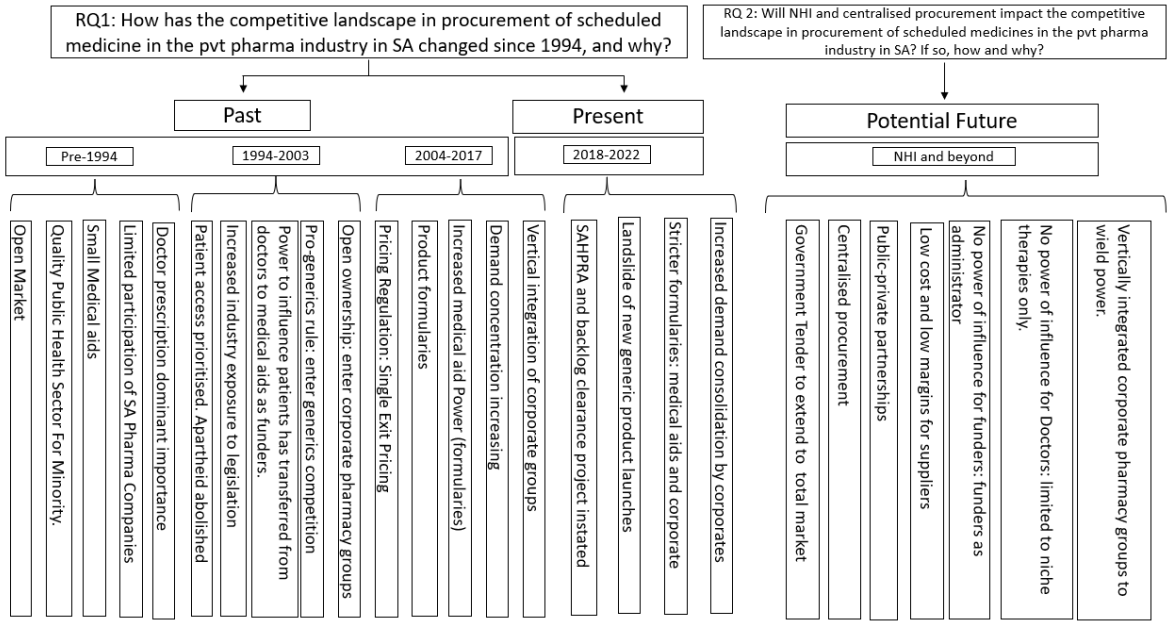

Figure 7: Overview of the findings for research question one and two (Source: Researcher)

First, we will discuss the findings around research question one, which is intended to take a historical and contemporary look at how the competitive landscape in procurement of scheduled medicines in the private pharma industry in SA changed from the period 1994 to 2022. Then, we will discuss the findings regarding research question

two, which, through the lens of the participants in the study, aim to characterise a potential future state of being for the competitive landscape in procurement of scheduled medicine in the private pharma industry in SA in the context of centralised procurement and NHI.

6.2 Discussion on Research Question 1

How has the competitive landscape in procurement of scheduled medicine in the private pharma industry in SA changed since 1994 and why?

The researcher has segmented the discussion of the findings related to research question one into four separate periods namely 1) pre-1994, 2) 1994-2003, 3) 2004-2017 and 4) 2018-2022. The reason for this is because each of different periods are characterised by a variety of different competitive dynamics which need to be clarified in order to inform on details that are pertinent to understanding how the power dynamics between various players in the procurement system have unfolded throughout the years, and why. What follows is an in-depth discussion of the findings that are relevant to each of the four different periods

Period: Pre-1994

The key emerging themes from the findings regarding the competitive landscape in the private pharma industry in SA for period prior to 1994, was that the industry was a lesser-regulated, open market in terms of buying, selling, and trading scheduled pharma products. Quality public healthcare services were on offer for the minority of white South Africans, and heinously excluded black South Africans from access to high quality public healthcare facilities due to apartheid. Medical aids had smaller member cohorts than today, and there was limited participation of SA pharma companies as suppliers in the private pharma market. What follows in this section, is a detailed discussion of these key emerging themes relating to the competitive landscape in procurement of scheduled medicines for the period pre-1994.

Open market

The findings from the research study were that the private SA pharma market characterised an open trading market in the era pre-1994 with regard the procurement and sale of scheduled medicines. Even though SA had sanctions against it, the suppliers who were present in the market at the time were permitted to increase their pricing at

any point in time and were not capped in terms of the price level that they wished to increase their prices to. Furthermore, pharmacies and wholesalers could increase their mark-up at their own discretion.

According to Moodley & Suleman (2019) single exit pricing was first promulgated in the medicines act of 1997, before then pricing was not regulated in the SA private pharma market, and access to medicine for the broader population was not yet prioritised (Perumal-Pillay & Suleman, 2020). This meant that suppliers had an opportunity to engage in a mostly free-trade type of system with pharmacies and doctors using various sales and marketing mechanisms to promote the use of their products. The pharmacy ownership rule was not yet changed pre-1994, which meant that one had to be a pharmacist to own a pharmacy, thus most pharmacies were standalone mom's and pop's type stores with pharmacists as business owners. Pharmacies were also not yet capped in terms of their mark-up on scheduled pharma products (National Department of Health, 2020).

The findings from the research study confirm the theory that the SA private pharma market did in fact resemble the characteristics of an open market in the period pre-1994. The absence of significant trading regulations created the environment for suppliers and buyers in the procurement system to trade freely with one another.

Quality public health sector for the minority

From the findings in the research study, it was noted that the public healthcare system in SA pre-1994 was of significantly high quality. The quality of care that was available from the public healthcare system was comparable to that of the private market. The infrastructure that delivered the quality care, however, was only available to the white minority, while the majority of black South Africans were heinously excluded from high quality public healthcare institutions at the time.

According to Coovadia et al. (2009), the ANC's post-apartheid plan in 1994 aimed to address the inequities caused by the segregation rule which excluded access to quality healthcare facilities for the majority of black South Africans pre-1994. Furthermore Coovadia et al. (2009) establishes that although the public healthcare infrastructure pre-1994 delivered high quality treatment outcomes for patients, it was limited to availability for the white minority in SA.

Thus, it can be concluded/confirmed by theory that the public healthcare system in SA pre-1994 availed quality healthcare for the minority of white South Africans. Albeit that the public healthcare system is not under the focus of investigation for the purposes of this research study, the fact that the public healthcare system was about to potentially be overwhelmed by an increase in healthcare demand bids particular relevance for understanding the backdrop against which the competitive dynamics in the private pharma industry unfolded in the following years.

Small medical aids

From the findings of the research report, it was observed that a smaller part of the South African population subscribed to medical aids. The reasons that were provided by the findings chapter were that, at the time, the majority of black South Africans were mostly impoverished under apartheid rule, while the public healthcare system provided a high standard of care for the minority of white South Africans.

According to Doherty Jane & McLeod Heather (2007), medical aid membership in SA increased by 20% for the period 1994-2006, however, the growth of medical aid membership has declined steadily by 0.2% per annum for the period 2004-2014 according to Omotoso & Koch (2017).

Albeit that it appears that medical aid membership declined in later years (2004-2014), the researcher proposes that a 0.2% decline in membership is potentially statistically insignificant, and that the evidence from prior literature that suggests that medical aid membership had grown 20% for the period 1994-2006 more accurately represents the phenomenon of a growing medical aid member cohort post-1994. As such the researcher concludes that based on the evidence presented, the notion that medical aids pre-1994 had smaller patient cohorts, is more probable, thus it will be acceptable to say that this proposition was confirmed by various part of available theory including the lates annual report of the council for medical schemes (CMS, 2021).

Limited participation of SA pharma companies

The findings from the research report highlighted the proposition that the private pharma industry was dominated by mainly originator American, British, and European pharma

companies (suppliers) pre-1994. Thus, the market participation by South African pharma companies was limited despite the sanctions that were held against SA at the time.

According to Horner (2022), pre-1994 only 13% of active product ingredients used in the production of scheduled medicines SA was manufactured locally, and that foreign owned multi-national pharmaceutical companies (MNC's) dominated the SA pharma industry with close to 86% market share at some points in time prior to 1994. The fact that MNC's dominated the private SA pharma market pre-1994 is furthermore corroborated by Te Naudé & Luiz (2013).

Thus, the findings from the research report are confirmed by theory from the literature review section in Chapter Two. There was in fact limited participation on behalf of South African pharmaceutical firms in the private SA pharma market prior to 1994, and that the market was indeed dominated by mainly originator pharma companies. Supplier, supplier type, and their behavioural dynamics play a pivotal role in understanding the potentially changing competitive landscape of the private pharma industry in SA.

Doctor prescription dominant importance

When it came to the precise brand of medication that a patient was given at the time of dispensing pre-1994, it was noted from the findings of the research study that the prescribing doctor had the bulk of the power in its part of the GVC. This is potentially because there were fewer pharmaceutical product registrations active in SA, with mostly originator product availability, and fewer generic product availability. As mentioned in the first part of this Chapter, downstream there was also not a lot of buyer consolidation such as large pharmacy groups.

According to Smit (2013), the market propensity for an originator medicine falls as the number of generic competitors enter the market. Furthermore, it is understood that according to the (MarketLine Industry Report, 2021), the generic volume market share in SA increased from 58% in 2016 to 67% in 2021 during a period where the number of available generic products increased significantly. According to Pournader et al. (2020) it is understood that expert power, such as demonstrated by the leadership opinion of prescribing doctors reduce opportunistic behaviour by sellers and buyers in a GVC. As such, it is known that in the absence of extreme competitor intensity between suppliers and buyers in a particular industry such as the private pharma industry in SA, expert

power plays a significant role in the GVC (Håvold & Håvold, 2019). According to Horner (2022) the majority of competitors in the pharma industry were non-generic American, European and British companies.

The researcher is therefore able to conclude that the literature confirms the findings of the research study with respect to the notion that prescribing doctors had the dominant decision-making power in terms of the specific brand of scheduled product dispensed to the patient in the period pre-1994.

Period: 1994-2003

The key emergent themes from the findings regarding the potentially changing competitive landscape in procurement if scheduled medicines for the period 1994-2003 can be summarised as follows: After the inauguration of the ANC in 1994, a democratic South Africa was born. Access to quality healthcare for all South Africans, not only the white minority, was a major agenda point for the incoming ruling party. Suppliers and buyers in the private pharma continued to reap the benefit of high profit margins during this period, but the medicines act of 1997 proposed significant changes to the regulatory frameworks that set the rules of the game for the various players in the procurement system of the private pharma industry of SA.

Despite resistance from various multinational pharma companies, the proposed amendments to the medicines act were ruled as valid. This decision meant that the private pharma industry was now increasingly exposed to new regulation which would potentially impact on the competitive power dynamics between players in the procurement system. A strong pro-generic stance was taken by government in an official attempt to drive down the cost of medicine in SA. Legislation was also passed that permitted any company/individual the right to apply for a license to own a pharmacy–- under strict new conditions off course. What follows in this section, is a detailed discussion of these key emerging themes relating to the competitive landscape in procurement of scheduled medicines for the period 1994-2003.

Patient access prioritised, and apartheid abolished

The findings from this section highlighted the proposition that the in-stepping ANC government had prioritised availability, and access to affordable healthcare for all South Africans. The reason for this was because the majority of black South Africans did not

have access to quality healthcare for two main reasons 1) affordability and 2) geographical dispersion. The fact that the majority of the black population were excluded from economic activity under apartheid rule meant that many were impoverished and resided in outlying rural areas which did not have healthcare facilities and infrastructure. This meant that these patients had to travel long distances to gain access to medicine or other healthcare services in the apartheid era. Consequently, after apartheid was abolished in 1994, it became a key priority for the SA government to rectify the situation, improve patient outcomes by prioritising the provision of access to affordable healthcare for all South Africans.

