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Effects on the procurement process of pharmacies in Sweden in light of the COVID-19 pandemic

Master's thesis in Supply Chain Management

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DEPARTMENT OF TECHNOLOGY MANAGEMENT AND ECONOMICS

Division of Supply and Operations Management
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Abstract

The COVID-19 pandemic caused global disruptions and changed the business environment for health care services. Among health care services, the pharmaceutical industry covered a responsible role far larger than what it was accustomed to. When normal work procedures no longer were viable, the pharmacies were forced to change in order to supply medicine and other essentials. Specifically, the extreme increase in demand during a short period challenged the procurement of pharmaceutical goods. This forms the background to this master's thesis. The purpose of this study is to investigate how the procurement process of pharmacies in Sweden has changed in the light of the pandemic both with regard to short- and long term changes.

The theoretical frame of references is based on supply chain management, industrial purchasing, and literature on COVID-19. Additionally, a literature background of pharmaceutical supply chains and procurement was made to gain insight of how the pharmaceutical procurement process was designed. Based on the existing theory found along with the aim of the study, an analytical model was created to fit the overall purpose of the thesis.

The method of the study is a multiple case study consisting of three pharmacies in Sweden. The cases have primarily been chosen to be of value from a supplier perspective and make up a diverse case pool to represent a wider part of the pharmacy market in Sweden. Representatives from each case company were interviewed in order to gain insights to their procurement processes and reactions to the pandemic. The data collected through interviews make up the majority of the empirical findings.

The analysis showed that all case companies in the study applied both short- and long term changes to their procurement processes. To cope with the increased demand and volatility of certain pandemic related products, they changed their batch sizes and frequency of orders. The decision of increasing purchasing volumes was stressful for all the case companies. Though, they strengthened their resilience in different ways by creating crisis teams and overseeing their contingency plans. A trend of digitalisation was also discovered with more and more communication being made via online solutions. Furthermore, the pandemic forced both the pharmacies and their suppliers to increase their transparency and flexibility towards each other. This is not common in an otherwise closed business environment.

Keywords: *Pharmaceutical supply chain, procurement process, COVID-19*

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1. Introduction

The COVID-19 pandemic has had a major global impact in many ways, not the least for supply chains across all industries (Chtioui, Bouhaddou, Benghabrit and Benabdellah, 2020). The pandemic has reminded companies of how fragile their supply chain structures and work procedures can be when exposed to disruptions (Chtioui, et al., 2020). Examples of disruptions due to the pandemic are shut-downs of factories and cross-border shipments for long periods of time, which has hindered production and transports for most businesses around the world. These disruptions are challenging not only because they can affect all actors in a supply chain but also other actors providing the same type of product or service. This leads to difficulties in finding substitutes which is otherwise a potential solution when a supply chain actor is struggling to deliver (Castañeda-Navarrete, Hauge and Carlos López-Gómez, 2020). There are industries which can be argued of being more affected than others, such as the healthcare industry due to the importance of the products involved and its essential role of having supply available on specific times (Radnor, Robinson, and Dickinson, 2014).

The healthcare industry, including all actors providing medicine and healthcare supplies, came to play a key role during the pandemic outbreak (Tirivangani, Alpo, Kibuule, Gaeseb and Adenuga, 2021). Short lead times and availability of goods has always been a crucial part of the healthcare industry due to the importance of medicine and healthcare supplies in society. However, the pandemic situation has come to remind us of the vulnerability of these aspects as the industry has been forced to implement new and ineffective procedures (Palomar-Fernández and Álvarez-Díaz, 2020). The previously mentioned shut-downs of factories and cross-border shipments, have shown that the existing infrastructure for accurate deliveries isn't stable enough to handle disruptions. The pandemic has exposed these weaknesses in the infrastructure, even in countries and regions known for their high standards of stable healthcare systems (Chtioui, et al., 2020). Sweden is one such example and is often referred to when discussing countries of high standards within healthcare (Rehnberg, 2019). Despite the high standards, actors in Sweden have also been struggling from the pandemic disruptions to secure healthcare and medical supplies in society (Laage-Thomsen and Frandsen, 2022).

The disruptions from the COVID-19 pandemic have clearly affected entire supply chains in the healthcare industry, all the way from original manufacturers to the end customers. It has put a pressure on procurement departments due to the unchanged importance of accurate deliveries (Radnor, et al., 2014) and simultaneously a lack of availability from suppliers (Castañeda-Navarrete, et al., 2020). Additionally, the fact that these disruptions are worldwide makes contingency plans such as having multiple, diverse, and global suppliers less useful since all of them are experiencing the same problems (Smith, 2020). When common trade routes closed due to new policies and restrictions, actors within the industry had to adjust their supply chains (Tirivangani, et al., 2021). Thus, it became inevitable for healthcare actors to change their processes and structures to cope with the disruptions.

Palliance AB (hereby noted as 'Palliance'), a supplier and distributor within the Swedish healthcare industry, is one company which has experienced challenges due to the pandemic. They supply and distribute goods, both through private sales and through tenders, to pharmacies in Sweden and have experienced changes in the last two years concerning how their customers within the pharmacy sector operate. Being confident that there are important changes made within the pharmacies which have implications for their distributors, Palliance now sees the need to further investigate the effects of disruptions on pharmacies in Sweden in light of the COVID-19 pandemic. In order to best satisfy the needs of Palliance, only the pharmacy market in Sweden, a segment within the healthcare industry,

will be investigated in this study. The pharmacy market will in this study include all retail pharmacies, meaning those pharmacies engaged in the retail sale of goods to consumers. Retail pharmacies are run with a permit from the Medical Products Agency (Läkemedelsverket, LV). Additionally, it is important to note that the pharmacies are strictly limited in changing the procurement of contracted goods through tenders since aspects such as suppliers, purchasing prices, sales prices, and marketing efforts are predetermined by the tendering organisations. Thus, this study will focus on such goods that pharmacies have a higher possibility to affect concerning choice of suppliers, sales and prices. In other words, the procurement of prescribed drugs and products will not be investigated, but focus will rather lie on over-the-counter (OTC) drugs and other goods.

The literature on the COVID-19 pandemic and its effects on the pharmacy market concluded that there is a lack of information on how pharmacies, specifically, and their procurement processes have been affected during the pandemic. However, some information was available on for example how the pharmacies' ability to provide healthcare services has changed (Herzik and Bethishou, 2021) and additionally how the circumstances have changed for pharmacies and their supply chains (Pedersen, Schneider and Scheckelhoff, 2020). However, most of the research found in the area is connected to the effects of the pandemic on healthcare in general (Tirivangani, et al., 2021; Chtioui, et al., 2020; Palomar-Fernández and Álvarez-Díaz, 2020) or on supply chains in general (Smith, 2020; Castañeda-Navarrete, et al., 2020). Meanwhile, for suppliers and distributors of pharmacies, such as Palliance, it is of great relevance to understand how their customers, i.e., pharmacies, have responded and how the internal processes of pharmacies have changed due to disruptions that have occurred. This forms the background to this master's thesis.

1.1 Purpose of the thesis

The purpose of this master's thesis is to, in light of the COVID-19 pandemic, analyse how the procurement processes of pharmacies in Sweden have changed and how they will change. Further, the implications of these changes for distributors of pharmacies will be analysed. In order to fulfil this purpose, the pharmacy market and the existing procurement process must first be investigated and understood.

1.2 Problem discussion

The supply networks of pharmacies can be complex and regulated, making it necessary to understand the overall structure in the pharmacy market before investigating specific parts of the networks (Baglio, Garagiola, and Dallari, 2017). Thus, in order to achieve the purpose of this thesis, it is initially necessary to map the pharmacy market in Sweden and how it is managed.

A key solution for pharmacies to secure a high supply availability is to create and nurture an effective supply chain, where the stability and optimization of the procurement process is in focus (Modisakeng, Matlala, Godman, and Meyer, 2020). It is therefore crucial to understand and monitor necessary changes in the procurement process specifically.

The impact of the COVID-19 pandemic on supply chains around the world (Smith, 2020; Castañeda-Navarrete, et al., 2020) and the healthcare industry in general (Tirivangani, et al., 2021; Chtioui, et al., 2020; Palomar-Fernández and Álvarez-Díaz, 2020) has already been motivated. However, to what extent and specifically how pharmacies have been affected is less explored and needs further investigation.

Based on above observations, the following research questions have been formulated in order to fulfil the purpose of the thesis:

Research question 1 (RQ1):

Which pharmacies are present on the pharmacy market in Sweden and what are the main differences in their governance structure?

Research question 2 (RQ2):

How has the COVID-19 pandemic affected the procurement processes of pharmacies in Sweden?

- a. What were the main stages of the procurement processes of the pharmacies before the pandemic?
- b. What are the main stages of the procurement processes today and how has it changed due to the pandemic?
- c. Which of these changes are likely to remain and which are likely to revert to the state before the outbreak of the pandemic?

Research question 3 (RQ3):

What implications do these changes entail for distributors of these pharmacies?

1.3 Thesis structure

Before proceeding to the next chapters of material and information aiming to answer the above mentioned research questions, a short description of the structure and order of chapters will be described.

Chapter 2 aims to give a theoretical base and background for the rest of the chapters. Here theory on supply chain management, procurement, healthcare, the COVID-19 pandemic, and supplier relationship management will be covered. Chapter 2 is then ended with an analytical model which will be used throughout the study.

Chapter 3 presents the methodology for executing this study and covers the research approach and design, the different parts of the study, empirical data collection through case studies, and reflections on the quality of the thesis.

Chapter 4 aims to give an understanding of Palliance AB, the company which as requested this study. The presentation covers a company background, sales channels, product portfolio, distribution network, and effects on the company in light of the COVID-19 pandemic.

Chapter 5 will give the reader a better understanding of the pharmacy market and thus aims to answer research question 1. The chapter describes how the pharmacy market and system in Sweden is structured, which the largest actors are, and how regulations affect the market.

Chapter 6 includes descriptions and analyses of each case company involved in this study. The analysis of each case takes a standing point in the analytical model of the study. Building upon this chapter, chapter 7 describes the main cross case observations and presents them in a summarised table.

Chapter 8 digs deeper into some main points of discussion such as governance and regulations in the pharmacy market, effects from being a pharmacy market focusing on physical stores vs e-commerce and implications for suppliers when changes occur within pharmacies.

Finally, chapter 9 summarises the main takeaways and conclusions made throughout the study. Additionally, managerial implications and suggestions for further research is also discussed shortly in this chapter.

2. Literature background

This chapter will review important literature on supply chain management (SCM) and serve as the study's theoretical foundation. The chapter will cover supply chain management in general, the networks and interactions that it entails, as well as an overview of how SCM is carried out in the pharmacy market in Sweden. In addition, the literature background will provide an overview of procurement, such as definitions, different parts, and roles within a business. Finally, based on the definition of procurement along with the aim of this study, an analytical model is presented which will be used as a base throughout the report for discussing and answering the research questions.

2.1 Supply chain management

At the start of the 1980s, the term Supply Chain Management (SCM) was coined. It was largely utilised to provide light on how organisations' internal business processes, such as purchasing, production, sales, and distribution, were integrated (Dubois, Hulthén, and Pedersen, 2004). Companies have had to deal with complicated flows of products, services, and information in recent years as a result of continuing globalisation, while demand has been variable and nonlinear (Christopher, 2012). The scope of supply chain management has widened from an intra-organizational focus to a focus on inter-organizational issues across the entire supply chain (Dubois et al., 2004). The authors see some parallels in the SCM literature, such as various phases of intra- and inter-organizational integration and coordination across multiple levels on both the supplier and customer sides of the business.

As a result, because the flow of products, services, and information is bi-directional, this necessitates the management of intra- and inter-organizational connections. Finally, the authors stress the necessity of delivering high customer value through efficient resource allocation and the development of a competitive chain advantage (Dubois et al., 2004). Although this paper will adopt the Global Supply Chain Forum's definition offered in Dubois et al. (2004) which can be found below to characterise SCM, there is no general definition of the word or its scope.

"Supply chain management is the integration of key business processes from end user through original suppliers that provides products, services and information that add value for the customers and other stakeholders"

2.1.1 Networks and relationships in supply chains

Within the review of SCM, relationships are an important basis that has received a lot of attention in the literature (Gadde and Snehota, 2000; Dubois et al., 2004; Gadde, Huemer, and Håkansson, 2003; Gadde and Snehota, 2019).

Initially, the industrial network approach (INA), considers the three aspects or dimensions of industrial networks to be resources, activities, and actors (Håkansson and Snehota, 1995). The resource dimension refers to how a relationship's resources are used. A firm, on the other hand, is frequently a component of a larger organisation with several partnerships employing the resources (Håkansson and Snehota, 1995). Companies are members of many supply chains at the same time, according to Dubois et al., (2004). Each interaction has an impact on the available resources, resulting in reliance between businesses and the formation of supply chain networks. This interconnectedness, according to Gadde et al., (2003), necessitates resource adjustments and combinations to support diverse technologies across business borders.

The activity dimension refers to the coordination of information, products, and services amongst players in a supply chain (Gadde et al., 2003). The activities that make up a chain are interconnected and linked together by loose or tight linkages, forming a network that can help firms rationalise key processes that extend beyond ownership borders.

The networks that include the resources and activity linkages evolve over time and have no fixed centre or boundaries. This means that networks are loosely connected systems of interactions with other actors, which no single firm can control (Gadde et al., 2003). The actor dimension, the last component of the industrial network concept, is thereby raised. Gadde et al., (2003) define actors as facilitators who coordinate and combine operations, exploiting and reconfiguring resources in cooperation and rivalry with other businesses.

Managing connections within a company and with vendors is a difficult undertaking. It necessitates good collaboration, the monitoring of interdependencies within supply chain networks, and the flexibility to adapt to changing conditions (Gadde and Snehota, 2019). Gadde and Snehota (2019) go on to say how important it is to learn, build skills, and competencies in order to take advantage of business chances through partnerships.

The front end of every manufacturing or service focused business has in recent years seen an uprise in the priority of customers (Piercy and Lane, 2009). From initially being a tactical part of business to becoming one of the most strategic focuses when building a successful business, the customer's opinion and power have increased rapidly (Piercy and Lane, 2009). According to Payne and Frow (2013), the investment in satisfying the customers and working for a long-lasting stable relationship is now worth more than the investments made to acquire new customers. These trends show that a business is forced to change if their customers demand so (Payne and Frow, 2013). According to the authors, as globalisation has increased, the willpower of customers to search for better and new alternatives has followed, leading to a new era of customers that have higher knowledge and are less affected by sales pressure.

2.1.2 Supply Chain management in the pharmacy market

The pharmacy market is seen as one of the most important parts of the healthcare industry (Tayyab, Awan, Bukhari, and Sabet, 2022). There is, according to Tayyab et al. (2022), a consensus that the pharmaceutical supply chain is of great importance. Yet, the authors also entail that the existing literature on the subject fails to prove that consensus.

All the complex parts of the hospital supply chain are considered as one of the main structures when analysing a region's health care strength (Chtioui et al., 2020). This also applies to the pharmaceutical connections the health care could offer. The supply chain management of pharmaceutical and healthcare related business is not vastly different from supply chain management within a producing or distributing business. The main focus is still often on operational efficiency and the contributions to this are gradually becoming a more central part of the pharmaceutical research sector (Iacocca and Mahar, 2019). And even though the supply chains of all types of healthcare structures are of a complex nature (Chtioui, et al., 2020), the definition of what a stable and reliant pharmaceutical supply chain is, is straightforward. The pharmaceutical products should be offered within a reasonable time, with a reasonable quality, for an acceptable cost (Bastani, Sadeghkhan, Ravangard, Rezaei, Bikine, and Mehralian, 2021). With these prerequisites checked, the supply chain should be considered as efficient. This is for most pharmaceutical service providers not a problem during normal and stable conditions, but only when these conditions change (Bastani, et al., 2021).

The management of logistics and supply chains within the healthcare sector is more complex and dynamic than many of its peers (Tayyab et al., 2022). This is because of the uncertainty of demand, as the demand for medicine can change rapidly and greatly, thus making the rescheduling of production and distribution tough to deal with. Together with the short shelf-life of some medicines, as well as the high cost of excess inventory, the pharmaceutical supply chain becomes a complex and, in many ways, dynamic subject (Tayyab et al., 2022).

Every supply chain is built upon actors taking on different roles and fulfilling the needs or connecting other actors. According to the authors, the typical roles included within a pharmaceutical supply chain could be designed like in Figure 1.

- A primary manufacturer who supplies the active ingredients needed
- A secondary manufacturer who finalises the production
- A distributor or a wholesaler
- A hospital/pharmacy/the actor who will prescribe the product
- The end customer

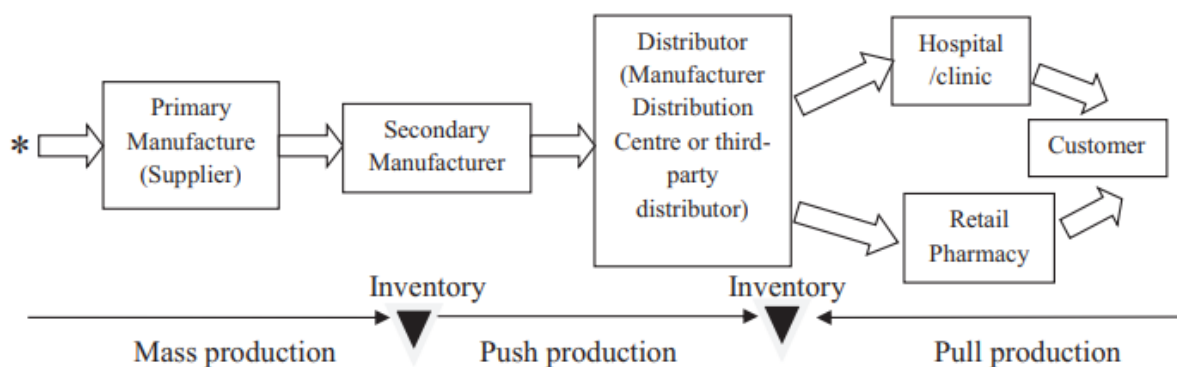


Figure 1. A typical structure in a pharmaceutical supply chain by Tayyab et al. (2022)

This is also supported by Iacocca and Mahar (2019), as they detail the flow of the physical medicine as well as how the money is moving between these actors. However, this study will not entail how money is transferred between the actors, but instead what roles these actors take and how this affects the pharmaceutical supply chain as a whole.