According to Rattan et al. (2019) poor healthcare amongst the majority of black South Africans were largely due to affordability and long travel distances to reach healthcare facilities. Furthermore Coovadia et al. (2009) affirms that opening up a segregated healthcare system was a key priority for the ANC post their inauguration (Adebisi et al., 2022). Thus, the findings in this regard are supported by literature which confirm that access to affordable medicine for the majority of South Africans was a key issue that the ANC government prioritised post inauguration.

Increased industry exposure to regulation

The players in the procurement system of the private pharma industry in South Africa had long enjoyed the benefits associated with being part of an industry which was free from pricing and many other trading regulations. The SA government introduced a host of new regulations under amendments that were made to the medicines control act of 1997 with the aim of driving down the cost of scheduled medicine. Thereby increasing the private pharma industry's exposure to regulation which impacted on the competitive landscape in procurement of scheduled medicine.

According to Moodley & Suleman (2020), amendments to the medicines control act that were promulgated in 1997, significantly increased the private pharma industry's exposure to regulation. Furthermore, Mayne (2001) highlights the legal implications of the amendments made to the medicines control act despite push-back from big pharma who were well aware of the financial impacts that pricing regulation could have on their businesses.

In this case, the literature confirms the findings that the private SA pharma industry profiteered from a lesser-regulated free market, and that the industry started to experience a significant increase in exposure to regulation in the period 1994-2003.

Power to influence patients has transferred from doctors to medical aids as funders

The findings reported that the first real change in terms of increased regulation, was the introduction of the medical schemes act which endowed the council of medical schemes (CMS) with the right to act as a standalone juristic person, this bolstered the power of medical aids to actively drive down the cost of medicine. The establishment of the CMS meant that medical aids were permitted to implementing product formularies. The findings suggest that the implementation of product formularies transferred a significant quantum of decision-making power away from prescribing doctors to medical aids, specifically in regard to what specific brand of scheduled medicines a patient that is contracted with a medical aid receive at the point of dispensing.

The medical schemes act (Republic of South Africa, 1998) clearly aimed to serve as a partnership mechanism between the SA government and the medical aids in SA. Both parties with one common goal – drive down the cost of medicine to patients. This act is confirmed in the literature by Dallas et al. (2019) and lives under the banner of constitutive power (Dallas et al., 2019). Constitutive power is a form of power where a collective of players in the GVC cooperate to indefinitely change the mechanics of an industry. According to Perumal-Pillay & Suleman (2020) the price of a scheduled product remained a key determinant for medical aids when decisions were made in regard to which products are placed on formulary. Furthermore, Matuka (2018) asserts that the relationship between prescribing doctors and medical aids are not productive signalling tension between the two parties as literature confirms the findings where medical aids start to gain dominant power in terms of what specific brand the patient receives at the point of dispensing.

Pro-generics rule – enter generic competition

The findings of the research report alluded that the year 2003 brought about additional changes to the competitive landscape in procurement of scheduled medicines. The first of which was the pro-generics rule that was implemented. According to the findings in the research report, this new legislation dictated the rule that pharmacists and pharmacy

assistants are obliged to offer a patient a more cost-effective generic product option at the point of dispensing when an originator or alternatively higher priced scheduled generic drug is prescribed by the doctor. The patient, however, does a choice not to accept the dispenser's proposal, and can select to pay the higher price for the prescribed drug. Prescribing doctors may indicate "no substitution" on the script, at which point the pharmacist is still obliged to inform the patient that a more cost-effective generic option is available but is urged to dispense the specific product as prescribed by the doctor. The fact that the new rule pushed generic substitution increased the attractiveness of the SA private pharma market for generic pharma companies.

The pro-generics rule and the increased attractiveness for generic players is clearly confirmed in literature by Horner (2022). This is also a clear form of institutional power (Ponte et al., 2019) by government which has a direct impact on various players in the procurement system of the private pharma industry in SA.

Open ownership – enter corporate pharmacy groups

The findings from the research project were that the second legislative change that came into play in 2003, was the open ownership rule for pharmacy licenses. The rule prescribed that any person or company may apply for and own a pharmacy license. It is however prescribed by the rule that a pharmacy owner is compelled to always have a registered pharmacist present in the pharmacy while the pharmacy is open for business. Previously the rule was that only a registered pharmacist may apply for a license to own a pharmacy. The SA government's intent behind the rule was to increase the geographical footprint of private pharmacies with the hope that it would urge pharmacy owners to expand their operations closer to outlying rural areas. This rule, however, also meant that a single company may own multiple pharmacies, and the findings showed that this rule had an unintended consequence which caused the establishment of corporate pharmacies, which in turn also transferred more power to corporate pharmacy groups. Furthermore, it was understood that the rule did not necessarily achieve it objective of expanding the geographical footprint of pharmacies to improve access of scheduled medicines to outlying areas.

The fact that the SA government implemented the open ownership rule for pharmacies is confirmed by Moodley & Suleman (2020), furthermore the impacts and unintended

consequences through which large corporate retail pharmacy groups began to form as a result of the rule is also highlighted by Moodley & Suleman (2020). It is understood by literature from Ponte et al. (2019) that this is a form of institutional power where the makers of policy were unaware of the unintended consequences of their decision.

Thus, the findings from the research report that the open ownership rule attracted the formation of corporate pharmacy groups, instead of improving the geographical dispersion of pharmacies is supported and confirmed by available literature.

Period: 2004-2017

The key emerging themes from the findings regarding the competitive landscape in the private pharma industry in SA for period prior to 2004-2017, was that the SA government's attempt to regulate industry pricing came to fruition through the implementation of their proposed SEP pricing policy. As the proliferation of corporate pharmacies gained traction under the open ownership rule in the private SA pharma market, the phenomenon of corporate pharmacy product formularies, vertical integration and demand concentration started to prevail. Medical aids further tightened their grip on the industry to establish themselves as the primary dictator in terms of what specific brand the patient receives at the point of dispensing. What follows in this section, is a detailed discussion of these key emerging themes relating to the competitive landscape in procurement of scheduled medicines for the period 2004-2017.

Pricing regulation: Single Exit Pricing

The findings concluded that an SEP a policy was implemented in 2004 whereby the SA government controls three key aspects in terms of the pricing for scheduled products in the private pharma industry in SA. Firstly, suppliers are only permitted to increase the price on their scheduled medicines once a year, and the increase is dictated by the department of health, suppliers may not increase their price any time they wish to the level of their own discretion as it was prior to the SEP rule.

The SEP pricing of all scheduled medicines are to be made publicly available so that the public can compare price on a variety of online platforms. Secondly, wholesalers may buy and sell scheduled products, only at the supplier's SEP, and is not allowed to place an additional profit margin on the product's selling price to pharmacies. Wholesalers may however accept a logistics from suppliers in return for the delivery of

the supplier's scheduled products to pharmacies. Thirdly, Pharmacies are capped in terms of the dispensing fee/margin that they are allowed to add on-top of the scheduled product's SEP price. The tiered dispensing fee system is designed so that the profit margin of a product declines as the price of the product increases. The impact of SEP was an overall reduction on product prices and margins for both sellers and buyers in the GVC.

According to (The South African Medicines Price Registry, 2022) prices of all SEP products can be perused on their website. The impact of the SEP policy is also highlighted by Moodley & Suleman (2019) who asserts that the SEP policy resulted in an significant reduction in the overall pricing of scheduled medicine over the period 2009-2014, furthermore it is understood from Naidoo & Suleman (2021) that a reduction in the overall price of a basket of scheduled medicines, also meant that profit margins were eroded for both suppliers and buyers as a result of the SEP policy.

The literature thus confirms the findings of the research report in regard to the role that SEP played in the changing competitive landscape in procurement of scheduled medicines in the private pharma industry of SA.

Corporate Pharmacy Groups: vertical integration, increased demand concentration, and prevailing product formularies

The findings suggest that the SA pharma market saw a rising increase in the number of corporate (chain) pharmacy groups for the period. Furthermore, the findings suggest that the proliferation of corporate pharmacies were strongly related to the open ownership rule and the pro-generics rule as described earlier in this section. As a result of the margin pressure due to the implementation of SEP, corporate pharmacy groups such as Dischem and Clicks developed a propensity to vertically integrate upwards in the GVC, thereby acquiring wholesalers and distribution infrastructure with the intention of scooping additional margins along the value chain.

The rising increase of corporate pharmacies were due to aggressive growth-by-acquisition strategies by corporate pharmacy groups, which meant a significant decline in the number of standalone mom's and pop's pharmacies. The result of which was an increase in demand concentration of scheduled medicines at corporate pharmacy groups. The findings furthermore suggest that these phenomena increased the

bargaining power of large corporate pharmacy groups, as they in essence became a significant gatekeeper between supplier and patient.

According to the literature by Moodley & Suleman (2020), there has been a substantial increase in the number of corporate pharmacies and a considerable reduction in independent pharmacy ownership in the private pharma industry in SA. Industry reports by Dischem (2022) reveal an increase in the number of new pharmacies opened up in the last year. According to Barnard (2019) corporate pharmacy groups have vertically integrated. For example, Clicks Pharmacies own UPD wholesaler and UPD distribution in SA, while Dischem owns CJ Distribution. Finally Kwak & Kim (2020) confirms the phenomenon of increased bargaining power of buyers in industries where there is increased demand concentration. According to Grabs & Ponte (2019), bargaining power refers to an instance where one player in the GVC exerts a certain amount of negotiation pressure on another player which causes the other player to behave in a way that is not necessarily in the player's utmost best interest. Therefore, it is clear from the academic literature that bargaining power is exerted on suppliers of scheduled medicines by large corporate groups when suppliers forfeit a portion of their margin to gain access into doing business with a large corporate pharmacy customer. As a result, the findings of this section are confirmed by relevant academic literature and pertinent data from industry reports.

Increased medical aid power

According to the findings, medical aids became more dictatorial in terms of wielding their institutional power whereby medical aid members were allowed to receive their PMB medication. Members could only receive their PMB medication co-payment free at DSP's. If pharmacies did not comply with medical aid formularies and other cost saving strategies, they would lose their DSP status, which meant that they would subsequently over time also relinquish the support and income generated from medical aid members who moved to another which is a DSP, because they would prefer to collect their medication co-payment free.

According to M'bouaffou et al. (2022) asserts the fact that majority of patients prefer to receive their medication co-payment free from a DSP. Furthermore, M'bouaffou et al. (2022) confirms that fact that the medical schemes act promotes the DSP arrangements

between medical aids and suppliers in order to advance their objective of quality service delivery to patients for products that are on the PMB list. According to Dallas et al. (2019) institutional power is regarded as a collective attempt by an institution to regulate how players compete and behave in a GVC, this notion is supported by Friel et al. (2021) who resolves that institutional power and the development and implementation of policy across multiple sectors is required to reduce health inequity.

Thus, there is adequate academic literature to confirm that medical aids are indeed exercising significant institutional power and is so doing altering the fundamental market mechanics of the procurement system in the private pharma industry in SA.

Period: 2018-Current

The key emerging themes from the findings regarding the competitive landscape in the private pharma industry in SA for period prior to 2018-Current, was the change over from the MCC to SAHPRA. One of the key objectives of the newly established SAHPRA, was to clear an immense backlog of new product registration applications that were stuck in the system due to inefficiencies in processes by the MCC. Subsequently, the result of the back-log clearance project was that a landslide of new generic product registrations flooded the SA pharma market.

As competitor intensity increased, and multiple generic substitute products in each molecule became available on the SA private pharma market because of SAHPRA's efficient registration process, the influence of prescribing doctors diminished significantly. Corporate pharmacy groups now had the luxury to pick-and-choose which supplier's products they wanted to add on their formulary, and as such corporate pharmacy groups became more prescriptive to their pharmacist employees with regard to what specific brand of product they were urged to dispense.

SAHPRA and back log clearance project instated

According to the findings regarding this emerging theme, in February 2018 the medicines control council (MCC) was reformed to become the South African Health products regulatory Authority (SAHPRA). SAHPRA's first priority was to clear the backlog of new product registration applications and then to implement continuous processes that would ensure a more efficient registration process. The reliance pathway was a new way of evaluating dossiers under registration and was intended to result in

accelerated registration for products that fulfil the necessary criteria. This way, SAHPRA relies on the clinical data as presented by another reputable country's national regulatory authority where available, and a full clinical review by SAHPRA is not required prior to registration.

The formation of SAHPRA and its objectives are clearly outlined (Keyter, Banoo, et al., 2018). According to Keyter et al. (2022), the reliance pathway has been an effective way to speed up the registration process of new product registration applications. Clearly this is a prime example of institutional power where government make upgrades to its infrastructure and policies with the objective of changing certain aspects of a particular industry.

Thus, the findings confirm what is written in academic literature with regard to the establishment and objectives of SAHPRA, and also the identified prevalence of institutional power that demonstrated.

Landslide of new generic product launches, increased corporate pharmacy presence and medical aid power

The immense improvement in the efficiency of new product registration processes brought along by the formation of SAHPRA, meant that a massive number of new generic products launched into the SA private pharma market. Ultimately, both the establishment of SAHPRA and the implementation of a more efficient registration process was intended to increase the number of available generic equivalents available on the SA pharma market, and so doing drive down the cost of scheduled medicines with the intention of increasing patient access to affordable medicine.

Furthermore, Keyter, Banoo, et al. (2018) noted that a backlog of more than 16000 new product registration applications were in line for registration as at 1 February 2018. SAHPRA planned to clear all 16000 applications in just two years, while he MCC had a record of managing to complete only 2550 registrations per year. According to Keyter et al. (2021), the timeline or new product registrations were 68% quicker since the inception of the backlog clearance project, furthermore Keyter et al. (2021) asserted that SAHPRA was able to produce a substantial number of new product registrations since 2018.

It is then concluded from the findings and confirmed by academic theory, that the effectiveness of new systems which were implemented by SAHPRA had in fact produced an enormous amount of new product registrations by 2021.

The proliferation of corporate pharmacies still continues, with the latest pharmaceutical industry report by Fitch Solutions (2022) indicating the SA competition commission's oversight of corporate pharmacy behaviour as a significant threat to suppliers in the pharmaceutical industry. Furthermore, medical aids continue to wield even more power as their options to select cheaper generics exponentially expand because of the huge number of new product registrations since 2018 (Keyter et al., 2021).

6.3 Discussion on Research Question 2

Will NHI and centralised procurement impact the competitive landscape in procurement of scheduled medicines in the private pharma industry in SA? If so, how, and why?

In this section the researcher will discuss the findings that look to the future to anticipate whether NHI and centralised procurement is expected to have an impact on how players in the procurement system of the private pharma industry compete with one another. The researcher has unpacked each of the key themes that emerged from the findings in detail. In addition, the researcher has also perused relevant academic literature to establish whether the findings confirm, contradict, or extend the literature. What follows is a conversation that intends to potentially illuminate what the market conditions for the procurement system of the private pharma industry could possibly look like under centralised procurement and NHI.

Government tender to extend to total market in the form of centralised procurement

The findings in the research study suggest that with the implementation of NHI, the SA government will adopt a centralised procurement system which means that government tendering will make decisions regarding the procurement of scheduled medicines for the entire pharmaceutical industry, including the part of the population who are currently in the private sector.

In China, Yang et al. (2022) confirms the presence of centralised procurement strategy in the presence of an NHI pilot system. Furthermore, Yang et al. (2022) asserts that a centralised drug procurement (CDP) policy takes the form of a tendering system

whereby government makes buying decisions for both the public and private sector. Finally Yang et al. (2022) suggest that the CDP policy had two main positive impacts namely: 1) reducing cost of medicine to patients, and 2) promoting the development and growth of local generic drug producers. However, Vogler et al. (2022) suggests that although centralised procurement assisted in improved equitable access to affordable medicine, the impact of CDP on the prices of medicine remain inconclusive in their study.

Thus, it is indeed confirmed by literature that governments who adopt a national health insurance system are prone to using a centralised drug procurement system for the decision making in terms of what specific brand of scheduled medicine to procure.

Public-private partnerships under NHI

The findings suggest that NHI will drive the SA government to engage in a contractual arrangement with players in the procurement system of the private pharma industry in SA namely: distributors, wholesalers, and pharmacies. The purpose of the contractual arrangement will be to reach an agreement with the players in the procurement system whereby they open-up their distribution and dispensing services to all members of NHI with the objective of achieving universal health coverage for the broader population and work towards bringing the economic segregation between public and private patients to an end. According to the findings, this arrangement will be crucial step towards the advancement of increased access to affordable quality medicine for all people in SA.

According to Girdwood et al. (2019), private service providers such as wholesalers and pharmacies will play a vital role in providing publicly funded healthcare services which will be characterised as a public-private partnership. Thus, it is confirmed by academic literature that the SA government is highly likely to negotiate public-private partnerships. Although this appears to be a clear-cut case of institutional power, the findings also suggests that players in the procurement system are expected to apply bargaining power to ensure that the contractual arrangement is fair. According to Dallas et al. (2019) the presence of various types of power in GVC's are rarely mutually exclusive. The notion that the presence of both institutional and bargaining power could be present at the same time in the negotiation process between government and the players in the procurement system, means that the academic theory by Dallas et al. (2019) is confirmed.

Low cost and low margins

According to the findings, government will choose to select the most cost-effective registered generic medicine available for distribution to patients via the NHI system. In addition, centralised procurement through a tender contract type system is expected to significantly erode profit margins for suppliers.

Wouters et al. (2019), asserts that a tendering process, which is also expected to be implemented with the inception of NHI is expected to reduce the cost of medicine. This is furthermore confirmed in the research study as concluded by Yang et al. (2022). According to Chebolu-Subramanian & Sundarraj (2021), suppliers in India make only a 3%-4% profit margin on tender products that are purchased through a tendering process. This phenomenon is furthermore validated by Hasnida et al. (2021), who state that the cheap cost of medication in the context of a tender-type procurement procedure exerts huge pressure on profit margins.

Thus, it is confirmed by academic literature that a centralised procurement system with a tender type of selection process will reduce the cost of scheduled medicine and result in the erosion of profit margins of suppliers.

No power of influence for funders: funders (medical aids) as potential administrator

The findings of the research study suggested that the power that medical aids currently wield in the selection of the specific type of product that the patient receives at the point of dispensing will potentially diminish significantly. Furthermore, as the role of medical aids diminish, government is anticipated to be the sole decisionmaker in terms of the specific type of brand that the patient receives at the point of dispensing.

The findings propose that the reason why the role of medical aids is expected to diminish significantly, is because most of the income earning population of SA will be subject to a new form of tax as their financial contribution to NHI. As such, it is assumed that most of these people will not have the financial means to make a dual financial contribution to both the NHI and a private medical aid. Therefore, these existing medical aid members are expected to discontinue their medical aid contributions which will cause a massive reduction in revenue stream for medical aids.

Finally, the findings suggested that the role of medical aids could potentially be limited to serving the SA government as business administrators for the NHI. The findings suggest that medical aids could find them in a position where they compete for a contractual arrangement with government to act as an NHI administrator.

No power of influence for doctors: limited to niche therapies only

The findings suggest that prescribing doctor influence on brand selection is expected to diminish to zero for commoditised generic scheduled products. This is largely due to the assumption that government is anticipated to be the sole decisionmaker in terms of the procurement selection of what brand of scheduled medicine the patient receives at the point of dispensing under NHI. However, the findings suggest that prescribing doctor influence will still be relevant for specialised medicines where there are not many generic equivalents available on the market.

According to Zhou et al. (2019), the reality that prescribing doctors have almost no prescribing power for commoditised generic medicines under the circumstances of a centralised procurement system. However, Zhou et al. (2019) highlights the fact that tension does exist between the prescribing doctors, and the parties who ultimately select the specific brand of scheduled product that is procured and available for distribution and dispensing to patients. Thus, in situations where the prescribed medicine is a unique formulation with no generic competition, prescriber influence will be higher.

The findings that prescribing doctor influence declines, as the prevalence of centralised procurement and tendering systems increase, is thus confirmed by literature.

Vertically integrated corporate pharmacy groups to wield power

The findings suggest that large corporate pharmacy groups such as Dischem and Clicks are anticipated to wield significant bargaining power in the context of NHI and centralised procurement. The reason for this is that although government will look to exert institutional power on the corporate pharmacy groups, the reality is that their vast distribution infrastructure, and prolific number of stores positions the corporate pharmacy groups as an integral part, and vital conduit for government to achieve improved geographical access to affordable medicine in outlying areas.

According to Logan (2022), a large corporate pharmacy group named Boots pharmacies in the United Kingdom (UK) embarked on a blitzkrieg of pharmacy acquisitions prior to the inception of the national health service (NHS). Their large footprint in terms of number and geographical dispersion of pharmacies placed them in a favourable position to become favourable partners with, and designated service providers for the UK NHS. Furthermore Moodley & Suleman (2020) confirms the current shift in the pharmacy market from independent pharmacies to more corporate types of pharmacies, particularly due to the open ownership rule in SA. Finally, according to De Marchi & Alford (2022) larger firms benefit more from institutional power and policy implementation than smaller firms.

Thus, it can be confirmed by academic literature that large corporate pharmacy groups are potentially going to wield majority power in terms of what specific brand the patient receives in the context of a system such as NHI.

6.4 Conclusion

In this chapter the researcher organised the findings in relation to each of the research questions and the academic literature. The researcher analysed the findings and compared the description of the findings with academic literature. The reason for this because the researcher attempted to establish whether the findings confirm, extend, or contradict what was found in existing academic literature. The discussion of the findings for research question one is organised in terms of chronological order for the period starting roundabout 1994 to current. The reason for this is because the research question attempts to identify and describe key changes in the competitive dynamics for each of the four different time periods (pre-1994, 1994-2003, 2004-2017 and 2018-current). There are also landmark changes in policy and regulations in each interval, the impacts of which required crystallisation. Question two is concerned with describing the participant's perceptions of whether centralised procurement and NHI is expected to have an impact on the competitive landscape in procurement of scheduled medicine in its current shape and form. Therefore, the discussion relating to question two is arranged according to the key emergent themes.

CHAPTER 7: CONCLUSIONS AND RECOMMENDATIONS

7.1 Introduction

This study set out to explore the changing competitive landscape in procurement of scheduled medicine in the private pharma industry of SA. The researcher did this by applying the theoretical lens of global value chains (GVC), more specifically, from the perspective of changing power dynamics in GVC's due to increased government policy and regulation. As indicated in chapter one, the implications of increased policy and regulation on the players in a GVC lacks empirical grounding in the literature (De Marchi & Alford, 2022).