2.1.3 Regulations in the pharmaceutical market

Pharmacies in most countries are and have historically been regulated heavily by both laws and rules, both on federal and state levels (Adams, 2019). Below, a presentation of regulations in the pharmacy market in general can be found. However, a further investigation in this area with a focus on the market in Sweden can be found in section 5.5 of this report.

Retail pharmacies and other actors within the field are not free to choose and design their product portfolio or operations by themselves. Due to the delicate nature of medicine, it is important to prevent information asymmetry, secure data of medicinal effects of drugs offered to the public, and to assure the benefits of the medicine (Roberts and Reich, 2011). Healthcare services are regulated by law and should follow the decisions of the central agency such as FDA, EMA, or specifically in Sweden; Läkemedelsverket (LV). Though, according to Roberts and Reich (2011), the legislations and regulations made on a global level should be considered by each local or regional expert to better fit their circumstances.

Patients, especially in low-income countries, are often offered the more expensive of two drugs, which are not always the most appropriate and definitively not the most cost efficient. Unfortunately, this could drive the patients either into a more serious state of illness or into poverty (Roberts and Reich, 2011). Additionally, scandals could spark the trigger for new regulations. For example, when a doctor and a sales representative of a pharmaceutical company in Japan had an inappropriate relationship which gave the company an unfair advantage towards their competitors, this led to new regulations (Hideki, 2021). Roberts and Reich (2011) explain that without regulations, a pharmaceutical company could focus on their bottom line and only procure and sell medicine with the highest profit margin, which would heavily impact the low-income patients and customers.

This of course has an impact on the pharmaceutical supply chain as the medicine, according to the authors, flows through several chains throughout its lifetime. Regulations could either make a distributor or product more or less attractive for the pharmacy to cooperate with or procure. That is why the authors suggest governments to cooperate with large pharmaceutical actors such as pharmacies, manufacturers, and distributors to construct a regulation basis with as little conflict as possible between the actors. (Roberts and Reich, 2011)

The Swedish pharmacies were state owned until the 2009 reform. After the reform, the laws and regulations were lightened, and the market became more liberal. For example, the regulated ownership disappeared and now anyone can own a pharmacy, as long as you are not representing a prescriber or a manufacturer of pharmaceutical products (Wisell, Winblad, and Källemark Sporrang, 2015). Other regulations include the permissions of wholesalers, distributors, and laboratories, which all affect how attractive each actor is seen by the procuring pharmacies (Roberts and Reich, 2011).

2.2 Procurement and supplier relationship management

Procurement is a business support function that encompasses all sorts of buying that take place inside a firm (van Weele, 2018), whether direct or indirect spend. The importance of procurement has gained more attention in recent years as people have realised how much money they can save by reducing their spending. According to Vollmer and Murphy (2017), suppliers account for 65 percent of the overall value of a company's products and services which also represents the strategic relevance of well-functioning procurement.

Procurement is frequently mixed up with purchasing, as well as other concepts like sourcing and supply management. Van Weele (2018) claims that these phrases are very similar, but procurement is broader meaning that it includes all of purchasing and more. Procurement, of which purchasing is a component, might be seen as the more comprehensive function taking a total cost of ownership perspective instead of only looking at the cost of a single product. The more strategic actions, such as supplier evaluation and negotiation, as well as the more operational tasks necessary to purchase and receive items, are included in procurement. Purchasing, on the other hand, solely includes the operational aspect and may be regarded as the transactional function of procurement (van Weele, 2018). However, the two phrases do not have a consistent definition, and they are employed differently by various firms and in different situations.

2.2.1 The linear procurement process

There are many various explanations of the procurement process, just as there are many different definitions of procurement, and many firms use their own interpretations. According to Figure 2 below, the method outlined by van Weele (2018) has six stages. The first three stages are related to strategic sourcing, whereas the latter three are related to order

processing and operations. The stages, as outlined by van Weele (2018), will be briefly summarised here.

1. *Determining specification*

A purchasing requisition, or anything that has to be purchased, starts the process. This demand must be properly defined in order for a future purchase to be possible. Here, you must choose if you are looking for a product or a service, as well as what functional and technical criteria are required.

2. *Selecting supplier*

The supplier base of possible providers must be examined and narrowed down based on the specification, taking into account factors such as delivery lead time, price, quality, corporate social responsibility, and country of origin. Following this evaluation, a decision can be taken.

3. *Negotiation and Contracting*

This entails engaging in discussions to reach an agreement on conditions that, in the best-case scenario, benefit both parties and result in a legally enforceable contract. The contract may serve as a link between strategic sourcing and operational procurement, which is why it should form a buyer-seller relationship based on agreed-upon parameters.

4. *Ordering*

If the supplier is a new one, this phase involves setting up and developing ordering and handling procedures. After the procedures have been established, purchase orders may be placed.

5. *Expediting and evaluation*

This entails keeping an eye on and supervising the order in order to ensure supply. Typically, this entails the buyer and seller exchanging many papers, such as a shipping bill and a product receipt.

6. *Follow-up and evaluation*

The last phase is giving the provider a rating and ranking, as well as keeping all files up to date. It must be decided whether to continue sourcing from the chosen provider or to make changes and improvements.

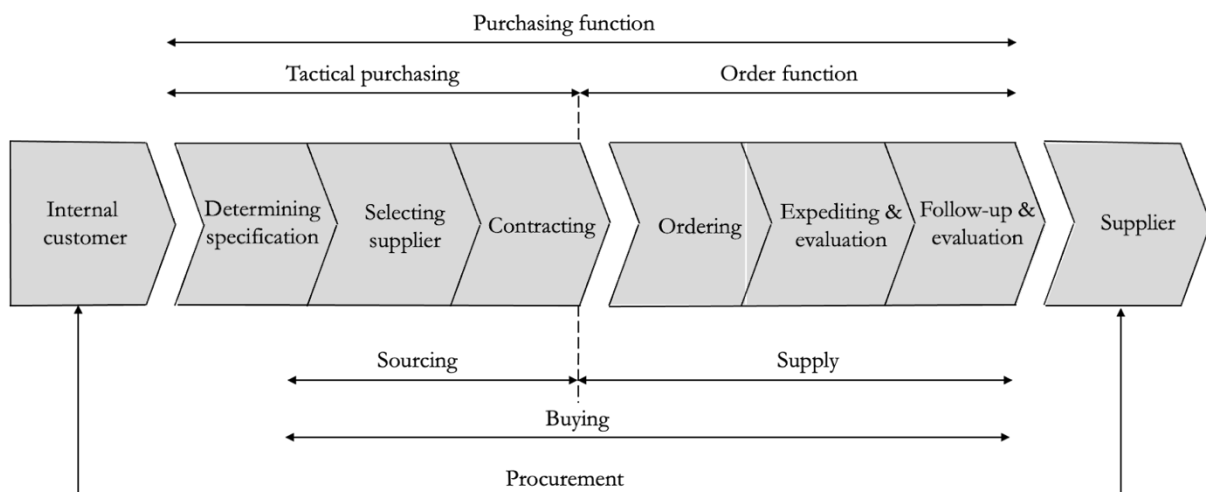


Figure 2. The linear procurement process by Van Weele (2018)

2.2.2 The extended procurement process

The above-mentioned procedure has been expanded into an extended procurement process model, as shown in Figure 3 below. The expanded model was developed in order to better meet the demands of businesses (van Weele, 2018). There are three phases in this model: source, purchase, and pay, each with multiple stages. As can be seen, this process is rather circular than linear indicating that the different steps of the process can be repeated and improved many times for a single supplier.

Source

The source-phase is more strategic in nature and entails a variety of analyses as well as the assessment, negotiation, and supplier selection procedures. Contracting is the final stage, which connects sourcing to the following phase. When initiating a procurement process for a new supplier, this is naturally the first step of the process which thereafter is circular and does not have a specific end as stated previously.

- *Spend & demand analysis*
An assembled category sourcing team conducts a spend analysis for the specific category. The estimated requirements and needs of the future are investigated and a proposal for a budget is put forward along with estimations on potential savings.
- *Supply market analysis*
An assessment of the satisfaction for internal clients at the business regarding the current supply within the category is made along with an analysis of the possible supplier base.
- *Sourcing Strategy development*
A sourcing strategy is proposed including what to insource or outsource (make vs buy), the number of suppliers that should be requested for information and quotations and the number of suppliers that should be contracted. Further, possible regions or countries that the supply should be procured from is decided.
- *Tendering & supplier selection*
The relevant suppliers are contacted and requested for information and quotations which result in competitive bids which are then compared and assessed in order to find the most suitable supplier.
- *Contracting & implementation*
After the most suitable supplier has been decided, negotiations are made which eventually lead to contract negotiations and signing of an agreement.

Purchase

The next phase is a more operational procurement step, which entails requisitioning, ordering, and receiving products. People involved in purchasing departments are often those who communicate with existing suppliers regarding the flow of products and forecasts. The last step of the responsibility of a purchasing department is usually to ensure that goods have been received and are available for customers on either an online store or on physical store shelves.

- *Search product/service*
With the contract along with including specifications of demands in hand, a search for suitable products or services is initiated from the chosen suppliers. The suppliers start by creating an example of the product based on their interpretation of the specifications.
- *Requisition & approval*
The product sample is assessed, and feedback is given to the supplier. If the sample is approved, the process moves on to the next step. Otherwise, a new sample is put forward until it has been approved by the buyer. The purchase requisition is the start of the purchase order since it aims to secure necessary resources and activities needed for producing and acquiring the product.
- *Purchase order submission*
After the sample and purchase requisition has been approved, the official purchase order is submitted to the supplier and production is initiated at the supplier.
- *Order fulfilment & logistics*
As the production is finished and they are being prepared for delivery, the delivery has to be checked against the specifications and requirements from the contract and purchase order. This can include lead time, logistics, quality, legal and environmental requirements etc.

Pay

After everything is completed, the invoice may be delivered and payment made, which is the pay-phase. The purchase-to-pay process is the lowest section of the model, or the second component. Most often, a finance department of a company manages this part and is not as involved in the flow of goods as departments handling the other two phases but is rather involved in the flow of money. As can also be seen in the figure, the pay-phase only makes out a small proportion of the entire process compared to other phases.

- *Invoicing & payment*
Once the products and delivery is approved, an invoice is received from the supplier with certain agreed payment terms which the buyer needs to fulfil.

These three phases are performed for every regular purchase, but the source-phase is normally performed only when a new purchase is required. As a result, the source-to-pay phase is strategic, but the purchase-to-pay phase is more administrative, operational, and usually requires set-up processes.

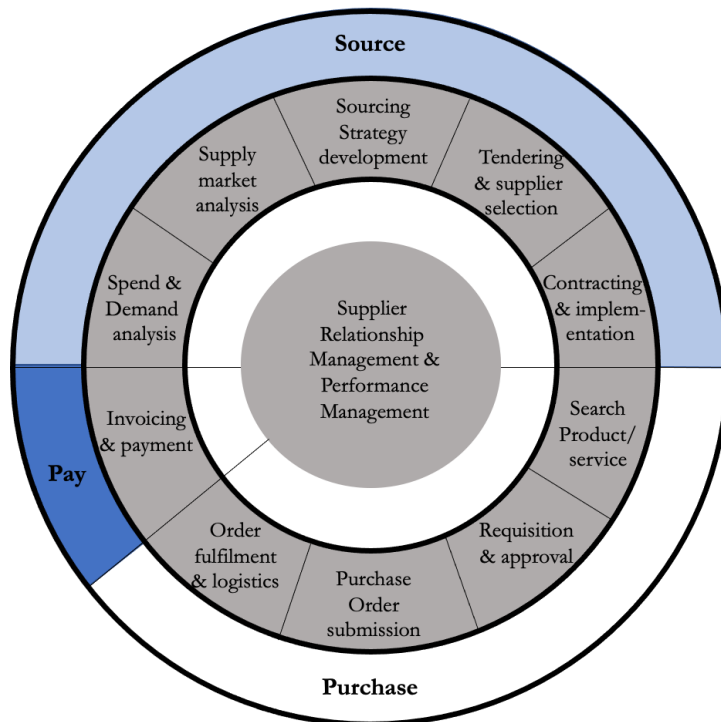


Figure 3. The extended procurement process model by Van Weele (2018)

2.3 The COVID-19 pandemic and its effect on supply chains

The procurement process described above is often a rather dynamic process which is constantly adapted to the environment. When the environment is exposed to external factors creating change, it is likely that the procurement process adapts as well (van Weele, 2018). One such external force, which has affected the environment for supply chains globally, is the COVID-19 pandemic. Thus, it is necessary to investigate the pandemic and its consequences in order to understand adaptations in the procurement process of different organisations.

The Coronavirus (SARS-CoV-2) initially emerged in Wuhan, China, in December 2019 (WHO, 2022). In the Wuhan area, around 94 percent of Fortune 1000 businesses have tier 1 or tier 2 suppliers (Paul and Chowdhury, 2020; Ivanov, 2020). Lockdowns and restricted borders have a global impact on material supply and manufacturing. The virus has spread throughout the globe to the point that WHO designated COVID-19 a pandemic on March 11th, 2020 (WHO, 2022). COVID-19 instances have been confirmed in all nations and territories throughout the world as of February 16th, 2022, resulting in almost 5,8 million fatalities (WHO, 2022).

Aside from the detrimental health consequences, the pandemic has wreaked havoc on society and the economy (Fonseca and Azevedo, 2020; Pato and Herczeg, 2020). To slow the spread of the virus, governments have closed borders, banned movement within and outside of specific countries, and implemented partial or complete social lockdowns.

Epidemic breakouts are defined by an unforeseen and long term disruption that affects all aspects of the supply chain at the same time, including supply, demand, and logistics (Ivanov, 2020). Supply chains have previously experienced several epidemic outbreaks, with 1438 reported between 2011 and 2018 (Chowdhury, Paul, Kaisar, and Mokterdir, 2021), including SARS in 2002-2003 (Ivanov, 2020) and avian flu (H1N1) in 2009 (Paul and Chowdhury, 2020), both of which negatively impacted SC performance. Nonetheless, the

pandemic's repercussions are unparalleled in contemporary times, with dire predictions for commerce and economic consequences (Chowdhury et al., 2021).

Problems that have arisen as a result of the COVID-19 pandemic are affecting all supply chain members and areas at the same time (Chowdhury et al., 2021). Chowdhury et al. (2021) conducted a literature review on COVID-19-related supply chain research and identified eight areas of the supply chain that the pandemic has impacted. These are demand management, supply management, production management, transportation and logistics management, relationship management, finance and sustainability management, and supply chain-wide impacts management. Demand fluctuations, material shortages, production disruptions, transportation delays, and extended lead times are some of the more specific impacts (Chowdhury et al., 2021; Van Hoek, 2020).

The food and healthcare sectors have received the most attention in the literature on COVID-19's impact, as those sectors may be seen as particularly important in the event of a pandemic (Chowdhury et al., 2021).

2.3.1 The COVID-19 pandemic and its effect on the pharmacy market

The pandemic has challenged the world's health services and made the pharmaceutical parts of this sector vital (Pedersen et al., 2020). Due to the tense pharmaceutical supply chain during the pandemic, pharmacies became a central actor in the healthcare sector (Tirivangani et al., 2021). Even the most resilient health care systems were severely challenged by the pandemic (Yu, Razon, and Tan, 2020).

According to Pedersen et al. (2020), the most common effect on their supply chains was the increased need of keeping a larger inventory of common medicine as well as a tighter communication with their distributors and wholesalers. When more and more countries and regions around the world-initiated lockdown procedures, medical supplies were hindered from transportation and therefore caused a shortage in several countries (Tirivangani et al., 2021). The authors also exemplify the global transportation routes in China and India as fragile options which were quickly shutdown and stopped the deliveries. The global suppliers were challenged by both travel restrictions as well as labour shortage (Yu et al., 2020).

Additionally, Socal, Sharfstein, and Greene (2021) mentioned that the restriction of travels made it hard for the USFDA (United States Food and Drug Administration) to approve new sources of medicinal products for the pharmacies, which led to the shortage surviving longer than anticipated. When supplies finally made it over the borders, they were heavily delayed and those in need of them had already suffered from the shortage for up to several months (Tirivangani et al., 2021). Socal et al., (2021) proposed that official quality metrics could help pharmacies to choose manufacturers which are less likely to be harmed by future shortages, i.e., with a higher resilience.

2.4 Analytical model

Based on the extended circular procurement model by Van Weele (2018), the procurement process of different pharmacies in Sweden can be categorised to create a basis for comparison and analysis. However, the purpose of this study is to not only look at the procurement process itself but also how it has been affected by external forces and disruptions, i.e., in light of the COVID-19 pandemic. Furthermore, the study also aims to understand what changes are likely to remain and what changes will revert to the initial state before the pandemic was a fact, i.e., if the changes are short- or long term changes.

Based on the aim of this study, a modified model has been developed. This model is based on the definition of procurement by Van Weele (2018) but with an element of external forces resulting in both operational and strategic changes. The external forces in this study emanate from COVID-19 disruptions on the environments of the case companies and can be seen through the dashed arrows on the left side of figure 4 below. The different changes will also be categorised as short- or long term changes depending on if the change lasts despite diminishing influencing factors from the pandemic which is shown in the box on the right side of the figure. Important to note is that short- and long term changes in each phase can affect the overall organisational structure and supplier relationship management which is shown in the figure through the arrow from the right towards the centre of the figure.

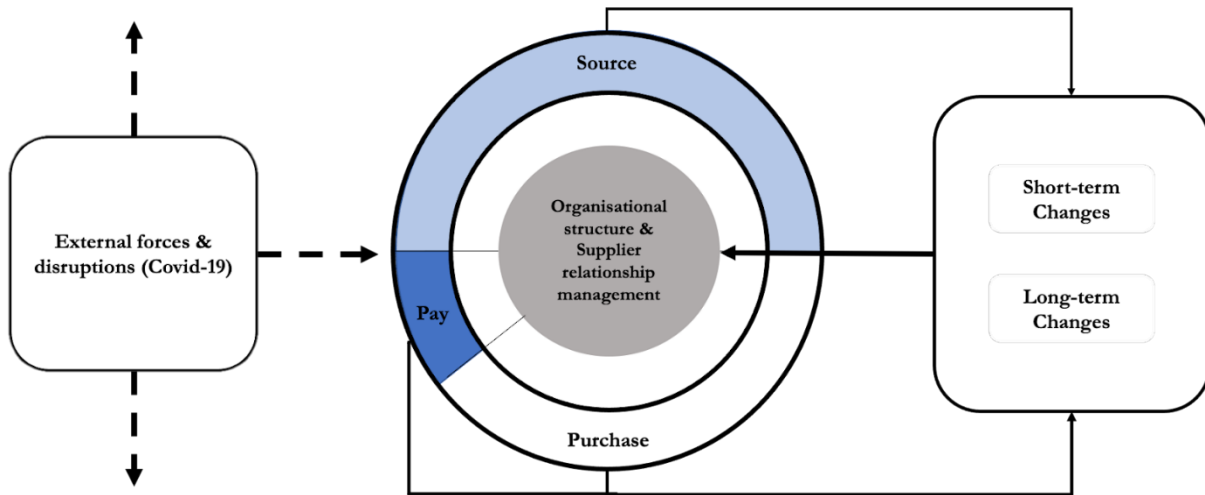


Figure 4. The effects on the procurement process from external factors and disruptions

3. Methodology

In this chapter, the methodology for answering the research questions will be presented. To begin with, the research design outlines how each part of the study was carried out. This is followed by presenting how and from what types of sources data was collected for the literature background. Further, the approach towards the COVID-19 pandemic and its constantly changing nature is presented. Lastly, the chapter outlines how the interviews were conducted, how the collected data could be analysed and how the quality of the study was assured.

3.1 Research approach and design

For this thesis, the main approach of inductive and qualitative reasoning was used. Induction is described by Corley, Bansal, and Yu (2021), as a way of reasoning where a limited amount of empirical data on a subject is translated into a broader more generalised scope. The authors explain that the inductive approach to a problem is to understand why and how a phenomenon has occurred. The approach was chosen due to the limited theory on the specific subject and the fact that this study takes its starting point in a few specific cases and thus, not enough examples to perform deductive research. According to Carter, Shih, Williams, Degeling, and Mooney-Somers (2021), a qualitative approach towards the research is best fitted when there is a need for complex understandings of a subject's experiences and centred around a few important insights.

3.1.1 Research design of the study

A research design was created to outline the process of answering the research questions. This was done by combining the theoretical knowledge and data with the empirical findings. The research for answering RQ1 was made mainly through an industry report from Sveriges Apoteksförening which is an organisation representing all pharmacies in Sweden and the answer, thus, mainly consists of secondary data.

Parallel with the literature research, data was collected through interviews with three different pharmacies in Sweden. These interviews and the associated discussions took the form of semi-structured interviews with relevant employees at each company. The empirical findings from these interviews were used to answer RQ2a and RQ2b. A combination of the findings from the literature study and the interviews laid the foundation for the analysis and discussion required for answering RQ2c and RQ3.

Important to mention is that the process of answering the different research questions is iterative and cross-sectional, meaning that the theoretical framework, the empirical findings, and the analysis all affect each other. However, Figure 5 below aims to show that a basic understanding of the literature and theoretical framework is needed before answering any of the questions. Also, the questions build upon each other, making it a rather linear process with cross-sectional elements.

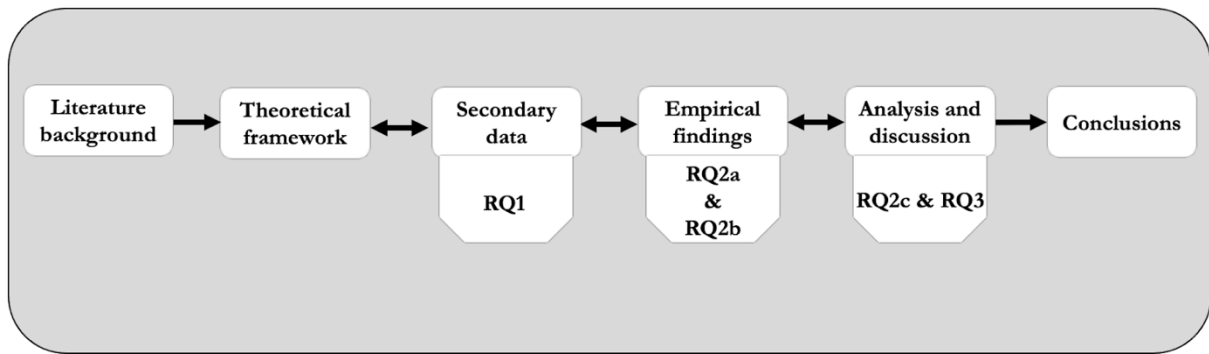


Figure 5: Illustration of the research design

3.2 Parts of the study

The description and illustration of the research design above gives an overview of what parts the study will include. Below, a more in-depth clarification of each part will be made. The different parts discussed are literature background, mapping of the pharmacy market, COVID-19, empirical data collection through case studies, analysis and discussion, and lastly reflections on the quality of the study.

3.2.1 Literature background

Firstly, the literature background was inspired by and conducted in the lines of Bryman and Bell (2011). The authors claim that the literature background lays a foundation of which the research could be conducted. According to the authors, the literature should also guide how to analyse the data collected in the study. The literature background was first and foremost done to gain an understanding and give a background to the investigated areas. Furthermore, the literature was also used to give legitimacy and guidance on how to analyse the empirical data as recommended by Bryman and Bell (2011). Therefore, it was done alongside the data collection and empirical studies.

The literature study started with a broad base of literature related to supply chain management, networks in supply chains, pharmaceutical supply chain, COVID-19 effects, etc. A combination of books, articles and other scientific texts were the main sources in the literature background. The found literature was then carefully read and selected to form a theoretical foundation and finally an analytical model fitted to the study's needs. The majority of the literature was found using Google Scholar, Scopus and Chalmers Library.

When searching for relevant literature, certain keywords were used in different combinations to find what was relevant to the subject area. The different keywords and combinations can be found in table 1 below.

Table 1. Keywords used in the literature background

Subject area	Keywords used in the literature search
Supply chain management	Supply chain, Supply chain management, Distribution networks
Procurement strategies	Procurement, Purchasing, Supplier management
Pharmaceutical supply chain	Pharmaceutical supply chain, Healthcare + Supply chain, Pharmacy + Supply chain

3.2.2 Mapping the pharmacy market

The first research question was mainly answered through data collection from secondary sources meaning that existing literature, reports, and available information online and in books constituted the majority of the conclusions. However, some data collected from the case studies was also useful in the understanding of the pharmacy market.

3.2.3 COVID-19 outlook

The COVID-19 pandemic and its effects are still in a continuously changing nature and the final outcomes are yet to be discovered. This implies that there is a great deal of uncertainty when discussing and analysing the effects. What may be relevant and correct data at a certain time could rapidly change and be outdated. The data used in this study was mainly obtained from the world health organisation (WHO) and the actual data and information obtained at the time of the study was and should be seen as the correct data at the time given, regardless of if new information has emerged.

3.2.4 Empirical data collection

The empirical data was collected through a multiple case study using qualitative methodologies and semi-structured interviews. Semi-structured interviews were deemed the best fit as it, according to Rowley (2012), is best used when it is important to understand processes such as the procurement process.

To be able to answer RQ2, an understanding of how supply chains have been affected by the pandemic in general had to be detailed. This, together with the knowledge of how the pharmacy market was affected gave the base needed to answer RQ2. The necessary data was sourced partly from the literature and partly from interviews with selected relevant companies which gave an empirical depth in understanding the procurement processes of the companies. While RQ2a and RQ2b were answered mainly with data obtained from the interviews along with the analytical model, RQ2c required a broader knowledge of how likely it is for them to implement these in a longer perspective. Thus, the answer of RQ2c took a stance in RQ2a and RQ2b and added yet another layer of discussion, analysis and a literature view to conclude an answer.

3.2.5 Analysis and discussion

The purpose of the analysis and discussion sections is to, based on the analytical model, make comparisons between the case companies in order to find similarities and differences in their approaches and experiences with the COVID-19 pandemic from a procurement perspective. This is done to generate representative conclusions for the pharmacy market and for the distributors of these pharmacies. The discussion also aims to provide a more nuanced perspective of the subject leading to new insights and key takeaways.

3.3 Empirical data collection through case studies

The goal of the multiple case study was to learn how the procurement processes of companies in the pharmacy market in Sweden were affected by disruptions caused by the COVID-19 pandemic.

3.3.1 Selection of cases

Initially, three companies active on the Swedish pharmacy market were selected in agreement with Palliance AB. These three companies are all customers of Palliance AB and

are therefore of high interest. However, after reaching out to the pharmacies, one of the selected actors was not available for interviews. Thus, a broader range of companies was approached to find a replacement. Eight companies control the vast majority of pharmacies in Sweden, of which five possess physical stores while three of the companies are solely active on the e-commerce market. From the approximately 1400 pharmacy stores, only 40 are operating without the influence of the eight largest pharmaceutical companies. To ensure that the results of the case studies presented a general and homogeneous picture of the pharmaceutical procurement process in Sweden, the selection of cases was based on the eight largest companies. However, spring has been a hectic period for pharmacy chains which made it impossible to interview some of them. Thus, the selection is based primarily on customers of Palliance and secondly on which companies agreed to having interviews. Also, a desire from Palliance was to interview both pharmacy chains who focus on physical stores and those who focus on e-commerce.

However, to make sure that several perspectives on the procurement process are presented, the case studies also highly valued a diverse case pool. Therefore, the case studies detailed the processes of pharmacies that possess physical stores as well as pharmacies who focus mainly on sales through e-commerce.

3.3.2 Conducting interviews

The interviewees were primarily contacted by e-mail to provide them with background information about the study and to schedule the interviews. Before the interview, the interviewees were given the opportunity to read the interview questions in order to prepare for it.

In a multiple case study, data is collected from various case companies with the goal of comparing the differences and similarities between them in order to make wider industry-specific conclusions (Marrelli, 2007). Semi-structured interviews will be used to acquire data and information from the individual case companies. Semi-structured interviews, according to Rowley (2012), are best used in circumstances when understanding procedures, perspectives, and values is critical. This will be useful for this study because it will provide insight into specific firms' processes, beliefs, and values, particularly in light of the COVID-19 pandemic and the impact that it had on individual companies' supply networks. Semi-structured interviews, according to Rowley (2012), provide greater freedom than structured interviews, allowing the interviewer to ask follow-up questions to the planned questions.

Each interview was conducted using the video conference platform Zoom. The interviews lasted between 47 and 63 minutes, depending on the interviewee's job at the organisation and their level of insight into the company's procurement strategies. Table 2 below shows an overview of the interviewees and their roles at each company. Because of the roles of the interviewees, there was not as much information available on the pay-phase of the procurement process. Thus, the analysis of the pay-phase is naturally not as deep as the source- and purchase phases.

Table 2. Overview of interviews

Company	Role at company	Duration
Apoteket AB	Team manager & Demand planner at goods management department	47 minutes
Apoteksgruppen i Sverige AB	Supply chain manager	57 minutes
Apothem AB	Purchasing manager & Category manager	63 minutes

In processing the empirical data in this study, several ethical considerations were made. Before the interviews, the interviewees were informed of the study's purpose, informed that the data from the interviews will be released with open access, and advised that the interview would be voice recorded. The interviewees were also notified that they and their company may remain anonymous in the study. They will also have the opportunity to comment on the sections of the report that discuss their company in order to ensure that the information published is accurate. These ethical considerations are in line with Allmark, Boote, Chambers, Clarke, McDonnell, Thompson, and Tod (2009)'s perspective on how to secure interview confidentiality and informed consent.

3.4 Reflections on quality of the thesis

In order to assure a high quality throughout the study, the validity and reliability criteria, which are relevant and widespread criteria used to evaluate the quality of empirical data, are used. Further, research ethics has also been considered, and below, a more detailed description can be found regarding how the criteria has been handled.

3.4.1 Validity

The validity criteria is an important quality component to establish the trustworthiness of the examined phenomenon due to the nature of the research (Golafshani, 2003). The validity of a study is determined by whether the phenomenon being investigated is characterised in the way that it was intended to be reported, as well as the research design, methods, and conclusions employed (Bush, 2007). A major critique of validity in qualitative research is that it cannot be used as a quality criterion because the researchers may have an inherent bias that has influenced the research outcomes (Golafshani, 2003). Bias might come from the researchers' perceptions gained during the study, such as through interactions with respondents employed in data collection or the iterative process, in which the researchers are constantly exposed to fresh impressions and knowledge derived from theory and empirical data (Andersen, Dubois, and Lind, 2018). As a result, researchers have expanded the validity notion to better match qualitative research by employing more applicable adjectives such as quality, rigour, and trustworthiness to assess the research's validity (Golafshani, 2003). In terms of the methodology used to gather data for the empirical findings, semi-structured interviews are a reliable technique of gathering information from respondents in the pharmacy sector in Sweden. The researchers can collect information regarding the examined phenomena through semi-structured interviews since the respondents are free to openly recapitulate their experience of reality without being influenced by the researchers' values. By voice recording the interviews during the empirical data collection, we were able to avoid misinterpretations of the empirical data or basic

human mistakes such as forgetting. As a result, we have received ongoing feedback on the writing process from a supervisor with extensive expertise in academic research and publishing in order to argue in the same spirit for the validity of the thesis. The interviewees have also provided feedback to us and have had the chance to examine the information related to their firm and address any mistakes or inaccuracies that may have arisen. However, there was some variance in the interviewees' positions at the organisations, which might have harmed the data collection's validity because they may not have had enough insight into all of the study's procedures.

3.4.2 Reliability

Reliability is a set of quality criteria that determines a research's repeatability. Simply put, a study must provide the same or similar findings over time, regardless of who does it (Amaratunga, Baldry, Sarshar, and Newton, 2002). Because the methodology of this thesis is properly documented, this study has a high level of reliability. This aids replication of the study since other researchers may rely on the described methodologies to pursue the same research route. On the other hand, because the interviews are semi-structured, the consistency of the results is less likely to occur due to the lack of a rigorous questioning format throughout the interviews. This is one of the disadvantages of conducting semi-structured interviews, according to Bush (2007), because respondents frequently repeat their experiences and are free to do so without the researchers steering the conversation in one direction. The respondents' responses are also heavily influenced by the follow-up questions that occur throughout the interview. Triangulation, which is collecting and comparing data from several sources in the same subject, is one technique to improve dependability (Bush, 2007).

3.4.3 Research ethics

When conducting a research project, research ethics is an essential subject to consider in terms of the influence on the persons participating in the study and the study's findings (Bell, Bryman, and Harley, 2019). As a result, ethics was considered in all aspects of the project. Privacy, harm to participants, and deception are three areas of ethical standards in business research, according to Bell et al. (2019). Privacy relates to the necessity to preserve the privacy of research participants, whereas deception refers to when researchers promote their research as something other than what it is.

The principle of privacy was addressed by ensuring that all interviewees were given the chance to stay anonymous in the report. Furthermore, all interview questions have been carefully crafted and vetted to ensure that the interviewees are not harmed in any way. To avoid fraud, the goal of the study and how the responses were used were described to the participants honestly before the interviews. The interviewees were also given the opportunity to read the finalised chapter including the empirical findings which backed up their claims.

4. Palliance AB

Palliance, as a company, was first started in 2011 as a Norwegian company (Palliance AS) with a Swedish subsidiary (Palliance AB). Today, the company has its headquarters in Gothenburg, Sweden, and has three minor offices in Norway, Austria, and China. Palliance does not own any production facilities and does not produce anything by themselves from raw material, i.e., the company is not an OEM. The company mainly focuses on buying products from suppliers who are interested in finding exclusive distributors in the regions that Palliance is active within. However, there are times when Palliance adjusts products or packages according to their customers' demands before selling them. Thus, Palliance can be seen as a trading company, buying products from original manufacturers, and selling them onwards to the company's own customers.

The outbreak of the COVID-19 pandemic has had both positive and negative economic effects on Palliance. The necessity for disinfection solutions in hospitals and pharmacies escalated in 2020 as a result of the pandemic, which Palliance was able to capitalise on. As a result, the company's turnover increased dramatically in 2020, and as a result, their supplier of these products has become one of their most important suppliers. On the other hand, many pharmacies and hospitals for different product categories have been more cautious in their purchases and Palliance has struggled to deliver products as usual during the pandemic.