This chapter intends to focus on the research study's main findings by amalgamating and condensing the findings as discussed in chapter five with the academic literature presented in chapter two. The reason for this is because this chapter aims to effectively answer both research question one and two as presented in chapter three. Furthermore, this chapter incorporates a section that discusses recommendations for stakeholders, in addition to a conversation on the implications for managers which is grounded in the findings as presented in chapter five. The chapter also clearly highlights the limitations of the research study and provides recommendations for future research.

7.2 Principal conclusions

Research question one set out to establish and explore how and why the competitive landscape in procurement of scheduled medicine in the private pharma industry in SA changed since 1994. The researcher chronologically unpacked the key change-characteristics over four different periods for past and present namely, pre-1994, 1994-2003, 2004-2017 for past, and 2018-2022 for present. According to Moodley & Suleman (2020), there is no doubt that the competitive landscape in procurement of scheduled medicine has changed over this period, mainly due to institutional power (Dauvergne, 2018) which was transferred onto the procurement system of the private pharma industry.

The key change-characteristics related to each of the different periods effectively answers "how" the power dynamics in the procurement system of scheduled medicines changed over time while details around the specific type of additional industry regulation and/or change in political objectives effectively answers "why". The competition between

players in the procurement system part of the global value chain of pharmaceutical products in SA has evolved to become increasingly complex (Dallas et al., 2019). Furthermore, Grabs & Ponte (2019) alludes to how power dynamics between players in the procurement system part of a GVC evolves over time to become less visible and more collective as opposed to a simplistic battle between two parties (Oliveira et al., 2021). Finally, it is understood that power dynamics evolve to become more subtle and unintentional in some cases (Grabs & Ponte, 2019).

The period pre-1994 saw little industry regulation compared to today with dominant expert power in terms of what specific type of brand the patient receives at the point of dispensing. The dominance of expert power is confirmed by Pournader et al. (2020) in cases where there is an more simplistic market environment with lower competition between buyers and sellers in a particular industry (Håvold & Håvold, 2019).

As the ANC government began to prioritise access to affordable healthcare after 1994, a gradual shift in power was seen away from prescribing doctors, more towards medical aids. The collective and direct implications of the combined institutional power by government and medical aids meant that generics substitution was prioritised (Horner, 2022). The reason for this is that government actively started to impose increased industry regulation in the period 1994-2003 with the objective of driving down the cost of scheduled medicine in South Africa (Moodley & Suleman, 2020).

2004 saw the first real impacts of the pharmacy open ownership rule, with the increased prevalence of corporate pharmacy groups such as Dischem and Clicks (Moodley & Suleman, 2020). The SA government's intention with this rule, however, was to create an increased geographical footprint of retail pharmacies to further access to scheduled medication (Moodley & Suleman, 2020). This is a clear example of where increased government regulation had an unintended effect in terms of power shifting towards one specific player in the GVC, when government had another social objective in mind (De Marchi & Alford, 2022).

The year 2004 also saw the implementation of single exit pricing (SEP) which was a policy that was intended to curb the increasing cost on scheduled medicines. According to Moodley & Suleman (2019), the result was indeed a decline in the over cost on a basket of scheduled medicine. According to M'bouaffou et al. (2022) the majority of

medical aid patients did not want to pay an additional co-payment on scheduled medicines which meant that medical aids had an increasingly significant say in terms of the specific type of brand that the patient receives at the point of dispensing.

In February 2018 it was announced that there would be significant reform taking place within the domain of the South African National Regulatory Authority (Keyter, Gouws, et al., 2018). The medicines control council (MCC) would now be called SAHPRA – The South African Health Products Regulatory Authority and would be a separate standalone juristic person, not part of the Department of Health (Keyter, Banoo, et al., 2018). SAHPRA had made significant inroads with regard to clearing the back log of new product registration applications which meant that a landslide of new generic medicines would penetrate the market from 2019 onwards. SAHPRA intended to clear a backlog of 16000 new product applications in just two years. This in comparison with an annual average number of 2500 new product registrations per annum under the MCC would mean a dramatic increase in competitor intensity in the private procurement system of the private pharma industry in SA (Keyter et al., 2021).

Research question two set out to establish whether NHI and centralised procurement is expected to impact the current competitive landscape in procurement of scheduled medicines in the private pharma industry in SA, and if so, how, and why. Thus, the researcher concludes that the potential impact of NHI on the competitive landscape in procurement of scheduled medicines appears to be significant. The available academic literature suggests that a centralised procurement system will bring increased access to scheduled medicines (Yang et al., 2022). Scholars are however divided in their opinion of whether a centralised procurement system and NHI will reduce the cost of scheduled medicine (Vogler et al., 2022).

Furthermore, it is concluded that a drastic power shift away from medical aids will increase the decision-making power of large vertically integrated corporate pharmacy groups (Logan, 2022). This mainly because government is expected to be in charge of procurement decision-making (Yang et al., 2022). Prescribing doctor power of influence is expected to diminish even further for molecules where generic equivalents are available of tender-formulary (Zhou et al., 2019).It is furthermore expected that profit margins for suppliers in the procurement system will be under severe pressure due to

prevalent low market prices as a result of the tender-based procurement system (Chebolu-Subramanian & Sundarraj, 2021). Finally, it is also concluded that in order to make an NHI system successful, a high degree of public-private partnerships will be necessary. It is suggested that existing private market pharmaceutical wholesaling, distribution and dispensing infrastructure will be contracted in to serve both public and private patients under NHI (Girdwood et al., 2019).

7.3 Theoretical contribution

The theoretical contribution of the research firstly relates to the impact of regulation on power dynamics between players in a global value chain (Dallas et al., 2019). The research has taken place in the context of the private pharmaceutical industry of SA which is a highly regulated environment (Fatti & du Toit, 2013), as such it forms a suitable domain in order to assess the implications of government policies that are intended for GVC upgrades with the intent of social, economic or environmental improvements (De Marchi & Alford, 2022). The findings of the research study provide insights into how players in the domestic part of the global pharmaceutical value chain compete for power to influence the specific type of brand that the patient receives at the point of dispensing. So doing the research reports adds to the insights in the specific arena (private pharma industry of SA) in which power dynamics between players in a GVC (Dallas et al., 2019).

Secondly, the research is also intended to support recent literature relating to the National Health Insurance in the private pharmaceutical industry of SA. In particular, to build on theory development in regard to what impacts NHI is expected to have across players in the procurement system of the private pharma industry in SA (Pauw, 2022).

7.4 Implications for managers and other relevant stakeholders

The findings of research document hold implications for the buyers, suppliers and intermediaries who are involved in the procurement system of the private pharma industry of SA. In this section, we will unpack the implications and recommendations for suppliers, wholesalers, pharmacies, prescribing doctors, medical aids and those members for form part of the government's NHI management committee.

Implications for Suppliers

The implications of the research for suppliers are that they can expect to face more competition on the short term due to a more efficient regulatory system in SAHPRA which is able to accelerate the processing of new product registrations (Keyter et al., 2022). Significant increased industry exposure to regulation over time (Horner, 2022) means that the collective bargaining power that medical aids (M'bouaffou et al., 2022) and corporate pharmacy (Moodley & Suleman, 2020) hold appears to tip the scale of power in their favour in terms of who decides what type of product the patient receives at the point of dispensing. Furthermore, the threat of NHI appears to be imminent (Katuu, 2018), and suppliers could face significant profit margin erosion when scheduled products are procured for the broader population under a tender based centralised procurement system (Chebolu-Subramanian & Sundarraj, 2021).

Managers of pharmaceutical companies need to plot a specific strategy that can either cope with the margin pressure that is anticipated, or suppliers need to ensure that they research and develop niche differentiator products that can sell through specialist doctors who prescribe new molecules that are independent from the commoditised, commercialised, and genericised market environment.

The findings suggest that managers should focus on bolstering their corporate pharmacy key account management structure, while paying specific attention to ensuring that their products are covered by medical aid formularies through upskilling and reinforcing their market-access knowledge and capabilities. The implication of this plan is that more frequent price reductions may be necessary to remain on medical aid formularies which will gradually erode profit margins. Once an organisation makes the decision to pursue a high-volume strategy, they are cautioned against expanding the size of their sales teams because the cost of commercialisation in corporate pharmacy groups and adherence to medical aid formularies will potentially result in a zero-sum game of lower selling price and lower margins. According to the findings, the key revenue drivers in this case, are the medical aids and pharmacy groups.

Managers are furthermore urged to do a comprehensive analysis on what the future of their organisational design will look like in the context of NHI and centralised procurement. In addition, managers are urged to continuously refresh their analysis and

incorporate the findings of their analyses as part of their risk mitigation plans when they discuss expansion strategies.

Implications for Wholesalers

The findings suggest that corporate pharmacy groups have already vertically integrated backwards so that their chain of continuously expanding pharmacy network is serviced by their own pharmaceutical wholesaler (Barnard, 2019). As such recommendations for the management of corporate wholesalers is that they should strategically expand the geographical footprint of their pharmacies to outlying areas so that their size and distribution make them an attractive partner for the National Health Insurance scheme.

The findings suggest that wholesalers who are not part of large corporate pharmacy groups are faced with a pool of declining pharmacy customers that they can serve, as such, it is recommended that these pharmaceutical wholesalers look for ways to work with one another in unison with the standalone independent pharmacies that they serve. The reason for this recommendation is so that through a collaborative effort, they are able to improve their bargaining power to negotiate better collective terms commercial terms with suppliers, as well as make them an attractive partner for NHI.

Implications for Pharmacies

The findings suggest that pharmacies already play a crucial role in deciding what specific type of brand the patient receives at the point of dispensing. However, the formation of large corporate pharmacy groups now mean that pharmacists mostly serve as corporate employees who follow a head office directive as opposed to individual business owners in community pharmacies (Barnard, 2019). The implication of this is that pharmacists have potentially already relinquished a fair bit of their decision-making power of what specific brand the patient receives at the point of dispensing. Recommendations for pharmacy managers are that they look for ways to reclaim some of their power of influence through getting involved in corporate suppliers' negotiations with the intent to ensure that they maintain their relevance in a highly commoditised commercial environment.

Implications for prescribing doctors

The findings suggest that the power of prescribing doctors to influence the specific type of brand that gets dispensed to the patient is diminishing. This phenomenon appears to

mainly prevalent in the case where products are particularly heavily genericised with many available alternative brands of the same molecule (Zhou et al., 2019). Recommendations for prescribing doctors is that they can revisit their treatment regimens and look for potential newer molecules that are not genericised. This way the doctor will have full control of what a patient receives at the point of dispensing. Alternatively, prescribing doctors can embrace an environment where other players in the procurement system drive down the cost of medicine, and they can look for ways in which they can prescribe in accordance with medical aid formularies so that they too add to ensuring that their patients receive co-payment free scheduled medicine at the point of dispensing.

Implications for medical aids

The findings suggest that medical aids have the most power in terms of what specific brand the patient receives at the point of dispensing (M'bouaffou et al., 2022). The implications for medical aids are that they need to be aware of their superior powerful position as intermediary in the procurement system. The reason for this is because the findings suggest that this position of power may be irreversibly disrupted in the context of NHI and centralised procurement. Recommendations for managers of medical aids are that they need to reach out to the NHI government committees and offer their assistance to help develop the NHI administrative policies and frameworks. The intention of this to promote their administrative skills to the end of showing national government that they are willing and capable to serve as a private partner in advancing the SA government's objective of universal health coverage (UHC) for all South African.