4.1 Customer categories / sales channels

The regions that Palliance is involved in are Sweden and Norway. There have for several years been considerations of expanding to a larger part of the Nordics as well, such as Denmark and Finland but it has not yet been done. The company usually divides its sales to customers into the following three categories:

1. Sales to pharmacy chains
2. Sales to regions/hospitals through tenders
3. Direct sales to single private customers

Regarding the sales categories, it is important to note that sales to different pharmacies can be included in both category one and two. Some tenders that Palliance are active within to different regions in Sweden include pharmacies. One such example is a tender in Region Skåne where Palliance distributes blood glucose metres to all the public health clinics free of charge. However, in order for patients of these clinics to use their metres, they need test strips which are provided through the pharmacies. Category one, on the other hand is direct sales where purchases have been decided directly by the pharmacies which is not the case for tenders where the pharmacies are obliged to be able to deliver the specific products. Category three is also direct sales but can include a wider range of customers such as schools, health clinics, municipalities etc.

The different categories have different strategic relevance for Palliance, where the combination is thought to cover for different risks. Category one has been the main sales channel through many years since the establishment of the company. This is because the relationships with the involved suppliers have followed from previous businesses run by the CEO of Palliance. Sales through category one is thus regarded as a stable income which stands for a relatively large part of the revenues. Category two on the other hand is a less stable revenue stream where processes are more long term meaning that the company has to prepare and work for these sales for several years before eventually being awarded a contract. Category two generally has lower margins than the other categories but often

higher volumes since sales are directed towards entire regions in Sweden such as Region Skåne, Västra Götalandsregionen or Stockholms Län. This category also has a lot of competition since there are strict requirements and many bidders. Since the tenders require much effort and work for a longer period of time compared to other categories, deciding to try and compete for a contract is seen as having more risk than other categories. However, because of the large volumes and the possibility to gain reliability, the tenders are seen as having a high long term strategic relevance for the company. The third category is also seen as an extra possibility to cover the risks of not having enough revenues when not being awarded the contracts which are competed for, as well as a good entry and way of testing the quality of products with smaller customers before investing more heavily in different products.

4.2 Product portfolio

Palliance is still a relatively small company compared to many of their competitors bidding for the same tenders. As a consequence of the company being in a growing phase the product portfolio is constantly changing meaning that some product categories gain a higher relevance in single periods while others stay relevant for many years. Today, the company has three product categories which have been relevant for a longer period of time and are described below.

1. *Diagnostics*

This category consists of products within areas such as blood glucose testing, cholesterol monitoring, haemoglobin testing etc. Currently, focus lies on blood glucose testing since Palliance was awarded a tender contract in Sweden which started in November 2021.

2. *Safe hygiene solutions*

This category consists of different types of disinfection solutions and equipment directed mainly towards hospitals in Norway. The company was awarded a tender contract with Sykehusinnkjop which is a national hospital organisation handling procurement for all hospitals in Norway.

3. *Medical home care*

This category consists mainly of different types of self-tests and care products that are sold through pharmacies. Some examples are pregnancy tests, ovulation tests, urinary tract infection tests, seat cushions etc.

Apart from these categories, Palliance is currently in the initial stages in several other areas such as products within allergy testing and drug testing. These categories are thought to grow bigger and be potential categories for winning future tenders. As mentioned, because of the growing phase of the company, it is constantly looking for relevant products and categories which fit into the overall strategy and product portfolio of the company in order to succeed in either private sales or through tenders.

4.3 Distribution network

Palliance's suppliers are all manufacturers who produce items that are subsequently sold to their first-tier clients such as Palliance. Palliance then sells products onward to its first-tier clients being mainly hospitals and pharmacies but could also include medical clinics, dental offices, pharmacy wholesalers and other businesses. The products aimed towards pharmacies can be sold either directly to pharmacies or through two main intermediaries acting as wholesalers named Tamro AB and Oriola Sweden AB (hereby noted as 'Tamro' and 'Oriola') which can be seen in figure 6 below.

Palliance is thus an intermediary between the manufacturers of the products and Palliance's customers. However, their role as an intermediary can differ depending on the customers and their demands. Many of the products that Palliance sell are simply traded without any adjustments while other products might need minor adjustments to fit the needs of the customers. These adjustments are never connected to the functionality of the products but rather the material and equipment around it needed to understand and use the product correctly. The adjustments are most often concerning packaging and educational material such as user manuals, quick reference guides or number of products in each transport carton. Palliance further adds value to their customers through education and service connected to their offered products.

Since Palliance's establishment in 2011, pharmacies have made up the bulk of the company's client base, but since 2020, there has been an increase in the share of hospitals. As a result of these adjustments, the customer portfolio currently encompasses around 50 percent hospitals and 50 percent pharmacies. Hospitals are in one way the end customer since they are the last actor who pays for the products, but the end users are not the hospitals themselves but rather their patients. The pharmacies are rarely the end customers or the end users since they sell most of their products further to the end users.

There are no warehouses or transportation vehicles owned by the Palliance. The firm outsources activities related to the physical movement of products to actors with whom it has a tight relationship. Currently, two warehouses are used, one in Sweden and the other in Norway. Even though warehousing and inventory management are outsourced, Palliance staff nonetheless visit the warehouses on a regular basis to ensure that everything is running well. A schematic overview of Palliance's distribution network can be seen in figure 6 below.

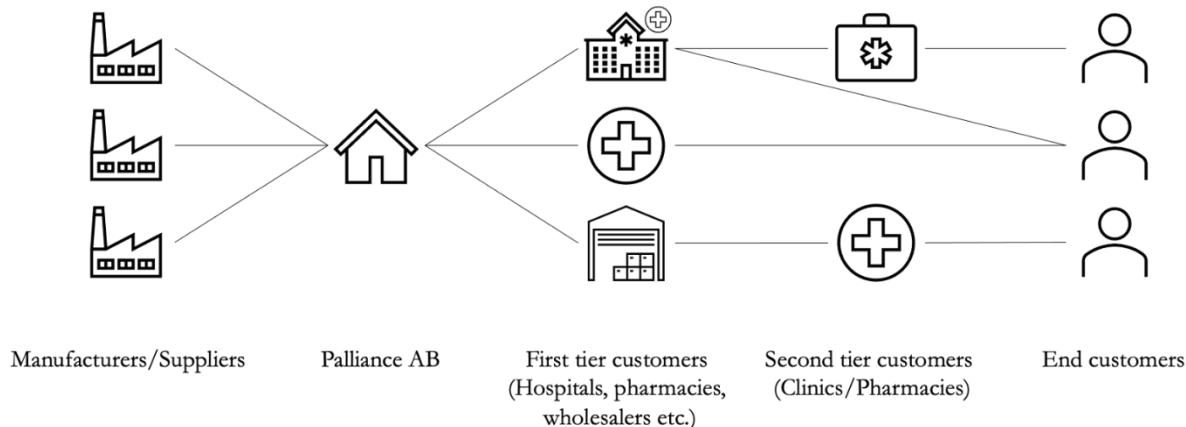


Figure 6: Distribution network of Palliance AB

4.3.1 Relationships with pharmacies in Sweden

Palliance offers their products to all pharmacies in Sweden. However, the relationship with the different pharmacies differs depending on what products they buy from Palliance and how specific demands they have. There are three pharmaceutical companies with focus on physical stores and one company focusing on e-commerce in Sweden which buy goods directly from Palliance. The rest of the pharmacies are customers through tenders where they are obliged to offer Palliance's products through their stores.

The relationships for Palliance with the pharmacies which are not private customers are naturally not as close as the relationships with the other pharmacies. The reason behind this is that pharmacies which buy goods directly have decided to make the purchase themselves

and, unlike tender situations, they are free to negotiate purchasing prices and sales prices towards customers on their own. This makes the pharmacies more prone to securing a good relationship in order to achieve good margins.

Palliance's type of relationships with their private pharmacy customers are more connected to which products and what demands the pharmacies have rather than if it's a physical or an e-commerce pharmacy. Apoteket AB (physical focus) and Apotea AB (e-commerce focus) are both buying similar self-tests and the relationships between Palliance and these pharmacies are very similar. However, Apotek Hjärtat AB mainly buys seat cushions which is different compared to the other two pharmacies. This is a product which is possible to distribute directly to customers in the form that it's purchased from Palliance's supplier and thus the relationship and communication with Apotek Hjärtat AB is not as deep.

In order to obtain new customers, Palliance optimises their efforts in the pharmaceutical business based on procurement windows that usually occur three or four times every year. Suppliers are welcome to register their products with the pharmacy chains during these procurement periods, and they are reviewed by the pharmacies as thoroughly as feasible in terms of time constraints. Successfully evaluated vendors are then invited for discussions and contract signings as the next stage in the process. However, the chances of making it to the final phases are slim because there are a large number of items registered and pharmacies don't have enough time to fully assess them all. Palliance has been compelled to find another approach to negotiate with pharmacies due to the large number of items that are registered. This is accomplished through direct contact, which is now Palliance's primary method of acquiring new pharmacy clients. Palliance seeks to schedule actual encounters with potential customers to offer their goods through direct contact in this situation. Instead of being a one-way presentation, the presentation usually becomes an interchange of ideas on how the items may benefit or be improved to benefit the consumer.

This interchange of ideas during product demonstrations, according to Palliance's CEO, demonstrates that the consumer has a significant effect on the company's product line. Customers in the pharmacy business have also approached Palliance to request that the supplier locate or manufacture a specific product that they want. Palliance frequently responds to these situations by adding new goods to their product catalogue, demonstrating the influence that customers may have.

4.3.2 Competitors

Palliance is a modest player on the market, with many larger competitors operating in the same regions. There are several sorts of rivals, each with its own size and areas of expertise. There are brand distributors in the pharmaceutical industry, such as Palliance, who distribute other brands. There are providers of prescription medicine in both pharmacies and the healthcare industry, and they frequently have a large range of goods, making them appealing suppliers. Palliance is distinguished from the bulk of its rivals by its smaller size, which means it has fewer hierarchical levels to consider and is more specialised in the areas in which it operates. Palliance is an exclusive distributor of the brands it sells to clients, which means it doesn't compete directly with other companies of the same brand, but rather with other representatives of other brands.

4.4 Palliance and the COVID-19 pandemic

The outbreak of the COVID-19 pandemic has as mentioned had both positive and negative economic effects on Palliance. Palliance initiated a dialogue with a supplier of disinfection solutions and connected products in the middle of 2019, approximately 6 months before the initial outbreak of the pandemic. Once the effects of the pandemic had spread to the Nordic

countries and many suppliers were not able to deliver, Palliance saw an opportunity to offer products from their newly added supplier to hospitals in Norway. Before the pandemic, companies could only offer products to hospitals in Norway through tenders but because of the delicate situation, exceptions were made. Thus, Palliance managed to get their foot into the hospital market without needing to go through the process of a tender. This situation led to a quick increase in Palliance's turnover in 2020. However, after some months, many companies had started to develop contingency plans and started to become more cautious because of the large stock of products. This in turn led to a purchasing stop in 2021 which left Palliance with a large stock of disinfection solutions which had been estimated to be sold. Palliance had to destroy a lot of their stock and this part of the pandemic led to a large decrease in Palliance's turnover in 2021. However, during this period Palliance had managed to get awarded a tender contract starting by the end of 2021. Today, Palliance provides Sykehusinnkjøp HF, the national procurement organisation for hospitals in Norway, with disinfection solutions and wet wipes. Thus, in this product category the pandemic has had both negative and positive effects on the company's success since late 2019.

Regarding products that are sold by Palliance to pharmacies in Sweden, some changes have also been noticed from Palliance's side. The sales for several product categories, such as pregnancy tests, have gone up during the pandemic. Simultaneously, the sales of several other categories, such as seat cushions, have gone down. Another experienced change is that the time of taking decisions has varied a lot during the pandemic. Under the most intense periods, decisions were taken more quickly and there weren't as many discussions as before the pandemic, while in the last 6-12 months the duration of decisions has been prolonged compared to before the pandemic. Employees at Palliance emphasise that many pharmacies have had an overload of work during the pandemic, and it is natural that it has been this way. However, for products not used to counteract the pandemic or with any specific connections to the pandemic, employees at Palliance feel that there shouldn't be as big of a difference for such products as opposed to products connected to the pandemic. Palliance is now in a position where they feel the need to respond to the many experienced changes, but they are not completely sure what specific changes have been made and how to best cope with those.

5. Pharmacy market in Sweden

In this chapter, an overview of the pharmacy market in Sweden will be presented. This part is mainly based on secondary data collected from a market report on the pharmacy market in Sweden shared by Sveriges apoteksörening (2021), an organisation that represents all pharmacies in Sweden which are open and available to all people. The sources of such data that are not collected from Sveriges Apoteksörening will be clearly presented with the specific source in the text. The chapter will begin by shortly presenting Sveriges apoteksörening and then give an overview of the pharmacy market.

The overview will cover which retail pharmacies are present on the market and what regulations and general obligations these actors must follow. The overview will also provide general information on different types of pharmacy actors in Sweden along with information on specific central developments which have been made in recent years.

5.1 About Sveriges Apoteksörening

Sveriges apoteksörening is an organisation which aims to ensure that the pharmacy market, through its diversity, development, and role, continues to generate societal benefits and remains an important and contributing part of the healthcare industry.

Their mission is to work for stable and predictable conditions for pharmacies, where the pharmacy market's customer- and societal-benefits are utilised. The association is an industry organisation, not an employers' organisation.

The organisation consists of 10 members which are mainly associations representing different parts of the pharmacy market. These 10 members represent, in essence, all pharmacies in Sweden which are open and available to all people. One of the association's members is Sveriges Oberoende Apoteksaktörers Örening (SOAF), which organises about 40 independent pharmacy contractors.

Through the organisation's covering position representing basically the entire supply side of the pharmacy market, it has valuable overall and detailed data on the pharmacy market in Sweden.

5.2 General information about the pharmacy market in Sweden

The entire pharmacy market in Sweden including both outpatient and inpatient pharmacies had a turnover of almost 64 billion SEK in 2020, which was an increase of 5,3 percent compared to 2019. These numbers include the drug sales at the pharmacies, which is divided into prescribed drugs and over-the-counter (OTC) drugs, as well as sales of other goods and services that are not included in the drug category. The drug category, according to section 1 of *Läkemedelslagen*, refers to any substance or combination of substances that:

- are provided with information that it has properties for the prevention or treatment of disease in humans or animals; or
- may be used on or applied to humans or animals for the purpose of restoring, correcting, or modifying physiological functions by pharmacological, immunological or metabolic action or for diagnosis.

The dominant segment is prescribed drugs, which account for approximately 73 per cent, while (OTC) drugs account for just over 8 per cent, and other goods 18 per cent. In the

outpatient market, other sales channels such as grocery stores and petrol stations also compete with pharmacies for the sale of certain OTC medicines, but these sales are not included in the pharmacy market. An overview of the turnover of each part of the pharmacy market can be found in Figure 7 below.

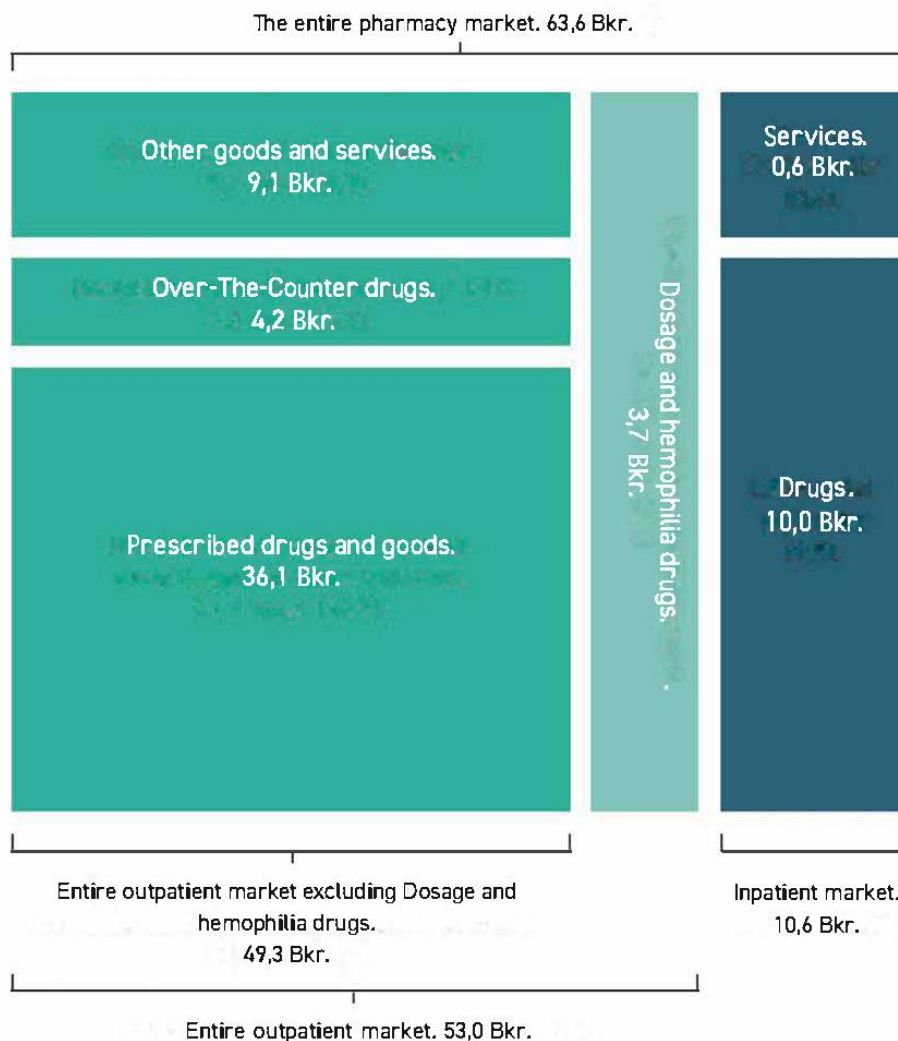


Figure 7. Overview of the pharmacy market based on net sales in 2020 (Apoteksföreningen, 2021)

Measured in volume, i.e., the number of units sold (usually consumer packages), the outpatient pharmacy market grew by a total of 3.3 percent in 2020. The increased sales in 2020 could thus be attributed to both an increased volume (more packages sold) and higher average prices for prescribed medicines and other goods. Pharmacies' e-commerce is increasing sharply and in January 2021, e-commerce accounted for 20 percent of sales in the outpatient market. Measured in volume (number of units), e-commerce amounted to more than 28 percent in the same month.

5.2.1 Prescribed drugs

Of the outpatient pharmacies' total turnover, prescribed medicines make up the majority share (73 percent). These drugs account for a third of the total number of units sold. Which drugs are prescribed, and to what extent, are completely controlled by the healthcare prescriber and are thus not something that pharmacies can or should influence. In addition, both the pharmacies' purchase price and sales price for the medicines included in the pharmaceutical benefit, i.e., most of the products procured through tenders, are determined

by Tandvårds- och läkemedelsförmånsverket (TLV). The pharmacies' operations concerning prescribed medicines therefore differ markedly from other industries, where free pricing, their own production capacity, and independent choice of range for goods and services are central starting points.

5.2.2 Over-the-counter drugs

Over-the-counter drugs are the part of the sales that pharmacies have the power to influence. These drugs correspond to just over 8 percent of sales and just over 22 percent of the number of units sold. There is free pricing for OTC medicines, but competition is fierce both between the pharmacy chains and from the rapidly growing e-commerce. In addition, there is competition from the grocery trade, which is also allowed to sell most OTC medicines. The volume of OTC drugs was unchanged in 2020 compared with 2019, and the average prices fell for this segment.

The proportion of OTC drugs sold outside pharmacies amounted to approximately 17 percent of the total turnover of OTC drugs by 2020, which is a decrease compared to 2019. Pharmacies are thus increasing their market share compared with previous years. To meet the competition from the grocery trade, which mainly sells well-known brands, pharmacies have introduced more alternative self-care medicines, such as various brands with the substances paracetamol and ibuprofen. This has increased the range of cheaper alternatives for consumers and further contributed to price pressure.

5.2.3 Other goods and services

The goods in pharmacies that are not classified as drugs are called *other goods*. This segment also includes services offered by pharmacies. Many of these services are currently provided free of charge to customers, which means that the impact on sales in this category is negligible. Sales of other goods and services amounted to 9.1 billion SEK in 2020, which corresponds to an increase of 13 percent compared with 2019. In relation to the pharmacies' total outpatient sales, other goods and services accounted for just over 18 percent of sales in 2020.

There is a clear tendency for pharmacies to try to compensate for the low trading margin on prescribed medicines and the fierce competition in the self-care market with a good set-up and sales of other pharmacy products. For many pharmacies, other goods sold in pharmacies have a special stamp of quality with a focus on health and well-being. During both 2019 and 2020, other goods accounted for the highest percentage growth in sales compared with self-care medicines and prescribed goods. The difference with other segments has been further strengthened during 2020. Other goods also account for a significantly larger share of sales in the e-commerce channel and amounted to over 40 percent in this channel in 2020.

5.3 The system in Sweden

In Sweden, a very high proportion of all medicines go via pharmacies. In the neighbouring Nordic countries, it is more common for certain medicines to be given to patients via hospitals instead. All pharmacies in Sweden must be able to dispense all medicines. This makes access to medicines across the country equal, but also poses a challenge for pharmacies. Medicines are not a homogeneous product group, but there are medicines used by tens of thousands of people and medicines that are only used by a few individual patients. The Swedish pharmaceutical market is therefore organised in such a way that it is the pharmaceutical manufacturers who have the largest warehouses in central locations in Sweden, while the pharmacies have smaller warehouses in as many locations as possible.

At each pharmacy, you adjust the stock according to which customers you have. The goal is for as many people as possible to get their medicines directly at the pharmacy counter and the others will not have to wait longer than 4 pm the next weekday. The best balance between how much stock you have in the pharmacy and which goods should be ordered is a difficult trade-off for pharmacies. If you do not have a medicine in stock, there is a risk that the customer will choose to go to another pharmacy, but you also do not want to sit with a stock of medicines that are not sold and that must be destroyed. At the same time, it is difficult to decide which drugs should be in stock because there are many drugs that are "unusual", and all customers are unique.

5.3.1 Stock keeping at the manufacturer

The largest part of all medicines available in Sweden is in the pharmaceutical manufacturer's warehouse. The manufacturer has its warehouse at a distributor who is also responsible for delivering the medicines to the pharmacies. The manufacturer's stock at the distributors is sufficient for an average of three to four months of consumption. The warehouse is continuously replenished from the manufacturer's factories, which are usually located outside Sweden. There are no requirements for how large stock a manufacturer must have in Sweden, and it can vary between different drugs and over time how much is in stock in Sweden for that particular drug. The advantage of having large stocks at a few distributors is that it is easy to distribute the medicines to pharmacies as needed without there being stocks lying in the "wrong" place in the chain.

5.3.2 Stock keeping at the pharmacies

At the country's 1433 pharmacies, there are around 7.5 million packages of prescription drugs in stock, distributed over almost 12,000 different drugs. An average pharmacy has around 5,000 packages in stock divided into about 2,300 different drugs. The large e-commerce pharmacies have even larger stocks. The total stock in pharmacies corresponds to the volume sold in Sweden per month.

The pharmacy's warehousing aims to have as wide a warehouse as possible based on the demand that each pharmacy has. Since pharmacies can receive new deliveries every weekday, the stock of each medicine does not have to be that large. Only a few medicines have such large sales that they are sold several times a week in most pharmacies in the country. Of these, there is a stock that lasts for several weeks at each pharmacy. The most common is that a drug is sold less often, but pharmacies still have many of these drugs in stock in order to provide good service to their customers. Although the pharmacy may not sell a certain medicine more often than every two or three months, it may be in the pharmacy's warehouse, but then in only a few packages. This means that on average a pharmacy's stock lasts for about a month, but if the manufacturer stops delivering, individual goods can run out in some pharmacies fairly quickly but remain in other pharmacies for several months.

5.3.3 Distribution of goods and roles of Tamro and Oriola

There are two leading actors for the distribution of goods from the supplier to the pharmacy: Tamro and Oriola. However, the distribution of prescribed drugs differs significantly from other goods. Prescribed drugs which are ordered from pharmacies must be delivered before 16:00 the next workday. This requires an extensive infrastructure and planning which almost only Tamro and Oriola are able to fulfil today. However, this is not the case for other types of goods for which there is no predetermined maximum delivery lead time.

Many suppliers of other goods, although, choose to sell their products through Tamro and Oriola because of the widespread networks they have and their connections to all the pharmacies. Thus, in practice, pharmacies have little opportunity to choose or influence the terms with the two distributors. Even though more pharmacy chains have their own distribution solutions for over-the-counter medicines, parallel-imported medicines, and merchandise, it has proved difficult to get pharmaceutical companies to deliver their goods in the pharmacies' own distribution solutions.

Moving back to the role of Tamro and Oriola, both work as sellers of warehousing and distribution services as well as wholesalers who offer all products from their suppliers to pharmacies. Simultaneously, they also communicate new needs from pharmacies to the suppliers and help looking for new suppliers. Thus, they act as intermediaries covering a significant part of the market for pharmaceutical goods and selling goods to both sides of the distribution network.

5.4 Different retail pharmacies on the pharmacy market in Sweden

Pharmacies in Sweden are divided into retail pharmacies which are available to all people, and inpatient pharmacies which are only available for those who are receiving care from a hospital or other similar care unit. However, the vast majority of pharmacies in Sweden are retail pharmacies which is also the focus of this thesis.

The retail pharmacy market in Sweden consists of five nationwide chains: Apoteket AB, Apotek Hjärtat AB, Kronans Apotek AB, Apoteksgruppen i Sverige AB, and Lloyds Apotek. In addition, there are three pure e-commerce pharmacies; Apotea AB, Meds Apotek AB, and Apohem AB, as well as about 40 privately run pharmacies. The privately run pharmacies are organised within the association SOAF, which as mentioned before is an organisational member of Sveriges Apoteksförening. These 40 privately run pharmacies constitute merely 2,7 percent of the entire market, since there exist approximately 1430 pharmacies in total in Sweden. The five nationwide pharmacy chains mentioned, constitute approximately 97 percent of all pharmacies, i.e. all except approximately 42 pharmacies. Apoteksgruppen i Sverige AB (hereby noted as 'Apoteksgruppen') is run both as a pharmacy chain with wholly owned pharmacies and in franchise form with about 30 pharmacies with individual ownership under the same brand.

The pharmacy market in Sweden was reformed in 2009 which has led to a large increase in the number of actors and pharmacies on the market. Previously, before 2009, there was only one actor, Apoteket AB (hereby noted as 'Apoteket'), which controlled the whole market, i.e. had a monopoly, but after the reform all actors that were permitted by Läkemedelsverket could run a pharmacy. In 2009, there were only 929 pharmacies on the market, all run by Apoteket.

Apart from all retail pharmacies, there are approximately 600 additional delivery points of medical and healthcare supplies which do not sell anything but work solely as points for handing out products bought from other actors. These delivery points exist mainly in areas lacking a nearby pharmacy.

5.5 Governance and regulations

The pharmacy market is partly strictly governed by laws and regulations. The authority Läkemedelsverket decides whether a drug should be prescription or not and whether over-

the-counter drugs may only be sold in pharmacies or also in other retail stores. The Swedish Dental and Pharmaceutical Benefits Agency (TLV) decides whether a prescription drug should be included in the drug benefit and thus financed by the state. The same authority decides what compensation the pharmacies receive from the state for carrying out its social mission to provide and advice on medicines and to carry out the generic exchange.

Many of the laws and regulations that regulate the pharmacy market are necessary because medicines are not just any goods and pharmacies are not just any stores. But all rules affect the pharmacies' ability to run pharmacies and cause costs. That rules drive costs is an insight that regulatory authorities should consider in the regulations so that existing and new rules are appropriate and effective.

5.5.1 The trading margin is controlled by TLV

TLV takes into account the overall sales development and profitability. That is, the sale of other goods and over-the-counter medicines is not only taken into account but is a prerequisite for pharmacies to achieve satisfactory profitability. This means that the current system steers towards developing the range and increasing sales of other products with a higher margin than prescription drugs. However, it is a challenge as competition is fierce and the growing e-commerce is pushing up prices for both over-the-counter medicines and other goods. For over-the-counter medicines, average prices have fallen in recent years. Conversely, pharmacies seek to reduce costs for the handling of prescription drugs where possible without violating the regulations.

For about 70 percent of the pharmacies' sales (medicines within the benefit), the state determines through the TLV both the pharmacies' purchase prices (AIP) and sales prices for medicines (AUP). The difference between them is the trading margin for prescribed medicines, which is thus determined by the state. The trading margin consists of a fixed amount and a percentage surcharge based on the purchase price and must, according to TLV, reimburse pharmacies for the work of providing medicines, dispensing prescriptions and related advice to customers and managing generic exchange of medicines. Additionally, it should compensate for other costs e.g., to keep inventories and inventory losses caused by price reductions.

According to TLV's established principles, the trading margin must also provide the players with reasonable profitability for the prescription transaction and create sufficient conditions for a profitable total transaction in order to enable the goal of increased availability. However, the recipe business is neither profitable nor in balance, it goes the opposite with a deficit. The Swedish Pharmacy Association has made calculations of the attributable costs and the result for the handling of prescription drugs within the benefit. These show that the trading margin covered 89 percent of the costs in 2016 and 88 percent in 2017, including additional earnings from parallel imports. Every prescription handling that pharmacies carry out thus entails a business loss and it is highly probable that the cost coverage has decreased further since these calculations were made.

The level of the trading margin has not changed since the reregulation in 2009. This means that the fixed parts of the remuneration have been eroded by inflation by 12 per cent, but revenues from the price-dependent part of the margin have also deteriorated. Admittedly, the overall trading margin has increased in kronor. But this is due to the fact that the number of prescribed packages that are dispensed has increased and that prescription drugs have increased in price, which in turn has increased the pharmacies' costs for, for example, warehousing. If the trading margin continues to erode, it will in the long run mean great difficulties for the pharmacy players to maintain the current level of service with regard to physical pharmacies. In the long run, this may lead to a reduction in the good availability of

medicines. If the government and TLV want to take responsibility for good drug advice and drug supply, there must be long term sustainable financing of this activity.

6. Case descriptions and analysis

This chapter details the empirical findings from several interviews with selected pharmaceutical companies in Sweden. Each sub-chapter is introduced with a short description of the company, the interviewees, and their roles at the company. The case findings will be divided into categories according to the three phases of the analytical model; source, purchase and pay. Additionally, a fourth category is included according to the centre of the analytical model; organisational structure.

6.1 Apoteket AB

At Apoteket, a Team manager along with a Demand planner who both are part of their goods management department, were interviewed in order to investigate the procurement process at Apoteket. The responsibility of the goods management department starts when they receive information from the assortment department regarding which products will be added or deleted from the assortment. Further, the responsibility of this department ends when the products have been received and delivered to the pharmacies, available to the customers. The different steps of their responsibility include taking decisions regarding purchasing volumes, timing of purchase orders, and when to refill their store shelves. The interviewees describe their responsibility as ensuring that the sourced goods are at the right place at the right time.

6.1.1 Source

Apoteket has four product revisions each year where products with a low demand are removed from the assortment and new products with higher potential are brought in. During these four exchange windows each year, suppliers are welcome to send in news and products they would like to offer. Apoteket also has the possibility to search the market themselves but rarely sees the need to do this because of broad supply from offering suppliers. However, if there is an obvious demand for a product that Apoteket does not sell today, the assortment department might start a search for suppliers on their own as well. For some products, Apoteket might choose to source a supplier who can provide products under the Apoteket brand. The products and suppliers are then evaluated by the responsible category manager based on price, potential sales, several quality criteria etc. For products and suppliers that go through the initial screening phase, a dialogue concerning prices and negotiations will follow.

The pandemic has undoubtedly had a major impact on Apoteket as a company, not the least in their procurement process. However, the interviewees emphasise that there have been different phases during the pandemic, where certain phases have been more stressful than others for the company. Furthermore, there is a distinct difference on the impact of different products and categories. The demand fluctuations for products used as a direct response for the pandemic such as disinfection solutions and face masks have been most difficult to cope with, while some products have not been affected at all. They continue by stating that the closed down factories and shipment routes, which mainly occurred in the beginning of the pandemic, have forced them to completely reject many of their regular work procedures and suppliers.

One clear difference during the beginning of the pandemic has been relinquishing the 4 exchange windows and instead contacting any supplier, who could provide the required products, outside the predetermined exchange windows. There were many quick decisions made in panic regarding choice of suppliers, choice of products etc. There was not enough

time to evaluate each option and some decisions led to great results while others did not play out as well as hoped.

Another noticeable effect of the pandemic is that there have been more price negotiations than usual with suppliers. The main reasons behind the initiation of such negotiations are shortages of raw material, packages, and containers which all lead to difficulties for suppliers to operate as usual. Thus, the fixed fees and the regular agreements used before the pandemic have not been useful during this period.

Regarding sourcing and choice of suppliers, the main deciding factor has always been price. This is something that, according to Apoteket, has not been affected by the pandemic. Quality is also mentioned as affecting the sourcing, though price is more important and has rather gained than lost importance during this period. Further, the contractual requirement on suppliers has not been adjusted or changed during the pandemic. This means that prices, quality aspects, and other demands have been expected in the same way as before the effects of the pandemic. If a supplier does not fulfil their contracted delivery lead time, Apoteket has a right to a penalty charge based on their contract. However, during the pandemic, Apoteket needed to overlook their otherwise strict demand by allowing a greater indulgence regarding the lead times, i.e., penalty charges have not been issued. This has however only been a temporary change during the most stressful phases of the pandemic.

6.1.2 Purchase

Depending on if a product is a private label- or white label product, the time after negotiations until the goods can be ordered can vary a lot. After negotiations, a private label product will go through a design and approval stage which can take several months. The next step for the goods management department is to make sure all master data and necessary information is in place and after that decide how the forecasts should be made for the specific products. The forecasts themselves, however, are made automatically by a forecasting system (Relex) that uses certain manually added parameters to calculate quantities and dates when the goods need to be received and shipped. Based on known lead times from their suppliers, most often three to five workdays, the team knows when to place orders for each product. The interviewees make clear that very few of their decisions are made manually but rather automatically through Relex which include considerations of different types of variation in demand.

The process looks relatively similar for both private label- or white label products, though the lead times can vary significantly for private label products depending on different requirements from Apoteket. Lead times for private label products can vary between two weeks up to eight months. The long lead time is mainly because these suppliers usually do not keep stock for the private label products of customers.

The interviewees mention that the most difficult part of their responsibility is making correct forecasts. They emphasise the difficulty of considering the many different types of external factors that can affect the demand. However, they continue by stating that in the great majority of cases they trust the forecasts made by Relex and rarely make manual adjustments.

Many of the products that were replaced by other products during the pandemic have got back into the assortment since, according to the interviewees, the customers are loyal to the brands they are used to buying. However, for a small share of the products, the issues regarding unstable demands and inaccurate forecasts remain. This mainly concerns facemasks and antigen-tests. Also, for disinfection solutions specifically, Apoteket has at

least temporarily chosen to stop producing their private label product and solely purchase products from other brands as a result of the pandemic.