Implications for NHI management committee (government)

The findings suggest that the implementation of government policy can potentially cause a shift in power dynamics between players in the domestic part of the global pharmaceutical value chain (De Marchi & Alford, 2022). It also suggests that although the state may have the best intentions to promote universal health coverage, the impact of their policy making could lead to the unintended economic benefit of some players in the procurement system (De Marchi & Alford, 2022). As such, the implication of the research is to create awareness that government must incorporate the views of all stakeholders that will be involved in NHI, and form a collective, and inclusive plan

alongside the private sector that lead toward shared goals that promotes increased access to affordable medicine for all South Africans (Friel et al., 2021).

7.5 Limitations of the research

- The generalisability is limited due to the relatively small sample size of the research.
- The research may be affected by biases of the researcher, this is due to the subjective nature of the qualitative research method.
- The transferability is limited to highly regulated industries such as pharmaceuticals.
- Credibility could not be established over a long period of time due to the cross-sectional timeline.
- The researcher was potentially prevented from gaining a complete understanding of the contexts under consideration, this is largely due to the free-flowing nature of the qualitative research method that was applied, and the fact that semi structured interviews were used. Information gathered was based on the memory recall of participants under time-constrained circumstances.
- The possibility exists that the participants responses may have been altered based on fear of judgement by the researcher, despite the researcher's best efforts to contain their emotions and expressions throughout the interview process.
- The researcher has not included the views of prescribing doctors on the competitive landscape in procurement of scheduled medicines in the private pharma industry of SA.
- The purposive sampling method used selected participants who fitted the criteria of business leaders in the procurement of scheduled medicines in the private pharma industry of SA. However, the size of the business was not set out as a criterion, as such, the findings could potentially be different if the size of the business in turnover was a specific criterion.

7.6 Recommendations for future research

The researcher suggests the following potential avenues for research in the future, based on the insights derived from this research report.

- A qualitative exploration into the perception of prescribing doctors in terms of the competitive landscape in procurement of scheduled medicine.
- A qualitative exploration into the perception of patients on which player in the procurement system dictates the specific type of product that they receive at the point of dispensing.
- A quantitative analysis of the impact on a basket of scheduled medicines because of increased new generic product registrations as due to of a more efficient South African Health Products Regulatory Authority.
- An exploratory qualitative study into what kind of business model innovation pharmaceutical suppliers is planning for in the context of NHI and centralised procurement.
- An up-to-date quantitative analysis of demand concentration in corporate pharmacy groups.

7.7 Conclusion

The competitive landscape in procurement of scheduled medicine in the private pharma industry in SA has changed significantly since 1994. The pharma industry has indeed seen a major increase in competition for power between buyers, suppliers, and intermediaries. Industry exposure to regulation from government (post-1994) that intends to improve access to affordable medicine primarily influenced where the power landed in the procurement system of the pvt pharma industry.

The findings of this research study strongly suggest that the medical aids currently wield majority power of influence in terms of what specific brand of scheduled medicine a patient receives at the point of dispensing. The study finds that in former years, the absence of major generic competition, and a more open market type system meant that expert power by prescribing doctors dominated the influence of what specific type of brand of scheduled medicine a patient received at the point of dispensing. The findings suggest that the establishment of large corporate pharmacy groups as a result of the open ownership rule in 2003, and the implementation of the pro-generics rule mean that the dispensing pharmacists and pharmacy assistants also currently wield significant power in terms of what specific brand a patient receives at the point of dispensing. Be that as it may, dispensers are still urged to comply with medical aid formularies, because

of the benefits of being part of the medical aids' designated service provider network of pharmacies.

The findings suggest that NHI and centralised procurement is expected to significantly impact the competitive landscape in procurement of scheduled medicines in the private pharma industry in SA. As such it is mostly anticipated that a tender type of procurement system will drive down the cost of medicine. However, it also means that supplier margins will drastically reduce, which may or may not have unintended consequences for the pharmaceutical industry of SA. Furthermore, it is anticipated that the power of influence will drastically shift away from medical aids, as the SA government (NHI) will be the sole procurement decisionmaker while public private partnerships between the government and large corporate pharmacy groups appear to be critical to the success of making NHI work.

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APPENDICES

APPENDIX 1 ETHICAL CLEARANCE APPROVAL GIBS

From: Masters Research <MastersResearch@gibs.co.za>
Date: 18 July 2022 at 11:16:17 SAST
To: 21752223@mygibs.co.za
Cc: Masters Research <MastersResearch@gibs.co.za>
Subject: Ethical Clearance Approved

Gordon Institute of Business Science
University of Pretoria

Ethical Clearance Approved

Dear Jacques Ackerman,

Please be advised that your application for Ethical Clearance has been approved.
You are therefore allowed to continue collecting your data.
We wish you everything of the best for the rest of the project.

Ethical Clearance Form

Kind Regards

APPENDIX 2 ETHICAL CLEARANCE APPROVAL UNIVERSITY OF PRETORIA

Faculty of Health Science: Ethics Application 470/2022 - Outcome: Approved Inbox ×

PSCSMPRA@up.ac.za via tuks.co.za
to u21752223, oosthuizenm, fhsethics

Thu, Oct 27, 1:35 PM (3 days ago)

Dear Mr JM Ackerman,

Please find attached the outcome of your Ethics Application submitted in the Faculty of Health Science. Please remember that all Approval Letters (if applicable) must be obtained before you may commence with your research.

FHS Research Ethics Committee

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One attachment • Scanned by Gmail

UP_ETH_FHS_I.pdf

Reply Reply all Forward

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Health Sciences

Institution: The Research Ethics Committee, Faculty Health Sciences, University of Pretoria complies with ICH-GCP guidelines and has US Federal wide Assurance.

- FWA 00002567, Approved dd 18 March 2022 and Expires 18 March 2027.
- IORG #: IORG0001762 OMB No. 0990-0278 Approved for use through August 31, 2023.

Faculty of Health Sciences **Research Ethics Committee**

27 October 2022

Approval Certificate
New Application

Dear Mr JM Ackerman

Ethics Reference No.: 470/2022
Title: The changing competitive landscape in procurement of scheduled medicines in the private pharmaceutical industry of South Africa

The **New Application** as supported by documents received between 2022-08-15 and 2022-10-25 for your research, was approved by the Faculty of Health Sciences Research Ethics Committee on 2022-10-25 as resolved by its quorate meeting.

APPENDIX 3 INFORMED CONSENT LETTER GIBS

Gordon Institute of Business Science
University of Pretoria

Dear Sir/madam,

I am currently a student at the University of Pretoria's Gordon Institute of Business Science and completing my research in partial fulfilment of an MBA.

I am conducting research on the changing competitive landscape in procurement of scheduled medicines in the private pharmaceutical industry of South Africa. Our interview is expected to last about an hour and will help us to understand how the competitive landscape in the procurement of scheduled medicines in the private pharmaceutical industry is changing. Your participation is voluntary, and you can withdraw at any time without penalty. All data will be reported without identifiers. If you have any concerns, please contact my supervisor or me. Our details are provided below.

Researcher:

Name and surname: Jacques Ackerman

Email: 21752223@mygibs.co.za

Cell: 0829751117

Supervisor:

Name and surname: Dr Marius Oosthuizen

Email: oosthuizenm@gibs.co.za

Signature of participant: _____

Date: _____

Signature of researcher: _____

Date: _____

APPENDIX 4 INFORMED CONSENT LETTER UNIVERSITY OF PRETORIA

ICD 1A

PARTICIPANT'S INFORMATION & INFORMED

CONSENT DOCUMENT

STUDY TITLE:

The changing competitive landscape in procurement of scheduled medicines in the private pharmaceutical industry of South Africa.

STUDY DESCRIPTION:

This research study relates to the private pharmaceutical industry in South Africa and the competitive landscape in procurement for scheduled medicines therein. The study will entail an exploratory research analysis of the industry's competitive landscape and supply chain. The participant will be requested to have an interview with the researcher (no longer than 60 minutes), requesting them to provide insights from their perspective on the competitive dynamics across the supply chain of the private pharmaceutical industry in SA. The research questions will cover relevant parts of the supply chain from the supplier to distributor, wholesaler, and pharmacy. The participant will not be asked to for any other administrative tasks other than answering the researcher questions about their views about the pharma industry. The researcher will not ask any personal questions to the participant and will endeavor to ensure that the participant is always comfortable.

Supervisor: Dr Marius Oosthuizen

Email: oosthuizenm@gibs.co.za

Cell: 084 670 1723

Principal Investigators: Jacques Ackerman

Email: 21752223@mygibs.co.za

Cell: 082 975 1117

Institution: University of Pretoria's Gordon Institute of Business Science

DAYTIME AND AFTER HOURS TELEPHONE NUMBER(S):

Daytime number/s: 082 975 1117 / 084 670 1723

Afterhours number: 082 975 1117 / 084 670 1723

DATE AND TIME OF FIRST INFORMED CONSENT DISCUSSION:

				:
Date	**month**	**year**		**Time**

Dear Prospective Participant

Dear Mr. / Mrs. .....

1) INTRODUCTION

I am a final year Master of Business Administration student in the field of Business Administration in the Department: Gordon Institute of Business Science, University of Pretoria. You are invited to volunteer to participate in our research project on the changing competitive landscape in procurement of scheduled medicines in the private pharmaceutical industry of South Africa.

This letter gives information to help you decide if you want to take part in this study. Before you agree, you should fully understand what is involved. If you do not understand the information or have any other questions, do not hesitate to ask us. You should not agree to take part unless you are completely happy about what we expect of you.

2) THE NATURE AND PURPOSE OF THIS STUDY

The purpose of the study is to analyse the changing competitive landscape in procurement of scheduled medicines in the private pharmaceutical industry of South Africa. This research project aims to explore a deeper understanding of the environment of the roles and responsibilities of various role players in the private pharmaceutical industry of South Africa. Furthermore, the purpose of the research will be to potentially inform on business practices of role actors in the pharmaceutical industry about what the implications could be for their organisational position in the context of NHI. The researcher proposes that more investigation is required on account of how the role actors in the private pharma industry of SA operate interdependently. After the proposed number of interviews, the researcher plans to do a thematic analysis of the data and then write an anonymous research report on the aggregated data to inform a deeper understanding of the private pharmaceutical industry. Each participant will only be interviewed once, and then will not be contacted afterwards by the researcher.

4) POSSIBLE RISKS AND DISCOMFORTS INVOLVED

There are no medical or physical risks associated with the participant's participation in the study. However, possible risks for the participant associated with the study are:

1. Time consumption of the participant for the time of the interview. The researcher will mitigate this risk by ensuring that the interview remain within the requested time frame (1 hour).

2. Confidentiality: The researcher will use pseudonyms (names different to the participants' real names) to ensure participant anonymity. The report will also be in an aggregated format to ensure that patient confidentiality is adhered to. Furthermore, data will also be saved without identifiers so that responds cannot be identified.

3. Reputational risk has been considered; however, the researcher is taking all the necessary confidentiality precautions. Therefore, no reputational risk exists for the participant or its organisation. The researcher will conduct its research across a wide range of organisations, as such risk for job security is none.

4. The researcher has considered whether there is risk for discomfort, however, the researcher will reiterate to the participant that their participation is voluntary, and if they are uncomfortable about any question they do not have to answer. The researcher has once again reviewed their proposed interview questions and do not foresee any discomfort for the participants in the study. The proposed questions are not intrusive or of a personal nature and is strictly aimed towards exploring the participant's views on the pharmaceutical industry.

5) POSSIBLE BENEFITS OF THIS STUDY

Although you may not benefit directly. The study results may help us to improve our understanding of the changing competitive landscape in procurement of scheduled medicines in the private pharmaceutical industry of South Africa. From a business perspective, the study aims to possibly inform the various role players in the procurement ecosystem of potential consequences for their organizations in the context of centralised procurement and national health insurance (NHI).