When the purchasing of products became increasingly complicated, Apoteket accepted all types of packaging and logistical solutions since they were desperate to receive the products. This new acceptance mainly affected the warehouse workers who then had to change their processes when dealing with inconsistent packaging solutions.

The interviewees continue by stating that the communication procedure with suppliers of their private label products did not change during the pandemic. However, the frequency of communication with suppliers of other brands had to be increased to make rapid decisions when necessary. The majority of communication during the pandemic revolved around increased lead times, as Apoteket expected all of their suppliers to communicate this directly to them.

6.1.3 Pay

Regarding payment and invoicing, the interviewees were not aware of any specific changes or affects during the pandemic. The company has agreed payment terms with suppliers which have been followed throughout the pandemic. However, as mentioned in section 3.6.2, the interviewees have less knowledge about the invoicing process and payments since the financial department has that responsibility and the interviewees are not as involved in the pay phase as in the rest of the procurement process.

6.1.4 Organisational structure and supplier relationship management

According to the interviewees, the most drastic change made during the pandemic was organisational wise. Instead of relying on managers to keep responsibilities and to always be the last one to approve changes, Apoteket opened up to let a group of people including employees working operatively on the subject make decisions together. The interviewees continue by stating that they have started to work more in larger groups to make sure that all perspectives and alternatives are presented before making a decision. Further, measures have been taken and changes have been made to increase flexibility and preparedness for similar situations in the future. These measures are for example streamlining the decision-making process to keep it smooth and effective even though more people are involved. Another measure is to educate and train employees for handling different contingencies.

Regarding supplier relationships, there is according to the interviewees a natural difference between their private label suppliers and suppliers of other brands. Apoteket has a naturally closer relationship with their private label suppliers for which it is also easier for Apoteket to affect the processes compared to suppliers of other brands. Furthermore, the suppliers of other brands are not as connected to the company and are mostly contacted when there is a need to negotiate prices or terms. However, during the pandemic, the more frequent communication with almost all suppliers has led to a closer relationship with many suppliers leading to new routines and procedures in handling certain suppliers.

6.2 Apoteksgruppen

The second pharmacy chain interviewed was Apoteksgruppen. The supply chain manager, responsible for the goods management department, was interviewed in order to investigate the procurement process at Apoteksgruppen. Above the interviewee in the company hierarchy is a purchasing director who has a wider strategic responsibility for the procurement process. The interviewee is responsible for making sure both prescribed drugs

and other goods (including Apoteksgruppen's private label products) are available in the pharmacies when needed.

The pharmacy stores included in the chain were initially run by separate individuals as a franchise business model. However, by 2019, a company from Lithuania acquired 150 stores and centralised the management of the company. Thus, the centralised version of the company has existed for approximately 18 months as of April 2022.

6.2.1 Source

Apoteksgruppen does not own any warehousing facilities. All stock keeping and distribution of goods, regardless of if it is prescribed drugs, other goods, or private label goods, is handled by Tamro and Oriola. The only difference between private label products and other products for Tamro and Oriola is that private label products have an own section in the warehouse and are only sold to one customer, i.e., Apoteksgruppen. Otherwise, the process is the same and Apoteksgruppen does not own any products until they are actually delivered to their pharmacies.

Each year, Apoteksgruppen has three exchange windows for adding new products and withdrawing existing products from their assortment. Suppliers are then able to send in proposals for products they want to offer. However, because of the role of Oriola, the decision of taking in a new white label product is dependent not only on Apoteksgruppen but also Oriola who has to decide if they want to add the product. Each window entails 100-200 new products and approximately as many removals. If there is not a specific urgent need, Apoteksgruppen rarely source new suppliers by themselves but instead lets them apply with products in each window. However, when a need occurs, Apoteksgruppen informs Oriola of their need, who in turn receives the responsibility for presenting possible options for Apoteksgruppen.

For the vast majority of products not included in Apoteksgruppen's private label, negotiations and communication are not made with the producing suppliers but instead with Tamro and Oriola. It is only for the private label products that negotiations and orders are made directly with the supplier of the products. However, there are usually only 140-200 private label products in the active assortment, which is small compared to the total number of products.

Finding suppliers who can deliver has been challenging during the pandemic. This has led to a more preventive way of sourcing suppliers. Apoteksgruppen tries to foresee and find what trends will come during periods with drastically changing environments. Thus, dialogues and early stages of negotiations are initiated without knowing if the supplier will be implemented or not in order to be prepared for different possible outcomes. This was the case with antigen-tests when Apoteksgruppen managed to secure their suppliers before the demand increased. The crisis team and the early research for potential suppliers has created an ability of quickly finding new and suitable suppliers when needed. However, all of this is done without changing the form of the contracts and requirements put on suppliers, i.e. new suppliers during the pandemic have been as thoroughly investigated as new suppliers before the pandemic. As a result, Apoteksgruppen has chosen not to join every trend since the available suppliers couldn't be investigated properly according to their standards.

6.2.2 Purchase

The pandemic has affected Apoteksgruppen in several ways. Taking the perspective of the goods management department, volumes of goods has been the main issue. It has been difficult to get volumes out to each pharmacy, difficult to find large enough volumes but also frightening to purchase large enough volumes. This is because many products have had

short periods with high demand followed by a drastic decline. Examples of such products are antigen- and antibody tests, disinfection solutions, and face masks. The volatility of demand has put pressure on forecasting and during this intense period, the usual forecasting system, Relex, has been abandoned and replaced with manual forecasts in Excel for the most affected product categories.

The interviewee describes how communication can be difficult, especially connected to the three exchange windows each year. Apoteksgruppen always wants to foresee what the demand will look like ahead. 200 new products each exchange window also means approximately as many removals of products that are not meeting the sales requirements. If the managers receive information about products with low sales as early as possible, they can avoid building unnecessary stock and incur depreciation costs. However, since their centralised goods management department purchases for all of their stores, it is often difficult to make optimal use of knowledge from each store.

During the pandemic, customers who could not find what they were looking for in one store, visited the next, and if the product could not be found there either they kept going to several stores within Apoteksgruppen until they found it. The pharmacies then shared what demands customers had during the last period, but since the customers visited many different stores, the demands from these were actually triggered by the same customer. This has complicated forecasting since the existing system cannot handle this kind of situation. Thus, this has led to the goods management department not listening to each demand but rather trying to satisfy needs on a higher level.

The interviewee mentions that the pharmacy market generally is not transparent, meaning that pharmacies seldom share their sales forecasts with suppliers other than those for their private label products. Thus, for most products, Tamro and Oriola must do their own forecasts based on historical data if nothing else is communicated from Apoteksgruppen. However, when new products are brought in, Apoteksgruppen usually gives Tamro and Oriola estimates of how many units they will sell in the initial period. For their private label products, Apoteksgruppen makes monthly forecasts for 12 months ahead which they share with the affected suppliers. For several product categories such as allergy- and sun related products, the forecasts are also divided into seasons and are then shared with the suppliers approximately eight weeks prior to the demand.

As mentioned, suppliers not delivering products labelled under Apoteksgruppen rarely have knowledge about sales forecasts from Apoteksgruppen. However, during the pandemic some suppliers have come to demand that forecasts are shared in order to be able to make better decisions. Previously, the suppliers might have had a rolling production schedule, but during the pandemic, forecasts from Apoteksgruppen became decisive for initiation of a new production batch. In this way, communication between Apoteksgruppen and important suppliers has become more frequent during the pandemic.

Another challenge is having products available when customers visit each store. There are many stores spread across large parts of the country. Employees at the stores and store managers do not want to keep more than a few or sometimes only one unit on the store shelves due to the theft risk. Thus, it becomes an important and difficult task to decide the size of stocks on each store shelf.

6.2.3 Pay

Due to the fact that Apoteksgruppen does not own any warehouse facilities and that Oriola delivers straight from their warehouses, Apoteksgruppen does not own any products apart from what they have in store. It is Oriola who purchases from their suppliers and then

Apoteksgruppen are able to order directly from Oriola. Thus, until the products are available for the customers in the stores, Apoteksgruppen has not paid for them.

However, regarding payment and invoicing, the interviewee was not aware of any specific changes or affects during the pandemic. The company has agreed payment terms with Tamro and Oriola which have been followed throughout the pandemic.

Once again, it is important to note that the role of the interviewee does not include activities concerning invoicing and payment which would thus need to be investigated further for a deeper understanding.

6.2.4 Organisational structure and supplier relationship management

The organisation has coped with the irregularly changing environments through creating a crisis-team which has the purpose of being able to make quick decisions involving all necessary departments. This team has been relatively free to take decisions on behalf of the entire company. Also, the interviewee emphasises that having few employees compared to other pharmacy chains has simplified the quick decisions and allowed the organisation to move and adapt faster.

Further, the pandemic has allowed Apoteksgruppen to make clear which types of settings that can handle drastically changing environmental conditions. An example brought up is how they structure their teams and departments within the company, and it has been something that has helped them during this period and will thus be built further upon. However, before introducing crisis teams, it was made clear that their way of making decisions, often only made by a single individual, was inadequate because that person did not have enough knowledge to make a well-grounded decision.

Changing the way of communicating from mostly physical to mostly digital communication, not the least for the procurement process, has also been a major adjustment and way of adaptation. This has allowed information to travel much faster and processes to become swifter during this period with many delays and bottlenecks. This is also something that has allowed for more frequent communication as mentioned previously which has for certain suppliers led to a closer relationship. The interviewee states that the transparency towards suppliers is something they have thought about improving for a while and that with a few single suppliers, they might continue sharing forecasts and keeping a closer dialogue even if it is no longer crucial for initiating production. Overall, the interviewee states good relationships with important suppliers are more crucial than ever.

6.3 Apohem AB

The third pharmaceutical company interviewed was Apohem AB (hereby noted as 'Apohem'). The interviewees are both involved in the procurement process at Apohem. One of them is a purchasing manager and is responsible for daily contact with existing suppliers including placing orders, making sure they keep acceptable stock levels, as well as making sure that the products are available in their online store. The other interviewee is responsible for the initial phase of the procurement process, i.e., sourcing including negotiations and establishing contracts for example.

Apohem is owned by Axfood and was established in 2017 meaning that they are relatively new on the market. Apohem shares some of their assortment with other parts of the Axfood concern. However, they have previously shared the employees responsible for negotiating the assortment. This will change in the near future as Apohem has grown large enough to

take responsibility for this as well. According to the interviewees, their bonds with Axfood opens up opportunities which, due to their small size, would be more difficult otherwise.

Apothem act as an online pharmacy which means that all their sales originate from their online shop. This is beneficial in several ways as they can keep thousands of different articles in their assortment and more easily have it available for the customer without needing to keep stock at many different locations. A physical store is limited by the shopping area and cannot keep an assortment as large as an online store. However, Apothem are obliged to offer all prescribed drugs and they cannot ship some of them due to temperature requirements e.g., Apothem have solved this requirement by letting one of their warehouses act as a point of contact where customers can retrieve prescribed goods, buy other goods, as well as consult a pharmacist. The interviewees state that even though Apothem have a physical delivery point, their focus is to be a top-of-the-line online pharmacy.

6.3.1 Source

Apothem revise their assortment every other week to find new products and remove low runners. This is significantly different from other pharmaceutical companies who focus on physical stores and revise three to four times per year. According to the interviewees, this makes them quick and agile which is something customers in the online sales channel expect. This means that new procurement processes are initiated, and contacts are made with new suppliers every other week. On these occasions, suppliers are able to present their available assortment and for interesting products, a dialogue and negotiations are initiated. If there is a high interest in the product or brand, the sourcing team can involve the campaign- and marketing team to assure that they get the most out of the negotiations and that the introduction of the new product is successful. When a contract is agreed upon with the supplier, the responsibility of the specific supplier moves from the department working with the sourcing phase to those working with the purchasing phase. Depending on if it is a previously unknown supplier or if it's a new product from an existing supplier, what time of the year it is, the duration of price negotiations, etc., the time spent before the product is available for the customers varies. If it is a well-known supplier and the price negotiation is swift, the process from contact to contract could take a couple of days. If it is more complicated, it could take a couple of weeks.

During the pandemic, due to the limited supplier base in Sweden of products specific to the pandemic, it was necessary for Apothem to quickly source from suppliers all over the world. Some suppliers of other products pleaded for force majeure and could increase their prices by several hundred percent. This and other setbacks such as longer lead times were accepted by Apothem as they had an understanding that the pandemic affected the suppliers as well. Regarding the sourcing phase, this meant more negotiations and a closer dialogue with suppliers to fully understand different sides of the situation. The interviewees emphasised that even though they were forgiving, they did not abandon their strict requirements on suppliers. For example, all new suppliers must be tested and approved according to Axfood and Apothem standards, and during the pandemic, several offers from unknown suppliers were declined based on a lacking possibility of quality assurance.

6.3.2 Purchase

When contracts have been set up, the purchasing department is given a list of products that should be added or removed from the assortment. The next step is to forecast the volumes needed to satisfy the customer demand. However, due to their close connections and short lead times from their suppliers, additional products are often just a matter of days away if the stock runs out.

Apothem is currently growing fast and is running a successful business, offering their customers an agile solution with short lead times. They are also growing rapidly, which means that they must make sure that every part involved in their procurement process is growing at a similar pace to not leave any part left behind.

In the initial phase of the COVID-19 pandemic, more customers sought to minimise physical interactions with others. This made them increase their online purchasing habits and were drawn towards online pharmacies. Thanks to Apothem's focus on e-commerce, they offered the customers a well organised store with fast deliveries. Besides the typical pandemic products such as masks and hand sanitizers, customers also sought to boost their immune system more than before and increased consumption of vitamins and nutritional supplements. Apothem have a large assortment of these products and benefited from the increased demand.

During the pandemic, products connected to prevention of the virus were important to purchase in larger batches to ensure the stock did not run out. However, because of the uneven demand, Apothem felt an uncertainty when dealing with large volumes since the demand could decrease significantly overnight. The interviewees describe that they have experienced the increased demand in different phases of the pandemic and that there has been a learning process from each phase until the next one. Thus, they have changed the way they handle increased demands regarding purchased volumes, preparation, stock keeping etc. In other words, they have adjusted routines in handling these types of situations.

As mentioned regarding the source phase, communication and involvement with new suppliers has gained importance during the pandemic. However, this applies to the entire procurement process including the purchasing phase where relationships and communication with existing suppliers is at least as important.

6.3.3 Pay

The interviewees were unaware of any specific changes or effects in payment and invoicing as a result of the pandemic. Payment conditions have been agreed with suppliers according to contracts that have been followed throughout the pandemic. However, as noted in section 3.6.2, the interviewees are less involved in the invoicing process and payments since their focus lies within the source and purchase phases.

6.3.4 Organisational structure and supplier relationship management

The interviewees state that they, as many others, have implemented a more digital and remote working environment. This simplifies and optimises the communication with suppliers and ensures that they can keep their rapid responses. The pandemic has accelerated the transformation of Apothem into its own entity rather than being a part of and highly connected to Axfood. Additionally, Apothem's organisation was tested by the larger demand and had to learn how to handle larger volumes than before. After the first phase of the pandemic, Apothem understood that there were several steps in their procedure which could be developed and made more efficient to cope with the larger volumes. Thus, an automation process has been initiated in order to remove bottlenecks and make the entire procurement process more adapted for future requirements.

Thus, the pandemic situation worked as a type of pilot phase for different systems and operations in order to understand which worked and which needed to be adjusted when exposed to tension. This involves not only operational stages of their procurement, but also organisational structure and communication between different parts of the company along

with external actors. Due to this, Apohem has been forced to work in environments that might be more usual in the future when they keep growing.

Regarding interaction with suppliers, Apohem are convinced that the increased focus on closer communication will live on even after the pandemic's influential factors have declined. However, with a broad supplier base comes a need for prioritisation which for Apohem entails a closer relationship with their largest suppliers compared to others. The interviewees emphasise that the closer dialogues and relationships have been crucial for handling the pandemic and will probably be as important going forward to keep growing successfully.

7. Cross Case Analysis

A presentation of each case has now been made where the information was divided into the different parts of the procurement process according to the analytical model of the study. In this section, a comparison between the case companies will be made, also in accordance with the analytical model, in order to later on be able to draw more general conclusions based on our observations. The section is summarized in the end with a table presenting the main observations from the cross-case analysis.

7.1 Source

Product revisions act as an exchange window for pharmacies to make sure that their product assortment is up to date and is satisfying the customers' demands. It also gives the suppliers a chance of presenting new products and gaining market shares as well as valuable connections to the pharmacy chains. Apoteket and Apoteksgruppen are both large companies with nationwide networks of pharmacy stores. Changing their assortment too often could complicate the communications and product deliveries to these. With a product revision every 3-4 months, the store managers have time to empty out and fill the shelves with new or old products. With several hundred stores for which almost all need the new products, an update in the assortment too often could be time consuming, preventing the pharmacists from performing their primary tasks and risk building a stock of outdated products.

However, Apohem does not need to restock new products by every assortment update as their "shelf" is digital and easily updated. Due to not having any physical stores, Apohem does not have to focus on delivering products to these. Instead, they can focus on keeping an updated stock at their warehouses and delivering their products on-demand straight to their customers. This is probably why Apohem are able to have a product revision every other week without straining their logistics. The case analysis also pointed to Apohem's desire of being known as agile and flexible, which the frequently recurring product revisions signals.

Even though Apohem have product revisions every other week, they do not fully rely on these to find new products. They still search the market themselves for new products and actively contact new suppliers to build a relationship. Apoteket and Apoteksgruppen on the other hand do this differently. Normally, they fully rely on their 3-4 product revisions every year to bring in the most interesting products. However, they can search the market by themselves if they see an upcoming demand and require suppliers quickly. This was important to use during the pandemic as Apoteket contacted any supplier who could provide the required products. Apoteket does not fully manage the process of finding new suppliers on their own, but instead they give the responsibility of this to Tamro. Apoteksgruppen does the same but with Oriola. Apoteksgruppen and Apoteket are dependent on Oriola and Tamro accepting and purchasing from new suppliers, because even though Apoteksgruppen or Apoteket is in need of something, Oriola and Tamro procure products for several other pharmacy chains as well and cannot solely listen to what Apoteksgruppen or Apoteket requires. However, the pharmaceutical companies can request a specific type of product which can be sourced in cooperation with Tamro and Oriola. Between the three case companies, it is clear that they all search for new suppliers and products in different ways if they see a demand for it.

Another difference found between the three case companies is their warehousing solutions. Apoteksgruppen do not keep any warehouses of their own, instead they rely on Oriola to stock their demanded products and order from them when the need comes up. Apoteket has

a similar relationship with Tamro. This enables the pharmacies to focus on their core abilities rather than being a logistics company. Together, the two intermediaries supply the majority of pharmacies in Sweden. Due to their size, they can offer all physical pharmacies next day deliveries of prescribed drugs. This is important for Apoteket and Apoteksgruppen as they are obliged to always be able to purchase and provide whatever prescribed drug a customer needs. This need is however not as relevant for Apohem as they do not deal with prescribed drugs in physical stores to the same extent as Apoteket and Apoteksgruppen. Apohem, as a company that is focusing solely on online services, instead own their warehouses and focus on their online sales, shipping directly to the customer with no store in between.

When it comes to contracting and negotiating with suppliers, it seems to be a uniform understanding between the companies that negotiations have become more intense. These negotiations happen whenever it is necessary, even outside of the exchange windows. When negotiating, Apoteket and Apoteksgruppen both claim that the price is the most important aspect of every contract. Even though they also mention that having a high quality is important, the price is what determines if it is a good or a bad deal. Apohem also emphasises that even though they heavily consider and focus on the price, they ensure that all products available for their customers are of high quality. This focus on quality could come from their ties with Axfood, for which there are strict quality requirements and good possibilities of investigating each supplier.

7.2 Purchase

A central part of all the case companies' purchasing phase is their ability to forecast future demand. The most common way is to use historical data and assume that customer demand will play out similar to previous periods. Apoteket and Apoteksgruppen both use Relex, a forecasting system which uses different parameters such as historical data, trends, and seasonal indices etc. This is common for larger companies as they have a more complicated and sophisticated forecasting method. Both companies tend to trust Relex's forecasts to the point that they discourage tempering with them. Only in special cases such as new product procurements, effects from external factors etc., may the demand planners manually enter the forecasts or alter the parameters. The most central and relevant example of when Relex was not able to foresee and take an external factor in consideration was the beginning of the pandemic. When the pandemic struck, the forecasting system could not handle the volatility and most pharmacies did not know what they could anticipate. This took Apoteket and Apoteksgruppen back to the time when they had to do much of their forecasting manually and by scouting the stores' demand every day. Apohem however, already used Excel instead of a business system for their forecasts when the pandemic struck which made it easier for them to adjust to the new situation.

After forecasts are finalised, the purchasing itself begins. Purchase orders are normally sent only a few days before an actual demand for a product in the existing assortment. This can be done for Apoteket and Apoteksgruppen since Tamro and Oriola hold stock of these products. For Apohem, most of their suppliers are localised at such distances that most delivery lead times are only a few days. However, during the pandemic, a few days was not enough, and all of the pharmacies had to make their purchase orders more than a few days in advance.

Another change during the pandemic for all of the case companies is concerning the handling of incoming goods. They were all more accepting in their requisition and approval phase of their purchasing. Details concerning how goods were packed and which sizes they came in could be overlooked because of the intense demand.

Due to the high demand, all case companies also experienced a need of purchasing larger volumes. To not fall behind or miss out on the opportunity, they had to gamble with uncertain forecasts and risk building depreciation costs. When the demand increases in such a way, there is an uncertainty of when the demand will decline. All case companies mention that there was a hard choice between risking the depreciation costs and missing out on sales opportunities. However, Apoteksgruppen and Apoteket seemed more cautious in joining every trend that could be seen, mostly because of the difficulty to properly investigate quality aspects of new suppliers in a short matter of time.

All case companies have been forced to prioritise specific product categories during the pandemic which has also led to more frequent communication with such suppliers during this period. However, since most suppliers of Apoteksgruppen and Apoteket only communicate with Tamro and Oriola, Apohem has had to change most in this regard. The closer communication has allowed them to gain a better knowledge about delays and operations leading to a higher control of the distribution network than would have been possible otherwise.

7.3 Pay

This phase hasn't been affected as much as other phases according to the answers from the interviewees. A reason for this could be that pharmacies are an actor that deals with the end customer directly on one side of the distribution channel. Since payments from end customers are almost always made directly over the counter, there are no delays compared to money transfers in business to business, e.g., between pharmacies and their suppliers. In such cases, payments are often allowed 30 or even more days after a delivery has been made. Thus, pharmacies have not been affected much in this area and naturally haven't made any significant changes.

However, as mentioned previously, this hasn't been dug as deep into as the other phases because of the roles of the interviewees and is therefore an area that would need further investigation before drawing well-grounded conclusions.

7.4 Organisational structure and supplier relationship management

A common solution to deal with the drastic changes was creating a more homogeneous environment for decision making. All case companies mentioned that they in some way had organised larger groups that took consideration of several different perspectives. Apoteksgruppen created a crisis team which were given the authority to take quick decisions when it was required. The members of this team were taken from different departments so that they did not miss anything important. Apoteket made similar changes but instead of creating an announced crisis team, they instead made sure important decisions were made including a group of people instead of single individuals. Even if they don't call this a crisis team, the purpose is the same, i.e., to include several different perspectives in the decision making. Additionally, for decisions that needed to be made quickly and did not incur big risks, they gave employees an increased authority and eliminated the unnecessary step of managers having to approve certain decisions. For all this to be possible, meetings and supplier communications had to be more efficient. Apohem mentioned that they were quick to establish a digital environment where employees were given the opportunity to work from home and to manage meetings online. This trend could in some way be seen at all three case companies.

As mentioned earlier, the digital environment has allowed for more frequent communication which generally has led to closer relationships with suppliers. Closer relationships have come parallel with a higher transparency towards suppliers which is something that all case companies mentioned in the interviews. However, there are different attitudes towards sharing information and even if all of them generally see it as something positive to be more transparent, Apoteksgruppen is the only one stating that keeping too much information from suppliers is a problem. Overall, all case companies state that good relationships with important suppliers is more crucial than ever.

All case companies also present different plans they want to follow to be more prepared if they are exposed to similar external forces in the future. Apoteksgruppen specifically mentions that they have updated their contingency plans and that their crisis team will be having regular meetings from now on, even if there is no obvious crisis to keep in consideration. A similarity could be found with Apoteket, who opens up to keep their diverse team to make sure that their business is aligned even when there are no external tensions. Additionally, the three case companies all state that they have developed a better understanding and work procedures to tackle larger unforeseen volumes in the future.

7.5 Overview of main observations

The different areas and phases of the analytical model have now been compared between the case companies. In order to get a better grasp of the main observations from this comparison, a summarised table has been made below.

Table 3. Main observations from cross case analysis of pharmacies in Sweden

Source

- All companies have a predetermined number of product revisions in a year, although Apohem does it more frequently.
- Majority of new suppliers are found through Tamro and Oriola for all companies although Apohem sources more on their own than others. Generally, a short negotiation and contracting period, except for private label products, for all companies.
- In sourcing, all case companies have strict quality criteria while low prices are the decisive criteria.
- Apoteket and Apoteksgruppen do not own any warehouses while Apohem has its own warehouses.
- Suppliers, both existing and new to all companies have negotiated more during the pandemic, mostly concerning prices.
- New suppliers have been searched for and contracted outside of the regular revision periods for all companies during the pandemic although less for Apohem because of their already more frequent revisions.
- All companies have been forced to make quick decisions differently than before during the pandemic although Apoteket seems to have abandoned their regular procedure more than the others.
- All companies have not demanded penalty fees from suppliers for breaches of contract on many occasions during the pandemic.
- Physical supplier visits and audits have been abandoned and communication has mostly been made through digital tools.

Purchase

- All companies use or will shortly begin to use (Apothem) a forecasting program (Relex). All companies highly trust the forecasts from Relex and lay purchase orders based on forecasts.
- Apoteket and Apoteksgruppen have been forced to make manual adjustments to the automatic forecasts during the pandemic.
- Requisition and approval of new products has been shortened and minor errors such as faults in packaging have been overlooked.
- All companies increased communication with and prioritised some suppliers based on their products' importance in the pandemic.
- Due to the increased demand, pharmacies have had to purchase larger volumes for some products relevant to the pandemic.
- Apoteksgruppen has been more cautious to not overestimate the demand during the pandemic, which is shown by their purchased product categories and volumes.

Pay

- No specific changes that the interviewees were aware of.

Organisational structure and supplier relationship management

- Apoteket is owned by the Swedish government while the other two companies are privately owned.
- Apothem does not sell any products branded under Apothem while both Apoteket and Apoteksgruppen do this.
- All companies have in some way reorganised responsibilities in order to make better decisions during stressful periods. Either through an announced crisis team or through other groups with the same purpose.
- All companies have changed mode of communication from physical to almost solely digital, both internally and with suppliers.
- Structure and procedures have been reorganised to better cope with larger volumes at all the companies.
- Contingency plans for the entire companies have been revised as a result of the pandemic.
- Closer relationships have been built with many suppliers.

8. Discussion

This section of the report will include discussions around key aspects of the study which will illuminate important parts to consider regarding the results. Further, the discussion is aimed to give a broader perspective on the contents in this study and hopefully contribute to some key takeaways of the study.

8.1 Different types of changes

There are some structural differences between short- and long term changes. Below, a discussion and division are made regarding the type of change.

8.1.1 Short term changes

Some of the changes could be seen as more practical and solution based, these tend to be short term changes. For example, when the demand increased tremendously for some specific pandemic related products, the pharmacies had to increase their batch sizes and purchase larger volumes. This is solely a reaction to the high demand and the large volumes on these products will not stay unless the demand does so. The increased volume additionally made it important and necessary to differentiate the suppliers base, i.e., secure supply from several different suppliers. This includes both sourcing new products and brands from existing suppliers, but also finding new suppliers to attend to the increased demand. However, customers tend to be loyal to a specific brand, so the pharmacies have seen the need of continuously purchasing brands that their customers are familiar with. This speaks in favour of the classical and large brands keeping their market shares instead of losing them to new competitors. According to Yanni Ping and Buoye (2022), the more engagement a customer has with a brand or product, the larger the probability is of building a loyalty to a specific brand. However, the authors also mention that the anxiety emanating from the pandemic could diminish this effect. This could lead to customers finding new brand loyalties and could be influenced by how anxiously the customer feels regarding the pandemic.

Another short term change is the need of reaching out to suppliers outside of the revision periods to secure supply fast. Otherwise, the pharmacies want to limit the revisions to these periods. Additionally, while this has put tension on the pharmacies to deliver to their customers, it also has challenged the suppliers' procedures and possibilities to be flexible. That is probably why many suppliers have requested the pharmacies to communicate their demand and place orders further in advance.

All these changes have a common variable. They are all pure reactions towards an external factor and are heavily dependent on this factor. When not necessary anymore, these changes will go back to the original procedure. Though, it is important to mention that all of these changes have brought experience to each pharmacy and made them more aware of their procedures' benefits and drawbacks. It is also important to keep in mind that short term changes could become middle term or even long term changes if nurtured correctly and if it is beneficial for the company.

8.1.2 Mid-term changes

The most obvious change that cannot be directly placed as a short term or long term change is how the relationships have changed between the pharmacies and their suppliers. This could also be a change that started as a short term change but has been accepted and lives on until there is time and resources to invest in it. For example, both the pharmacies and the

suppliers have been forced to keep closer communication to ensure that the logistics are correct and to be able to make quick decisions.

Due to the extreme conditions some of these relationships have been forged in, the communication could grow strong, and the tight relationship could last for several years. Though, in some cases, the closer relationship has been nothing but a necessity and is not encouraged. This could be because of the time-consuming procedures often connected to a close relationship. If the pharmacy does not see the beneficial side of it, they could go back to keep some suppliers at arm's length. This type of distanced relationship was common around the 90's, however today pharmaceutical businesses are the most prone to change into a deeper communication and closer relationship with their suppliers (Hoyt and Huq, 2000). The most natural way of business after strengthening a relationship is to continue by building closer communications. The pharmaceutical business is unfortunately not known for their transparency, and this could affect the industry as a whole, to create a more open dialog between suppliers and pharmacies. For example, a closer relationship enables sharing forecasts, warehouses, and solutions, which could benefit both the industry and society as a whole.

8.1.3 Long term

The pandemic has also made all kinds of companies and industries aware of new and more effective procedures. These changes can start as a short term option forced upon a company in lack of a better alternative, but as time goes develop into a sustainable work procedure viable in the long term. It is of course impossible to foresee exactly how these changes will work in the future, but there are signs indicating that they are here to stay. One of these signs is that the company has no immediate intention to change it back to former procedures. Another one is that the change is not forced upon by an external party, meaning that the change is solely internal and the decision to keep it or not is within the company.

When employees were asked to keep their human interactions to a minimum, a more digital and online work environment were created. This started as something uncomfortable and problematic for many companies but later turned out to work. The effects of this have been the discovery of not having to travel to maintain relationships, attending meetings, and show up physically to work. The COVID-19 pandemic has accelerated this process and opened up the opportunity for many new ways of working. This is seen as a long term change as there are no indications that this will go back to how it was before the pandemic. Some businesses have started to let employees back to the office, but several, such as Apohem, are also keeping the hybrid solution where the employee can choose themselves. When opening up to the hybrid solution and offering work from home, it is important for the organisation to also keep the social relationships.

Apoteksgruppen made it clear that their crisis team will remain even after the effects of the pandemic have diminished. They pointed out that the benefits by having such a team is always welcomed and that from now on will pay more attention to their contingency plans. This attitude could also be heard from Apoteket, where they have seen the benefits of having a larger team from different departments, offering different perspectives on how the company is managed. They also mention the transfer of responsibility of daily operational decisions from managers to each relevant employee who works closest to the subject.

When the demand increased, all pharmacies were forced to increase their purchasing volumes and to manage their logistics to handle these new volumes. This acted as a pilot study for Apohem as they are in a growth phase and looking to increase their volumes in the near future. Because of this, their routines and work procedures have already been tested in

a high-tension environment. This means that they can take this experience to modify their procedures to optimally face their future phase with larger volumes.

8.1.4 Changes illustrated in the analytical model

The different changes observed in the study has now been categorised into short- mid- and long term changes. Below in figure 8, the changes have been inserted to the analytical model in order to give an overview.

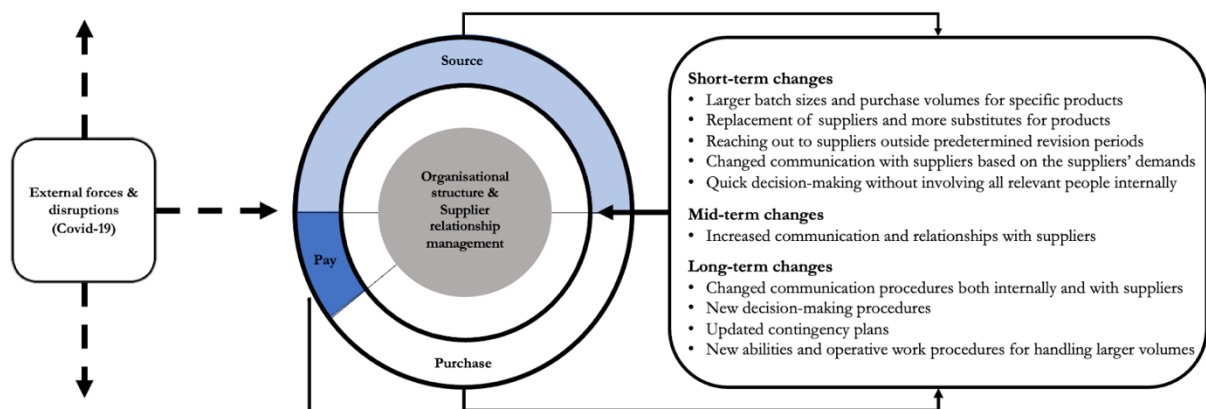


Figure 8. Overview of changes in the analytical model

8.2 Control and limitations for pharmacies in Sweden

As described in section 5, the pharmacy market in Sweden was controlled by the Swedish government having a monopoly for many years until 2009. Even if this was more than 10 years ago, there are still traces of that structure which can be seen today. Further, along with the fact that an open pharmacy market in Sweden only has existed for 13 years, there are many regulations and laws creating large entry barriers for new entrants according to Sveriges Apoteksförening (2021). This is probably the reason why there are only 8 large actors controlling the vast majority of the market. Even if this could be seen as strict, it is important to prevent information asymmetry and to assure that the medicinal products available are assured to have the correct effects (Roberts and Reich, 2011). One way of doing this is through the regulations withhold in the pharmaceutical market in Sweden.

Additionally, prescribed drugs which have been procured through public tenders have strict requirements where suppliers must be able to deliver such goods the next day. This puts significant pressure on an agile infrastructure and system which should handle both communication, warehousing, and distribution services swiftly. Requirements such as these also set high entry barriers for actors within distribution and warehousing. This could be one of the reasons that there are only two intermediaries, Tamro and Oriola, which possess approximately all of the market for warehousing and distribution of prescribed drugs to physical pharmacies in Sweden. On one hand, suppliers are forced to go through these intermediaries to be able to fulfil the requirements and on the other hand pharmacies are obliged to purchase goods from these intermediaries. This affects all pharmacy chains in Sweden, although online pharmacies are less affected. Since the very short delivery times are for delivering goods to physical stores where goods have been prescribed, online pharmacies can send such products directly to end customers and not be as locked with intermediaries.