6) COMPENSATION

You will not be paid to take part in the study. There are no costs involved for you to be part of the study.

7) YOUR RIGHTS AS A RESEARCH PARTICIPANT

Your participation in this study is entirely voluntary and you can refuse to participate or stop at any time without stating any reason.

8) ETHICS APPROVAL

This Protocol was submitted to the Faculty of Health Sciences Research Ethics Committee, University of Pretoria, telephone numbers 012 356 3084 / 012 356 3085 and written approval has been granted by that committee.

9) INFORMATION

If I have any questions concerning this study, I should contact:

Researcher:

Name and surname: Jacques Ackerman

Email: 21752223@mygibs.co.za

Cell: 0829751117

Supervisor:

Name and surname: Dr Marius Oosthuizen

Email: oosthuizenm@gibs.co.za

Cell: 084 670 1723

10) CONFIDENTIALITY

We would like you to conduct an interview with us. The interview may take about an hour. All information obtained during the course of this study will be regarded as confidential. Each participant that is taking part will be provided with an pseudonym (a name that is different from the participant's real name). This will ensure confidentiality of information so collected. Only the researcher will be able to identify you as participant. Results will be published or presented in such a fashion that participants remain unidentifiable. The hard copies of all your records will be kept in a locked facility at The University of Pretoria' s Gordon Institute of Business Science.

11) CONSENT TO PARTICIPATE IN THIS STUDY

- I have also received, read and understood the above written information about the study.
- I have had adequate time to ask questions and I have no objections to participate in this study.
- I am aware that the information obtained in the study, including personal details, will be anonymously processed and presented in the reporting of results.
- I understand that I will not be penalised in any way should I wish to discontinue with the study and that withdrawal will not affect my further treatments.
- I am participating willingly.
- I have received a signed copy of this informed consent agreement.

_____ _____

Participant's name (Please print) Date

_____ _____

Participant's signature Date

_____ _____

Researcher's name (Please print) Date

_____ _____

Researcher's signature Date

Signature of the Witness

Date

APPENDIX 5 INTERVIEW QUESTIONNAIRE

1) In your view: what major changes in the private pharma industry landscape has taken place after 1994?

2) Do you believe centralised procurement in the context of NHI would impact the private pharma industry in SA?

3) If yes, why?

4) How do you believe the private pharma industry landscape would change in the context of centralised procurement and NHI?

5) How would you describe the current competitive dynamics of the procurement ecosystem of the private pharma industry in SA?

6) How have the competitive dynamics of the procurement ecosystem of the private pharma industry in SA evolved since 1994?

7) What would you characterise as the most pertinent changes to the industry landscape?

8) In your view, within the current industry dynamics, which role player in the private pharma industry dictates the specific type of product that the patient receives at the point of dispensing?

9) How has this changed since 1994?

10) Which role player in the private pharma industry dictates the specific type of product that the patient receives at the point of dispensing, In the context of centralised procurement and NHI.

11) How would this power change in the context of centralised procurement and NHI?

12) Describe the key characteristics of your current business model.

13) How have you innovated or observed business model innovation in your organisation since 1994?

14) Do you believe centralised procurement and NHI would have an impact on your organisation?

15) If yes, how, and why?

16) Do you believe centralised procurement and NHI would have an impact on your current business model?

17) If yes, how?

18) Do you believe centralised procurement and NHI would create urgency towards business model innovation for your organisation?

19) If yes, why?

20) What major characteristics of your current business model, would require innovation in the context of centralised procurement and NHI

APPENDIX 6 LIST OF CODES FOR DATA ANALYSIS

Name
1994 to 2004_attempt by multinationals to create a closed supply network
1994 to 2004_doctors and pharmacists directed dispensing decisions
1994 to 2004_dominance of multinational manufactured goods
1994 to 2004_introduction of medical scheme structures
1994 to 2004_introduction of the Medical Aids Act
1994 to 2004_period of high margin gains for manufacturers
1994 to 2004_pricing exploited
Balance of power_dominant players have remained dominant
Balance of power_large hospital groups influence with own formularies creating competition in the market
Buyer gains since 94_increased affordability and access
Categories of medical aid cover_fourth tier addresses preventative interventions but only offered by some schemes
Categories of medical aid cover_primary care
Categories of medical aid cover_secondary benefits
Categories of medical aid cover_tertiary benefit as hospitalisation
Challenges anticipated with NHI downstream_complexity and restrictions in managing product range
Challenges anticipated with NHI downstream_complexity of managing dispensing processes for private vs public users at a singular dispensing point
Challenges anticipated with NHI downstream_complexity of managing private vs public pricing structures at a singular dispensing point
Challenges anticipated with NHI downstream_convincing patients that government health facilities will be adequate
Challenges anticipated with NHI downstream_employ of private sector outlets to dispense may have opposite effect of decentralising
Challenges anticipated with NHI downstream_ensuring upgrade of existing distribution players for adequate controls and processes
Challenges anticipated with NHI downstream_high risk of a lot of diseases and illnesses being overlooked for treatment support
Challenges anticipated with NHI downstream_how a centralised system might operate to meet blueprint of varied demand profiles
Challenges anticipated with NHI downstream_how a centralised system might operate to meet varied needs of satellite depots and hospitals
Challenges anticipated with NHI downstream_large segment of population does not have capabilities to support accuracies required for a centralised system
Challenges anticipated with NHI downstream_protecting patients and ensuring benefits are prioritised over cheap alternatives
Challenges anticipated with NHI downstream_restriction of choice for doctors and patients
Challenges anticipated with NHI upstream_centralised tender process may throttle participation restricting access to critical drugs

Challenges anticipated with NHI upstream_manufacturers need to gear up financial muscle for expected character of govt credit terms
Challenges anticipated with NHI_centralised tender processes likely to delay introduction of new innovative drugs
Challenges anticipated with NHI_change in business risk profile for private upstream and downstream players
Challenges anticipated with NHI_development discussions must be held with stakeholders who dont understand pharma industry dynamics
Challenges anticipated with NHI_risk of corrupt practises distorting procurement processes
Challenges anticipated with NHI_set to be a unique system with no precedence to guide modelling
Challenges anticipated with NHI_system proven in other countries to have inefficiencies
Challenges in current procurement ecosystem downstream_honerous processes for docotors to access choice products is diluting power to influence choice
Challenges in current procurement ecosystem downstream_hospitals reluctant to hold expensive products stifling demand
Challenges in current procurement ecosystem downstream_loss of medical personnel to global opportunities
Challenges in current procurement ecosystem downstream_viability of small medical aids destroyed by covid expenses
Challenges in current procurement ecosystem upstream_complexity of conflicting pricing regimes along the value chain erodes value
Challenges in current procurement ecosystem upstream_cost of materials and processes have increased faster than rate of SEP increases
Challenges in current procurement ecosystem upstream_manufacturer firms being impacted by delays in reimbursements
Challenges in current procurement ecosystem upstream_manufacturer firms excluded from state basket for central procurement often collapse
Challenges in current procurement ecosystem upstream_manufacturer firms must court powerful funders to access market support for products
Challenges in current procurement ecosystem upstream_pressure to retain business can result in retaining unprofitable services to maintain a basket of offerings to clients
Challenges in current procurement ecosystem upstream_pricing regime makes SA unattractive for launch of new innovations vs international benchmarks
Challenges in current procurement ecosystem upstream_pricing structure has disincentivised innovation
Challenges in current procurement ecosystem upstream_SA govt expects products to be cheaper for public sector impacting returns for big pharma
Challenges in current procurement ecosystem_competition intensity creates a barrier for new entrants into SA pharma
Challenges in current procurement ecosystem_cost of importing equipment is high due to fragmented demand
Challenges in current procurement ecosystem_destabilsation of industry dynamics by corporate pharma
Challenges in current procurement ecosystem_dominant players creating unfair trading conditions
Challenges in current procurement ecosystem_gaps in medical aid regulation create an uneven playing field for players

Challenges in current procurement ecosystem_generic manufacturers have kept prices of generics quite high
Challenges in current procurement ecosystem_generic substitution is mandatory by law favoring performance of generic suppliers
Challenges in current procurement ecosystem_government control over pricing leaves firms vulnerable to negative changes in market environment
Challenges in current procurement ecosystem_independent pharmacies being squeezed out due to low buying power
Challenges in current procurement ecosystem_inefficiencies of regulator & regulation processes create prohibitive barriers for new entrants into SA pharma
Challenges in current procurement ecosystem_innovators specifically seeking to reduce pricing
Challenges in current procurement ecosystem_intensifying competition eroding pricing
Challenges in current procurement ecosystem_intensifying competition rapidly erodes differentiation advantages
Challenges in current procurement ecosystem_intensifying opportunitic participation trivialising and fragmenting value chain
Challenges in current procurement ecosystem_medical aids primarily compete on price
Challenges in current procurement ecosystem_one medical aid firm has become dominant with monopoly influences
Challenges in current procurement ecosystem_price has become more important than quality
Challenges in current procurement ecosystem_profiteering by corporate pharmacies
Challenges in current procurement ecosystem_rapid commodotisation of products
Challenges in current procurement ecosystem_SA market only significant to local manufacturers of generics
Challenges in current procurement ecosystem_SA market regarded as small scale in significance by multinationals
Challenges in current procurement ecosystem_therapeutic substitution is intensifying competition
Challenges in current procurement ecosystem_violation of Act aspirations for availability and accessibility
Challenges in current procurement ecosystem_wide variation in perspective and approach to participation
Challenges with current business processes downstream_chronic inefficiencies in government facilities and processes
Challenges with current business processes_lack of risk equalizing controls instigates exaggerated increases in medical inflation
Challenges with current business processes_still a limited base of local manufacturing for generics
Challenges with current business processes_weak R&D base
Challenges with current procurement ecosystem_government is chronically under resourced affecting delivery of its oversite mandate
Changes since 94 _advent of digital & social media has changed communication and information flow
Changes since 94 _good output attained in managing HIV through state facilities
Changes since 94 upstream_introduction of single exit pricing legislation
Changes since 94_ power to influence patients has transferred from doctors to medical aids as funders
Changes since 94_Act 101
Changes since 94_commoditisation of common formulae

Changes since 94_consolidations along value chain leading to small footprint of players
Changes since 94_Declining economic conditions and uncertainty driving conservative behaviours
Changes since 94_division of SA consumer market based on access to wealth and ability to afford
Changes since 94_emergence of formularies
Changes since 94_emigration by citizens has resulted in lost income
Changes since 94_ethical laws
Changes since 94_free trade market evolved to FMCG approach
Changes since 94_increase in new entrants intensifying competition
Changes since 94_increased affordability and accessibility
Changes since 94_increased cost of doctors, specialists and hospitals
Changes since 94_innovative firms must work harder to demonstrate product value to doctors and patients
Changes since 94_introduction of the dispensing fee cap
Changes since 94_legislation passed permiting ownership of private pharmacies
Changes since 94_margin erosion caused downsizing & restructuring of firms
Changes since 94_more communicable diseases have increased and dominate government attentions
Changes since 94_more restrictions to trade stimulating behaviours
Changes since 94_not much change in fundamental industry operating model for distribution of medicines
Changes since 94_patients more informed with easier access to health and treatment information
Changes since 94_price erosion
Changes since 94_significant changes to pharmacy and wholesaler business models
Changes since 94_value chain has become highly transactional and contract heavy
Character of centralized procurement_accuracy of inputs is critical to success
Character of centralized procurement_acute treatment process must have scope to deliver on demand
Character of centralized procurement_allows for certain standards to be set and maintained
Character of centralized procurement_allows for certain uniformity in access for beneficiaries
Character of centralized procurement_buyers determine what is accessible to patients
Character of centralized procurement_buying typically based on formulary
Character of centralized procurement_chronic support system is easier to administer
Character of centralized procurement_determined by nature of demand
Character of centralized procurement_has centralized buyers at a regional or national scale
Character of centralized procurement_highly sophisticated with multiple complex considerations
Character of centralized procurement_managing end to end inputs and outputs
Character of centralized procurement_manifests as localized vertical integration
Character of centralized procurement_must be well supported by digitalised systems and processes
Character of centralized procurement_simplifies processes when well founded on value optimising principles
Character of NHI system_different business model from private sector
Character of NHI system_doctors are employed by the state
Character of NHI system_goverment led
Character of NHI system_government is the primary buyer

Character of NHI system_operates on a unique pricing model
Character of NHI system_patient access driven by prescribed benefits and molecules
Complexity of sector_characterised by a dynamic regulatory framework
Current approach by medical schemes_establish networks of primary partner professionals and facilities to save costs
Current approach by patients_Low income patients rely on state and have no scope to exercise choice
Current approach by patients_make choices aligned with medical aid recommendations to avoid extra costs
Current approach by patients_senior citizens unable to exercise power of choice
Current approach by patients_wealthier patients able to exercise more choice
Current approach by pharmacies_choice of what is purchased now controlled by medical aid directives
Current approach by pharmacies_exercises opportunities to offer cash patients product options that help optimise margin capture
Current approach by pharmacies_SA pharmacies employ FMCG type approach
Current approach by pharmacies_selective in purchasing
Current approach by pharmacies_selective in what they offer patients
Current approach by pharmacies_tend to be larger format in store size
Current approach in anticipation of NHI_medical schemes are innovating to decentralise primary care diagnosis and treatment services
Current approach in centralized procurement_state determines supply standards and scope of coverage for needs
Current approach in procurement ecosystem_hospitals negotiate preferential rates with suppliers to gain margin off scheme rates
Current business process by medical scheme_ business model is broken into focus units with cost management as a core focus stream
Current business process by medical scheme_ risk management is a significant focus to secure and protect funds
Current business process of medical schemes_third functional focus is sales drive to identify and recruit members
Current business process_autonomous business units have own end to end facilities and processes
Current business process_each medical scheme must independently negotiate supply and procedure agreements with providers
Current business process_firms differentiationg by designing environmentally and socially consciousness processes
Current business process_medical schemes being forced to consolidate as some struggle to survive regulated conditions
Current business process_medical schemes classified as financial services companies and also regulated by fin services board
Current business process_medical schemes guided by Medical Aids Act founded on social health principles
Current business process_medical schemes must provide minimum cover for chronic diseases as guided by legislation
Current business process_medical schemes provide cover for additional list of non life threatening chronic diseases

Current business process_use of different pricing for state versus government tenders
Current business processes downstream_doctors and patients more influential in directing demand for products
Current business processes downstream_doctors are influential in directing demand for products
Current business processes downstream_emergence of OTC demand in rural pharmacies to counter inefficiencies in government facilities
Current business processes downstream_firms already embedding a culture of constant and rapid change
Current business processes downstream_firms have fragmented the value chain with internal and outsourced interfaces
Current business processes downstream_firms structured into autonmous business units
Current business processes downstream_government already has reliable supply processes for a large basket into private pharmacies
Current business processes downstream_ongoing focus to streamline product range accessible to consumers
Current business processes downstream_pharmacists are influential over vitamin choices
Current business processes downstream_private sector procurement creates scope for more suppliers to offer different product choices
Current business processes downstream_provinces currently operate independent budgets and have different needs
Current business processes downstream_specialist doctors rely on absolute efficacy so not supportive of generics
Current business processes downstream_tenders typically limit scope of product choices
Current business processes in medical schemes_requires extensive employ of technology to be viable
Current business processes of medical schemes_secondary focus is admin of enrolling members and monitoring claims
Current business processes upstream_advanced data sourcing and mining to inform innovation and go to market
Current business processes upstream_brand development focus yields price advantages
Current business processes upstream_defined by multilayered distribution structure
Current business processes upstream_extensive investment in product innovation
Current business processes upstream_firms innovating products operate in cross functional brand team units
Current business processes upstream_firms producing innovative products compete differently from players in generics
Current business processes upstream_firms using other strategies to incentivise sales e.g. rewards and deals
Current business processes upstream_health practitioners starting to innovate lower cost service packages
Current business processes upstream_innovation requires investment into the right human capabilities
Current business processes upstream_multinational firms producing offshore and distributing locally
Current business processes upstream_multinationals driven by global corporate strategic direction
Current business processes upstream_OTC segment creating opportunity for product innovation

Current business processes upstream_products must compete on scientific merit without influence from price
Current business processes upstream_SA regulation does not permit charging of logistics or other supply fees
Current business processes upstream_successful product innovation requires equal regard of stakeholder contributions from different functions
Current business processes upstream_under pressure to make innovative use of communication tools to impact clients
Current business processes_big retailers & wholesalers driving formularies
Current business processes_corporate events encourage interaction and perspective sharing among industry players
Current business processes_employ of technology to drive differentiation
Current business processes_evolving from employ of resources to funding models
Current business processes_firms selling baskets of products
Current business processes_focus on molecule and entity acquistions
Current business processes_innovation focused firms strive for differentiation and niche opportunities
Current business processes_multinationals have positioned themselves to have multiple interfaces along value chain
Current business processes_ongoing focus to streamline processes and resources
Current business processes_some multinational operations in SA primarily focussed on marketing and sales
Current business processes_strong brand equity building through OTC
Current downstream business processes_evolving quest for efficiencies and expedience
Current downstream business processes_influenced in design by international benchmarks
Current downstream business processes_more shelf space for reduced range
Current downstream business processes_simplification for pharmacists
Current power dynamics in ecosystem_access to information has made patients more powerful in influencing demand
Current power dynamics in ecosystem_big retailers & wholesalers wield influence through buying power
Current power dynamics in ecosystem_business models driven by commercial principles & governance
Current power dynamics in ecosystem_corporate pharma integrating vertically with own brands
Current power dynamics in ecosystem_doctors have lost power as prescribers due to medical aid funding models
Current power dynamics in ecosystem_dominance by corporate pharmacy
Current power dynamics in ecosystem_government as buyer and funder wields influence over government dependent consumers
Current power dynamics in ecosystem_government pronounces annual price adjustments for its procurement
Current power dynamics in ecosystem_growing influence of funders
Current power dynamics in ecosystem_growing influence of medical aids as large scale buyers
Current power dynamics in ecosystem_growing influence of medical aids over innovative products as funders
Current power dynamics in ecosystem_growing influence of medical aids over what doctors can prescribe

Current power dynamics in ecosystem_growing influence of pharmacists as specialist advisers to patients
Current power dynamics in ecosystem_influence of DOH guidelines and processes
Current power dynamics in ecosystem_legislative stance on generics extends some power to pharmacists
Current power dynamics in ecosystem_legislative stance on generics has altered the market landscape
Current power dynamics in ecosystem_medical aids have positioned themselves to play multiple roles along value chain
Current power dynamics in ecosystem_medical aids with own formularies determine product supply options
Current power dynamics in ecosystem_new diseases are influenced by bioequivalence and prescribers
Current power dynamics in ecosystem_operates as a pendulum across players
Current power dynamics in ecosystem_ownership of formularies spread along value chain
Current power dynamics in ecosystem_patients disempowered to exercise choice
Current power dynamics in ecosystem_retailers as gatekeepers
Current power dynamics in ecosystem_single exit pricing has neutralised price based competitive behaviours
Current power dynamics in ecosystem_some medical aids negotiate service rates specialist doctors
Current power dynamics in ecosystem_some opportunities for pharmacists to influence as specialist advisers to patients
Current power dynamics in ecosystem_specialist doctors free to charge choice rates for services
Current power dynamics in ecosystem_specialist doctors powerful in directing patient choice but not GPs
Current power dynamics in ecosystem_suppliers still influential over pharmacy stock options and choices
Current power dynamics in ecosystem_ultimately demand dynamics serve to rebalance power skews
Current power dynamics in ecosystem_unique products lead in their categories
Current power dynamics in ecosystem_varies by therapeutic class and ailment
Current power dynamics_larger medical schemes able to contract on better terms making them more viable than smaller schemes
Current realities of the sector_a lot of diseases and medical conditions are going untreated
Current realities of the sector_administrators of medical schemes are private entities paid a fee for services
Current realities of the sector_influence of firms quest for remuneration has shaped the current industry
Current realities of the sector_large distortion in per capita investment in healthcare between private and public patients
Current realities of the sector_large portion of citizens fully dependent on state facilities for healthcare
Current realities of the sector_long standing fragmented relations set to influence partnership options
Current realities of the sector_medical schemes are not private entities they are large savings schemse that belong to the members

Current realities of the sector_opportunity to proactively extend access and reduce costs of old patent drugs
Current realities of the sector_private patient market size has been stangnent in recent years
Current realities of the sector_SA health specialists still regarded as well skilled and respected internationally
Current realities of the sector_SEP fundamentals applied have not worked well for the industry
Current realities of the sector_some old drugs still enjoy niche status in SA but generic elsewhere
Duration of respondent exposure in pharama
Emerging concerns_ethical senstitivities emerging linked to delayed/denied access to innovative drugs for SA consumers
Emerging concerns_patients unable to afford access to innovative new drugs that funders will not fund.
Emerging concerns_potential competition commission case over large retailer entry into own brand generics
Emerging trends in sector ahead of NHI_big retailers & wholesalers forming strategic upstream licensing partnerships for generic molecules & services
Emerging trends in sector ahead of NHI_big retailers & wholesalers likely to become more powerful with influence of supply of generics
Emerging trends in sector ahead of NHI_Big retailers posed to introduce own brand generics
Emerging trends in sector ahead of NHI_expansion of scope to train medical personnel through partnerships with external universities
Emerging trends in sector ahead of NHI_focus on employ of technology to enhance business processes and customer responsiveness
Emerging trends in sector ahead of NHI_introduction of new Twin Peaks regulation set to classify med schemes as fully fin services
Emerging trends in sector ahead of NHI_questioning of established pharma business practises
Emerging trends in sector ahead of NHI_stronger focus on business bottomline of capturing revenue
Expected implications of NHI downstream_all players to fall under the dictates of state over product choice
Expected implications of NHI downstream_chronic treatment programs to be administered by the state
Expected implications of NHI downstream_currently insured expected to remain as a different tier of participants
Expected implications of NHI downstream_draw in participation from currently uninsured but employed citizens
Expected implications of NHI downstream_expanded global search for supplies to meet procurement needs
Expected implications of NHI downstream_pharmacies to fall under dictates of permitted payment structures
Expected implications of NHI downstream_pharmacise to be paid a service fee for dispensing
Expected implications of NHI downstream_private pharmacies to be mandated to service public clients
Expected implications of NHI on procurement ecosystem_central purchasing will require skilled and informed negotiators
Expected implications of NHI on procurement ecosystem_likely to cause an increase in number of medical personnel required