Overall, due to the structure of the market and the role of the intermediaries along with all requirements put on both suppliers and customers, i.e., pharmacies, of these goods, it is

difficult for an actor to differentiate much from competitors. In many aspects, such as handling of prescribed goods, supplier portfolios and product prices, this can be seen through the similarities between the different case companies.

On top of the structure and regulations, customers within healthcare products tend to be very brand loyal, meaning that they are very cautious with buying and using products from new brands. Compared to other industries, such as apparel for example, healthcare supplies directly affect the well-being of humans and is thus handled more carefully. During the pandemic, this was not an issue since the lack of products forced all people to change both behaviours and lifestyles. However, this brand loyalty seems to have hindered some long term changes during the pandemic concerning choice of products and suppliers. This is seen through pharmacies quickly moving back towards old suppliers which were put on hold during delivery issues and delays. At the same time, the pandemic might have also slightly eased the brand loyalty within customers since they might have noticed that alternative products worked even better than previous ones.

8.3 Differences between online and physical pharmacies

The analysis and discussion of online sales has until now focused on Apohem's ambition to be the best possible online pharmacy. However, both Apoteket and Apoteksgruppen have online stores as well. The main difference is that while Apohem have the possibilities to invest and adapt their assortment for this purpose, the other companies are limited by their focus on their physical stores. They cannot match Apohem's range of products and simultaneously solve the logistics of running several hundreds of stores all over the country. This would mean either expanding each pharmacy store to keep the area required of showcasing enough products or focusing their business on their online stores with the new logistical problems that come with this. Neither of these suggestions is in line with what they currently offer their customers. Apoteket and Apoteksgruppen are probably confident with the situation as they continue to slowly invest in their online solutions while mainly focusing on their physical stores.

One of the reasons for Apohem's success within the online business is how they handle the distribution. While Apoteket and Apoteksgruppen's distribution is handled by Tamro and Oriola, Apohem have invested in their own warehousing and distribution system. They manage to build large warehouses filled with a broad range of products, as well as presenting an availability that is attractive to the customers. Even though they do not use Tamro's or Oriola's distribution services, they still offer quick deliveries straight from their online stores. Due to them making distribution a primary part of their business idea, they have a leverage on their physical competitors within this area.

As previously mentioned, the pandemic forced many companies to implement digital solutions to maintain relations, attending meetings, and communicating with partners. Due to the nature of Apohem, they were more prepared for this adjustment than their competitors. Their size also made the adaptation of a digital work environment less complicated, and they could quickly align the whole company to the new way of working.

8.4 Different conditions for pharmacies affect the outcome

When discussing work procedures, routines, and crisis management, there seem to be a distinct difference between Apoteket and the other companies. While the other companies speak positively about how they tackled the crises originating from the pandemic and that they are proud of how well they could keep their regular procedures, Apoteket were more reactive and took quick and unfortunately often hasty decisions. Some of these were coin-flip

decisions and could either turn out good or bad. This could be interpreted in different ways, depending on what aspects of business are relevant. On one hand, Apoteket is the largest pharmaceutical company in Sweden, and is not known for their agile operations. This reaction could be a sign of them trying to create a faster paced business environment and could help them from being too immobile or dense. On the other hand, however, they are as mentioned the largest pharmaceutical company in Sweden and have the responsibility of several hundreds of stores. Their hasty and reactive way of making decisions could end up shaking the foundation of the company. Maybe Apoteket is not meant to have fast paced and mobile operations and should instead focus on stability and reliability.

This is not the case for Apohem, as they are a new actor on the market and focus on being a fast paced and mobile online pharmacy. When other pharmacies saw the need of tightening communication and creating crisis teams, Apohem could focus on their operations and to dampen the effects of the pandemic outburst. They could do this because of their small size. Apohem already had tight communication and was therefore not in need of any explicit teams, as the team's members would be the same as the already established teams at Apohem. It is of course understandable that companies with thousands of employees need to organise differently than a company with less than a hundred. Additionally, this saved time and resources for Apohem as they could organise quicker than their competitors and had an benefit when a realignment of the company structure was required.

As previously mentioned, the work procedures revolving around Apoteket and Apoteksgruppen's private label products differ from the white label products. For example, for their private label products, the company is invested from the start and will have to endure long processes of design suggestions, packaging solutions, product format, etc. The lead time from suppliers varies substantially when ordering these products as Tamro and Oriola do not keep stock of the companies' private label products. Apohem on the other side does not have any private label products, solely trading with white label products. This means that their relationship with suppliers is less complicated and the management of these is less time consuming. Additionally, the white label products require no further responsibility from Apohem as they are not the producer nor the product owners.

8.5 Implications for suppliers and distributors

The initial short term changes within pharmacies, resulting from external factors due to the COVID-19 pandemic, have affected many existing suppliers negatively. The reason behind this is that this was a period when many substitutes were found, and a lot of new suppliers were allowed into the networks of the pharmacies. Thus, many suppliers of pharmacies, such as Palliance, have felt an increased competition in many product categories. It is easy to think that this only affects suppliers active within categories directly connected to the pandemic. However, since the pandemic made it difficult for nearly all suppliers to deliver regardless of the type of product, there was a higher competition in many other categories as well. This conclusion is supported by Dubois, Hulthén, and Pedersen (2004), who stated that companies are members of several supply chains at the same time, making the probability that these suppliers are connected high. The networks created between the suppliers and their counterparts are affected by the choices made in both ends (Gadde, Huemer, and Håkansson, 2003). This makes the network dynamic and prone to change when large disruptions like those emanating from the pandemic hits it.

Simultaneously, this situation led to an opening for many other actors which didn't have any contract with the pharmacies at the time. In stable conditions, it can be tough to get the attention of pharmacies and notice your products when competing with hundreds of others. During product revisions, pharmacies might not have enough time to thoroughly analyse each offer. However, having an interesting product available in a time when most suppliers

are having a hard time to deliver can more easily get the attention of pharmacies. For Palliance, this has also been seen within their pharmacy customers and not the least their customers of disinfection solutions where they first got a chance to provide their products and later also won a national tender for the same product. However, the disinfection situation was not in the Swedish market but in the Norwegian market.

Even if the effect of switching suppliers and bringing in substitutes for many products strongly affected existing suppliers in that period, this change didn't last for long because of the brand loyalty that customers felt. In other words, most customers went back to buying the product they were used to as soon as those suppliers were able to deliver again.

During the pandemic, almost all suppliers had increasing costs and had to negotiate higher prices towards the pharmacies. This was something that needed to be done considering the circumstances. However, the negotiations and acceptance within pharmacies could also be seen as an opening for suppliers to take advantage and increase their margins.

Delays and other problems occurring have made pharmacies demand updates more frequently. Thus, suppliers have been used to notify and update customers more often than before. However, the increased demand for communication goes both ways and suppliers may benefit from such a change since it allows them to gain a closer relationship with their customers. This could be linked to what Gadde and Snehota (2019) said about partnerships taking advantage and growing strong of changing conditions. Additionally, suppliers have been able to demand more data and sales forecasts from customers allowing them to make better decisions. Provided that they can keep this relationship even when external factors from the pandemic decrease, they can gain long term benefits.

Because of the changed structure for making decisions within many pharmacies, negotiations and contracting may take longer time. Previously, it was more likely that a supplier could get their product into the assortment only through contact with a single category manager for example. However, since the structure is changed in a way that involves more people and stages, this can now be more difficult and more time consuming. Palliance is one of the companies who has experienced this and feels that even if they know someone in a company that has tested and approved the product, it can still be a difficult task to get all necessary people on board.

Overall, what is easily detected is that since all suppliers and pharmacies have the same end goal and are driven by the same thing, i.e., the behaviour and demand of end customers, they are affected in a similar way by the pandemic. If customers change the way they behave, all actors in the distribution network will have to adjust accordingly. When a pharmacy makes changes, it is inevitable for suppliers to make adjustments. The pharmacy market is known for its uncertain demand (Tayyab et al., 2022) and these changes have shown the importance of working closely together with suppliers and trying to see the bigger picture when disruptions like the pandemic and other external factors affect the world.

9. Conclusions and managerial implications

After analysing the case findings and discussing the differences and similarities between the three case companies, some conclusions can be made about how external factors such as the COVID-19 pandemic have affected the procurement process of pharmacies in Sweden in different time scales.

It is important to remember that even if there are some significant differences between the case companies in this study, such as focusing on online sales solely or on both physical and online sales, the pharmaceutical market is controlled and regulated to a certain degree. The structure and regulations of the market decreases the room for changes and adjustments. Thus, it can be concluded also from this study that the case companies' procurement processes are relatively similar and include the same activities, although somewhat adjusted to their business concept.

The analysis of the case findings suggests that the main activities and steps of the procurement process have not been replaced or eliminated. The procurement phases after the pandemic are similar to what they looked like before. Though, many of them have been slightly altered to better fit the new business environment. Amongst these changes, there were both short- and long term changes made within the case companies. The discoveries made in the research states that short term changes often occur as instant changes because of external forces changing the business environment. The case companies all made hasted decisions to satisfy clients and suppliers and to cope with the fluctuations triggered by the pandemic.

Long term changes on the other hand are more often built upon observations and knowledge from the short term changes. These long term changes generally need a decision made by the management of the company while short term changes are made without anyone approving them. However, there are also long term changes that are built up through many short term changes such as procedures and abilities that arise from continuously changing the way of working or thinking slightly over a longer period of time. One significant continuous change during the pandemic is the transition to an online working environment and online sales. This trend is seen on the entire market and the companies that solely focus on online sales have been able to benefit most from it. These changes, both short- and long term, all affect the pharmacies in some way. They either gain experience, knowledge, or implement new work procedures. Some of these changes and learnings have already been retested due to the ongoing war in Ukraine. This has had similar effects on supply chains worldwide.

Further, pharmacies have taken significant risks during the pandemic by purchasing larger volumes than what they have been comfortable with and risking depreciation costs. This has however mostly played out positively for the three case companies as they have increased their sales. Additionally, some smaller pharmaceutical companies on both the purchasing and the selling side have taken advantage of the situation and used it as a springboard to take market shares from their competitors or increased their prices.

The pharmaceutical companies and their suppliers are connected in many ways. They are a part of the same supply chain and are therefore affected by each other's decisions. When suppliers raise their prices because they have difficulties sourcing materials and parts, the pharmacies find other suppliers. A lot of suppliers took significant losses when they lost large customers to new competitors. When the pharmacies demand larger volumes faster than before, the suppliers demand a forecast and a longer notice. The pandemic also forced the pharmacies to value new aspects of their suppliers e.g., geographical localisation, logistics

solutions, and flexibility. This led to suppliers broadening their sales approach. Instead of only presenting a product and a price, the suppliers now can be evaluated by e.g. their ability of shipping under tough business environments, if their packages facilitate the pharmacies' warehouse handling systems, or if their suppliers are placed in Europe. In the light of the COVID-19 pandemic, it would be beneficial for both pharmacies and their suppliers if the industry was more transparent. Sharing forecasts and production capabilities could create synergies and facilitate the cooperation between them.

Finally, it is important to remember that even if this study focused and was conducted on the pharmaceutical market in Sweden, many of the key takeaways can be applied to other areas as well. The analytical model constructed in this study is a way to show and analyse how a business is affected by external forces and is not solely connected to the pandemic or the pharmaceutical market. Thus, it can be used and be built upon further to analyse other industries and supply chains.

9.1 Managerial implications

This study gives an insight to what implications these activities and changes could have on a business, and what a manager could do to limit these as well as learn from these.

From the position of a manager at a pharmacy, the study shows the strength of the brand loyalty the majority of customers possess. Therefore, ensure the security of your supply routines by diversifying the supplier base and by ensuring the supplier sees your business as a prioritised customer. The relationships between suppliers and the pharmacies have been tested during the pandemic, and the ones that grew strong have been able to benefit both actors through an increased transparency and understanding towards each other. However, the study also pointed to the difficulties some suppliers experience when getting a product approved and tested. By simplifying this process, the communication and insight in the supplying company is increased.

From the position of a manager at a supplying company, the study showed the importance of being able to present important and interesting products in the time of an unstable environment. By diversifying the supplier base, you could differentiate yourself by keeping availability of important products. Additionally, the pandemic was used as an opening for a lot of suppliers to increase margins and take advantage of the pharmacies' exposed position. By treating the pharmacies with respect and understanding, you could increase your chances of winning tenders and contracts later on after the unstable environment.

Relevant for both managers of pharmacies and suppliers is the importance of relationships, trust, and understanding in a time of crisis. This could open up possibilities later on as well as creating stronger bonds within the industry.

9.2 Suggestions for further research

Even though this research has concluded several interesting conclusions, it has also brought up topics for further discussion and investigation.

For future research in this area, the last phase of the procurement process, pay, should be investigated to understand what impact a disruption can have. The interviewees covered in this research were positioned in roles with a good insight of the two first phases, but a limited insight of the last. Though, the interviews gave hints of some changes in the pay phase as well, though never investigated.

Furthermore, the research investigated the impact of the influential factors from the procuring company to the supplier. This presents how the suppliers have been affected by the changes made by the procuring company. By switching roles and allowing the procuring company to be affected by the changes made by the suppliers, a mirrored perspective could be brought up and compared to the findings from this research.

Finally, the pandemic showcased how fragile a lot of work procedures, supply chains, and business environments are. Even though crisis teams and contingency plans have been updated, global crises have occurred, and will occur in the future as well. How are the changes motivated by the pandemic compared to changes motivated by invasions, wars, climate disasters, etc. The suggested research is to map how the procurement process has changed when there has been some type of other major business disruption on both a global and local scope.

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Appendix I – Interview templates

Interview template for pharmacies

About the interviewee(s):

1. Name of the interviewee
2. Name of the company
3. Contact details for further questions
4. Role of the interviewee in the company

General questions on the company and role of the interviewee:

1. Could you tell us a bit about the company you work at?
2. Tell us about your role in the organisation, what do you do in general?
3. In what way are you involved in the procurement process?
4. What does the structure of your organisation look like around people who are involved in the procurement process and what are the different areas of responsibilities?
5. Could you try to describe the procurement process from the time you decide that you need a new product or supplier until you have received a delivery and paid for it?
6. What is the time horizon for such a process?
7. What are the most difficult steps for this process today?
8. What were the most difficult moments before Covid-19?
 - a. Has it changed and if so, how?

Questions connected to COVID-19:

1. Could you describe how Covid-19 has affected you as an organisation?
2. How has Covid-19 affected the procurement process?
3. How have requirements and the choice of suppliers been affected?
4. How has the choice of products changed?
5. How has the purchase itself and the purchasing procedure been affected?
6. How have payment, payment terms and evaluation of purchases been affected?
7. Has the time horizon been affected?
8. What do you think the change will look like in the future?
 - a. What changes do you think will remain even after the influencing factors from Covid-19 settle?
 - b. What changes do you think will disappear / are about to disappear?

Questions connected to supplier relationship management:

1. How do you communicate with your suppliers?
2. How close is the collaboration with your suppliers?
3. How involved are the suppliers in the changes made regarding, for example, product range, requirements for suppliers and changes due to Covid-19?
4. Has the relationship with the suppliers changed during Covid-19?
5. Did you receive new requirements from suppliers under Covid-19?
6. Are any of these requirements still there? Will they remain?

Interview template for Palliance AB

About the interviewee(s):

1. Name of the interviewee
2. Name of the company
3. Contact details for further questions
4. Role of the interviewee in the company

General questions on the company and role of the interviewee:

1. Could you shortly describe Palliance as an organisation?
2. Could you describe your function in the company and what you do in general.
3. Could you describe your customers and their main characteristics?
4. In what way did you manage to gain these as customers?
5. How do your customers purchase goods from you?
 - a. Do you have any consumer agreements in place?
 - b. Timeframe, standardization of agreements, and backup companies?
 - c. What are the differences between public and private procurement?
 - d. Can you tell us about your product branding strategy?
6. To what extent may your product offering be influenced by the customer?
7. How much customer contact/involvement do you have, and how do you work to improve the customer experience?

Questions connected to pharmacies:

1. Could you describe your customers within the pharmacy market in Sweden?
2. What products do the pharmacies purchase from Palliance?
3. How do you communication with pharmacies?
 - a. How does your relationship with pharmacies look like relative to other customer segments?
4. What differences do you see between the pharmacies?
5. What strategic value does the pharmacies have for Palliance?

Questions connected to the distribution network of Palliance:

1. What is the structure of your distribution network?
2. What does your communication with suppliers and/or customers look like?
3. Do you have a clearly stated distribution strategy for the activities and services that intermediaries perform?
4. What are your biggest distribution challenges?
5. Who are your main competitors?
6. To what extent can you influence various processes like as suppliers, negotiations, distribution structure, customer interaction, and feedback?
 - a. To what extent are you able to control these?
 - b. To what extent are you controlled by these?

7. How will you be able to compete with larger corporations?
8. What distinguishes Palliance from its competitors?
 - a. What are your unique selling points?
 - b. Provide unique brands and products?
 - c. What makes customers want to choose them?
9. In what way does Palliance work to improve customer experience?
10. How would you describe how well Palliance's distribution network handles change?
 - a. In what way is disruptions handled?
 - b. In what way is Palliance affected when its customers make changes in their organisations?

Questions connected to COVID-19:

1. How has the COVID-19 pandemic affected you as a company?
2. What changes have you noticed concerning demand from customers?
3. What have you done in order to cope with changes?



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