Expected implications of NHI on procurement ecosystem_likely to draw existing distribution players into a supply chain network to extend access to clients
Expected implications of NHI on procurement ecosystem_public sector will require more skilled personnel to design and execute support structures
Expected implications of NHI on procurement ecosystem_suppliers will require more skilled sales advisory processes and personnel
Expected implications of NHI on procurement ecosystem_transfer of power from all other players to government
Expected implications of NHI on procurement ecosystem_transfer of power from medical aids to government
Expected implications of NHI upstream_more automation to drive efficiencies
Expected implications of NHI upstream_procurement will remain with some existing players but processes and procedures likely to change
Expected implications of NHI_business models to consist of a basket of offerings
Expected implications of NHI_centralised system
Expected implications of NHI_design of critical component elements to be shaped through debate
Expected implications of NHI_employ of centralised tendering processes already in place
Expected implications of NHI_few specialised supplier streams set to remain independent
Expected implications of NHI_government to provide the administrative framework
Expected implications of NHI_healthcare service providers must register as suppliers to NHI
Expected implications of NHI_impose an urgency to innovate business models
Expected implications of NHI_increase in private public partnerships
Expected implications of NHI_increase in private sector player partnerships
Expected implications of NHI_increased power in big retailers to influence the chain
Expected implications of NHI_industry participants expected to carry all essential molecules
Expected implications of NHI_intense focus on expanding dispensing points
Expected implications of NHI_introduction of government formularies
Expected implications of NHI_large portion of citizens will be fully dependent on state support
Expected implications of NHI_legislated expectation for one-stop shop experience for patients
Expected implications of NHI_legislated stance on generics set to instigate a level of volatility
Expected implications of NHI_new entrants to expand geographic reach of dispensing
Expected implications of NHI_pharma companies may need to gear up to finance government
Expected implications of NHI_price based business model set to dominate
Expected implications of NHI_primary healthcare medicine to shift to being public sector based
Expected implications of NHI_private firms in primary healthcare to lose this income base
Expected implications of NHI_public sector patients seeking services through private sector outlets and vice versa
Expected implications of NHI_requires a centralised healthcare tender process to be shaped
Expected implications of NHI_set to drive down prices and contain inflationary effect in healthcare services
Expected implications of NHI_set to throttle various forms of innovation to drive sales along value chain
Expected implications of NHI_shift of chain from value driven to volume driven
Expected implications of NHI_some players with scope to play multiple roles in the value chain
Expected implications of NHI_stratified base of users

Expected implications of NHI_to primarily impact primary healthcare which is 80% of market consumption
Expected implications of NHI_wholesalers to play a key logistical role in the value chain
Future growth opportunities_expanding healthcare services to include home based care
Future growth opportunities_high volume demand will enable access to product that is off patent with international firms
Government approach_must navigate impact of uncertainty in macro environment
Government approach_phased preparation process with milestone timelines
Impact of NHI in SA environment_an intervention set to bring about increased access to medical care for underserved segments
Impact of NHI in SA environment_an intervention set to bring about necessary harmonisation of access to medical care for citizens
Impact of NHI in SA environment_net effect will be an expansion of pharma industry value and operations in SA
Impact of NHI in SA environment_net effect will be increase in patient contact for all practioners (benefit to skills)
Impact of NHI on procurement ecosystem _government to take over pooling of medical aid contributions into a central national fund
Impact of NHI on procurement ecosystem _likely to drive prices of medical services downwards
Impact of NHI on procurement ecosystem _likely to instigate significant restructuring of the sector
Impact of NHI on procurement ecosystem _reduced scope for private sector participation
Impact of NHI on procurement ecosystem _scale of operations required may render smaller players unattractive for required network partnerships
Impact of NHI on procurement ecosystem _set to change how customers are reached
Impact of NHI on procurement ecosystem _set to expand role of digital solutions & communications along value chain
Impact of NHI on procurement ecosystem _set to increase volume demand through widened distribution scope
Impact of NHI on procurement ecosystem _set to make products cheaper due to economies of expanded scale
Impact of NHI on procurement ecosystem _set to motivate introduction of new technologies
Impact of NHI on procurement ecosystem _system proven in other countries to be viable and create new opportunities
Impact of NHI on procurement ecosystem as efficient service_must contend with extensive fragmentation
Impact of NHI on procurement ecosystem as efficient service_must contend with wide diversity in medical needs
Impact of NHI on procurement ecosystem as efficient service_set to evolve into a centralised system
Impact of NHI on procurement ecosystem as efficient service_will need to be regionally or geographically fragmented
Impact of NHI on procurement ecosystem as revenue driver_centralizing of income and revenue streams by players
Impact of NHI on procurement ecosystem downstream _reduced relevance of medical aids
Impact of NHI on procurement ecosystem_closer alignment private and public tender pricing
Impact of NHI on procurement ecosystem_consolidation of players into one system of procurement
Impact of NHI on procurement ecosystem_highly competitive pricing environment

Impact of NHI on procurement ecosystem_needs to be looked at as two streams of service efficiencies vs revenue generating
Impact of NHI on procurement ecosystem_players motivated to frame new business models
Impact of NHI on procurement ecosystem_power to transition to value chain players with sufficient financial footing to broker international supply deals
Impact of NHI on procurement ecosystem_reprofiling of human capital requirements along the value chain
Impact of NHI on suppliers_dilution of human resource requirements
Impact of NHI on suppliers_predominance of tender driven procurement processes
Impact of NHI on suppliers_restructuring of pharma firms
Industry players current stance towards NHI_a positive step pregnant with opportunity
Industry players current stance towards NHI_a source of much uncertainty
Industry players current stance towards NHI_an essential intervention to address a volatile situation
Industry players current stance towards NHI_an unstable national health system is one of a basket of insitagors proven cause a revolution
Industry players current stance towards NHI_buy into the concept
Industry players current stance towards NHI_cannot be designed as per European model as SA funding capacities are different
Industry players current stance towards NHI_cannot be designed as per European model as SA patient insights and exposures are very different
Industry players current stance towards NHI_cannot be designed as per European model as SA patient needs are very different
Industry players current stance towards NHI_companies already evolving spured by covid
Industry players current stance towards NHI_conducting scenario plans
Industry players current stance towards NHI_have not really thought about it
Industry players current stance towards NHI_legal challenge being prepared to determine scope of NHI influence over individual choice
Industry players current stance towards NHI_reality of livelihoods to be protected in and by the sector raises imperative that NHI must be successful
Industry players current stance towards NHI_some multinationals feel confident of inhand institutional knowledge they can leverage to navigate NHI changes
Interventions being planned to counter NHI inefficiencies_innovative insurance plans for offshore hospital care
Interventions being planned to counter NHI inefficiencies_investment into large hospitals offshore
Post 94_access to technology has remained limited
Post 94_procurement ecosystem characterised by a lot more transparency
Post 94_procurement ecosystem characterised by a predominance of imported supplies
Post 94_quality of public healthcare has declined
Post 94_stance on product quality assurance has declined
Post 2004_intensified government attentions to protect patients by regulating the pharma value chain
Post 2004_intensified government attentions to to change market mindsets and practises
Post 2004_intensified price competition
Post 2004_severe price decrease
Post 2004_significant growth in power held by medical aids
Post 2004_stagnation of pricing for pharma

Pre-94_funders were smaller and not as influential
Pre-94_limited participation of SA firms
Pre-94_local firms had competence to build and repair some of the required healthcare machinery
Pre-94_market more open for multiple competitors to participate
Pre-94_market was small and confined due to sanctions with limited multinationals
Pre-94_medical aids were not so controlling and prescriptive over patient expenses
Pre-94_quality of SA public health infrastructure was exceptionally good
Predictions of significant market trends_resurgence of the GP as an influential guide for patients in the treatment journey
Predictions of significant market trends_rise of Chat based interaction to be significant in healthcare delivery
Prognosis for private pharma if no NHI_evolve into large FMCG process with digitalised order processing
Prognosis for private pharma if no NHI_five medical schemes are set to survive into the new era due to size and integrated offering of services
Prognosis for private pharma if no NHI_likely to dilute influence of pharmacists further
Prognosis for private pharma if no NHI_need to streamline processes by reducing options and flexibility
Prognosis of NHI service effect_doctors set to work harder and quicker which may compromise standards
Prognosis of NHI service effect_governement unlikely to be able to manage diversity of demand patterns
Prognosis of NHI service effect_government likely to set up as many as seven entities to manage NHI processes along the value chain
Prognosis of NHI service effect_government likely to set up staff deployment structures to deploy staff as they qualify
Prognosis of NHI service effect_likely to be hampered by regionally legislative differences in initial phases
Prognosis of NHI service effect_likely to cause some businesses to close if they opt out of joining central network
Prognosis of NHI service effect_likely to further restrict SA patients' access to innovative drugs
Prognosis of NHI service effect_likely to insitigate emigration of wealthy people from SA
Prognosis of NHI service effect_likely to insitigate exit of doctors from SA market
Prognosis of NHI service effect_likely to insitigate exit of multinationals from SA market
Prognosis of NHI service effect_likely to unfold in fragmented localised phases
Prognosis of NHI service effect_medical aids likely to be repositioned as secondary benefits service providers
Prognosis of NHI service effect_medical aids likely to extend target market scope to rest of Africa and beyond
Prognosis of NHI service effect_not likely to bring about significant change to core business principles of the sector
Prognosis of NHI service effect_not likely to replace private medical care structures
Prognosis of NHI service effect_not likely to work well initially
Prognosis of NHI service effect_reality of livelihoods to be protected in and by the sector raises imperative that NHI must be made to work
Prognosis of NHI service effect_storage and distribution processes likely to be decentralised rather than centralised

Prognosis of NHI service effect_strategic relationships are set to be a key differentiator
Prognosis of NHI service rollout_current government supply reliability gives reason for optimism for NHI success
Prognosis of NHI service rollout_likely to be delayed but may work if sufficient funding is forthcoming
Prognosis of NHI service rollout_likely to be delayed but pushed by political agenda
Prognosis of NHI service rollout_likely to be delayed due to financial and process constraints plaguing government
Prognosis of NHI service rollout_likely to be delayed in implementation due to covid effect
Recommendations for an ultimate model_align with lifestyle related focus on wellness
Recommendations for an ultimate model_central buying oversight should be managed by a multi-stakeholder group
Recommendations for an ultimate model_centralise price but allow provinces to operate own processes
Recommendations for an ultimate model_centralise price but not procurement processes
Recommendations for an ultimate model_embraces a holistic approach to healthcare balancing prevention as well as cure
Recommendations for an ultimate model_embraces a mindset that prioritises interests of patients from all walks of life
Recommendations for an ultimate model_fees based funder model
Recommendations for an ultimate model_founded on well differentiated molecules
Recommendations for an ultimate model_include strategic focus on branding and brand equity building
Recommendations for an ultimate model_introduction of a risk equalization pooled fund to spread risk of elderly and sicker members
Recommendations for an ultimate model_introduction of innovative long term value structures to optimise savings in patient care
Recommendations for an ultimate model_marketing limited to key account managers
Recommendations for an ultimate model_prioritise interests of patients by driving down prices
Recommendations for an ultimate model_produces a basket of innovative molecules
Recommendations for an ultimate model_strategic choices should prioritise interests of patients
Recommendations in prep for NHI downstream_state hospitals in need of intense upgrade attentions before NHI
Recommendations in prep for NHI_leverage current government tendering processes and focus on refining value extraction
Recommendations in prep for NHI_look at other country models with NHI set up
Recommendations in prep for NHI_private sector needs to be proactive in assisting government to design a functional NHI model
Recommendations in prep for NHI_reduced head count
Recommendations to navigate NHI downstream_pharmacists should leverage opportunity to prescribe as per permitted scope
Recommendations to navigate NHI downstream_pharmacists to employ social media more conciously to maintain exposure
Recommendations to navigate NHI downstream_pharmacists to focus on service as a key differentiator
Respondent background track record_rooted in private sector
Types of ethical restrictions_anti-trust rulings

Types of ethical restrictions_corporate governance rulings